

Global Logistics At Cecil Commerce Center

2.0 **DISCOVERY PHASE:**

2.1 Overview: Prior to the start of the visioning and design phases of the project, a comprehensive effort was conducted to identify, schedule and facilitate meetings with JAA's development partners, and stakeholders at the Cecil Commerce Center which included the City of Jacksonville, the JEDC, the Jacksonville Chamber of Commerce, JEA, the Jacksonville Port Authority (JAXPORT), Florida Community College of Jacksonville (FCCJ), and other agencies and companies with interest in the Commerce Center and its future development. A comprehensive listing of Local Community Groups, Municipal, and Governmental Agencies, and Regional Stakeholders is as follows:

2.1.1 Cecil Field airport Advisory Committee (CFAAC).

2.1.2 Jacksonville Planning Commission.

2.1.3 Jacksonville City Council.

2.1.4 Jacksonville Chamber of Commerce.

2.1.5 Jacksonville Economic Development Commission (JEDC).

2.1.6 Florida Department of Transportation.

2.1.7 Federal Aviation Administration.

2.1.8 Jacksonville Port Authority (JAXPORT).

2.1.9 Florida Community College of Jacksonville (FCCJ).

2.1.10 JIBC Transportation and Infrastructure Committee.

2.1.11 Jacksonville International Business Coalition (JIBC).

2.1.12 Northeast Regional Planning Council.

2.1.13 CSX Transportation.

2.1.14 Jacksonville Transportation Authority (JTA).

2.1.15 City of Jacksonville, Office of the Mayor.

2.1.16 City of Jacksonville Department of Neighborhoods.

2.1.17 Parks and Recreation Planning and Development.

2.1.18 Public Works Regulatory and Environmental Services.

2.1.19 Clay County Board of County Commissioners.

2.1.20 Baker county Board of County Commissioners.

Previous studies and reports were also reviewed and updated with information gathered from the meetings with stakeholders and public agencies whose interests and policies impact the site.

2.2 Location: As depicted in **Exhibit 2.1**, Jacksonville, which is located within Duval County, is located in northeast Florida along the Atlantic Ocean. The city center

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is located approximately 33 miles from the Georgia-Florida border. Cecil Field is positioned in the southwestern corner of Duval County with the airport's southern boundary abutting Clay County. The Cecil Commerce Center, an industrial park, is located along the airport's northwestern boundary. The airport property line is focused around the airfield and encompasses approximately 6,100 acres.

2.3 Political Jurisdictions: Several governmental bodies have jurisdiction within three miles of the Airport, as shown on **Exhibit 2.2**. These legislative bodies have zoning authority as well as other responsibilities. This section discusses the three entities that are responsible for land use in the vicinity of the Airport. Additionally, a brief description of the regional transportation agency is provided.

The Jacksonville Aviation Authority owns and operates Cecil Field as well as three other airports within the Jacksonville city limits. In 2001, the Florida state legislature created JAA from the former Jacksonville Port Authority. JAA is a political subdivision of the state, with powers that include implementing regulations and imposing user fees. The Authority is run by a governing board made of seven members—four appointed by the governor and three appointed by the Mayor of Jacksonville. The day-to-day management responsibility falls to an executive director and his staff. JAA has control over on-airport land use and works with neighboring governments to enact appropriate land use legislation for close-in areas.

The second political jurisdiction is the City of Jacksonville, which surrounds the Airport on three sides. In 1968, the City consolidated with Duval County to streamline governmental services. The City's consolidated government is organized with a mayor as the executive officer and a 19-member city council responsible for legislative matters.

Additionally, Clay County also has governmental authority over areas in close proximity to Cecil Field. Clay County is organized with a county manager who is appointed by the county council to execute legislation and handle operational issues. The council consists of five members who are elected from districts within the county for four-year terms, which are staggered.

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While not technically a governing authority, the decisions of the regional transportation planning organization do impact Cecil Field. As required by federal law, jurisdictions in the Jacksonville area participate in regional transportation planning. This is accomplished in the Jacksonville area through the First Coast Metropolitan Planning Organization (MPO). This MPO works to bring regional entities together to identify and prioritize needed transportation infrastructure. This regional approach provides a more accurate assessment of needed transportation improvements since people often live in one jurisdiction, while working in another. Coordination with this entity is important for JAA because having adequate vehicular access routes is vital to the Airport's long-term success.

2.4 Land Use:

Exhibit 2.2 illustrates the existing land use designations for areas within an approximate three-mile radius of Cecil Field. Off-airport areas fall under the jurisdiction of Clay County and the consolidated government of the City of Jacksonville-Duval County. The land use classifications shown in **Exhibit 2.2** reflect future planned uses that were determined by the local government through the comprehensive planning process. The developments that are allowed in each land use designation are controlled through zoning ordinances, which will be discussed subsequently.

Within the airport boundary, the City has designated two land use classifications. The first is a large multi-use area, which encompasses existing buildings, the airfield, and undeveloped areas. The second designation, located in the southwest quadrant of the airport property, is public facilities. This area was reserved during the Base Closure Study process for eventual use as an environmental mitigation area and for the development of community hiking trails. Land uses surrounding the Airport cover the full-range of traditional land uses. Agricultural uses predominate to the west whereas residential and commercial land uses dominate to the east of the Airport. Small pockets of recreational and light industrial uses also exist to the west. One of the main residential developments to the southeast is Oakleaf Plantation, which is a master planned community that includes residential, commercial, and public developments. Some of the residential areas east and south of Cecil Field are likely to experience frequent aircraft overflights. Directly south of Cecil Field is an area designated by Clay County as open space/recreational use. This area encompasses a portion of Jennings State Forest.

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To the north and northwest are additional public facility and multi-use land uses. Much of these areas lie with the Cecil Field Commerce Center, a designated industrial park. This park includes some commercial and manufacturing uses as well as some aviation and aviation support developments. There are some existing residential units (former military housing) within this boundary. The public-use area northwest of Normandy Boulevard encompasses the Jacksonville Equestrian Center and Cecil Recreation Complex and FCCJ's Cecil Field Campus. Additionally, a small amount of heavy industrial use borders the Commerce Center.

- 2.5 Zoning:** In addition to land use, the nearby political jurisdictions also implement zoning regulations, which provide the legal controls to the types of developments within each land use category. Additionally, zoning regulations also include items related to airports, mainly concerning height, noise, and safety standards.

The City of Jacksonville has enacted aviation-related zoning regulations in Ordinance Number 2006-1225-E, which pertain to both civilian and military airports within the city limits. These ordinances are published as Title XVII *Land Use*, Section 656 *Zoning Code*, Part 10 Regulations Related to Airports and Adjacent Lands Thereto. These regulations address height restrictions in the vicinity of the airports within city boundaries. These height regulations refer to Federal Aviation Regulation Part 77, which describe height restrictions in various areas around an airport. The City also has ordinances regulating land use related to airport noise. Table 656-2 outlines the types of developments which are allowed in different noise zones, such as Noise Notice Zone A which experiences noise ranging from 60-64.99 DNL, Noise Zone B which experiences noise from 65-69.99 DNL and Noise Zone A which experiences noise greater than 70 DNL. According to this Ordinance, a single-family dwelling is not allowed in Noise Zone A, but could be allowed if the residences are constructed with proper noise insulation. Additionally, landowners are required to submit a disclosure statement when selling land within any of the three zones. The City has established the Airport Noise Advisory Council to review airport noise issues and make recommendations to address them.

Clay County also has enacted aviation-related zoning through County Ordinance 85-87, as amended. These regulations set forth similar restrictions as those enacted by the City of Jacksonville, including the use of disclosure statements by

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property sellers. These regulations address land use restrictions related to accident potential zones (APZs), height restrictions, and noise impacts. Variances are handled slightly differently with the requestor applying to the board of adjustment. Clay County still refers to Cecil Field as “Naval Air Station Cecil Field”; however, the ordinance is written such that the applicability is based upon the use of the airport facility and not a classification imposed within the county zoning ordinance. Although for clarity the Clay County should amend their regulations to reflect the airport’s current name.

2.6 Transportation Infrastructure: Key to drawing future businesses to the area is the existing transportation infrastructure within the City, which includes three major interstates, a deep-sea water port, and three active rail lines. The availability of various modes of transportation for people and goods supports economic activity within the region. Brief descriptions of these regional transportation facilities are given below, including an approximation of their distance from Cecil Field.

2.6.1 Interstates and Highways: Major interstates and highways crossing the Jacksonville area that provide a north-south route are Interstate 95 and U.S. Highway 1. Both of these provide access along the eastern coast of Florida as well as into Georgia and coastal states further north. Interstate I-10 travels along the southern border of the U.S. in an east-west direction. It goes as far as California and terminates in downtown Jacksonville at its intersection with I-95. Outer areas of Jacksonville have convenient access via Interstate 295, which serves as an access loop, and intersects all three major U.S. highways discussed herein.

The airport is located just 5 miles south of Interstate 10. Improvements to Branan Field-Chaffee Road and the construction of New World Avenue are currently being constructed. These improvements will provide a four lane access between I-10 and Cecil Field. Access to I-10 is also provided by I-295, which can be reached by heading east on 103rd St. The Florida Department of Transportation is currently planning to make Branan Field Chaffee part of an outer beltway connecting to I-95 via the Shands Bridge, which is south of Green Cove Springs, to I-10 at the Branan Field Chaffee I-10 intersection. According to FDOT officials, the Right-of-Way has been acquired and surveyed. Currently, FDOT is scheduled to send a Request for Qualifications in October of 2008 to concessionaires to complete this link. FDOT anticipates a five year completion

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date for this portion of the beltway, once the contract is awarded. **Exhibit 2.3 –** FDOT Plan.

The agreement between the City of Jacksonville and the Florida State Department of Community Affairs states that “Notwithstanding and provisions of the Cecil Field Transition Element which references a limitation on average daily trips, the provisions of the Cecil Field Transition Element shall Allow for a level of trip generation from NAS Cecil Field equal to 4,785 external p.m. peak hour trips prior to evaluation in the City’s Concurrency Management System as to the level of service standards (King Engineering Cecil Commerce Center Concurrency Evaluation- Regulatory Review).” With the numbers of trips generated by existing occupants and the impacts from the construction of the Equestrian Center and Florida Community College’s Cecil Field Campus, the balance of the vested trips remaining is 4,294. The subject property is bounded and serviced by 103rd Street and Normandy Boulevard (both State Roads and currently are under FDOT jurisdiction) on the northern portions of the land controlled by the Jacksonville Airport Authority. Both Normandy Boulevard and 103rd Street are four-lane arterials divided by a median.

103rd which initially merged into Normandy has been reconfigured to terminate at New World Avenue. Normandy Avenue, which becomes a two-lane road immediately to the west of New World Avenue has a western terminus at State Road 301. Since the base closing, a number of DRIs have been established in the Cecil Field area that have reserved trips on both roads causing both to be graded lower than what is actually perceived.

2.6.2 Public Transportation: In response to meeting concurrency pressures imposed by these forces, the Jacksonville Transportation Authority has offered to create a Transit Hub in the area to alleviate potential traffic load on the road infrastructure. The JTA has been seeking creative solutions throughout the Jacksonville SMSA by creating Transit Oriented Developments (TOD) such as King Street Station, and developing multimodal facilities such as their current plan for the Prime Osborn Center which will combine passenger rail, commercial bus, and city transit systems. The JTA is currently reviewing ridership demands in Jacksonville in relationship with the new growth potential generated from Cecil Field (Exhibit 2.4). The location of a public transportation hub that serves both Cecil Field South and North as well as the Cecil Field Campus of FCCJ and the Equestrian Center that has retail support for all parties merits considerable attention if one intends to provide services for the region in a more holistic

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manner. JTA's interest in such a concept extends to the use of a shuttle service linking such a center with users in the surrounding area.

2.6.3 Sea Ports: The Jacksonville Port Authority operates three seaport facilities. In recent years, these facilities have handled 7.3 million tons of cargo, including 540,000 vehicles. The Port Authority has an on-going project to deepen the channel to 40 feet. Each of these port facilities is described below:

A. Talleyrand Marine Terminal: This is the closest port facility to Cecil Field. The drive time between these two facilities is estimated at 40 minutes to cover the 22.5 miles. The port facility is located along the St. Johns River approximately 21 miles from the Atlantic. This facility provides connections to the CSX, FEC, and Norfolk-Southern rail lines. The facility has 160,000 square feet of storage space, including some cold storage areas. It is part of Foreign Trade Zone No. 64. The facility handles most types of cargo, including containerized, break bulk, and liquid bulk commodities as well as vehicles.

B. Blount Island Marine Terminal: This is the closest terminal to the Atlantic, which is only nine miles east along the St. Johns River. It is approximately 35 miles from the Airport. The drive using existing roads from Cecil is estimated to take about 50 minutes. This port terminal serves as one of the largest vehicle import-export centers in the U.S. It also handles containerized, break bulk, and Ro/Ro materials. This terminal has a connection with the CSX rail line.

C. Dames Point Marine Terminal: This facility, covering 585 acres, is the newest of the terminal operated by the Port Authority. It is located west of and adjacent to the Blount Island facility. Therefore, travel distances and times between Cecil Field and this port terminal are similar to Blount Island. Carnival and Celebrity cruise lines began operations began in 2003 at a passenger terminal located on this site. In addition to the cruise activities, operations are currently limited to bulk cargo, such as limestone and granite. A connection with the CSX rail line is located onsite.

D. Future Growth: To the west of the Dames Point Terminal is a terminal facility that is being constructed to accommodate Mitsui O.S.K. Lines (MOL). Mitsui signed a thirty-year lease with JaxPort and intends on moving 360,000 to 800,000 containers annually through this port facility beginning operations in 2008. JaxPort has also signed a Memorandum of Understanding with Hanjin

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Shipping Company, LTD. To build a \$360 million, 170 acre container terminal, this will be the first dedicated terminal on the east coast for the company. JaxPort anticipates a \$1 billion dollar economic impact to the city with the creation of thousands of jobs. In anticipation of the increased demand on the road system serving these port facilities, JaxPort is currently planning to build an intermodal container transfer facility that will place one-third of the container load on rail.

2.6.4 Railways:

A. Operational and Competitive Situation: Jacksonville is served by two Class I Railroads, CSX Transportation and Norfolk Southern Railway (NS), and one Class II Railroad, the Florida East Coast Railway. Cecil Commerce Center is not presently served by any railroad. When Cecil Field was an active Navy facility a spur track extended south from the CSX mainline (Jacksonville Terminal Subdivision) near the Pope-Duval Park off Beaver Street. With decommissioning of the naval air station the line was deactivated and most of the track was removed. Large portions of the existing rail bed remain intact. Other portions have been replaced by elements of redevelopment on the portion of Cecil Commerce Center north of Normandy Boulevard. New World Avenue, south of Waterworks St., for example, occupies the former railroad right of way.

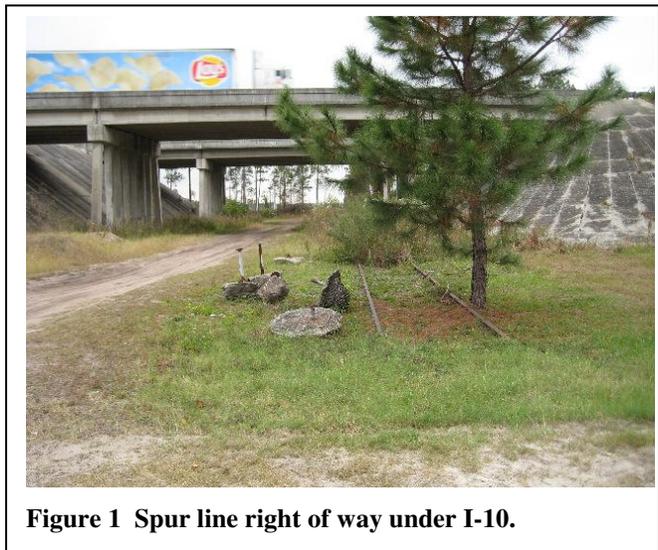


Figure 1 Spur line right of way under I-10.

CSX is acutely interested in Cecil Commerce Center North as an industrial site. In 2006, the railroad company hired McCallum Sweeney Consulting, a site selection and economic development firm, to identify and certify “Mega-Sites” for automotive plants. The firm classified 1,500 acres of the JEDC property north of Normandy Boulevard as “shovel-ready.”

For operational and economic reasons, the railroad is less interested in the property south of Normandy Boulevard. Extending the rail line into Cecil South would, at minimum, entail an at-grade crossing of at least four lanes of Normandy Boulevard. Assuming the rail line is reinstated north of Normandy Boulevard, an extension to the south could replicate the \$6.0-\$10.0 million

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estimated cost of restoring the line into Cecil North. These expenses would need to be amortized across what may be a thin traffic volume.

According to Norfolk Southern Railway industrial development officials, that railroad is five to six miles distant to the turnout from CSX's Jacksonville Terminal Sub to the spur at its closest point. Norfolk Southern has been developing its 5,000-acre Westlake Industrial Park on Pritchard Road, about four miles west of I-295 and two miles north of I-10.

NS has little interest in direct access to Cecil Field. The extension would need to overcome serious barriers, such as Cary State Forest, the U.S. Navy facility in Whitehouse, Beaver Street, and the CSX main line. The additional mileage would perhaps necessitate an entire full-day's workload for a crew and locomotive. This expense would need to be spread among the traffic originating and destined for Cecil. Absent development of a major industrial facility, such as an automotive plant, the need to recover this expense through rates would likely put NS at a competitive disadvantage to CSX and trucks.

The railroad also expressed a concern for upsetting the competitive equilibrium by intruding on what arguably could be called CSX's turf. Multiple rail lines, they argue, would be better for customers, but worse for railroads.

If the spur line into Cecil were reactivated, CSX would provide access to Norfolk Southern, Florida East Coast Railway, and other traffic through the interchange process.

B. Impact on Commerce and Business: The aviation-related businesses envisioned at Cecil Commerce Center south of Normandy Boulevard would rely heavily on high-valued, advanced-technology components that are unlikely to use rail, which typically accommodates shipments of low-valued bulk commodities.

There are exceptions. Intermodal shipments on flatcars of products in containers or trailers are frequently competitive with trucks in terms of transit time. Railroads also continue to do a lucrative business carrying new automobiles by adapting their equipment to provide a protected environment. Railroad companies welcome movements of specialized shipments that are too high, wide, or heavy to be accommodated on roadways. Such movements are

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typically more labor-intensive than typical railroad moves and may require specialized equipment, such as articulated schnabel cars. For railroads, the revenue and contribution to fixed costs attributable to such movements are higher than with more typical traffic.

The portion of Cecil Commerce Center north of Normandy Boulevard is expected to accommodate a mix of industrial customers, including the Bridgestone-Firestone plant, already under construction. Such customers are more prone to using rail. The location near CSX's mainline would facilitate efficient rail service.

The 21.5-23.0-foot clearances found on CSX may enable aviation-related customers south of Normandy Boulevard to handle inbound loads consisting of aviation parts, such as fuselages, that may be unfeasible on all-highway moves. However; the likely infrequency of such specialized movements, coupled with the capital cost of extending the rail line south of Normandy Boulevard, argues for planning to accommodate such traffic with rail-to-truck transfer at a rail support yard located in the central part of the JEDC portion of Cecil Commerce Center. Under this scenario, ultimate delivery would be over the road to the manufacturing facility south of Normandy Boulevard.

As both the northern and southern components of Cecil Commerce Center are developed, it would be prudent to provide easements which would leave the door open to future rail operations. Likewise, given the possibility that inbound shipments to facilities south of Normandy Boulevard may be high, wide, or heavy, the roadway network, traffic signals, and utilities on both sides of Normandy Boulevard should be designed to accept oversized loads. For example, New World Avenue, the principal road in and out of Cecil Commerce Center, has been designed with traffic lights positioned at 17 ½ feet. High loads on flatbed trailers may require their modification.

C. Frequency, Level of Service, Hours of Operation: The level of rail service to Cecil Commerce Center would largely be a function of the nature and volume of service required. Specialized shipments of oversized airplane parts coming from the port would likely arrive in pulses as ships arrive. These movements are handled in small increments and at slow speeds.

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Traffic increases and diversions of traffic from CSX's "A" Line (between Jacksonville and Sanford, Florida) to its "S" line (between Baldwin and Wildwood) leave its Jacksonville Terminal Subdivision nearly at capacity. The proposed intermodal logistics center in Winter Haven should reduce traffic flowing through Jacksonville, ameliorating this situation.

On the other extreme, high-speed unit train service would be possible for large-scale manufacturing operations using bulk materials or producing automobiles and requiring or generating trainload quantities of inputs or products. Neither is anticipated for the JAA portion of Cecil Commerce Center. Blocks of standard railcars should be handled by CSX in merchandise trains operating out of Moncrief Yard in Jacksonville.

2.7 Landside and Support Facilities: This section describes the landside and support facilities at Cecil Field, including tenant buildings, the fuel farm, and the control tower. Some of these facilities were in poor condition when control of the Airport was transferred to JAA. Many of the oldest structures had lead paint and asbestos and were in need of roof repairs. Additionally, some facilities required upgrades to meet current federal, state, and local regulations related to handicapped accessibility and other building codes, including electrical standards. These improvements were necessary before the Aviation Authority could lease them. **Exhibit 2-7** identifies many of these landside and support facilities.

2.7.1 Tenants: JAA leases most of the current structures located along the two flightlines to various companies and government organizations. Photos of many of the tenant facilities are shown in **Exhibit 2-8**. Many tenants also lease the smaller buildings located near their primary facility. Tenant locations and activities are briefly described below:

A. Airborne Tactical Advantage Company (ATAC): ATAC provides a growing fleet of tactical aircraft and services to the US military, including outsourced airborne tactical training, threat simulation, and research & development. ATAC sub-leases the southern quarter of Hangar 825 from Boeing.

B. Air One: Air One is a full service FBO. Currently, they do not conduct maintenance activities but are planning on offering this service once their new hangar is built. The future plans call for a 30,000 square foot hangar with a 4,000

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square foot FBO administrative office structure attached. This building will be located at a site north of their existing facility. Five thousand square feet of the aircraft storage portion of the structure will be dedicated to aircraft maintenance. Air One has constructed a 90,000 gallon fuel farm. Even though the company sees a strong market for accommodating piston driven aircraft in the region, they do not see this as part of their overall business plan. Rather, they see their role as support to the MRO and air cargo activity anticipated at Cecil Field in the future.

C. Boeing Company: In 1999, Boeing opened its Aerospace Support Center–Cecil at the Airport. Currently, Boeing leases three hangars (67, 825, and 1820,) out of which they have performed maintenance and modifications to F-18 Hornet, aircraft. These three hangars have a total area of approximately 385,000 square feet (SF). Boeing also leases 600,000 sf of ramp space located in front of these hangars.

Boeing and Alenia Aeronautica have been contracted to build the C-27J Spartan and have agreed to assemble the aircraft at Cecil Field. Prospective sites for this facility are being discussed with Boeing.

D. Flightstar: In 2004, Hangar 815 underwent expansion modifications to provide additional floor space and to accommodate tail sections of aircraft. Flightstar currently leases this hangar where they provide maintenance, overhaul, and repair services, converting commercial passenger aircraft to air cargo. The company has performed these services on B727, B737, B757, DC9, and MD80 aircraft. Currently, Flightstar employs approximately 600 persons, of which 75% are permanent staff positions and 25% are itinerant contract labor. The company currently contracts housing for the itinerant labor force with local budget motels. Additionally, on any given day there are 50 to 60 customer representatives on the site which creates a need for extended stay lodging. Current forecast indicates the need to double the size of the existing facility.

E. Florida Army National Guard: A helicopter unit of the state's National Guard is based at the Airport. This unit currently stores multiple CH-47 and H-60 helicopters in Hangar 860, with 84,000 sf. The Army National Guard will be construction a new facility to the west of Hangar 860 (**See Exhibit 2-9**). Building 858 is used for training rooms and offices.

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F. Florida Community College at Jacksonville: In 2007, the college completed Phase One of the Cecil Field Campus, a new 46,000 square foot, two story classroom building. Students can focus on aviation management or aircraft maintenance as well as flight training. The master plan for the campus includes five additional core campus buildings, and auditorium, observatory, veterinary facility, large animal clinic, and commercial vehicle training facility. The Cecil Field Campus is located on the northwest corner of the New World Avenue and Normandy Boulevard intersection (**See Exhibit 2-10**). FCCJ has its Aviation Center of Excellence on property that it leases from the Jacksonville Aviation Authority, on airport property south of Normand Boulevard. The center is comprised of two classroom buildings fronting Lake Fretwell Road and Hangar 14, which the college shares with Homeland Security. (**See Exhibit 2-10**) FCCJ and the Jacksonville Airport Authority are currently requesting proposals for a new paint hangar facility that will be located on the northeast taxiway of runway 18/36. The facility will be a two phase development comprised of two 81,000 square foot hangars (**See Exhibit 2.12**).

G. Jet Turbine Services, Inc.: This firm provides overhaul and maintenance services on aircraft jet engines. Jet Turbine Services operates from Building 313. This 56,100 square foot facility does not have direct access to the apron.

H. Logistics Services International (LSI): This firm provides maintenance, repair, and overhaul services from Building 824. Additionally, LSI provides training services to the aerospace and security industries from a facility in the Cecil Commerce Center. LSI plans on relocating administrative offices from the Lake Gray facility to Cecil which will require a 13,500 square foot addition to the existing structure.

I. Fleet Readiness Center, Southeast (FRC SE): FRC SE, previously known as NADEP, provides F-18 modifications for the US Navy. They operate a satellite hangar, Hangar 1845, at Cecil Field with the main hangar at NAS Jacksonville.

J. Robinson VanVuren & Associates (RVA): This firm is responsible for providing air traffic control services as part of the FAA's Contract Tower Program. This facility is considered a Level 1 Tower, which includes airports with low activity levels. RVA operates from the air traffic control tower (ATCT)

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that is located within the terminal building (#82). The ATCT is operational daily from 7 a.m. to 9 p.m.

K. Signature Flight Support: This company serves as the Fixed-Base Operator (FBO) at the Airport. This FBO provides aviation fuel, aircraft parking, hangars, oxygen service, pilot services, and limited catering. Signature moved into the completed terminal in October 2004.

L. L-3 System Corporation: Titan offers communication and informational system services with a focus on national defense issues. This firm operates from Building 887.

M. Homeland Security: This federal agency shares Hangar 14 with the Florida Community College using this facility as offices and shop space for maintenance of its P-3 Orion fleet. They currently have a ten year maintenance contract with a company out of New York for major maintenance and overhaul of the aircraft based at Cecil. There is no Aircraft storage provided except for a fabric structure that was erected on land that is leased from Signature. Plans are for six to eight P-3 aircraft to be based at Cecil resulting in a need for a hangar facility that could store at least two aircraft.

N. United States Coast Guard: This Department of Homeland Services unit operates a fleet of HH65 Dolphin helicopters from Hangar 13. They are also currently rehabilitating Hangar 1846 to be used for office and administrative space.

O. Leased Apron Space: Exhibit 2.13 illustrates apron space that JAA is currently leasing to its tenants and should be considered in planning future expansion.

2.7.2 Support Facilities: Most airports have several facilities dedicated to support activities. At Cecil Field, these support capabilities include airport administration, an electrical vault, emergency response units, a control tower, and fuel farm.

A. Aircraft Rescue and Firefighting Facility: Building 72 houses an onsite Aircraft Rescue and Firefighting (ARFF) unit. This facility is a joint-use operation with the City of Jacksonville. Firefighters stationed at this facility are trained to

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respond to aircraft incidents. The unit has three ARFF vehicles as well as more traditional structural units. These vehicles are stored in the four vehicle bays in the building. The structure is of concrete block construction and has approximately 8,000 square feet of space.

B. Air Traffic Control Tower: As noted in **Section 2.2.1**, Cecil Field has an onsite air traffic control tower (ATCT). This facility is located near the intersection of the inboard runways in Building 82.

C. Electrical Vault: Building 83 serves as the airfield electrical vault. It houses multiple regulators for the various lighting, signage, and NAVAID equipment located on the airfield. It also houses a generator to provide power to these circuits for a limited time as needed. Equipment in the vault has been and will continue to be upgraded in conjunction with airfield electrical upgrade projects.

D. Fuel Farm: Two fuel farms currently serve Cecil Field. The first fuel farm, operated by Signature, is located north of the terminal building. Currently, three aboveground storage tanks (ASTs) are located at this site. Two tanks have capacities of 12,000-gallon whereas the capacity of the third tank is 20,000 gallons. All three tanks store Jet A fuel. Signature



Fuel farm

operates several trucks to deliver fuel to users. Air One FBO also has a second fuel farm. Additionally, the Aviation Authority also has a small self-serve fuel area for unleaded and diesel fuel. These are used by airport staff to fuel airport service vehicles. This fueling area is located north of the aviation fuel farm within the airfield perimeter fence

E. Airport Administration: JAA has a staff dedicated to managing Cecil Field. This staff includes an airport manager, administrative support staff, operations personnel, and facility maintenance. Since the completion of the terminal renovations in October 2004, staff has moved into their permanent location in Building 82.

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F. Primary Access Roads: Exhibit 2.14 identifies major roadways near Cecil Field. Users access the Airport by traveling through Cecil Field Commerce Center, which has two entrances off of 103rd Street. This road is also designated as County Road 29 and provides a direct connection to I-295 and the downtown area. Located just north of 103rd Street is Normandy Boulevard, which is also known as State Road 228. This road runs along the northwest corner of the Commerce Center and provides access to and from Interstate 295, which is approximately seven miles from the Airport area. Chaffee Road currently provides the most direct connection to Interstate 10. Interstates 10 and 95 can easily be accessed from the Interstate 295 loop. Additionally, Interstate 10 provides a connection to Interstate 75, which is located approximately 66 miles west of Jacksonville. Other roads near the Airport are Bell Road located to the west and Brannan Field-Chaffee Road on its eastern border. The short-term transportation improvement plan for the Jacksonville area shows improvements slated to widen Brannan Field-Chaffee Road and to construct a new intersection at Interstate 10, scheduled to be open Fall 2009. This improvement will significantly increase ground access for Cecil Field.

G. Perimeter Fencing: A six-foot high chain-link fence encompasses the majority of the airport boundary. Additionally, a fence is located along the east side of the airfield inside of the outer perimeter fence. This interior fence functions to segregate the Air Operations Area (AOA). Vehicular and pedestrian gates are spaced periodically to allow the passage of individuals who have been granted the authority to enter these areas. As the property is further developed with uses other than aviation consideration need to be given as to how aviation functions are segregated from non aviation uses.

H. Utility Infrastructure: The multiple buildings at Cecil Field require traditional utility services, including the provision of water, sewer, power and natural gas services. Additionally, stormwater management conveyance systems have to be adequately sized to handle runoff from precipitation events. This section briefly describes the existing utility infrastructure at the Airport. It should be noted that this infrastructure is concentrated along the developed flightline areas, with only limited services in the eastern section of the airport property.

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I. Water, Sewer, & Power: Since the Navy turned over ownership of the property to the Aviation Authority, the Jacksonville Electric Authority (JEA) has assumed control of the water, sewer, and power utilities on airport property and within Cecil Commerce Center. JEA has installed approximately \$50 million of infrastructure, primarily in the southwest quadrant of the site (see Exhibits 2.15-2.17). JEA operates an onsite water and sewer treatment plant in the Commerce Center and is planning to build a substation to the northwest of runway 18/36 as a means of serving property to the east of the runway. Exhibit 2.25 illustrates water, sewer and electrical power service along 103rd Street.

Directly tied to the provision of water services, is the ability to provide adequate fire protection in aircraft hangars. In some existing facilities, fire protection capability is somewhat limited. Since taking control of Cecil Field, the Aviation Authority has undertaken a multi-phase project to improve the existing fire loop, which provides water to the various hangar fire suppression systems. The final phase of this project was completed in 2007.

J. Natural Gas: TECO Gas provides natural gas service to facilities at the Airport. The main service lines run along airport's border with the Commerce Center. JAA utilizes natural gas to power some boiler systems.

K. Stormwater Facilities: Runoff from airport areas is routed and contained in multiple stormwater management facilities. These facilities include a series of inlets and outfalls connected via underground pipes and ditches. In the recent past, some drainage failures have been observed under airfield pavement. A major capital program is underway to repair/ replace failing drainage pipes. The advanced aging is not totally unexpected as many of these facilities were installed over 60 years ago.

2.8 Environmental Overview:

2.8.1 Introduction: To obtain the information required for the environmental analysis portion of this Master Plan Update, the following references were reviewed by AVCON:

- NAS Cecil Field Final Base Reuse Plan (February 1996).
- Northeast Florida Aviation System Plan and Cecil Field Airport Feasibility Study (July 1997).
- Marketing Analysis for the Reuse and Development of NAS Cecil Field (July 1997).

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- Transportation Supplement to the NAS Cecil Field Base Reuse Plan (September 1997).
- COJ Ordinance 97-1064-E (November 1997).
- Memorandum of Agreement between COJ, JPA and SJRWMD to establish Cecil Field Wetland Mitigation Plan and “Natural and Recreation Corridor” (March 1998).
- 2010 Comprehensive Plan NAS Cecil Field Transition Element (May 1998).
- COJ Ordinance 98-225-E (June 1998).
- Cecil Field Strategic Airport Master Plan (October 1998).
- Final Environmental Impact Statement, Disposal and Reuse of NAS Cecil Field (October 1998).
- COJ Resolution 1999-94-A (February 1999).
- Environmental Baseline Survey for Transfer, Jacksonville Port Authority, Volume II (August 1999).
- Avigation Easement to Jacksonville Port Authority from United States of America (September 1999)
- Quitclaim Deed for Economic Development Conveyance to COJ (October 1999).
- Approval of Vested Property Affirmation Certificate (VPAC #23631) (December 1999).
- Conceptual Forest Management Plan for Cecil Field by the Florida Department of Agriculture and Consumer Services Division of Forestry (December 1999).
- Perpetual Easement for FDOT (January 2000).
- Cecil Field Natural and Recreational Corridor Management Plan (March 2000).
- Environmental Baseline Survey for Transfer, Economic Development Conveyance (EDC) Parcel, Volume I (May 2000).
- Quitclaim Deed for Economic for Economic Development Conveyance to COJ (September 2000).
- Cecil Field Commerce Center Business Plan (September 2000).
- Grant of Easement for Bellsouth Telecommunications (December 2000).
- Cecil Commerce Center Master Stormwater Management Plan, Volume I (March 2001).
- Stormwater Pollution Prevention Plan (Draft) for Cecil Field Airport, Jacksonville, Fl. (November 2006).
- Cecil Commerce Center Master Stormwater Management Plan, RAI Response (July 2001).

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- Cecil Commerce Center Master Stormwater Plan SJRWMD Permit #4-031-70452-1 (November 2001).
- COJ Resolution 2002-296-A (April 2002).
- COJ Resolution 2002-340-A (May 2002).
- COJ Resolution 2002-341-A (May 2002).
- COJ Resolution 2002-441-E (May 2002).
- Fish and Wildlife Service Review of Projected Plans (May 2002).
- Agreement between the DCA and the COJ regarding Cecil Commerce Center and Cecil Airport (August 2002).
- Ordinance 2002-669-E (August 2002).
- Ordinance 2002-670 (August 2002).
- Public Health Assessment, NAS Cecil Field (September 2002).
- Division of Historical Resources, Project File Number 2003-2721 (April 2003).
- EPA Superfund, Explanation of Significant Differences (October 2003).
- Grant of Easement for JEA (November 2003).
- Memorandum of Agreement Allocating U.S. Army Corp of Engineers Wetland Credits, Mitigation and Creation at Cecil Field (August 2004).
- Intergovernmental Management Agreement (September 2005).
- INM noise contour files and noise contour maps from Reynolds, Smith & Hills (January, 2006).
- Munitions Response for Site 1, Hangar 860, CH2MHILL Constructors, Inc (December 29, 2006).
- Resolution 2007-579, 2007B Series Text Amendment, City of Jacksonville 2010 Comprehensive Plan, Future Land Use Element.
- First Coast Metropolitan Planning Organization, Transportation Planning, www.firstcoastmpo.com.
- Official Website of the City of Jacksonville, www.coj.net.
- Official Website of Clay County, www.claycountygov.com
- Cecil Field Master Plan Update, AVCON, Inc., 2007.

Since the primary function of the property is that of an airport, the initial AVCON analysis of the environmental condition pertaining to the airport's development was written in relation to the impact categories as outlined with the FAA Airport Environmental Handbook has been maintained. These categories consist of the following:

- Noise.
- Compatible Land Use.

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- Social Impacts.
- Induced Socioeconomic Impacts.
- Soil and Groundwater Contamination.
- Air Quality.
- Water Quality.
- Department of Transportation (DOT) 4(f) Lands.
- Historic, Architectural, Archaeological and Cultural Resources.
- Biotic Communities including Flora and Fauna.
- Endangered and Threatened Species.
- Wetlands.
- Tree Mitigation.
- Floodplains.
- Coastal Zone Management Program.
- Coastal Barriers.
- Wild and Scenic Rivers.
- Prime and Unique Farmlands.
- Energy Supply and Natural Resources.
- Light Emissions.
- Solid Waste Impacts.
- Construction Impacts.

The sections on Soil and Groundwater Contamination and Tree Mitigation were not included in the FAA Airport Environmental Handbook but were included due to their relevance in this environmental overview.

2.8.2 Noise: Noise is defined as “undesirable sound” and is one of the major concerns of both airport owners and airport neighbors. Various methods, known as metrics, have been developed to measure sound. Overall, sound is measured in decibels (dB). Aircraft sound levels are also measured using the A-weighted decibel scale (dBA). This noise metric was developed because it approximates how the human ear hears sound.

Aircraft noise, while measured in dBA, is a cumulative measurement over a 24-hour period based on annual traffic activity which is referred to as the average day-night sound level (DNL).

DNL is the equivalent sound level over a 24-hour period, except that noises occurring at night (defined as 10:00PM through 7:00AM) are artificially increased by 10 dBA. This weight reflects the fact that noise is perceived to be more

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bothersome to the community during these hours. This measurement is also referred to as (L_{dn}). The EPA identified DNL as the most appropriate means of evaluating airport noise (from "Information on Levels of Environmental Noise Requisite to Protective Public Health and Welfare with an Adequate Margin of Safety," U.S. EPA Report No. 550/9-74-004, September 1974). Most other public agencies dealing with noise exposure, including the FAA, the Department of Defense (DOD), and the Department of Housing and Urban Development (HUD), have formally adopted DNL. FAA requires that DNL be used in describing cumulative noise exposure and in identifying aircraft noise/land use compatibility issues.

The Noise Pollution and Abatement Act of 1972 (also commonly known as the Noise Control Act of 1972) is a statute of the United States initiating a federal program of regulating noise pollution with the intent of protecting human health and minimizing annoyance of noise to the general public.

The effects of noise are seldom catastrophic, and are often only temporary; but adverse effects can be cumulative with prolonged or repeated exposure. Sleep disruption, the masking of speech and television, and the inability to enjoy one's property or leisure time, impair the quality of life. In addition, noise can interfere with the teaching and learning process, disrupt performance of certain tasks, and increase the incidence of antisocial behavior. There is some evidence that noise can adversely affect general health and well-being in the manner as chronic stress. (WHO, 1999; Passchier-Vermeer and Passchier, 2000).

A primary element in the environmental analysis of the Master Plan for Cecil Field is the development of the existing and potential noise contours over the 20-year planning period. Many processes are used to determine the noise contours including the use of existing and forecasted airport operations, change in type of aircraft that use the airport, and changes in airfield configuration. These assumptions are then used in the Federal Aviation Administration's (FAA) Integrated Noise Modeling (INM) software which generates the noise contours using these variables.

Changes in the amount and the type of aircraft play a significant role in the development of the noise contours. The addition, removal, or modification of a runway, or change in the type of approach will all affect the noise contours generated for an airport. Because the airport improvement strategy for Cecil Field involves shortening the two inboard runways and constructing an

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additional runway to the east, the changes in the airfield configuration will significantly impact the noise contours for Cecil Field as these improvements are implemented. **Exhibits 2.18 and 2.19.**

The noise contours developed in the INM are important tools in long-term protection against incompatible land uses around the airport. The contours are used to formally define areas that are compatible and non-compatible with the airport generated noise based on average noise exposure. The Airport Layout Plan and this narrative report should be coordinated with the City of Jacksonville and with neighboring Clay County to ensure that existing and planned airport facilities are considered in local planning documents and that airport operational capabilities are preserved through local land use controls. The City of Jacksonville has incorporated zoning controls related to Airports and Lands Adjacent Thereto in Part 10 of the City Code. While the current code has set a community standard that allow residential development in the 65 DNL contour it does require notice to property owners and increased noise attenuation within the structure. The City and the JAA recently completed a revision to Part 10 of the COJ Zoning Code recognizing noise impacts to the 60 DNL contour and increasing enforcement of the notice provision for properties within the 60 DNL and above noise contours. This revision was enacted on March 27, 2007 under Ordinance 2006-1225-E. A summary of the Part 10 revision relating to allowable land uses for noise zones is presented in **Exhibit 2.20.**

A Rural Residential Land Use classification currently exists just south of the proposed runway. As seen on **Exhibit 2.19**, part of this development lies inside of the 65 DNL noise contour. The JAA needs to work with the City to reduce this type of incompatible development.

Under FAR Part 150, FAA requires that the 65, 70 and 75 DNL contours be modeled and depicted on a Noise Exposure Map (NEM). Of these three categories, the 75 DNL noise contour reflects the most severe impact, while the 65 DNL noise contour reflects the least.

Human tolerance to noise has been determined to be below 65 DNL and land areas outside the 65 DNL noise contours are considered to be compatible with airport activities. At or above 65 DNL, measures should be taken to mitigate sound to limit or eliminate interference with human activities. Residential and

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some business and commercial development are normally not compatible with the 65 to 75 DNL noise contour unless soundproofing or other mitigating actions are implemented. Above 75 DNL, it is recommended that the airport own or control the land through an aviation easement to ensure compatibility is maintained.

Additional restrictions on development are illustrated in the Building Height Restrictions around the airport (**Exhibit 2.21**)

In September 1999, an aviation easement was granted to the Jacksonville Port Authority, now the JAA. This easement states that the JAA has a right of flight for the passage of aircraft in the airspace above the property illustrated in **Exhibit 2.22**. Also, with respect to the City parcel around the airport, natural growth and other obstructions will be limited to 215 feet as to comply with Federal Aviation Regulation, Part 77. Additional easements have been granted to several agencies in order to provide access to Cecil Field. On December 17, 1999, the Jacksonville Energy Authority (JEA) was granted an easement for utilities along 103rd Street. On January 13, 2000, the FDOT was granted an easement in the Northeast corner of the airport property for Branan Field Chaffee Road, presented in **Exhibit 2.23**. On December 1, 2000, Bell South was granted a 30ft by 30ft easement located approximately 100ft southeast of the intersection of Lake Fretwell Street and Aviation Avenue, illustrated in **Exhibit 2.24**. On November 14, 2003, the JEA was granted easements along the eastern transmission corridor and the Aviation Avenue utility corridor. The JEA easements are depicted in **Exhibit 2.25**.

According to the Final Environmental Impact Statement, noise from Cecil Field comes primarily from military/civilian aircraft, traffic, industrial operations, and construction and demolition services. As a public use airport, the projected 2024 noise exposure levels are expected to decrease in some areas due to the use of improved technology, known historical trends in airport operations by aircraft type and quieter civilian aircraft. However, the addition of runway 17-35 will increase the affected 65 DNL contour areas dramatically. The 2024 projected 65 DNL level extends short of Branan-Field/Chaffee Road to the east. It extends past (from Runway 18-36) and short (from proposed runway 17/35) of Normandy Blvd to the north. The contour line extends about 7,000 feet west of the westernmost property line, and about 3,000 feet past the southern most property line.

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The western and southern portions within the 65 DNL noise contour line extend into Recreational/Open Space and Agricultural land use. The land uses contained in the northern contour lines involve Multi Use, Light and Heavy Industrial and Rural Residential. The eastern lines contain Low Density and Rural Residential, Conservation, and Recreation and Open Space. **Exhibit 2.19** shows the current and projected 2024 65 DNL contour lines.

2.8.3 Compatible Land Use: Land Use maps are created by governing agencies to control the types of future development which are allowed in different locations. These controls are established to provide compatible land areas for the development of business districts, residential subdivisions, entertainment sectors, commercial and other development alternatives. Zoning maps are created for similar purposes but are established to control current developments. Future Land Use and Zoning must be used together to control development, which is an important factor in sustaining and developing airports. The land surrounding an airport must be compatible with airport operations. Steps must be taken by airports to ensure the surrounding lands have compatible Land Use and Zoning classifications to avoid current and potential development issues.

Section 163.3177(6) (j), Florida Statutes requires that local comprehensive plans provide for land use compatibility around existing and planned airports. It is required by the FAA that airports and airport authorities seek compatible uses for property surrounding the airport and this can be accomplished through zoning and municipal planning efforts.

Exhibit 2.26 illustrates the current Land Use map for Cecil Field.

2.8.4 City of Jacksonville Land Use: The map generated from the City of Jacksonville's Geographic Information System (JaxGIS) identifies the land surrounding Cecil Field as Multi-Use (MU). In August 2002, the City of Jacksonville enacted Ordinance 2002-669 which changed the future land use designation for approximately 10,385 acres of Cecil Field from Public Buildings and Facilities (PBF) to MU.

Additionally, Ordinance 2002-670 adopted the 2002B Series of Semi-Annual Text Amendments to the City 2010 Comprehensive Plan. This included designation of the uses within the MU land use category, which are as follows:

- Business Park (BP).

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- Community/General Commercial (CGC).
- Conservation (CSV).
- Heavy Industrial (HI).
- Low Density Residential (LDR).
- Light Industrial (LI).
- Medium Density Residential (MDR).
- Neighborhood Commercial (NC).
- Public Buildings and Facilities (PBF).
- Recreation/Open Space (ROC).

Upon approval by reviewing agencies, the ALP set and this narrative should be coordinated with the Duval and Clay County planning departments and the City of Jacksonville to ensure that existing and planned airport facilities are considered in local planning documents and airport operational capabilities are preserved through local land use controls. Of particular importance is the preservation of the imaginary three-dimensional surfaces, defined by Federal Aviation Regulations Part 77 and illustrated in the ALP set, and the airport runway protection zones located at each existing and planned runway end.

Clay County is encouraged to update its codes and regulations to comply with the requirements of Chapter 333, Florida Statutes (F.S. 333) for protecting airports from incompatible development and loss of navigable airspace. Resolution 2007-579, 2007B Series Text Amendment, City of Jacksonville 2010 Comprehensive Plan, Future Land Use Element, has been adopted to protect airports and other industrial areas from incompatible land uses. The text adopted under Resolution 2007-579 is pending enactment under Ordinance 2007-1075. If Ordinance 2007-1075 is enacted by the City of Jacksonville, the text of the Future Land Use Element will be amended. This resolution states that where incompatible land uses exist in proximity to airports, the City of Jacksonville will support changes to the Future Land Use Map or rezonings to replace incompatible land uses with compatible uses. This resolution also states that the City shall update its land development regulations to ensure compatible land uses near airports and that new incompatible uses such as residential use and places of public assembly shall be limited. The City of Jacksonville recently adopted several ordinances amending Part 10, Chapter 656 of the City of Jacksonville Municipal Code to ensure compatible land use around the airport, such as Ordinance 2007-727-E and pending Ordinance 2007-1048.

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Currently, the City of Jacksonville Ordinance Number 91-59-148 § 1, published as Title XVII Land Use, Section 656 Zoning Code, Part 10 Regulations Related to Airports and Adjacent Lands Thereto categorize Cecil Field as a military airport. This code has been updated in Ordinance 2006-1225-E which classifies Cecil Field as a civilian airport. The City of Jacksonville's concurrency management office looks to the Jacksonville Economic Development Commission (JEDC) for all land use control and vested trips for both the City and Airport property. For this reason, the JAA needs to continue to work with the City and JEDC concerning the improvements outlined in this Master Plan. Many changes have taken place to the land uses involving Cecil Field since the initial land use analysis produced by the JEDC as illustrated in **Exhibit 2.27**.

A. City of Jacksonville Zoning: According to Ordinance 97-1064-E, the City of Jacksonville/Duval County rezoned Cecil Field from PBF-1 to PUD (Planned Unit Development) zoning in November 1997 based on the Cecil Commerce Center Business Plan. **Exhibit 2.26** illustrates the Ordinance 2002-670, adopted by the City in 2002, amended the COJ 2010 Comprehensive Plan to include designation of the uses within the Multi-Use Land Use category, deletion of the Cecil Field Transitional Element and incorporation of the relevant sections of the Transition Element into applicable sections of the COJ 2010 Comprehensive Plan. The Ordinance also establishes the JEDC and the JAA as local points of contact for development of their respective properties, establishes a specialized concurrency management system for Cecil Field and the Cecil Commerce Center and requires a Chapter 163 agreement between COJ, DCA and FDOT prior to implementation of the specialized concurrency management plan system.

The JAA needs to continue to work with the City to ensure that the development proposed in the Cecil Field Airport Master Plan is reflected in the Cecil Field PUD land uses, the MU zoning and the Concurrency Management System.

B. Clay County Land Use and Zoning: The southern boundary of Cecil Field lies on the county line between Duval and Clay County. The Land Use and Zoning classifications in Clay County could impact current and future development at Cecil Field. The current landuse map for Clay County is presented in **Exhibit 2.27**. A more detailed master plan of the Branam Field development is illustrated in **Exhibit 2.29**. A potential incompatible development planned in Clay County could lie within the 60 DNL noise contour, which is restricted under Ordinance 2006-1225-E. The forest/silviculture area of Oakleaf Plantation, located within the Villages of Argyle, is planned just southeast of

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Cecil Field and could lie within the proposed Runway 17-35 60 DNL contour line, see **Exhibit 2.18**. The JAA needs to work with the City to enact land use changes in this area in order to preserve the ability to construct this proposed runway in the future.

C. Cecil Field Business Plan: In 2000, the Jacksonville Economic Development Commission (JEDC), the City entity responsible for the redevelopment of the City owned property of the former NAS Cecil Field, began to develop the Cecil Commerce Center Business Plan. The Cecil Commerce Center Business Plan took the direction of the 1996 Base Reuse Plan and developed an implementation plan for the Cecil Commerce center that also intertwined land use and zoning designations that impacted the Cecil Field Airport property. These uses are not always consistent with the development proposed in the JAA Cecil Field Airport Master Plan.

The Business Plan proposed a parcelization plan for the North and South development areas of Cecil Field Commerce Center. There was an additional parcelization plan that was developed for the Cecil Field Master Stormwater Plan that included the JAA airport development. JEDC has abandoned parcel plan.

The land uses proposed in the Cecil Commerce Center Business Plan were also used to address vested trip concurrency and future development concurrency plans. In both of these areas, Storm Water and Concurrency, the impact of the JAA Strategic Airport Master Plan was not fully factored into the analysis.

Based on the Business Plan, the City adopted several Ordinances relating to the development of the Cecil Commerce Center and the Cecil Field Airport. Ordinance 2002-669 and 2002-670 were described above. Ordinance 2002-441-E adopted an agreement between COJ and DCA signed on August 7 2002 that concerned development at both the Cecil Commerce Center and Cecil Field Airport. Development Potential for the Preferred Reuse of Cecil Field, was developed from multiple sources including the above ordinances and provides the permitted development potential for both the Cecil Commerce Center and the Cecil Field Airport. Several elements of the COJ/DCA agreement are still being developed, particularly concerning land uses and concurrency. At this time it is understood that the Department of Community Affairs for the State of Florida has an optional process to remove Redevelopment Plans for Military Base Closures from the Development of Regional Impact (DRI) process where the

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overall development plan is consistent with local (City of Jacksonville) comprehensive plans. Current discussions with the City of Jacksonville Planning Department have brought up additional methods to alleviate traffic pressures placed on area as created by the trips reserved by the recent residential development in the area. The Planning Department believes that if the transportation hub concept expressed earlier in the study comes to fruition, the area can be designated as a Multimodal Transit District, crediting the area in trips generated in the final build-out. Another concern that the Planning Department has is the number of trips reserved by the various DRIs that have been planned but have not currently been realized due to the recent economic downturn in the residential market. One possible solution would be the establishment of a Transportation Concurrency Management Area that acknowledges the need to maintain trips for Cecil due to the fact that the area is an economic engine that is critical to the growth of the city.

JAA must continue to work closely with the City to ensure that land uses, concurrency requirements and storm water plans support both the City development of the Cecil Commerce Center and the JAA development of the Cecil Field Airport.

2.8.5 Social Impacts: The purpose of a social impact analysis is to determine the effect of airport development on the human environment. The types of social impacts that generally result from airport development include:

- A. Alterations in transportation patterns.
- B. Disruption of established communities.
- C. Relocating residencies and/or commercial businesses.
- D. Disruption of orderly, planned development.

2.8.6 Alterations in Transportation Patterns: Florida State Law, Chapter 163, Part II, Florida Statutes and Rule 9J-5.0055 requires that public facilities and services needed to support development must be available concurrently with the impacts of such development. In May 1998, the Cecil Field Transition Element states that development and/or reuse which generates up to 24,988 average daily trips will be vested in the City's Concurrency Management System. It also states that since the estimated average daily trips through 2010 is only 21,882, an amendment to the 2010 Comprehensive Plan would be required to allow development or reuse which generates more than 21,882 average daily trips (ADT's), provided, however, in no case shall development or reuse on Cecil Field

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be allowed which generates more than 24,988 average daily trips without being subject to the City's level of service standards.

In 2002, the City of Jacksonville and the Department of Community Affairs (DCA) agreed that prior to NAS Cecil Field's closure, it generated the equivalent of 4,785 p.m. peak hour trips (PHT) and the same amount of transportation impacts can be assumed for the redevelopment of Cecil Field.

In August 2002, an agreement was signed between the Department of Community Affairs (DCA) and the City of Jacksonville regarding Cecil Field. The DCA and the City agreed with the 1998 Cecil Field Transition Element that stated prior to Cecil Field's closure as a Navy Base, it generated the equivalent of 4,785 p.m. peak hour trips and that the City may recognize an investment in the transportation network serving the impact area, and contributions of land and funding from the City to the FDOT for improvements to the state highway system in the impact area. This Specialized Concurrency Management System has not been established and the Airport needs to work with the City and DCA to gain concurrency for the improvements outlined in this master plan.

Currently there is no obligation to improve the roads surrounding Cecil Field due to its redevelopment as a public-use facility. According to the Agreement between the DCA and COJ regarding Cecil Commerce Center and Cecil Field, August 2002, the City is investing \$323.2 million in roadway improvement in the planning area surrounding Cecil Field.

As Cecil Field develops, average daily traffic will increase due to additional tenants, employees and customers. As this number increases, the demand on the transportation infrastructure will increase as well. Currently, several roads supporting Cecil Field are over capacity and could require future rehabilitation or improvement before additional development can proceed. Roads which have a Level of Service (LOS) higher than a C, such as D and F, should be considered for improvement. Traffic characteristics typical of these categories are heavy congestion which creates long wait times for the travelers. Many of these roads have an LOS of F which means they have exceeded their ultimate capacities.

The City of Jacksonville has established the Concurrency Management System which is setup to collect fees from developers in order to maintain the current roadway system and improve the roads to meet increasing transportation

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demand due to additional development. The current fee structure is set up as follows. For non-residential, new buildings, additions, alterations and/or repairs, there is a \$15.00 fee per 1,000 enclosed square feet, up to 500,000 square feet. Over 500,000 square feet, there is a fee of \$6.00 per additional 1,000 enclosed square feet. These fees should be considerable when planning additional developments at Cecil Field.

The 2007 Florida Legislature recently passed HB7203 that was signed into law. This law amends the Florida Growth Management law to remove development associated with airport passenger terminals and concourses, air cargo facilities and hangars for equivalent amount of transportation impacts from redevelopment of Cecil Field as vested for concurrency requirements. This agreement states that p.m. peak hour trips will be used to determine concurrency instead of average daily trips. Additionally, due to the unique nature of the redevelopment of Cecil Field, the City will consider an amendment to the Transportation Element of the City of Jacksonville Comprehensive Plan to establish a Specialized Concurrency Management System for the impact area of Cecil Field, which shall take into consideration; the cost and number of internal roads to be constructed, the City and related agency maintenance or storage of aircraft from any concurrency requirements as implemented in local comprehensive plans.

2.8.7 Soil and Groundwater Contamination: For years, Cecil Field functioned as Navy base. During that time the fuel system at Cecil Field included a pipeline in which jet fuel was piped to NAS Cecil Field from NAS Jacksonville. This pipeline has now been shut down by the Navy. Fuel was stored in six 60,000-gallon underground steel welded tanks, then distributed to a 210,000-gallon day tank in the airport operations area, where it was then distributed by trucks or by means of two high-speed refueling systems, oriented north/south and east/west. All previous aviation fuel storage tanks have been removed by the Navy as part of the environmental restoration program for cleanup of the base.

As a result of the presence of fuel and other contaminants, soil and groundwater contamination has occurred on Cecil Field, which poses a potential threat to human health. The locations of known groundwater contamination by aviation fuel are shown in **Exhibit 2.30**. To study the condition of the soil and groundwater, an Environmental Baseline Study Transfer (EBST), which updated the previous Environmental Baseline Study (EBS) conducted in 1994, was performed at Cecil Field in 1998. This study analyzed approximately 150

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buildings, structures or open areas to determine the environmental condition of each area. Each of the locations are rated on a scale of 1 to 6, or 7 in the case that the area requires additional information.

Category 1 refers to an area where no storage, release or disposal of hazardous substances or petroleum products has occurred, including no migration of these substances from adjacent areas. Category 6 refers to an area where storage, release, disposal and/or migration of hazardous substances or petroleum products have occurred, but required response actions have not yet been implemented. Out of these approximately 150 sites evaluated, 60 sites have a rating of 5, areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway but all required remedial actions have not yet been taken, or higher.

In September 2002, the Agency for Toxic Substances and Disease Registry (ATSDR) conducted an evaluation of Cecil Field. This study was initiated due to Cecil Field's listing on the U.S. Environmental Protection Agency National Priorities List in 1989. At Cecil Field, 12 operable units (OU) consisting of 24 separate areas of contamination have been identified as well as other potential sources of contamination. This study reviews environmental exposures on future uses of the property and provides information on safely managing the environmental hazards for the current and future use of the property. Nine different exposure conditions were studied from which several conclusions were drawn. First, people trespassing on Site 15 may have incidental contact with contaminated soil and creeks, but this situation posed no apparent public health concern. Second, lead contained in the soil at the forest management/wildlife corridor could not be measured accurately due to the unavailability of exposure based sampling. Therefore, since the future use and remediation plans are still uncertain, Site 15 poses an indeterminate (potential) public health hazard. Third, the unexploded ordinance near Site 15 could be hazardous if digging or excavating is conducted. Lastly, lead in Yellow Water or Sal Taylor Creek, draining Site 15, is available and could accumulate in wildlife but poses no public health hazard due to the low levels of lead.

Actions have been taken to warn the public of the potential harm. The Navy increased the number of warning signs around Site 15 and the surrounding residents have been informed and educated about the condition of Site 15. The Navy modeled lead contamination in fish and predicted a very low

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(<0.01mg/day) average daily intake for people eating fish from this area. The EPA and Naval Facilities Engineering Command stressed to the Cecil Field Reuse Planning Committee that planning any recreational activity should avoid Site 15 and the area should be off limits to residents and regular recreational use.

On January 10, 2003, the Environmental Protection Agency (EPA) removed 16,527 acres of Cecil Field from the National Priorities List (NPL). In 1989, all of Cecil Field, approximately 17,200 acres, was included on the NPL, which is a list of facilities that the EPA determined may pose a significant threat to public health, welfare, or the environment. After examination, several sites were determined to be of no harm to people or the environment and were therefore removed from the NPL. OU 4 (Site 10), OU 5 (Site 14), OU 12 (Sites 44, 42 and the old golf course), and 16,527 acres which are not associated with an operable unit have been determined not to pose a risk to human health or the environment.

On January 17, 2005, studies were conducted, using test wells, to determine the condition of the soil and groundwater at different locations at Cecil Field. During this study, it was determined that Cecil Field contains 22 sites which in some way exceed human health criteria for soil, groundwater or both. Some categories of the contaminants are aromatics, naphthalenes, trimethylbenzenes, Polycyclic Aromatic Hydrocarbons (PAHs), collections of hydrocarbon compounds that are associated with petroleum (TRPHs), etc. Each contaminated site, depending on the type of contamination, has a list of Land Use Controls (LUC), which is a control on the activity that can occur at a specific location.

On July 2007, the Navy conducted an investigation of the sites with LUC at Cecil Field. It was determined that there are still 10 sites which pose a contamination risk, therefore the land use controls established in 2005 for these 10 sites still apply. **Exhibit 2.31** identifies the locations of the sites with LUC and **Exhibit 2.32** presents a table summarizing the 10 sites, outlining the types of contamination and the specific LUC associated with each site. An annual LUC inspection is performed on the sites which have already been conveyed to the JAA to ensure that the LUC are maintained. The Annual Land Use Control (LUC) Compliance Certification is presented as **Exhibit 2.33**.

Petroleum contamination at the North Fuel Farm Site is currently being remediated by air sparging and biosparging. **Exhibit 2.34** illustrates the locations of monitoring wells and both shallow and deep contamination plumes. These sites will need to be remediated before development could progress.

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Due to the fuel delivery and storage systems having been limited to the Northwest development area, no groundwater contamination areas are known to exist at the locations of the proposed Mid-Field, Southeast and Northeast development areas, therefore groundwater contamination is not anticipated and should have no affect on their development.

Unexploded ordinance (UXO) and Discarded Military Munitions (DMM) have been found at Cecil Field which pose a risk to airport and construction personnel as well as could restricts future development. Two of these sites are near Building 373, located at the north end of the Northwest Development Area, and Hangar 860, located at the Southeast end of the Northwest Development area. The Building 373 area is located just north of proposed Site 9B and this contamination could restrict development. This site is undergoing a munitions response to determine the extent of UXO contamination and to remove any UXO from the site. If no ordinance or munitions are found, or if the site has been satisfactorily cleared of USO and DMM and declared safe, then the site may be available for development and construction of Site 9B will not be affected. If ordinance or munitions are found near the outlying edges of the search area, then an expanded search area will need to be established and development of Site 9B will be restricted until the munitions response in complete.

The second area of known UXO contamination is located at the Southwest corner of the Northwest development area. The proposed FLARNG development is located in this area. On February 14, 2005, a tenant of Hangar 860 observed multiple munitions and explosives of concern (MEC) in an open stormwater drainage ditch located to the southwest of Hangar 860. This triggered a munitions response which covered a 20-acre area and was completed from May 22, 2006 to June 22, 2006. This search found and destroyed 21 miscellaneous impulse/signal cartridges, 7 20-millimeter projectiles, 451 JAU-22/B Cartridge Actuated Initiators and 3 MK 23 practice bombs. The first of two munitions response areas have been cleared and available for use by FLARNG. The second area is scheduled to be searched starting March 2007. The proposed FLARNG development does not extend into the second search area therefore the proposed development will not be restricted. Any additional development into the second search area will be prohibited until this area has been cleared. No UXO or DMM is known to exist at the future Mid-Field, Southeast or Northeast locations so development of these areas should not be affected.

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2.8.8 Water Quality: The objective of the Federal Water Pollution Control Act (also commonly known as the Clean Water Act) is to restore and maintain the chemical, physical and biological integrity of the nation's waters. Stormwater impacts will also be addressed and discussed below.

A. Surface and Groundwater: According to the Final Environmental Impact Statement, 1998, the redevelopment of Cecil Field will have no significant impacts on surface water or hydrology nor will it affect the availability of groundwater. The groundwater contamination listed in the soil and groundwater contamination section has a minimal affect on the Floridian Aquifer since very little groundwater recharge occurs in this area.

B. Stormwater: Cecil Commerce Center and Cecil Field consists of 17,607 acres, according to the Cecil Commerce Center Master Stormwater Management Plan (MSMP), Volume I (2001), approximately 6,000 acres was to be preserved as a Natural and Recreational Corridor. This is meant to provide a natural wildlife habitat and buffer between St. Mary's River and the Black Creek hydrologic basins. In addition, it is to improve water quality discharged from the site and provide mitigation credits for any probable impacts from development. The 641 acres located in Clay County, however, were not included within the MSMP.

The MSMP reports that the peak flood stages, flows and velocities were found for three main tributaries. They are 1) Black Creek 2) St. Mary's River and the 3) Ortega River. The smaller tributary creeks feeding Black River include 1) Sal Taylor 2) Caldwell Branch and 3) Rowell Creek. The other tributary creeks are an unnamed tributary to the St. Mary's River and an unnamed tributary to the Ortega River. The coastal lowlands located in the St. John's River basin makeup the area surrounding Cecil Field. Also, according to the MSMP, the majority of the land has a slope average of 0.005 ft/ft and contains sizeable wetland depressions. The topographical information, provided by the USGS quadrangle, regarding the area north of Normandy Boulevard is comprised of one contour (85 feet). South of Normandy Boulevard, the elevations vary from 70 to 80 feet. However, for areas near the lower tributary, Sal Taylor Creek, the slopes increase toward Black Creek. The Natural Resource Conservation Service (NRCS) classified the soils in the Duval County Soil Survey (1978). It was shown that all the soils are consistent with the flatwoods soils that makeup the Leon-Ridgeland-Wesconnett and Pelham-Mascotte-Sapelo groups of sandy soils. The Leon-Ridgeland-Wesconnett soils are sandy throughout and deemed poorly to very

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poorly drained in undisturbed conditions. The latter is classified as soils that are poorly drained, sandy near the surface and loamy below. The water table within said soils is known to be relatively high therefore, the capacity of the soil storage is limited during wet periods.

In the City of Jacksonville, Florida, Cecil Commerce Center Master Stormwater Management Plan (March 2001), runoff calculations were determined through consideration of assumed impervious areas for individual hydrologic units estimated based on the land use information.

The City and the JAA jointly executed a Cecil Field Master Stormwater Management Plan that was approved by the St. Johns Water Management District (SJRWMD) Permit # 4-031-70452-1 in November 2001. The permit included the preservation of approximately 6,000 acres as a Natural and Recreation Corridor that provided natural wildlife habitat and a buffer between the St. Mary's River to the north and the Black Creek hydrologic basin to the south. In return the SJRWMD permit and the subsequent US Corps of Engineers permit provided for certain development impacts and wetland credits for those impacts.

The other main feature of the permit proposed a major expansion of Lake Fretwell that would serve both Cecil Commerce Center developments and certain Cecil Field Airport developments. The conceptual permit establishes an area served by Lake Fretwell. This area is roughly bounded on the north by 103rd Street/Normandy, and on the south by Crossover Street and on the east by Aviation Avenue. Much of the Fretwell service area can be developed to a higher degree of impervious area as long as Lake Fretwell is expanded accordingly. Some areas within the Lake Fretwell service area were not contemplated for development under the conceptual permit. For example, the conceptual permit considers the golf course to remain a golf course with no impervious area. Additional stormwater management facilities would be required for development of these areas. Long term development of the Cecil Field mid-field and east development areas was not covered in the permit except for the wetland impacts. Development in these areas will require construction of stormwater management facilities such as a wet detention pond or a dry retention pond. We anticipate that the soils and geotechnical conditions at Cecil will favor the use of wet detention ponds and not support creation of efficient dry pond facilities. This will need to be evaluated on a case by case basis. During master planning, it has been assumed the stormwater treatment facilities will cover 18% of the

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developable land area. This approach is supported by our experience on similar type projects.

This permit is valid for 20 years from the date of issuance provided that construction of the initial phase of the system is permitted and construction undertaken within two years of the issuance of this conceptual approval permit and provided that all phases of the system are designed and built in accordance with the terms of the conceptual approval permit and that all required permits for subsequent phases are obtained. The permit authorizes a conceptual plan of development for Cecil Field. This includes 27.5 square miles of the former NAS. Also stated in this permit is that within two years of permit issuance and every two years after that, the City and JAA shall submit an inventory of existing impervious areas and newly constructed impervious areas within the Cecil Commerce Center.

Cecil Field discharges into the North Fork of Black Creek and continues to the south. A storm sewer system serves the majority of the existing development that is located to the south. Most of the flow is then discharged using main connections. These connections vary in sizes from 48 to 84 inches. The flow is then directed to a large interconnected wetland system that is located to the east of the north-south runway. A modification has been made in order to accommodate the increased inflow caused by the drainage being divided between Sal Taylor Creek (east) and Rowell Creek (west). The modifications include a ditch and control structures having been installed along the stream for flow control purposes. The convergence of Rowell and Sal Taylor creeks lies on the western edge of the airport boundary. The system to the south flows to Yellow Water Creek, which will discharge into the North Fork of Black Creek. It is important to note that Black Creek has had a history of flooding and the additional inflow impact should be analyzed to determine the long-term effects on Black Creek. Also, according to the SWPP, located along Sal Taylor Creek are two spill diversion ponds that are located in remote areas of the airport. These ponds are designed to contain major spills that may bypass primary containment measures.

In summation, the conceptual permit covers some aspects of wetland and wildlife permitting required by the SJRWMD. Army Corps of Engineers (ACOE) also has wetland/wildlife jurisdiction and their permitting typically coincides with SJRWMD permitting. The conceptual permit identifies conservation / preservation corridors in exchange for a limited amount of wetland impact

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mitigation. It is our understanding that wetland lines at Cecil have only been estimated at this time and that finalizing the exact location of wetland lines needs to be accomplished as part of the final permitting. Establishing the exact locations of wetland lines with the SJRWMD and ACOE would also greatly assist with final master planning and site layout. The environmental consultant, Environmental Resource Solutions, has a great deal of experience at Cecil related to wetland and environmental issues. It is recommended that they be consulted for better understanding of these issues.

Final environmental resource permitting, or ERP, with the SJRWMD would be required prior to construction of any proposed development. Similar permitting with the City of Jacksonville would also be required through the City's "10-set" process. In general, stormwater facilities that meet SJRWMD regulations typically meet City of Jacksonville requirements.

Other agencies may also have jurisdiction related to stormwater issues. Mostly this would involve construction activities by the contractor constructing improvements. This may include Florida Department of Environmental Protection (FDEP) discharge permitting, National Pollution Discharge Elimination System (NPDES) and Consumptive Use Permit to use surface or groundwater for irrigation.

C. Best Management Practices (BMPs): BMPs are defined as structural, nonstructural and managerial techniques that are recognized to be the most effective and practical means to control nonpoint source pollutants yet are compatible with the productive use of the resource to which they are applied. Potential BMPs that were noted within the Cecil Commerce Center MSMP are separated into two categories: Structural (constructed facilities) and Non-structural (regulations or ordinances).

Under structural stormwater controls are the following:

- Wet detention ponds.
- Exfiltration trenches.
- Shallow grassed swales.
- Water quality inlets and baffle boxes.
- Porous pavement.
- Skimmers.

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Non-Structural Controls:

- Erosion and sediment control on construction sites.
- Land use planning and SWPP.
- Procedures.
- Regulations.
- Employee training.
- Record keeping and reporting.
- Chemical use controls.
- Fertilizer application controls.
- Street sweeping.
- DCIA minimization.
- Operation and maintenance.
- **Swales:** Natural swales provide a drainage area for stormwater that fall within permeable soils that are not limited by a high water table. They allow the water to filter and percolate into the soil and are referred to as infiltration BMPs. Florida regulations (Chapter 62-25FAC) require swales to be designed to percolate 80% of the runoff for a 3-year, 1-hour design storm within 72 hours. This requirement is only necessary if swales are the only BMP used to provide the water quality treatment. 0.25 to 0.5 inches of treatment is typical for pretreatment uses for swales.
- **Water Quality Inlets and Baffle Boxes:** Typically installed at catch basins, water quality inlets are used to prevent sediment, oil and grease from invading storm drains and stormwater infiltration systems. Baffle boxes are then installed further downstream within the storm sewer.
- **Skimmers:** Another method of inhibiting oil and grease from flowing into receiving water bodies is the use of oil and grease skimmers. These skimmers are designed to reserve oils and greases at the surface of the retention/detention system to grant time for them to dissipate and biodegrade.

Other BMPs include:

- Spill prevention and response (industrial land uses).
- Sweeping and scrubbing (airside land uses).
- Source controls minimizing exposure of polluting materials, reduction of direct runoff to streams, proper chemical disposal and employee training (for all land uses).
- Retention swales (airside runways, taxiways, and golf course areas).
- Wet and dry detention and existing wetlands storage (landside land uses).

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D. Expansion of Lake Fretwell: The regional lake system to the north and the expansion of Lake Fretwell, are examples of a regional facility approach involving wet detention with pre-treatment for land uses that have expected sources of oil and grease.

According to the Cecil Commerce Center MSMP, in order to accommodate existing and the proposed development expected to occur south of Normandy Boulevard, west of "A" Avenue and north of 9th Street, the proposed system was sized to provide for 43 days of permanent pool volume and the required storage treatment volume of 2.5 inches over the impervious area. This assumption was based on 41.4% impervious area for 2,065 acres of developed tributary area. It is important to note that the contributing golf course area, consisting of about 79 acres, can be reduced if re-graded for retention.

In order to meet FAA requirements and minimize wetland impacts, the location and shape of the proposed Lake Fretwell have been modified. The modifications include the following:

- Steep side slopes (3:1);
- In order to keep wading birds out, the depth of the pool volume for Lake Fretwell is maintained at least 7.6 feet;
- Hooks were installed on the side banks to provide the ability to install monofilaments in the case that bird activity increases;
- The design of the lake is a 5:1 length to width ratio (900 feet wide and 5000 feet long).

The alternatives for the airside land uses, on the JAA side, are between first flush diversion inlets, baffle boxes, and oil-water separators versus swales or other onsite controls that equal 0.5 inches of treatment. To achieve peak attenuation, it was recommended that the wetlands east of the existing runway continue to be utilized.

2.8.9 Department of Transportation (DOT) 4(F) Lands: As stated in the original Section 4(f) legislation of 1966 and its revisions (1968 and 1983), Section 4(f) protects three basic types of resources: publicly owned public park and recreation areas, publicly owned wildlife and waterfowl refuges, and historic sites (also known as cultural resources).

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A Gopher Tortoise Preserve is located just southeast of the airport and is located within a Conservation Land Use. Just to the east of the Gopher Tortoise Preserve is the conservation area of the Oakleaf Plantation which is also illustrated in **Exhibit 2.35**. These conservation areas could affect future development of the airport.

According to FAA Order 5050.4B, the significance threshold for an airport's actions on a Section 4(f) land is if the physical use of the property would be more than minimal or if the constructive use of the property substantially impairs the 4(f) property. The Order states that it must be determined whether an airport's proposed action would eliminate or severely degrade the intended use of the Section 4(f) resource.

The Gopher Tortoise Preserve and the conservation area within the Oakleaf Plantation could restrict future development at the airport, namely the construction of proposed Runway 17/35 which is planned for possible development during Phase 4. The airport should work with the City and Clay and Duval Counties to restrict this type of development in close proximity to the airport.

2.8.10 Historical Architectural, Archeological, and Cultural Resources: In August 1995, according to the Cecil Field Strategic Master Plan, a cultural resource assessment for NAS Cecil Field was administered and submitted to the Florida Division of Historical Resources. The two components that made up this assessment were as follows:

- A.** An archaeological sensitivity assessment: This included background and documentation research, field investigation and, in order to identify any potential archaeological sensitive areas at the station, a model was developed.
- B.** A comprehensive building survey: Made up of photo documentation, historic context for station development, and investigation of the eligibility for inclusion on the National Register of Historic Places (NRHP) for the station's buildings.

It was concluded in 1995 that there were no known archaeological sites to exist at NAS Cecil Field. Because a vast portion of the surface of the facility (approximately 3,900 acres) underwent an extensive disturbance through the duration of the base development, the disturbed portions are highly unlikely to contain intact archaeological resources.

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However, a more recent archaeological sensitivity assessment of the station concluded that nine sites on the Cecil Field Airport property have a high probability of containing historically sensitive sites. Due to this finding, on April 30, 2003, the Division of Historical Resources (DHR) reviewed this area and informed the Jacksonville District Corps of Engineers about 16 areas within Cecil Field that are of high archaeological sensitivity, see **Exhibits 2.36** and **2.37**. The DHR assesses effects upon sensitive sites and considers alternatives to avoid or minimize adverse effects. According to the DHR, development of sites 3, 8 and 14 will have no effect on any historical properties. According to the City of Jacksonville, site 4 will be undisturbed, eliminating any possible adverse effects. However, if anything is to be done to this property, the DHR must be contacted to evaluate the site and determine if there is anything with historical significance that must be avoided. Additionally, before any land clearing or ground breaking activities occur on any of the highlighted sites, the DHR must be notified and a study must be performed to determine if this land is eligible for listing in the National Registry of Historic Places, or of other historical or architectural significance. This will help the DHR determine what actions need to be taken to preserve the site.

2.8.11 Biotic Communities Including Flora and Fauna: It is expected that the overall impacts to upland vegetation and wildlife will be minimal and insignificant. It is advised that field surveys be conducted for future developments in correlation with applicable federal, state and local regulations in order to determine the extent of impacts to the biotic communities after site development plans have been formed.

2.8.12 Endangered and Threatened Species: The gopher tortoise, Sherman's fox squirrel and Bachman's sparrow have been previously confirmed on Cecil Field. The existences of the habitat for these species make it possible for other species to occur on Cecil Field. In order to create habitats at a variety of developmental stages, periodic harvesting and prescribed burning of selected pinelands would be necessary for the benefit of these species. The future long-term development will have a conflicting impact on the existing habitats and individual species. For example, grading for building construction could cause mortality to gopher tortoises by occupying their burrows. Also, the development of industrial activities adjacent to future Runway 17/35 could result in a loss of suitable foraging habitat for the Southeastern American Kestrel. A significant indirect impact, as noted in the Cecil Field Strategic Airport Master Plan, could possibly

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result from fragmentation of suitable habitats, especially from large developments and transportation corridors.

On May 29, 2002, the Fish and Wildlife Service responded to a 20-year permit application in order to revitalize and develop the recently closed NAS Cecil Field as a Commerce Center. The Fish and Wildlife Service evaluated the impact this project would have on the eastern indigo snake, which is a threatened species and is federally protected. This Service determined that the proposed project may affect, but is not likely to adversely affect, this species. The Service's biological opinion is that the future development on Cecil Field is not likely to jeopardize the continued existence of the eastern indigo snake. Due to the snake's categorization as threatened, several terms and conditions must be met at the development site in order to avoid damage to the snake. The developers must have a protection/education plan for all construction personnel. Only an individual who is either authorized by a section 10(a)(1)(A) permit or designated by an agent of the State of Florida by the Fish and Wildlife Conservation Commission can come into contact or remove the snake. An eastern indigo snake monitoring report must be submitted to the North Florida Field Office within 60 days of the conclusion of clearing phases.

Future developers will be required to conduct additional consultation with the United States Fish and Wildlife Service and the Florida Game and Fresh Water Fish Commission based on the presence of listed species and suitable habitats, prior to any new development. An Environmental Assessment will also be required prior to any new runway development. In addition, all new development on the airport property is subject to review and approval through the local permitting process in order to ensure consistent development with city conservation policies

2.8.13 Wetlands: For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water 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." [EPA Regulations listed at 40 CFR 230.3(t)]. Because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human

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disturbance, wetlands vary largely. Wetlands provide many functions that include:

- A. Surface water storage (flood control).
- B. Shoreline stabilization (wave damage protection/shoreline erosion control).
- C. Stream flow maintenance (maintaining aquatic habitat and aesthetic appreciation opportunities).
- D. Groundwater recharge (some types replenish water supplies).
- E. Sediment removal and nutrient cycling (water quality protection).
- F. Supporting aquatic productivity (fishing, shell fishing, and waterfowl hunting).
- G. Production of trees (timber harvest).
- H. Herbaceous growth (livestock grazing and haying).
- I. Production of peaty soils (peat harvest).
- J. Provision of plant and wildlife habitat (hunting, trapping, plant /wildlife /nature photography, nature observation, and aesthetics).

Proposed construction within the proximity of the wetlands requires a certain permitting process that involves preliminary wetlands assessments, delineation and mitigation of the wetland. Mitigation strategies may be initiated once the extent of impacted wetlands is known. Wetland mitigation involves the restoration or enhancement of existing degraded wetlands or creation of manmade wetlands. On-site wetland mitigation is preferred so as to not interfere with aircraft flight operations.

However, if off-site mitigation is the only practical solution, then the mitigation should be performed in close physical proximity and, if possible, the same watershed as the affected wetlands. The redevelopment of Cecil Field will have adverse affects on the wetlands on the eastern side of Cecil Field. Therefore, to offset the adverse affects from redevelopment, on March 13, 1998, the City of Jacksonville, the Jacksonville Port Authority, Clay County, the Department of Environmental Protection and the St. Johns River Water Management District entered into a Memorandum of Understanding to establish a Cecil Field Wetland Mitigation Plan and "Natural and Recreational Corridor". In this memorandum, all parties agreed that the land in question should be maintained as a natural corridor. It is suitable for passive resource-based public recreation, more specifically, this corridor would allow low intensity activities during day light hours, which includes biking, hiking, fishing, etc. The Corridor will be

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considered compensation for the adverse impact of development on the eastern side of Cecil Field. The Corridor will be available for mitigation opportunities so long as the impacts on the eastern portion and designated portions within Clay County do not exceed the mitigative value of the corridor. The Natural and Recreational Corridor is illustrated in **Exhibit 2.38**.

Mitigation credits were based on the value of the created Natural and Recreational Corridor. On April 19, 2004, a Memorandum of Agreement was signed between the City and JAA. This agreement states that of the 413.54 credits authorized by the US Army Corps of Engineers permit, the JAA can use 105.16 credits for development on the Airport property and the City can use 308.31 credits for development on the Cecil Commerce Center property. Of the 100 acres of required wetland creation, the City is responsible for 71.32 acres and JAA is responsible for 28.68 acres in the COJ property, which is the same area as in the St. Johns River Water Management District permit. On August 24, 2004, an agreement was made between the City and JAA which stated that of the City's 308.31 credits, 11.57 credits must be used for the Equestrian Center, Community Center, pool, softball complex and utilities corridor. Additionally, 9.12 credits must be used for future development of the recreational area of the Cecil Commerce Center and 25.20 credits must be transferred to the JEA for development at the Cecil Commerce Center.

The SJRWMD permit number 4-031-70452-1 authorizes 497.06 credits and the USCOE permit number 2003-1935 (IP-BAL) authorizes 413.54 credits that are divided between JAA and COJ.

2.8.14 Tree Mitigation: The City of Jacksonville maintains a tree mitigation fund. If during development, trees are removed without acceptable substitution elsewhere, fees are paid by the developer into this fund. These funds are used to create public parks, recreational areas, etc.

2.8.15 Flood Plains: Along the coastal area of Florida, two classifications of floodplains (tidal and stormwater) generally exist. Tidal floodplains are the result of tide and wind generated flood stages, while stormwater floodplains are associated with rainfall. A floodplain is an area of relatively level land that is inundated from time to time. It may border a stream, lake or river, or may be a watercourse in its own right. Floodplain areas are subject to a one-percent, or greater, chance of flooding at anytime (may be inundated during a 100-year flood). The Jacksonville area has a slight elevation above sea level and relatively

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flat topographic land surface, and as a result of this, extensive floodplain areas exist.

The streams that encompass the most floodplain area on the airport property are Sal Taylor Creek and Rowell Creek. Three areas exist on Cecil Field which are located in a floodplain area (**Exhibit 2.39**). The first area is located on the eastern edge of the property and is mainly contained in the Conservation Corridor. The Jacksonville GIS classifies this area as "A" which means that this area is in a 100-year floodplain and will be inundated by water during a 100-year storm.

The second area is located on the southeast property boundary, south of Runway 9R-27L and east of Runway 18L-36R. A majority of this area lies within Cecil Field property while a small portion lies within the Rural Residential land use located outside of the airport property. This is classified as "AO" which corresponds to shallow flooding with average depths between 1 and 3 feet during a 100-year storm. The western edge of this area extends towards the Southeast development area but should not affect development of the proposed alternative. The third area is located just northeast of the second area and also shares the same "AO" designation. This third area is located near the Northeast development area but should not affect its development.

2.8.16 Prime and Unique Farmlands: Prime and unique farmlands consist of lands that are best suited for producing food, feed, and other types of crops. It has the soil quality and moisture supply needed to produce and sustain high yields of crops when treated and managed according to modern farming methods.

The production of timber is one of the agricultural land uses located on and in the vicinity of Cecil Field. This land use will remain in the forestry management/airport reserve area until the new parallel runway and midfield area are constructed.

2.8.17 Environmental Overview Summary: The preferred development plan for Cecil Field over the 20-year planning period might include some potential environmental impacts such as noise, compatible land use, soil and groundwater contamination, air quality, wetlands, water quality, historically sensitive sites, floodplains, farmlands and hazardous materials.

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According to this overview, the environmental conditions affecting the proposed development plan, the Mid-Field, Southeast and Northeast Development areas should be minimal. The soil and groundwater contamination could have a small impact on the development on a number of sites indicated for aviation use but this contamination is currently under remediation and development could soon be relatively unrestricted. Historically sensitive sites have been located at Cecil Field but are not located in areas of planned development. Wetland areas will likely be impacted by the Mid-Field, Southeast and Northeast development areas and the creation of the Natural Corridor and additional wetland areas on airport property will help mitigate these adverse impacts. A tree buffer may potentially offset the City of Jacksonville's mitigation fees for tree removal as well as add a visual barrier between off-airport and on-airport activities. Three areas of floodplains exist, one of which is primarily located in the Conservation Corridor and the other two are not located in areas of currently planned development.

Continued study and/or coordination in a formal environmental study may be required during the preliminary design development of future airport projects. The development of Runway 17-35 will more than likely require an Environmental Impact Statement, and these studies can define more precisely the impact of development on specific areas of concern, such as wetlands, historically sensitive sites, light emissions, floodplains, etc.