Prepared for:
Department of Veterans Affairs

In accordance with:
Department of Veterans Affairs Regulations 38 CFR 26

Pursuant to:
National Environmental
Policy Act Section 102(2)(C)

Final Environmental Assessment
for
Jacksonville Area National Cemetery

Jacksonville, Florida

May 2006

Abstract

The US Department of Veterans Affairs (DVA) proposes to construct and operate a new national cemetery to serve the veterans of the Jacksonville, FL, area. This action is in compliance with the National Cemetery Expansion Act of 2003, which directs the Secretary of Veterans Affairs to establish six new national cemeteries. Four alternatives on two sites are being considered, along with the No Action Alternative. None of the alternatives would result in significant adverse impacts on the human environment. Preparation of an environmental impact statement (EIS) is not required for this action.

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Executive Summary

The United States Department of Veterans Affairs (DVA) has prepared this environmental assessment (EA) to evaluate the environmental impacts of constructing and operating a new national cemetery in the Jacksonville, Florida area (proposed action). The EA was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ)'s regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and DVA's NEPA regulations (38 CFR 26).

Purpose and Need

Within DVA, national cemeteries are the responsibility of the National Cemetery Administration (NCA). The mission of the NCA is to "honor veterans with final resting places in national shrines and with lasting tributes that commemorate their service to our nation." In fulfillment of this mission, NCA provides cemetery services to veterans and other eligible persons pursuant to the provisions of the National Cemeteries Act of 1973 and related other statutory authority and regulations. In 2003, Congress passed, and the President signed, the National Cemetery Expansion Act of 2003 (Public Law 108-109). The Act directs the Secretary of Veterans Affairs to establish six new national cemeteries, one for each of the following areas: Southeastern Pennsylvania (Philadelphia); Birmingham, Alabama; Jacksonville, Florida; Bakersfield, California; Greenville/Columbia, South Carolina; Sarasota County, Florida.

DVA's purpose and need for the proposed action is to provide reasonable access to VA burial services to the unserved veterans in the Jacksonville, Florida area, in compliance with the National Cemetery Expansion Act of 2003.

Alternatives

DVA began the search for a suitable location in December 2003. Through advertisements, letters, site visits, and meetings, NCA called on members of Congress, state and local officials, veterans, and citizens for assistance and suggestions. DVA identified 14 potential cemetery sites in northeastern Florida.

Out of the 14 potential sites, preliminary analysis identified two that would best accommodate DVA's purpose and need: a 568-acre property owned by the City of Jacksonville straddling Lannie Road, east of Lem Turner Road in North Jacksonville (City Site); and a privately-owned tract, approximately 724 acres in size, located a short distance east of the City Site, at the eastern end of Lannie Road (Wright Site).

Following the primary site selection process, DVA developed four alternatives to construct and operate the proposed cemetery on one or the other of the two sites:

- Wright Alternative: construct and operate the proposed cemetery on the Wright Site
- City North Alternative: construct and operate the proposed cemetery on the portion of the City Site located north of Lannie Road
- City South Alternative: construct and operate the proposed cemetery on the portion of the City Site located south of Lannie Road
- Lannie Road Realigned Alternative: realign the portion of Lannie Road that traverses the City Site to the south of its current location and construct and operate the proposed cemetery on the City Site north of the realigned road

All four alternatives are evaluated in the EA, along with the No Action Alternative.

Impacts

The No Action Alternative would have no significant adverse impacts.

The action alternatives would have no or negligible adverse impacts on the following: land use, socioeconomics, Environmental Justice, utilities, community services, transportation, cultural resources, air quality, noise, geology, surface and ground water, floodplains, and hazardous waste.

Under the City North Alternative, land occupied by a model airfield and the area over which users fly their model aircraft would be needed for development of the proposed cemetery. This adverse impact would be mitigated by relocating the facility to an appropriate new location in cooperation with Jacksonville's Department of Parks, Recreation, and Entertainment, and in consultation with the current users of the site. This minor adverse impact would not occur under the other alternatives.

Under all action alternatives, there would be some changes to the selected site's topography because future burial areas would have to be elevated with fill to ensure burials remain above the high water table. Adverse impacts on stormwater due to the increase in impervious surfaces would be mitigated by construction and operation of a permitted stormwater management system. Impacts would be minor.

Under all action alternatives, the future cemetery site would include wetlands. DVA would design the cemetery to minimize impacts to these wetlands and development would be limited to upland areas as much as possible. However, while there are enough upland areas to accommodate all program requirements under any alternative, the distribution of uplands and wetlands across the sites would make it unavoidable to fill some wetlands, for instance to construct connecting roads. DVA would be required to obtain confirmation by the US Corps of

Engineers (USACE) and the St. Johns River Water Management District (SJRWMD) of the wetland delineation conducted in 2005 for the EA, and to file a *Joint Application for an Environmental Resource Permit* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. Following implementation of mitigation measures, impacts would be minimal and not significant.

There would be moderate (Wright Alternative) or minor (other action alternatives) impacts to wildlife and vegetation, partially offset by the creation of new habitat for landscaping and/or wetland mitigation purposes; therefore, impacts would not be significant. Under all action alternatives, a survey may be needed to establish whether wood storks, a federally listed endangered species, are using the site to forage. During the master planning and design process, DVA would consult with the US Fish and Wildlife Service and the Florida Wildlife Commission to identify and mitigate any potential impacts the proposed action might have on the wood stork. The wood stork favors marshy and wet areas that, if present on the selected site, would mostly remain undeveloped and available for use by the stork. No adverse effects on the wood stork are expected. No other federally-listed species are likely to be present on the potential sites. The alternatives would have no significant adverse effects on endangered and threatened species.

A survey may be needed to establish whether any state-listed species occur on the selected site. If the presence of state-listed species were established, DVA would work in consultation with the Florida Wildlife Commission to develop avoidance, minimization, or mitigation strategies. Any impacts to state-listed species, therefore, would be minor and not significant.

Under all action alternatives, there would be construction-related, short-term, adverse impacts on air quality, noise, and stormwater. These temporary impacts would be minimized through the use of standard best management practices. Because construction of the cemetery would require disturbing more than five acres, DVA would need to obtain from the Florida Department of Environmental Protection a *Generic Permit for Stormwater Discharge from Large and Small Construction Activities*.

Based on the analyses contained in the EA, DVA has determined that implementing the proposed action under any of the alternatives considered would not have any significant impacts on the human environment. Therefore, an EIS is not required and will not be prepared.

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The United States Department of Veterans Affairs (DVA) has prepared this environmental assessment (EA) to evaluate the environmental impacts of constructing and operating a new national cemetery in the Jacksonville, Florida area (proposed action). The EA was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality (CEQ)'s regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the Department of Veterans Affairs' NEPA regulations (38 CFR 26).

1.1 Background

Within DVA, national cemeteries are the responsibility of the National Cemetery Administration (NCA). The mission of the NCA is to "honor veterans with final resting places in national shrines and with lasting tributes that commemorate their service to our nation." In fulfillment of this mission, NCA provides cemetery services to veterans and other eligible persons pursuant to the provisions of the National Cemeteries Act of 1973 and related other statutory authority and regulations.

Since 1973, annual interments in Veterans Affairs (VA) national cemeteries have increased by more than 150 percent, from 36,400 to more than 93,000 in fiscal year 2004. Interments are expected to keep increasing until 2008, when veterans' deaths will peak at approximately 676,000. This upward trend in veteran deaths results in a corresponding increase in the demand for burial services in national cemeteries.

It is one of NCA's goals to ensure that eligible veterans have reasonable access to VA burial benefits. Experience and recent historical data have shown that more than 80 percent of persons interred in national cemeteries resided within 75 miles of the cemetery at the time of death. Therefore, NCA considers reasonable access to burial benefits to mean that a first interment option, for casketed or cremated remains in a national or state veteran's cemetery, is available within 75 miles of the veteran's place of residence.

To serve the veterans who do not have reasonable access to a VA burial as defined, NCA builds new national cemeteries. To identify areas in need of a new national cemetery, NCA has established a threshold of 170,000 unserved veterans.

In May 2002, DVA submitted to Congress a *Future Burial Needs Study*, as required by Section 613 of the Veterans Millennium Health Care and Benefits Act (Public Law 106-117). In this study, the Jacksonville, Florida area was identified as one of the areas in the country with the greatest concentration of veterans without reasonable access to VA burial services.

Subsequent to the 2002 study, Congress passed, and the President signed, the National Cemetery Expansion Act of 2003 (Public Law 108-109). The Act directs the Secretary of Veterans Affairs to establish six new national cemeteries, one for each of the following areas:

- Southeastern Pennsylvania (Philadelphia)
- Birmingham, Alabama
- Jacksonville, Florida
- Bakersfield, California
- Greenville/Columbia, South Carolina
- Sarasota County, Florida

1.2 Purpose and Need

DVA's purpose and need for the proposed action is to provide reasonable access to VA burial services to the unserved veterans in the Jacksonville, Florida area, in compliance with the National Cemetery Expansion Act of 2003.

1.3 National Cemetery Development

When building a new national cemetery, NCA follows a six-step process:

Step 1: Preliminary Site Selection – NCA identifies a geographic area with a large population of unserved veterans; after determining the size of the future cemetery based on demographic data, NCA canvases the area for appropriate sites and identifies an initial set of potential sites; these potential sites are screened for suitability, and the most suitable two to five sites are advanced to the next stage. The preliminary selection process for the proposed Jacksonville area national cemetery is described in Chapter 2 of this EA.

Step 2: Site Evaluation and Final Selection – The sites selected during Step 1 are evaluated in compliance with NEPA. An EA is prepared and a site assessment must result in a Finding of No Significant Impact (FONSI) to be considered for acquisition and development. Once completed, the EA and FONSI undergo a 30-day public review, after which NCA makes a final recommendation to the Secretary of Veterans Affairs, who decides which of the considered sites will be acquired and developed. This EA has been prepared in fulfillment of Step 2 of the process for the proposed Jacksonville national cemetery.

Step 3: Site Acquisition – Unless the selected site is being donated or otherwise transferred to the DVA at no cost, as sometimes occurs, it is then purchased at fair market value. The Department of Justice, acting on behalf of the DVA, reviews all documentation ensuring all legal requirements are met. For the proposed Jacksonville area national cemetery, this step is expected to occur in 2006.

Step 4: Cemetery Master Plan and Design – After the DVA acquires the selected property, it selects an engineering and architectural firm to design the new cemetery. A master plan is

prepared along with more detailed plans for the first phase of development. This first phase generally includes the first active burial sections of the cemetery as well as the required supporting facilities and infrastructure. Subsequent development phases include additional burial areas and supporting infrastructure, as needed. Typically, each phase provides enough space for a 10-year period of use. In the case of the proposed Jacksonville area cemetery, Step 4 is expected to take place during 2006–2007.

Step 5: Construction Documents Preparation – Under a separate contract, construction documents for development phase I are prepared. These documents serve as a basis for the selection of a contractor. For the proposed Jacksonville area cemetery, this is expected to occur in 2007.

Step 6: Construction – NCA solicits bids from contractors; the bidding and award process takes about three months; construction of development phase I generally requires two or more years. For the proposed Jacksonville area national cemetery, construction is expected to take place during 2008–2009.

1.4 NEPA

NEPA provides for the consideration of environmental issues in federal agency planning and decision-making. Under NEPA, federal agencies must prepare an environmental impact statement (EIS) or an EA for any federal action, except those actions that are determined to be "categorically excluded." An EIS is prepared for those federal actions that may significantly affect the quality of the human environment. An EA is a concise public document that serves to provide sufficient evidence and analysis for determining whether to prepare an EIS. If the EA finds that no significant impacts would occur, a FONSI is issued and the agency may proceed with the action. An EA includes brief discussions of the following:

- The purpose and need for the proposal.
- The alternatives considered (as required under Section 102 [2] [E] of NEPA).
- The environmental impacts of the proposed action and alternatives.
- A listing of agencies and persons consulted.

The DVA will use this EA to help determine which of the evaluated sites to acquire for development. As noted, to be considered for acquisition, a site must be developable without significant impacts to the environment.

More generally, the DVA's policy includes provisions to:

- Act with care in carrying out its mission of providing services for veterans and to ensure it does so consistently with national environmental policies. Specifically, the DVA shall ensure that all practical means and measures are taken to protect, restore, and enhance the quality of the human environment.

- Avoid or minimize adverse environmental consequences, consistent with other national policy considerations.
- Prepare concise and clear environmental documents supported by documented environmental analyses.
- Preserve historical, cultural, and natural aspects of our national heritage.

2 Description of Alternatives

Consistent with Section 102(2)(e) of NEPA, CEQ regulations require that an EA contain a brief description of the proposed action as well as a description of the alternatives considered. Agencies are directed to use the NEPA process "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the environment" (40 CFR 1500.2[e]). Alternatives found to be unreasonable do not need to be evaluated in the EA.

The proposed action assessed in this EA is the establishment of a new national cemetery to serve veterans in the Jacksonville, Florida area. DVA considered a number of alternative sites for this cemetery. This chapter describes these alternative sites, explains which alternatives were dismissed from further consideration, which alternatives were selected for further analysis in this EA, and the reasons why. Because the reasonableness of a potential site is in part a function of how well it can accommodate the programmatic requirements of the proposed new cemetery, a general description of these requirements is provided first. This description is largely based on general design criteria for VA cemeteries; actual design will take place after completion of the NEPA process.

2.1 Proposed Jacksonville Area National Cemetery: General Characteristics

2.1.1 Size

The optimum size of a VA cemetery is a function of both the population to be served and the general demographic trends. In the case of the Jacksonville area cemetery, NCA has determined that the facility should be able to accommodate a total of 25,000 gravesites at build-out (2030). This includes sites for casketed remains and sites for cremated remains. A majority of the casketed remain gravesites (80 percent) would be in lawn crypts. Lawn crypts are pre-placed concrete containers with removable concrete lids that are installed all at once by excavating the burial area at the time of land development. Lawn crypt burials require less space than regular burials. In addition to concrete lawn crypts, NCA is also exploring the use of plastic crypts.

Based on these requirements and the need for the site of the proposed new cemetery to accommodate the usual supporting facilities (described in Section 2.1.2), NCA determined that any potential site should be no less than 300 acres in total area if it was to be considered a reasonable siting alternative. This area determination is due to the character of the environment in northeastern Florida. A smaller site would likely offer too little land for development (defined as land that can be developed without significant mitigation requirements; this excludes, for instance, wetlands, a very common occurrence in Florida) and/or require extensive mitigation to be developed.

2.1.2 Standard Program Elements and Design Principles

As noted in Section 1.3, master planning for, and design of, a new VA cemetery take place only after a site is selected. Each cemetery is, to a large extent, tailored to fit its location. Therefore, a detailed description of the proposed new cemetery is not possible until a site is selected and a master plan has been developed for the site. However, because all VA cemeteries serve the same function, they share common features and elements that must be accommodated by any selected site. The following paragraphs are general descriptions of those common elements, mostly summarized from information available on the DVA Web site. Although some assumptions about the size of some facilities can be made at this stage and are mentioned below, in general, exactly how each element would specifically be accommodated or addressed at the proposed Jacksonville area cemetery would be determined at the master planning and design stage.

Grading, Drainage, and Plantings – The objective of NCA is to retain a site in as natural a state as possible. Grading may be necessary but is kept to a minimum. In general, grades range from a minimum of 2 percent to no more than 15 percent. On sites with a high water table, fill may be necessary to create a sufficient depth of soil so burials can be made above the water table. To the extent feasible, soil from on-site cuts is used for on-site fill. Natural features, such as trees or tree groups, streams, or wetlands, are preferably left untouched and incorporated into the landscaping. Plantings, consisting of native species, are used to articulate the site layout. Ensuring proper drainage is essential and stormwater management facilities, such as ponds, may double-up as landscape features.

Entrance – The main entrance area is designed to create a sense of arrival at a special place; it incorporates architectural and landscape elements that convey the significance and dignity of the site without overpowering the visitor. It also features some method to restrict and control vehicular access. This entrance is for funeral corteges and visitors only. A service entrance, sufficiently removed from the main entrance, is provided for utilitarian access (maintenance, construction, delivery).

Flag Area – The United States flag is the main symbolic focus of the cemetery, and of special significance to veterans and their families. Therefore, each cemetery has a stand-alone flag area, designed and landscaped to maximize the attractiveness and dignity of the place. The area includes a flagpole, a turf assembly area for small gatherings, and a focal point that can be used by speakers.

Roadway System – The cemetery is served by a hierarchy of roads organized around the entrance road leading into a network of primary roads, secondary roads, and service drives that serve the various sections of the facility. The entrance road, which connects with the public road network at the main entrance, is generally divided, each side supporting one-way traffic, with a passing lane. The primary road is preferably a loop allowing one to drive through the cemetery without turning around; it provides access to all other roads. The secondary roads can be subordinate loops or connector roads; they provide access to the burial sections. Other roads include the service entrance road, connecting to the public road network at the service entrance; service drives to buildings and other structures; and committal service shelter drives.

The design speed for the roads is 15 miles per hour. Maximum grade is 10 percent. All roads must be built to accommodate heavy equipment and large trucks loaded with wet soil, gravel, and headstones. The preferred road design includes curbing. Width should be sufficient for two-way traffic to pass a parked vehicle. Parking needs are accommodated in different ways. In general, visitors will park along roads or in parallel pull-offs. Buildings have their own parking areas, as needed. The cemetery also includes a cortege assembly area, near the Administration/Public Information Center or the entrance road. The cortege assembly area consists of lanes for vehicles to line up prior to proceeding to a committal service shelter.

Administration/Public Information Center – This complex houses the offices and workspaces of the cemetery administration staff. A visitor orientation center is incorporated into the complex so that it relates to the main entrance and cortege assembly area. Public restrooms and visitor parking are provided. Employee and other non-visitor parking areas are hidden from public view as much as possible.

Maintenance Complex – This complex accommodates all of the maintenance needs of the cemetery. It includes employee workspace, break room, locker rooms, and restrooms; vehicle and equipment storage and maintenance bays; and a maintenance yard of sufficient size to accommodate the unloading of a tractor-trailer truck. Visitors normally do not access this facility; therefore, it is sited so as to not be readily visible to visitors. In addition, the complex has its own vehicular entrance to and from the public access road, separate and apart from the cemetery main public entrance.

Committal Service Shelters – Normal operations at national cemeteries provide for away-from-gravesite interment services. These services are held in visually isolated sheltered areas. The shelters are covered structures that are open or partially enclosed on the sides and provide limited protection from wind, rain, and sun. Each shelter accommodates one service at a time and is large enough to receive about 60 attendees. Some overflow parking is provided. At this time, it is expected that the Jacksonville area cemetery would have three committal service shelters, each approximately 600 square feet in size.

Burial Sections – Burial sections are areas devoted to full-casket in-ground interments. Each cemetery includes several such areas, each visually separate, broken by vegetated areas, roads, and/or topography. In general, a burial section does not exceed three acres. As much as possible, burial sections follow topographical features. Each gravesite has one marker, consistent with applicable legal requirements. Standard gravesite sizes are 3 by 8 feet for pre-placed lawn crypt burials; 4 by 8 feet for double-depth interments in a 7-foot excavation; and 6 by 8 feet for single-depth, side-by-side interment when soil conditions make excavation below 5 feet impractical.

Cremains Sites – Cremated remains (cremains) are accommodated either in designated cremains sections or a special garden niche or terrace (in-ground burial); or in a columbarium (niche in an above-ground structure); or in a cremains garden (for the scattering of ashes).

Other Common Elements and Features – These may include memorial sites and sections, preferably in areas not suitable for burials; an area for the display of memorials donated by various veterans groups, which can take the form of a walk or terrace; a site for a potential

memorial to all veterans; an avenue of flags to display donated burial flags; and a site for a donated carillon tower. All cemeteries include signage, benches, trash receptacles, flower containers, and a gravesite locator. The proposed Jacksonville area cemetery will include an irrigation system.

2.1.3 Development and Operations

The Jacksonville area national cemetery would be developed in phases. During the first phase of development, the infrastructure required for the cemetery to function would be built and chosen areas of the site would be opened to burials. It is expected that in the first ten years of development, approximately 7,500 full in-ground burial sites and 4,500 columbarium niches would be provided. Once a given development phase reaches build out, another portion of the cemetery would be opened to burials. The Jacksonville area cemetery is expected to reach full build-out by 2030. The first interments are expected to take place in 2009.

VA cemeteries are open for burials five days a week. Burials are not conducted on weekends and holidays. The average daily number of burials varies with location and time. It is expected that during its first ten years of operation, the Jacksonville area cemetery would see an average of six to seven burials per weekday.

2.2 Alternatives Development Process and Alternatives Dismissed from Further Consideration

2.2.1 Primary Site Selection Process

2.2.1.1 Focal Point and Identification of Potential Sites

The first step in siting a new national cemetery is the definition of a focal point for the search. The focal point is determined primarily based on the distribution of the unserved veteran population and the location of available existing cemeteries. As determined based on the 2002 burial needs study, the focal point for the proposed new cemetery was located approximately where Nassau, Duval, and Baker counties meet, as shown in Figure 2-1 (Unserved Counties Credited to Jacksonville). Figure 2-1 also shows the 20 counties in Florida and Georgia within 75 miles of the focal point that would be served by the proposed new cemetery. Table 2-1 shows the unserved veteran population for each of these counties. As can be seen in Table 2-1, there are a total of 188,500 unserved veterans within 75 miles of the focal point, a little over half of whom reside in Jacksonville (Duval County) itself, while another 22 percent are found in two adjacent counties: Clay and St. Johns. The 188,500 unserved veterans represent the “target service population” for the proposed new cemetery.

Unserved Counties Credited to Jacksonville

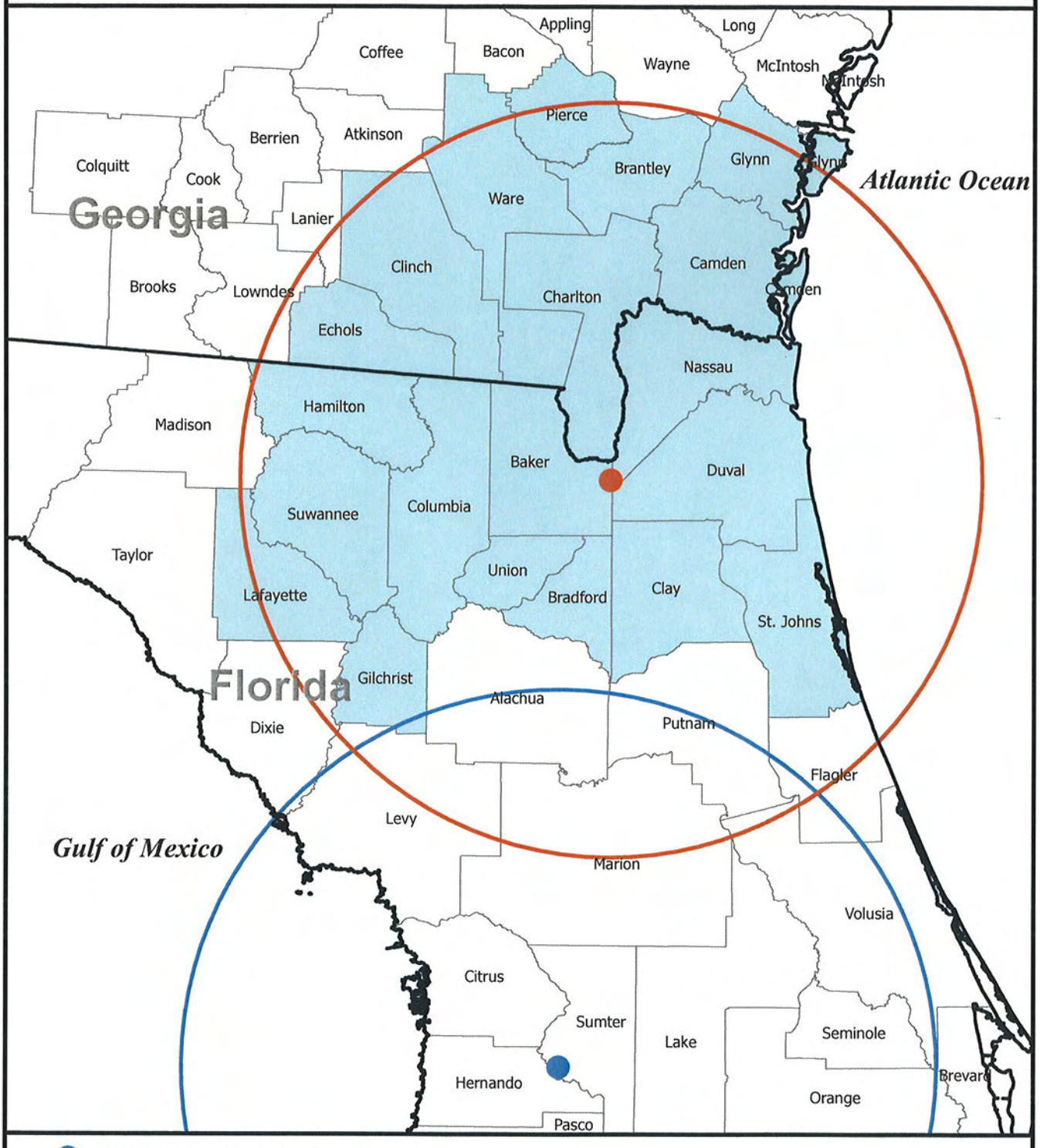

Figure 2-1

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Table 2-1
Unserved Veterans within 75 miles of the Jacksonville, FL Area

County	Number of Veterans
Florida	
Duval (Jacksonville)	95,116
Clay	23,198
St. Johns	17,863
Nassau	8,296
Columbia	7,842
Suwanee	4,334
Bradford	3,356
Baker	2,436
Union	1,723
Gilchrist	1,567
Hamilton	1,211
Lafayette	770
Total Florida	167,712
Georgia	
Glynn	7,673
Camden	5,120
Ware	3,572
Brantley	1,436
Pierce	1,237
Charlton	973
Clinch	531
Echols	246
Total Georgia	20,788
Total	**188,500**

In December 2003, NCA began its search for potential cemetery sites to serve the 188,500 veterans in the Jacksonville area. Through advertisements, letters, site visits, and meetings, NCA called on members of Congress, state and local officials, veterans, and citizens for assistance and suggestions to identify potential sites. This process, along with two visits by representatives of NCA (in January and July 2004) resulted in the identification and evaluation of 14 potential sites. The location of these sites is shown in Figure 2-2 (Sites Considered for New National Cemetery). A brief characterization of each site is included in Appendix D.

2.2.1.2 Site Evaluation

NCA assesses potential sites based on the following ten general criteria:

Proximity – The site should be located as close as possible to the densest veteran population in the area under consideration; not only actual distance, but travel time to the site is considered. In this case, the densest veteran population is found in Duval County (Jacksonville). For this

reason, the intersection of Interstate 95 (I-95) and I-10 in downtown Jacksonville was used as the point of reference for this factor.

Size – Sufficient acreage must be available to provide gravesites for at least a 40-year projection. Interment rates and acreage requirements are projected based on veteran population within a 75-mile radius of the site.

Shape – Uniform boundaries, undivided by roads or easements, with generally square or rectangular shapes are desired. Irregularly shaped sites are more difficult to access and less efficient to design and develop.

Accessibility – The site should be readily accessible via highways and major public roadways. Close proximity to highway interchanges and public transportation is desirable. The road quality of access highways is also considered.

Utilities and Water – Availability of public utilities (electricity, water, sewer, and gas) is important. However, on-site septic systems and on-site potable water wells or ponds are acceptable. An adequate water supply for irrigation is of primary importance.

Surrounding Land Use – Sites adjacent to visually objectionable land uses, loud noise, high traffic, or other nuisance elements should be avoided. Both current and projected adjacent land uses are considered.

Soils – Soils should be of a quality that will provide adequate topsoil for growing turf; they should have adequate stability for constructing roads and buildings; they should be well-drained; and they should be free of shallow-depth groundwater. There should be no sub-surface obstructions or hazardous waste present.

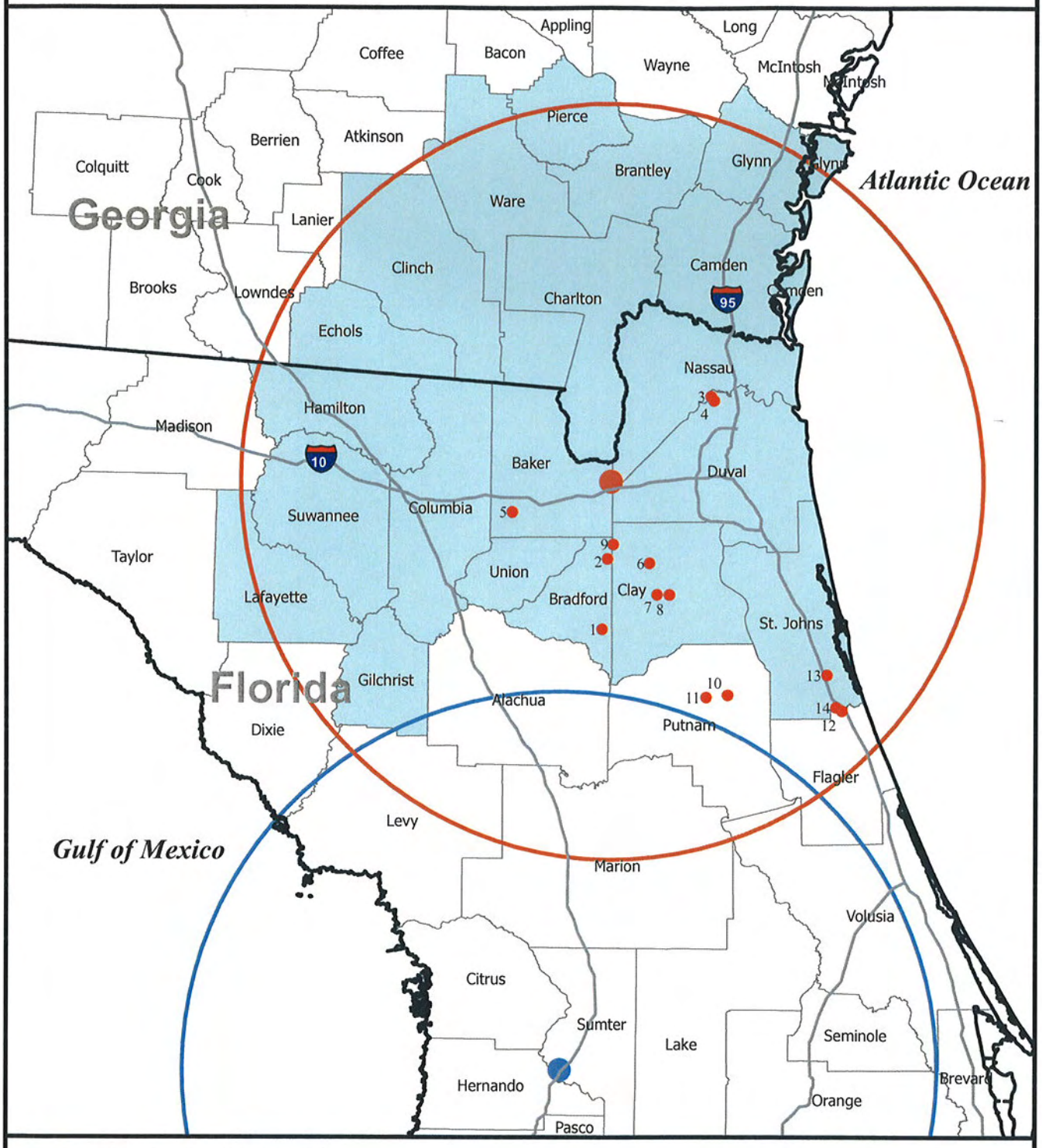
Topography – Comparatively level to rolling terrain is desirable for areas to be developed. The grade of burial areas should be in the 2 to 15 percent range. There should be sufficient slope to enable proper drainage of the site. Ravines, wetlands, and sinkholes cannot be developed.

Aesthetics – Existing site amenities such as pleasant views and quality vegetative cover are favorable.

Restrictions to Development – The presence of man-made elements such as cultural, historic, or archaeological elements, utility easements, rights-of-way, or mineral rights can hamper or legally prevent development. Presence of endangered species, historic artifacts, and or wetland areas limits or precludes cemetery development.

An additional important consideration when evaluating potential sites for the proposed Jacksonville area cemetery was the need to minimize any overlap with the service area of Florida National Cemetery in Bushnell in order to avoid leaving some areas unserved while creating redundancies in others. Rather, a proposed site should have as many of the 188,500 unserved Jacksonville area veterans within its 75-mile-radius service area as possible. Therefore, overlap

Sites Considered for Proposed Jacksonville Area National Cemetery



Cemetery Location Candidate
Florida National Cemetery Location
Focal Point for Proposed Jacksonville Cemetery Site Search
Florida National Cemetery 75 Mile Service Area
75 Mile Service Area Centered on Focal Point
Unserved County Credited to Jacksonville

28 0 28 Miles
40 0 40 Kilometers

N

Figure 2-2

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with Florida National and coverage of the target population were two important criteria used by the NCA in evaluating the suitability of the potential sites.

Several of the evaluation criteria are quantifiable and, therefore, make it relatively easy to rank the potential sites in relation to each other in an objective manner; such factors include size, proximity, overlap with Florida National, and percentage of the target veteran population served. Table 2-2 shows how each of the considered sites performed for each of the quantifiable criteria with the exception of size because all sites were potentially large enough to accommodate the proposed cemetery; therefore, size was not a significant factor in evaluating the sites. Table 2-3 provides the site ranking for each criterion (again, except size).

Table 2-2
Quantitative Criteria

Site # (County)	Distance to I-95/I-10 Intersection (Miles)[1]	% Overlapping with Florida National Service Area[2]	Target Service Population Covered[3]	% of Target Service Population Covered
1 (Bradford)	44.8	29.8	178,154	94.5
2 (Bradford)	31.2	20.7	179,590	95.3
3 (Duval)	18.5	3.2	187,730	99.6
4 (Duval)	18.5	3.2	187,730	99.6
5 (Baker)	43.7	15.2	180,827	95.9
6 (Clay)	27.1	20.6	187,263	99.3
7 (Clay)	30.4	24.2	179,590	95.3
8 (Clay)	30.6	23.9	179,590	95.3
9 (Clay and Bradford)	27.9	18.9	187,263	99.3
10 (Putnam)	48.1	34.2	176,166	93.4
11 (Putnam)	53.6	35.6	177,908	94.4
12 (Flagler)	54.5	27.9	158,081	83.9
13 (St. Johns)	46.8	25.3	165,923	88.0
14 (St. Johns)	54.9	28.1	158,081	83.9

Notes:
1. Numbers represent the shortest road distance from the site considered to the I-95/I-10 intersection.
2. Numbers represent area overlap.
3. Counties partially included in the service area are counted in full.

Table 2-3
Site Rankings for the Quantitative Criteria

Rank	Distance to I-95/I-10 Intersection (Site)	% Overlapping with Florida National Service Area (Site)	% of Target Service Population Covered (Site)
1st	3	3	3
2nd	4	4	4
3rd	6	5	9
4th	9	9	6
5th	7	6	5
6th	8	2	2
7th	2	8	8
8th	5	7	7
9th	1	13	1
10th	13	12	11
11th	10	14	10
12th	11	1	13
13th	12	10	12
14th	14	11	14

As can be seen, Sites 3 and 4 performed best under all three relevant quantifiable criteria while Site 1 and Sites 10 through 14 performed worst under all three relevant quantifiable criteria. Looking at absolute rather than relative numbers, the superiority of Sites 3 and 4 is confirmed. The distance of both sites to the reference point is approximately 18.5 miles; the next closest sites, Sites 6 and 9, are located 27–28 miles from the reference point. The overlap between the service areas of Sites 3 and 4 and that of Florida National is a little over 3 percent. The next best sites under this criterion (Sites 5 and 6) have a 15 percent and 21 percent overlap, respectively. The advantage of Sites 3 and 4 is less clear with regard to the percentage of the target veteran population covered. Sites 9 and 6 would serve a similar proportion of the Jacksonville area veterans.

However, in addition to performing substantially worse than Sites 3 and 4 under the distance and overlap criteria, Sites 9 and 6 also perform poorly under at least one of the qualitative criteria. Site 9 would have to be accessed from US 31, a heavily used road with significant truck traffic, which would conflict with slow-moving funeral corteges and create a potentially hazardous situation. Thus, accessibility would be poor. Site 6 performed poorly for the shape criterion, being characterized by an awkward small corner frontage on State Route 218; additionally, it was surrounded by unappealing neighboring uses and appeared likely to require substantial mitigation if developed.

More generally, while the advantage of Sites 3 and 4 over the other sites with respect to the quantitative criteria could in principle be offset by the advantage of other sites with respect to the qualitative criteria, actually none of the other sites were found to be substantially better than

Sites 3 and 4 under the qualitative criteria. All the sites were either worse than, or similar to, Sites 3 and 4 with respect to these criteria, in addition to being also worse with respect to the quantitative criteria.

Additionally, Sites 3 and 4 received substantial public support, expressed in a mailing campaign that resulted in 151 letters favorable to the selection of these sites and only 10 supporting other sites or expressing no preference. The mailing campaign occurred in response to an effort by veterans groups to promote locations in the area of Flagler County. The DVA understands and is sympathetic to the desire of all veterans to have a national cemetery near their homes. However, NCA can only develop and maintain so many national cemeteries and, when siting a new facility, must select the location that best meets its purpose and need.

Analysis has shown that Sites 3 and 4 would serve a larger number of Jacksonville area unserved veterans more efficiently than would any of the other 12 sites considered as part of the initial alternative evaluation process. As a result, selecting any of these 12 sites when Sites 3 and 4 are available would not be a reasonable alternative. Therefore, Sites 1 and 2 and Sites 5 through 14 were dismissed from further consideration. Only Sites 3 and 4, which best meet the selection criteria, were retained for further evaluation.

2.2.2 Secondary Site Selection Process

Although both Site 3 and Site 4 were better suited to NCA's purposes than the other potential sites originally considered, neither site was usable "as is" to construct the proposed Jacksonville area national cemetery. Through the secondary evaluation and selection process described below, NCA defined narrower, more focused alternatives for assessment in this EA.

2.2.2.1 Secondary Site 3 Alternatives

Site 3 consisted of approximately 3,000 acres of privately-owned, undeveloped, mostly forested land north of Jacksonville International Airport. This is substantially more land than NCA needs to develop the proposed new cemetery. Therefore, a first step was to identify what portion or portions of Site 3 were best suited to NCA's purpose.

After revisiting the property and consulting with the owner, NCA initially selected two potential sites, Sites 3.1 and 3.2, as shown in Figure 2-3 (Sites 3 and 4 Secondary Alternatives). These sites were selected because of:

- Their compact shape and potential to contain a sufficient amount of developable land (as defined in Section 2.1): Site 3.1 covers approximately 724 acres and Site 3.2 covers 497 acres.

- Their location on the edge of the overall property, which makes them accessible from existing public roads and would allow the owner to sell either of them without unduly fragmenting the rest of the property.

2.2.2.2 Secondary Site 4 Alternatives

Site 4 consisted of approximately 568 acres owned by the City of Jacksonville east of Site 3 and currently under the jurisdiction of the Sheriff's Office. Most of the property is in pasture, dotted with wooded areas. Though treated as one location for the purposes of the primary site selection process, Site 4 really consisted of two potential sites separated by a public road (Lannie Road), as shown in Figure 2-3. Each of these two sites – Site 4.1 and Site 4.2 – is sufficiently compact in shape to accommodate the proposed new cemetery and has the potential to contain enough developable land (Site 4.1 covers approximately 316 acres; Site 4.2 covers 252 acres). Both sites are easily accessible through Lannie Road. The western boundary of Site 4.1 reflects the future alignment of Ethel Road, the relocation of which is currently in the planning stage. Only the land east of the new alignment is proposed for acquisition and development of the new cemetery.

2.2.2.3 Preliminary Site Analysis

Further review of the four identified sub-sites based on the evaluation factors listed in Section 2.2.1.2 confirmed that these sites would be reasonable alternatives to meet NCA's purpose and need, with one exception: Site 3.2. Indeed, review of Site 3.2 showed that:

- Although the site is accessible in principle through existing public roads, approach to the site would have to be through residential streets that would not be adequate to accommodate the car and truck traffic generated by the cemetery in both its construction and operational phases. Additionally, such traffic would represent a serious nuisance for the area's residents.

- A preliminary evaluation of the quantity and distribution of wetlands on each site showed that of all four sites, Site 3.2 appeared to have the highest proportion of wetlands (48 percent of the site, as opposed to 28.5 percent for Site 3.1; 26 percent for Site 4.2; and 15 percent for Site 4.1). Additionally, the distribution of those wetlands throughout the site (refer to Figure 8 in Appendix D) would make it very difficult, if not impossible, to develop the cemetery around them to minimize impacts (see Appendix D for more information on the preliminary wetland evaluation conducted as part of the secondary site selection process).

Based on these two findings, NCA determined that Site 3.2 was not a reasonable alternative and dismissed it from further consideration.

Additionally, the preliminary site analysis highlighted features of Sites 4.1 and 4.2 that might substantially constrain development. While not sufficient to dismiss either site as being an unreasonable alternative, these constraints suggested the need to develop an additional secondary Site 4 alternative that would not be subject to them. The constraints in question are:

- Site 4.1: the northernmost parcel of the site includes two city-owned recreational facilities that would have to be relocated at a significant cost if the site was developed: a model airplane flying field, and a playground and softball field.

Sites 3 & 4 Secondary Alternatives

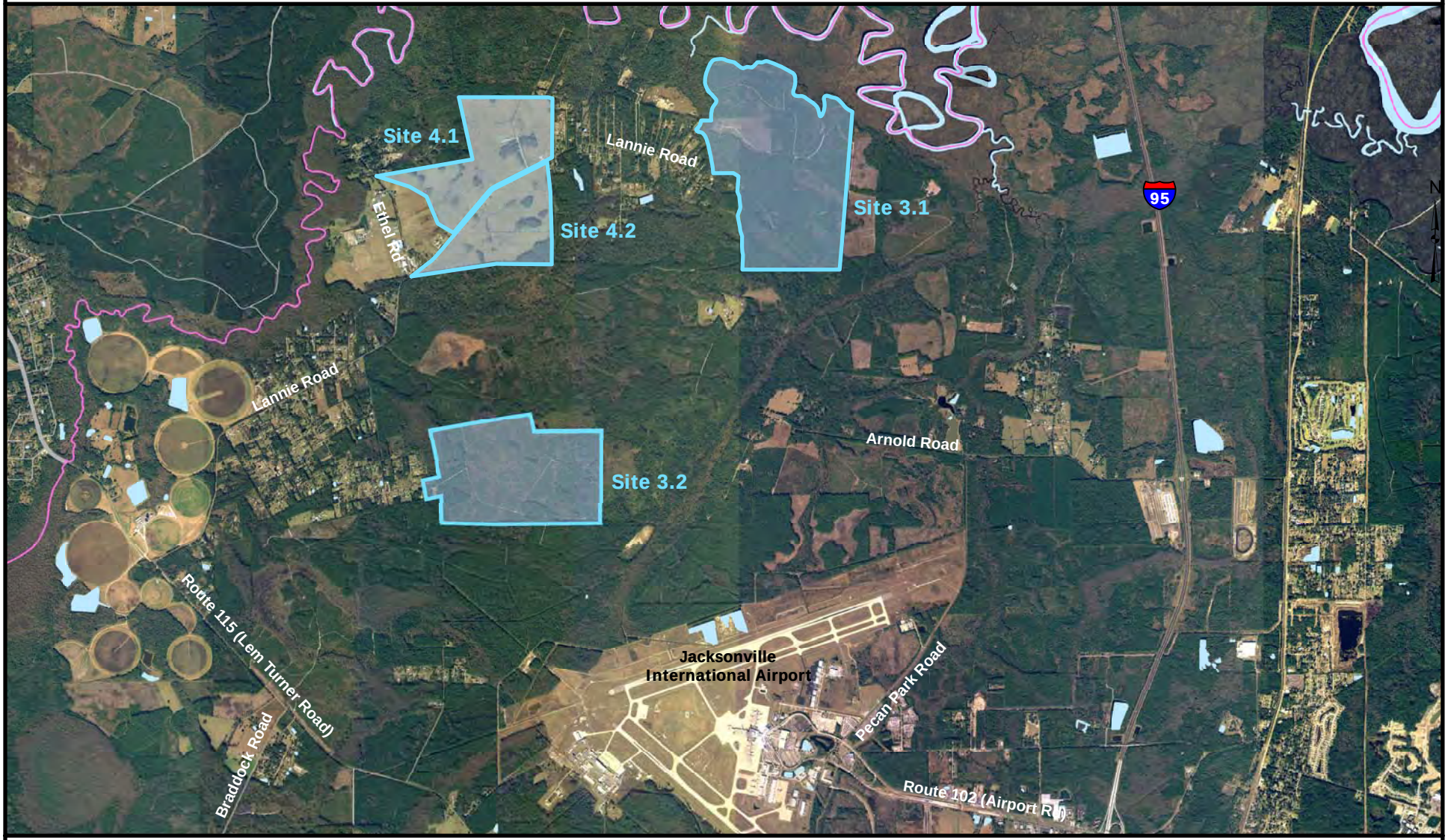

Figure 2-3

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- Site 4.2: this site is the smallest of the sites considered, and likely to offer the least amount of developable uplands.

Consequently, NCA developed a third alternative which would consist of excluding the parcel where the recreational facilities are located from the site and realigning Lannie Road south of its current alignment to compensate for the loss of area and create a sufficiently large potential site, as shown in Figure 2-4 (Secondary Alternative 4.3). Following the proposed realignment, the site would cover approximately 365 acres. Preliminary consultation with the City of Jacksonville indicated that the city is willing to consider realigning Lannie Road. On this basis, NCA found Site 4.3 to be a reasonable alternative and selected it for assessment in the EA.

2.3 Alternatives Assessed in This EA

2.3.1 Action Alternatives

Based on the process described in Section 2.2, four alternatives action alternatives are assessed in this EA:

- Alternative 1 or **Wright Alternative**: construct and operate the proposed new Jacksonville area national cemetery on Site 3.1; henceforth referred to as "Wright Alternative" after the owner's name.

- Alternative 2 or **City North Alternative**: construct and operate the proposed new Jacksonville area national cemetery on Site 4.1; henceforth referred to as "City North Alternative," after the owner of the site and its location relative to Lannie Road.

- Alternative 3 or **City South Alternative**: construct and operate the proposed new Jacksonville area national cemetery on Site 4.2; henceforth referred to as "City South Alternative," after the owner of the site and its location relative to Lannie Road.

- Alternative 4 or **Lannie Road Realigned Alternative**: construct and operate the proposed new Jacksonville area national cemetery on Site 4.3; henceforth referred to as "Lannie Road Realigned Alternative" after the alternative's main characteristic.

2.3.2 No Action Alternative

Under this alternative, NCA would not build a new national cemetery to serve the Jacksonville area veterans and their families. Since the National Cemetery Expansion Act of 2003 (Public Law 108-109) directs the Secretary of Veterans Affairs to establish six new national cemeteries, including one to serve the Jacksonville area, the No Action Alternative would amount to ignoring the law passed by Congress and, therefore, is not a reasonable alternative. However, in accordance with NEPA regulations, the No Action Alternative is assessed in the EA to provide a baseline against which the impacts of the action alternatives can be compared.

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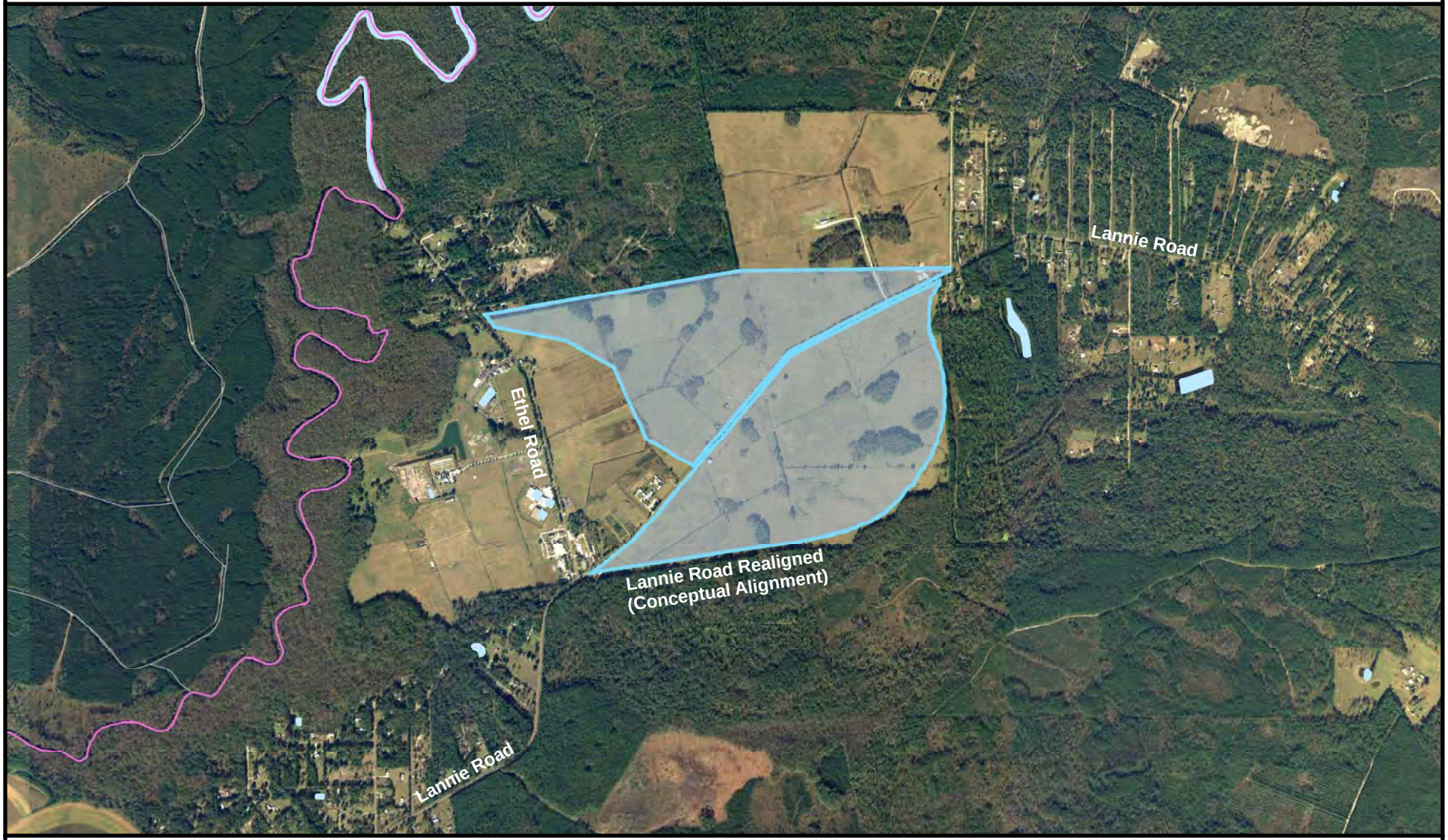
Secondary Alternative 4.3



Potential Cemetery Site

County Boundary

2,000 0 2,000 Feet

600 0 600 Meters

N

Figure 2-4

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Table 2-4
Comparison of Alternatives

Impact Area	No Action	Wright	City North	City South	Lannie Rd Realigned
Land Use and Plans, Zoning, Aesthetics, plans, and Coastal Zone	No adverse impacts	No adverse land use impacts Minor short-term adverse impacts and moderate long-term positive impacts on aesthetic environment No adverse impacts on zoning No or negligible adverse impacts on plans Moderate adverse impact on private development plans Consistent with the FCMP	No adverse land use impacts Minor short-term adverse impacts and moderate long-term positive impacts on aesthetic environment No adverse impacts on zoning No or negligible adverse impacts on plans or private development plans Consistent with the FCMP	No adverse land use impacts Minor short-term adverse impacts and moderate long-term positive impacts on aesthetic environment No adverse impacts on zoning No or negligible adverse impacts on plans or private developments Consistent with the FCMP	No adverse land use impacts Minor short-term adverse impacts and moderate long-term positive impacts on aesthetic environment No adverse impacts on zoning No or negligible adverse impacts on plans or private developments Consistent with the FCMP
Socioeconomics	No adverse impacts	No impacts on demography Minor positive impacts on employment and local economy Negligible adverse impacts on local cemeteries and tax revenues	No impacts on demography Minor positive impacts on employment and local economy Negligible adverse impact on local cemeteries	No impacts on demography Minor positive impacts on employment and local economy Negligible adverse impact on local cemeteries	No impacts on demography Minor positive impacts on employment and local economy Negligible adverse impact on local cemeteries

Impact Area	No Action	Wright	City North	City South	Lannie Rd Realigned
Community Services	No adverse impacts	Negligible adverse impacts	Negligible adverse impacts on fire, EMS, police, and healthcare services Minor adverse impacts on recreational facilities	Negligible adverse impacts	Negligible adverse impacts
Utilities	No adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Minor short-term (relocation) and negligible long-term adverse impacts
Transportation	No adverse impacts	Negligible to minor adverse impacts the road network Negligible traffic impacts	No adverse impacts on the road network Negligible traffic impacts	No adverse impacts on the road network Negligible traffic impacts	Negligible adverse impacts on the road network Negligible traffic impacts
Air Quality	No adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Negligible adverse impacts
Noise	No Adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Negligible adverse impacts	Negligible adverse impacts
Cultural Resources	No adverse impact	No adverse impacts	No adverse impacts	No adverse impacts	No adverse impacts
Natural Resources	No adverse impacts	No adverse impacts on geology Minor adverse impacts on topography and soils Minor adverse impacts on stormwater Minimal adverse impacts on wetlands Moderate adverse impacts on biological resources No impacts on threatened and endangered species	No adverse impacts on geology Minor adverse impacts on topography and soils Minor adverse impacts on stormwater Minimal adverse impacts on wetlands Minor adverse impacts on biological resources No impacts on threatened and endangered species	No adverse impacts on geology Minor adverse impacts on topography and soils Minor adverse impacts on stormwater Minimal adverse impacts on wetlands Minor adverse impacts on biological resources No impacts on threatened and endangered species	No adverse impacts on geology Minor adverse impacts on topography and soils Minor adverse impacts on stormwater Minimal adverse impacts on wetlands Minor adverse impacts on biological resources No impacts on threatened and endangered species

Impact Area	No Action	Wright	City North	City South	Lannie Rd Realigned
Hazardous Waste	No adverse impacts	No adverse impacts	No adverse impacts	No adverse impacts	No adverse impacts
Cumulative Impacts	No cumulative impacts	Negligible cumulative impacts	Negligible cumulative impacts	Negligible cumulative impacts	Negligible cumulative impacts
Potential for Public Controversy	Substantial potential for public controversy	Low potential for public controversy	Low potential for public controversy	Low potential for public controversy	Low potential for public controversy

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3 Affected Environment

Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Part 1500-1508) require documentation that succinctly describes the environment of the area(s) potentially affected by the alternatives under consideration to meet the agency's purpose and need. This description serves as a basis for the subsequent description of the potential impacts (presented in Chapter 4 of this EA).

The primary study area for the proposed action evaluated in this EA consists of 1) potential cemetery sites 4.1 and 4.2 as shown in Figure 2-3 of this EA, together referred to as "City Site;" and 2) potential cemetery site 3.1 as shown in Figure 2-3, referred to as "Wright Site." Depending on the type of potential impacts considered, the study area may expand to include the land surrounding the City and Wright sites or all of Duval County (Note: "City of Jacksonville" and "Duval County" refer to the same geographical and jurisdictional entity, reflecting the fusion of the City and County governments in 1968.)

For each impact category, existing conditions are described at a level of detail proportional to the potential for impacts.

3.1 Land Use, Zoning, and Coastal Zone Management

3.1.1 Land Use

This section describes in qualitative terms the actual use being made of the land within the study area. It is based primarily on site visits and study of recent (2004) aerial photographs. Figure 3-1 (Existing Land Use) shows the locations of the features mentioned in the descriptions below.

3.1.1.1 City Site

The City Site is owned by the City of Jacksonville. Lannie Road divides it into two sections. Most of the site on either side of the road is an open pasture currently used for cattle grazing under a lease from the City. The property is spotted with wood stands and its southeastern corner consists of a swampy area. The site is fenced and closed to the public. There are no buildings or structures on the site, with the exception of two small barns or cow sheds, and the recreational facilities described below.

In the northern part of the City Site, there is a park area consisting of a model airplane flying field managed by the Gateway Radio Control Club under a lease agreement with the City of Jacksonville's Department of Parks, Recreation, and Entertainment, and a playground/softball field, which was added to the site in 1997 after input from the area's residents (COJ.net, 2006a). The model flying field includes a roofed pavilion with picnic tables, a club house, and a short,

paved landing strip. Users fly model airplanes and helicopters over the surrounding area. Nearby stands a small, currently unoccupied mobile home previously used to house site maintenance personnel. The model airfield and playground/softball field are the only portions of the City Site open to the public.

The City Site is currently managed by personnel from the Montgomery Correctional Center (MCC), one of the Jacksonville Sheriff's Office Department of Corrections' three correctional facilities. The MCC extends on both sides of Ethel Road, just north of Lannie Road, adjacent to the southwest corner of the City Site. MCC is a secure facility for convicts serving sentences of up to one year. It has a capacity of approximately 650 inmates. In 2004, 8,308 inmates were processed into the facility (Jacksonville Sheriff's Office, 2004). The inmates work on selected public work projects. The facility includes a vegetable garden whose produce goes to charitable organizations (COJ.net, 2006b).

Another correctional facility, the Tiger Serious Habitual Offender Program (SHOP), stands next to MCC and the City Site. SHOP is a secure, 20-bed facility for high-risk male youths, operated for the State of Florida by Youthtrack Inc./Rescare. The site is fenced and similar in appearance to the MCC.

3.1.1.2 Wright Site

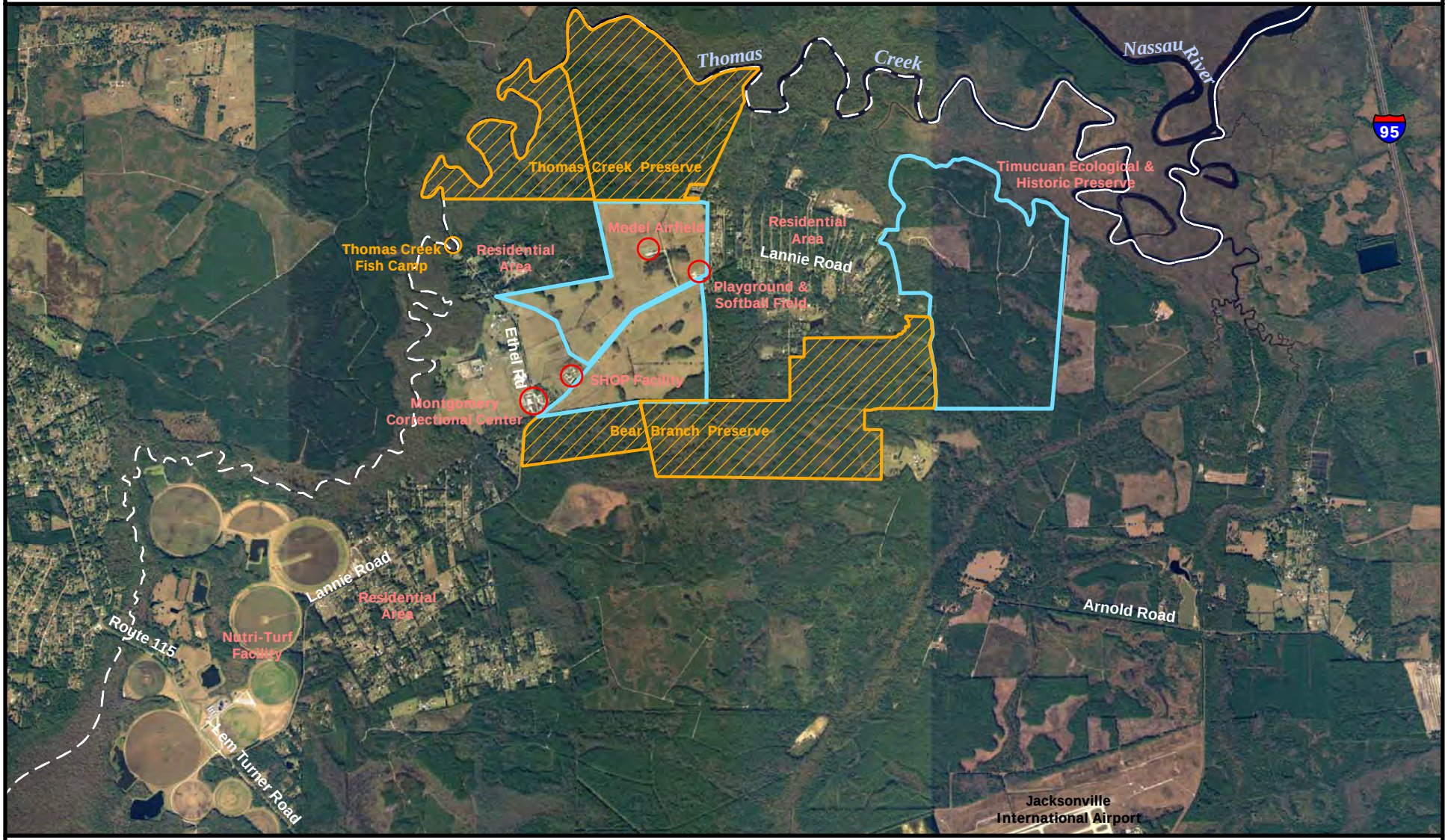
The Wright Site, privately owned and closed to the public, is entirely unbuilt. Much of the site consists of pine plantation, with some areas preserving their natural vegetation cover. Dirt roads traverse the property, which is part of a larger tract of undeveloped land (approximately 3,000 acres in area) that extends east and south under the same ownership. Access to the site is through Lannie Road, which ends at the gate. There are no buildings or structures on the property.

3.1.1.3 Surrounding Area

The area extending north of the City and Wright sites to Thomas Creek and the area extending south and southeast of the sites to the Jacksonville International Airport runways are mostly unbuilt and forested (including areas of pine plantation). They include several Preservation Project Jacksonville (see Section 3.1.4.3) properties: the Thomas Creek Preserve and the Thomas Creek Fish Camp, north and northwest of the City Site; and Bear Branch Preserve, south and southeast of the City Site, extending to the boundary of the Wright Site. The area immediately adjacent to the northeast corner of the Wright Site, up to Thomas Creek, is part of the Timucuan National Ecological and Historic Preserve. The 46,000-acre Preserve is managed by the National Park Service in partnership with state, city, and private land owners. It extends along the coast north of the St. Johns River and along the Nassau River. It comprises many important historic sites and natural areas, many of them wetlands.

There are three low-density residential clusters near the potential cemetery sites. The largest one is located southwest of the City Site, off the south side of Lannie Road. It consists of generally modest single-family homes, often mobile homes, set back from the streets on individual lots. A smaller, looser cluster of single-family houses is found off Lannie Road, between the City and the Wright sites. The third, smallest, cluster lies at the end of Ethel Road, near the northwestern

Existing Land Use



Potential Cemetery Site
Preservation Project Jacksonville Land
County Boundary

4,400 0 4,400 Feet

1,200 0 1,200 Meters

N

Figure 3-1

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corner of the City Site. In those two areas, houses generally stand away from the road, at the end of long and narrow lots.

The last major land use found in proximity to the potential cemetery sites is located near the intersection of Lannie Road and Lem Turner Road: it is a facility operated by Nutri-Turf, a subsidiary of Busch-Anheuser, where process water from the company's Jacksonville brewery is used to irrigate fields of sod and forage grasses, then is filtered through natural wetlands before draining to Thomas Creek. The facility is easy to spot on aerial photographs because of the large "crop circles" it generates.

3.1.2 Aesthetic Environment

3.1.2.1 City Site

Most of the City Site is a large, open, mowed meadow used for cattle grazing. The portion of the site south of Lannie Road, characterized by several forested patches, is visually more varied than the portion north of Lannie Road, which is more uniform and visually monotonous. While the two correctional facilities previously mentioned are visible from parts of the site, the flat topography of the land and the low elevation of the structures make the sight generally unobtrusive. Only from areas immediately adjacent to the facilities do their security fences and functional buildings somewhat detract from the visual quality of the property. The same is true of the model airfield in the northern portion of the site.

3.1.2.2 Wright Site

The Wright Site, because of its large size, remoteness, and tree cover looks more "natural" than the City Site. Though much of it consists of rows of planted pines, there also are substantial, relatively undisturbed areas of natural vegetation. Once past the entry gate, the visitor quickly loses sight of paved roadways and habitations. However, tire tracks on the dirt roads that traverse the site are a reminder that the property is being actively farmed as a pine plantation.

3.1.2.3 Surrounding Area

Overall, the area around the two potential cemetery sites is country-like in appearance, as is much of north Jacksonville. Both Lannie Road and Ethel Road are two-lane, curb-less, dead-end roads that contribute to the rural feel of the area. The low-density residential developments near the sites are quiet but also somewhat lacking in character, a feature that is typical of north Jacksonville according to the City's *North Jacksonville Shared Vision and Master Plan* (2003).

3.1.3 Zoning

Through zoning, local jurisdictions determine what uses are a matter of right and what uses require special permission for a given parcel of land. Only federal lands are not subject to the

local jurisdiction's zoning authority. Other lands, public or private, are subject to it. Both the City and the Wright sites are zoned by the City of Jacksonville.

3.1.3.1 City Site

The City Site is zoned *Public Buildings and Facilities-1 (Government)*. Under this designation, all lawful government uses are allowed, with very few exceptions (COJ.net, 2006c).

3.1.3.2 Wright Site

The Wright Site is zoned *Agricultural*. Among the uses permitted under this designation are agricultural, horticultural, and forestry uses as well as a wide range of other activities, including cemeteries and mausoleums (COJ.net, 2006c).

3.1.3.3 Surrounding Area

Most of the land around the two potential sites is zoned *Agricultural, Recreational and Open Space,* or *Rural Residential*. Preservation Project Jacksonville land immediately south of the City Site is zoned *Recreational and Open Space*. Permitted uses include most recreational activities such as camping grounds, golf courses, shooting ranges, and, with qualifications, supporting infrastructure. In areas zoned *Rural Residential*, single-family dwellings and mobile homes are permitted on lots that are at least 100 feet wide and 43,560 square feet in area, with up to 20 percent lot coverage and a height limitation of 35 feet (COJ.net, 2006c).

3.1.4 Plans and Ongoing Projects

3.1.4.1 City of Jacksonville's 2010 Comprehensive Plan

The City of Jacksonville adopted its *2010 Comprehensive Plan* in 1990. The plan was updated in 2002. The plan defines the City's policies and goals for the following elements: Historic Preservation, Housing, Transportation, Recreation and Open Space, Conservation/Coastal Management, Infrastructure, Future Land Use, and Capital Improvements. The plan is available online at the following address:
http://www.coj.net/Departments/Planning+and+Development/Current+Planning/2010+Comprehensive+Plan.htm

3.1.4.2 North Jacksonville Shared Vision and Master Plan

The City's *North Jacksonville Shared Vision and Master Plan* was issued in 2003. Its purpose is to "guide growth management decisions that appropriately utilize North Jacksonville's assets to spur quality growth and economic development." Development of the plan arose from the realization that the natural and economic assets of North Jacksonville were not being used to their full potential. Strong growth, both in quantity and quality, occurred primarily to the south, southeast, and southwest of the city whereas North Jacksonville continued to suffer from negative perceptions associated with its industrial history and lack of amenities for residents.

The negative trends identified by the plan were the following:

- Continued negative image due to lack of central focus, unattractive commercial strips, contrast between heavy industrial elements and pristine ecosystems, population perceived as being low-income/rural, and lack of high quality housing.
- Tendency for growth to jump over North Jacksonville into Nassau County.
- Lack of historic centers or focal points that would provide a destination for living, working, or recreating.
- Piecemeal development of rural areas that creates urban sprawl and prevents the formation of sustainable communities, resulting in overloaded rural roads with no interconnectivity, high cost of providing infrastructure, and loss of opportunities for mixed developments.
- Jobs/economic growth limited to low-wage jobs.

In response to these trends, the City proposes to change North Jacksonville by, as stated in the plan:

- Changing the economic paradigm.
- Eradicating the ugliness.
- Creating the North Jacksonville Town Center.
- Creating a sense of community.
- Creating great neighborhoods.
- Connecting with the environment.
- Connecting the places.
- Connecting the neighborhoods.
- Protecting the corridors.
- Embracing our history and culture.

3.1.4.3 Preservation Project Jacksonville

The Preservation Project Jacksonville, supervised by the Department of Parks, Recreation, and Entertainment, is designed to manage growth, protect environmentally sensitive lands, improve water quality, and provide public access to the City of Jacksonville's vast natural areas. It was initiated in 1999. To date, the Preservation Project Jacksonville has acquired more than 50,000 acres of land, to be managed in cooperation with state and federal agencies. The project is currently preparing to provide for public access to the city's natural areas while continuing to protect the environmentally sensitive lands (COJ.net, 2006d). Preservation Project Jacksonville properties lie north of the City Site and between the City and Wright sites (see Figure 3-1). This land is owned and managed either by the City of Jacksonville or the St. Johns River Water Management District.

3.1.4.4 Northeast Florida Timberlands and Watershed Reserve Project

Preservation Project Jacksonville is an element of the larger Florida Forever's Northeast Florida Timberlands and Watershed Reserve Project. Florida Forever is the world's largest conservation land buying program (it has acquired more than one million acres in the last five years) (FDEP,

2006a). The Northeast Florida Timberlands and Watershed Reserve Project includes land extending along a northeast-southwest diagonal from the Nassau River north of Jacksonville to Trail Ridge in Clay County. It covers more than 130,000 acres divided among more than 150 owners and hundreds of parcels over three counties (Nassau, Duval, and Clay). Project lands are targeted for acquisition by the state for conservation purposes and ultimate management as a state forest. It is expected that some of the land will have to be incorporated through a "less-than-fee simple" approach, such as grant of conservation easements or other means to preserve the environmental value of the land though it would remain in private hands. Some parcels within the project are designated "essential parcels." Both the City Site and the Wright Site are "essential parcels" of the project. However, until land within the project is actually acquired, the state has no special jurisdiction over it (FNAI, 2006). As noted, some land adjacent to the potential cemetery sites (Bear Branch Preserve, Thomas Creek Preserve) has already been acquired as part of the Preservation Project Jacksonville.

3.1.4.5 Construction Projects

The City of Jacksonville is planning the realignment of Ethel Road east of its current location. Ethel Road currently runs through MCC. Once the road is realigned, the facility's separation into two portions will end, facilitating its management and development. The western boundary of the City Site (north of Lannie Road) follows the new alignment of Ethel Road. The project is expected to be completed by 2007. After the realignment of Ethel Road, MCC plans to use the land west of the new road to expand its facilities.

A large private development project is being planned for the area where the potential cemetery sites are located: the Preserve at Thomas Creek Project, which includes building in the range of 10,000 homes along with shopping centers, offices, parks, schools, and other amenities on land that includes the Wright Site (along with other portions of the Wright property). The project's developer, Thomas Creek Preserve, LLC, has filed an Application for Development Approval with the City of Jacksonville. The application is currently under review and the process is projected to last until the end of 2006. The Preserve at Thomas Creek Project also includes extending Lannie Road eastward through the Wright Site to connect with Arnold Road, Pecan Park Road, and I-95. Braddock Road, to the south of Lannie Road, would be similarly extended.

3.1.5 Coastal Zone Management

The Florida Coastal Management Program (FCMP) was approved by NOAA in 1981. Federal agencies, and applicants seeking federal financial assistance and/or federal licenses and permits are required by the Coastal Zone Management Act to provide the State of Florida with the information needed to determine whether federal actions conducted in or adjacent to the State of Florida impact the resources of the state's coastal zone, and whether impacts to the state's coastal resources are consistent with the enforceable policies contained in the FCMP. The State of Florida's coastal zone includes the area encompassed by the state's 67 counties and its territorial seas. Therefore, federal actions occurring throughout the state are reviewed by the state for consistency with the FCMP (FDEP, 2006b).

The FCMP consists of a network of 23 Florida statutes:

1. Coastal Construction (Chapter 161 Florida Statutes [FS])
2. Local Government (Chapter 163 Part II FS)
3. State and Regional Planning (Chapter 186 FS)
4. Disaster Preparedness (Chapter 252 FS)
5. State Lands (Chapter 253 FS)
6. Outdoor Recreation (Chapter 258 FS)
7. Land Conservation Action of 1972 (Chapter 259 FS)
8. Recreational Trails System (Chapter 260 FS)
9. Historic Preservation (Chapter 267 FS)
10. Tourism and Economy (Chapter 288 FS)
11. Public Transportation (1) (Chapter 334 FS)
12. Public Transportation (2) (Chapter 339 FS)
13. Living Resources (Chapter 370 FS)
14. Living Resources (Freshwater) (Chapter 372 FS)
15. Water Resources (Chapter 373 FS)
16. Multipurpose Outdoor Recreation, Land Acquisition, Management, and Conservation (Chapter 375 FS)
17. Pollutant Spill Prevention (Chapter 376 FS)
18. Oil and Gas Production (Chapter 377 FS)
19. Developments of Regional Impacts (Chapter 380 FS)
20. Public Health (Chapter 381, Sections 381.001, 0011, 0012, 006, 0061, 0066, and 0067 FS)
21. Arthropod Control (Chapter 388 FS)
22. Sources of Water and Air (Chapter 403 FS)
23. Soil and Water Conservation (Chapter 582 FS)

The State of Florida's federal consistency review is coordinated by the Florida Department of Environmental Protection (FDEP) and conducted jointly by the FCMP member agencies. During the review, each member agency with a statutory interest in the activity determines whether the proposed activity is consistent with its statutes and authorities in the FCMP. Recommendations regarding the activity's consistency with the FCMP are provided by the member agencies to FDEP, which makes the state's final consistency determination (FDEP, 2006b).

3.2 Socioeconomics

The information in this section is primarily based on Census 2000 data as made available by the US Census Bureau (US Census Bureau, 2006).

3.2.1 Demographics

Both potential cemetery sites are located in North Jacksonville, an area with relatively few residents compared to the rest of the city. There are no residents on the sites. The sites are within

Census Tract 103.01, which is bounded by Lem Turner Road to the west, I-295 to the south, US 17 to the east, and Thomas Creek to the north (Census Tract 103.01's boundaries approximately coincide with the extent of Figure 2-3). In 2000, the population of Census Tract 103.01 was 3,404, or 0.44 percent of the entire population of Duval County (778,879). In 1990, the same census tract was home to 0.5 percent of the county's population, with 3,394 residents. Of the total 2000 population, it should be noted that 608 persons were reported as institutionalized (primarily reflecting the presence of the MCC), leaving the number of non-institutionalized residents at 2,796, or 0.36 percent of the county's total population. Most of Census Tract 103.01 is unbuilt and most of the non-institutionalized population appears concentrated in the three residential clusters identified in Section 3.1.1.3.

Of the 3,404 residents of Census Tract 103.01 in 2000, 77.9 percent identified themselves as white (non Hispanic) and 19.24 percent as Black. Hispanics made up 1.29 percent of the tract's residents. The numbers for Duval County as a whole were 63.52 percent white residents, 27.8 percent Black residents, and 4.10 percent Hispanic residents.

Out of all residents of Duval County, in 2000, 26.3 percent were under 18 years of age. The corresponding number for Census Tract 103.01 was 20.2 percent.

3.2.2 Income and Employment

As noted in the *North Jacksonville Shared Vision and Master Plan*, over the last few decades, North Jacksonville has not kept pace with the growth that has occurred south, southeast, and southwest of the city, where high-paying jobs and high-quality housing have been concentrating (City of Jacksonville, 2003). Guided by the plan, the City is making a conscious effort to promote high-quality economic growth in North Jacksonville, which seems poised for significant development over the coming years.

According to the *North Jacksonville Community Profile Report*, prepared in 2002 to support the master planning effort (MSCW, 2002), the primary areas of non-government employment in North Jacksonville were manufacturing (24 percent); transportation and warehousing (17 percent); and retail (13 percent). By comparison, the three largest employment categories in Duval County as a whole were educational, health, and social services (16.4 percent); finance, insurance, and real estate (13.2 percent); and retail (12.2 percent). In Census Tract 103.01, the primary areas of employments were construction (17 percent); retail (17 percent); and transportation and warehousing (17 percent). The last category likely reflects the presence of Jacksonville International Airport. The two correctional facilities previously mentioned (Section 3.1.1.1) likely account for most of the 6.5 percent of public administration employment in the tract. It can be noted that in spite of the presence of tree plantations (in particular on the Wright site), no census tract residents reported being employed in agriculture and forestry (a category that accounted for 0.2 percent of all employment in North Jacksonville). The employment rate in the census tract in 1999 was 45.2 percent (of the population 16 years of age and over).

In spite of North Jacksonville's real and perceived economic weaknesses, however, incomes in the area are overall comparable to those of the city as a whole (MSCW, 2002). In 1999, in Census Tract 103.01, the median household income was $41,698 ($40,703 for Duval County),

the median family income was $47,063 ($47,689 for Duval County), and the poverty rate was 13.6 percent (11.9 percent for Duval County).

3.2.3 Environmental Justice and Protection of Children

Signed on February 11, 1994, Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs all federal departments and agencies to incorporate environmental justice considerations in achieving their mission. Each federal department or agency is to accomplish this by conducting programs, policies, and activities that substantially affect human health or the environment in a manner that does not exclude communities from participation in, deny communities the benefits of, nor subject communities to discrimination under such actions because of their race, color, or national origin.

According to CEQ guidance on EO 12898, "minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis […] Low-income populations in an affected area should be identified using the annual statistical poverty thresholds from the Bureau of the Census."

As shown in Section 3.2.1, Census Tract 103.01, within which the two potential cemetery sites are located, is not home to a disproportionately high number of minority residents compared to Duval County as a whole. It actually has more resident identifying themselves as white (non-Hispanic) than Duval County. Therefore, the census tract does not qualify as an Environmental Justice community on racial or ethnic criteria. With regard to income, it was indicated in Section 3.2.2 that median family and household incomes in Census Tract 103.01 compares to those in Duval County as a whole. While the poverty rate was a little higher, the difference was not enough to create disproportionate impacts on low-income populations. Therefore, the census tract does not qualify as an Environmental Justice community on income criteria either.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was signed on April 21, 1997. Because the scientific community has recognized that children may suffer disproportionately from environmental health and safety risks, the EO directs federal agencies to identify and assess such risks, and consequently to ensure that its policies, programs, activities, and standards address effects on children. "Environmental health and safety risks" are defined as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest." Regulatory actions that are affected by this EO are those substantive actions that involve an environmental health risk or safety risk that an agency has reason to believe may disproportionately affect children.

As noted in Section 3.2.1, Census Tract 103.01 has proportionately fewer residents under 18 years of age than Duval County as a whole. There are no schools or daycare centers on or near either of the two potential cemetery sites. However, a small juvenile correctional facility is located near the City Site (see Section 3.1.1.1). Also, there is a playground/softball field on the

City Site, built to serve local residents. Though no hard data are available, anecdotal evidence from MCC personnel suggests these facilities are underused.

3.3 Community Services

Community services addressed in this section include fire control and emergency medical service (EMS), police, medical care, and parks. Schools and libraries are not addressed because there is no potential for them to be affected by the proposed action.

The Jacksonville Fire and Rescue Department serves an area of 840 square miles with a total budget of $109 million (2004/5), approximately 1,200 career and 45 volunteer firefighters, and 57 fire and rescue stations. In 2003, the department responded to almost 3,000 fire calls, and more than 76,000 emergency medical calls. The first arriving average response time for fire in 2003 was 5.10 minutes. EMS first arriving average response time in 2003 was 4.40 minutes (COJ.net, 2006e).

The closest station to the potential cemetery sites is Fire Station 47, on the premises of the MCC facility. Fire Station 47 is staffed by volunteers and is in generally poor condition. The city is currently planning the relocation of the station in connection with the Preserve at Thomas Creek development project (see Section 3.1.4.4). At this time, the exact location of the new station has not been determined. The city expects to be soliciting bids for the new station toward the end of 2007 (Jerzy, 2006).

Police services in Jacksonville are provided by the Jacksonville Sheriff's Office, with approximately 3,200 personnel and a total budget of about $224.8 million in 2004. In 2004, the Sheriff's Office Communications Center fielded 1,668,730 calls. A total of 1,029,833 calls were dispatched to patrol officers (City of Jacksonville, 2004). Patrol services operate from six substations, one in each of six Patrol Zones. The proposed cemetery sites are located within Zone 6, the substation for which is located at 936 Dunn Avenue, approximately 12 miles from the intersection of Lannie and Ethel roads. Citywide crime statistics over the last decade show a downward trend (minus 18.4 percent between 1995 and 2004 and minus 1.3 percent from 2003 to 2004). Within Zone 6, a total of 342 violent crimes and 2,913 property crimes were reported between January and November 2005, representing an increase of 12.1 percent and decrease of 1.7 percent, respectively, relative to the same period in 2004 (COJ.net, 2006f).

The closest hospital to the potential cemetery sites is Shands Jacksonville, at 655 West Eighth Street, approximately 20 miles from the intersection of Lannie and Ethel roads. In association with the University of Florida, this 485-bed facility serves northeast Florida, including Duval, Clay, Nassau, and St. Johns counties. It has over 330 faculty physicians and offers almost 70 specialty services. The hospital includes a state-of-the-art trauma center serving more than 2,500 patients each year. It is supported by the Shandscair and TraumaOne helicopter ambulance services, which together transport approximately 1,000 patients a year (Shands, 2006).

One City park, Lannie Road Park, is located on the City Site. As noted in Section 3.1.1.1, it consists in part of a playground and softball field serving the local residents. Another element of

the park is the model airplane field, also described in Section 3.1.1.1. A portion of the Timucuan National Ecological and Historic Preserve is adjacent to the Wright Site, as noted in Section 3.1.1.3. The City of Jacksonville is developing an access and circulation plan for the Preservation Project Jacksonville. The parcel of Project property just south of the City Site would feature a trail head providing access to the areas east of it.

3.4 Utilities

Water, sewer, and electric service in Jacksonville is provided by the Jacksonville Electric Authority (JEA). Gas service is provided by Teco Peoples Gas. Both the potential cemetery sites are unbuilt and there are no existing utility connections on the sites. Based on information provided by JEA, electric service is available along Lannie Road up to the Wright Site, serving residences and facilities along the road. JEA also reported a 12-inch PVC sewer force main running along Lannie Road, then South outside the Wright Site's southwestern boundary, then east across the southern section of the Wright Site. This sewer main provides limited sewer capacity to residences and facilities along Lannie Road. JEA reported no water main on Lannie Road. There are three currently unused artesian wells on the City Site. No wells are known to exist on the Wright Site. Peoples Gas reported no facilities along Lannie Road. Bellsouth provides local telephone service.

3.5 Transportation

3.5.1 Road Network and Site Access

The road network near the potential cemetery sites is illustrated in Figure 3-2 (Existing Road Network). Local vehicle access to both potential cemetery sites is through Lannie Road. Lannie Road is a two-lane, paved facility that begins at Lem Turner Road and dead ends at the Wright Site. It is maintained by the Jacksonville Department of Public Works. Current access to the City Site is through several locked gates off Lannie Road. Public access to the property is limited to the model airfield and playground located on the northernmost parcel. A short gravel road leads from Lannie Road to the airfield. There are no other defined roads or paths on the City Site. Access to the Wright Site is through a locked gate at the eastern end of Lannie Road. Dirt roads serve the portions of the site that are being used for pine plantation. Several paved and unpaved roads branch off Lannie Road to serve the local residential areas. At the MCC, Lannie Road meets Ethel Road, which serves a small residential area to the north as well as the Thomas Creek Fish Camp.

Public vehicle access to Lannie Road is through Lem Turner Road (SR 115). Lem Turner Road is a two-lane facility that runs in a south-northwestern direction between I-295 (and points south) and SR A1A (Buccaneer Trail), which both connect to I-95 and the regional and national network. Lem Turner Road is maintained by the Florida Department of Transportation.

The road network in the area under consideration here is likely to change substantially over the next decade as such projects as the Preserve at Thomas Creek development are implemented and transportation improvements are made to meet the new demand (see Section 3.1.4.4). One such proposed improvement is the extension of Braddock Road and Lannie Road eastward to connect with Arnold Road, Pecan Park Road, and I-95. Creation of these new links would be consistent with the objectives of the *North Jacksonville Shared Vision and Master Plan*, which include creating an east-west link across the area between I-95 and Lem Turner Road. Also, the City is in the process of realigning Ethel Road to the east of its current location. This project, currently in design, is scheduled for implementation in 2007. Its purpose is to put an end to the present division of the MCC into two portions separated by Ethel Road, and thus allow for more effective development and management of the facility. The future alignment of Ethel Road constitutes the western boundary of the City Site north of Lannie Road.

3.5.2 Traffic Conditions

All traffic to and from the potential sites has to go through the intersection of Lem Turner and Lannie roads, which is a signalized, T-shaped intersection. Lem Turner Road southbound has a dedicated left-turn lane onto Lannie Road. Northbound, it has a dedicated right-turn lane onto Lannie Road. Lannie Road has a dedicated right-turn lane onto Lem Turner Road northbound.

Currently, the only generators of daily traffic on Lannie Road are the two correctional facilities and the local residents. The potential cemetery sites themselves generate virtually no traffic, with the partial exception of the model airplane field on the City Site. In this case, however, most traffic is likely to be on the weekends. The same is likely true of any traffic generated by the Thomas Creek Fish Camp.

Conditions at the Lem Turner Road/Lannie Road intersection reflect the moderate amount of traffic generated by the land uses along Lannie Road. To describe these conditions, turning movement counts were obtained from the Florida Department of Transportation. The most recent counts available were taken in 2000. The counts were performed for every 15-minute periods from 6:00 AM to 10:00 AM and from 1:00 PM to 7:00 PM.

Because the counts are now six years old, an annual growth factor of 1.64 percent was calculated and applied for each year between 2000 and 2006. This growth factor was calculated using available average daily traffic counts on Lem Turner in the vicinity of Lannie Road between 1995 and 2003. An AM peak, midday peak, and PM peak were then determined by calculating which four 15-minute intervals produced the highest total traffic at the intersection. Finally, these numbers were used to determine the intersection's level of service. Levels of service (LOS) are calculated based on the delay experienced by vehicles at a given intersection and range from A (no significant delay) to F (excessive delay). The results of this analysis are summarized in Table 3-1. As shown in Table 3-1, the intersection currently functions at LOS A: traffic stopping at the light will usually be able to move through the intersection when the light changes.

Existing Road Network

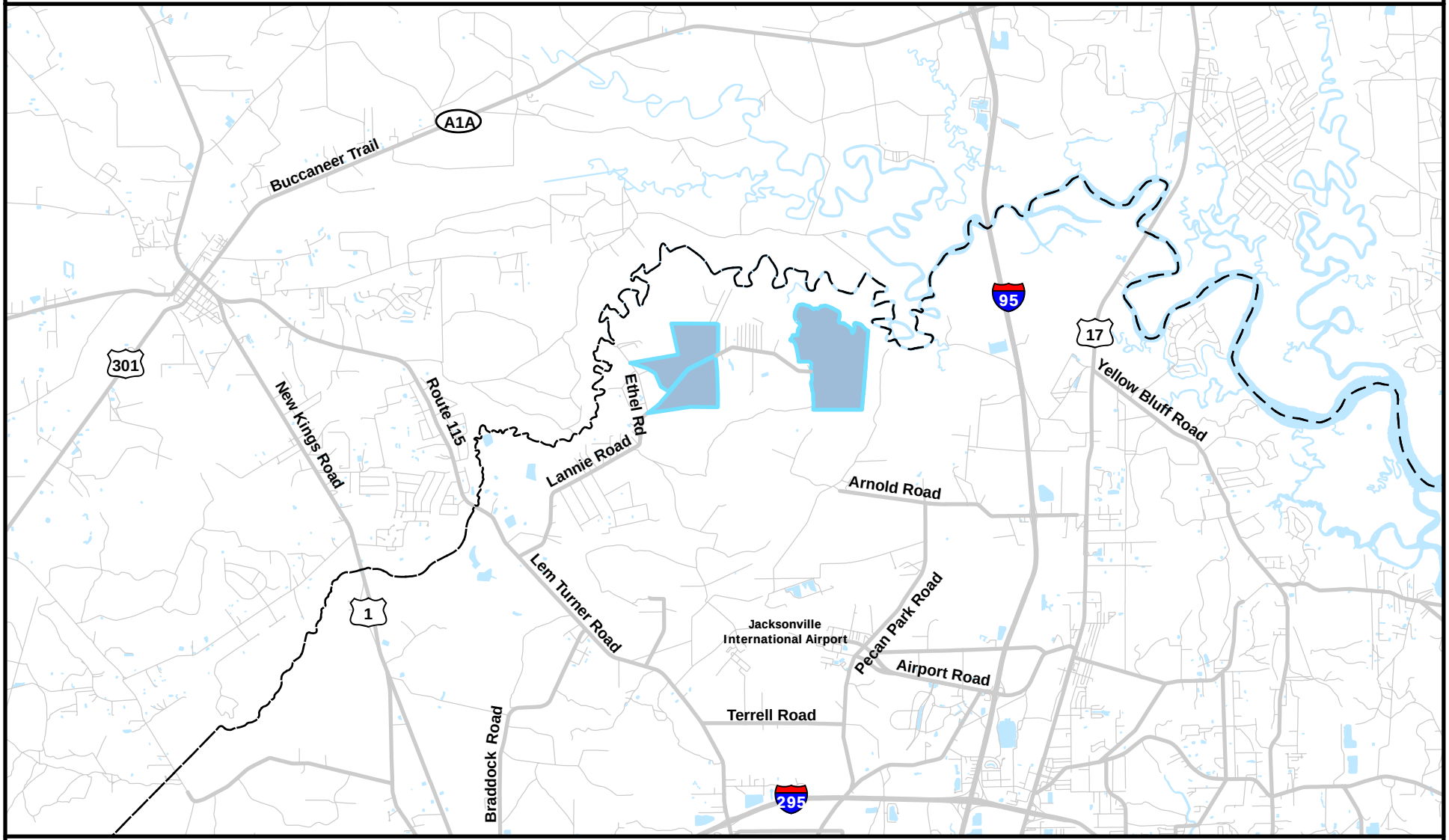

Figure 3-2

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Table 3-1
Conditions at Lem Turner Road/Lannie Road Intersection (2006)

	Lem Turner Road Southbound		Lem Turner Road Northbound		Lannie Road Westbound		Intersection LOS
	Left	Thru	Thru	Right	Left	Right	
AM Peak	16	520	110	83	188	17	A
Mid Day Peak	16	223	257	88	83	26	A
PM Peak	27	217	595	188	63	26	A

3.6 Air Quality

3.6.1 National Ambient Air Quality Standards

The US Environmental Protection Agency (USEPA), under the requirements of the 1970 Clean Air Act (CAA) as amended in 1977 and 1990, has established National Ambient Air Quality Standards (NAAQS) for six contaminants, referred to as criteria pollutants (40 CFR 50). They are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM10 and PM2.5), lead (Pb), and sulfur dioxide (SO_2). The NAAQS include primary and secondary standards. The primary standards have been established at levels sufficient to protect public health with an adequate margin of safety. The secondary standards have been established to protect the public welfare from the adverse effects associated with pollutants in the ambient air. The primary and secondary standards are presented in Table 3-2.

3.6.2 National Ambient Air Quality Standard Attainment Status

Areas that meet the NAAQS for a criterion pollutant are designated "in attainment;" areas where a criterion pollutant level exceeds the NAAQS are designated "in nonattainment." O_3 nonattainment areas are categorized based on the severity of their pollution problem – marginal, moderate, serious, severe, or extreme. CO and PM10 nonattainment areas are categorized as moderate or serious nonattainment areas. Where insufficient data exist to determine an area's attainment status, it is designated unclassifiable (or in attainment). The proposed development and operation of a new national cemetery would occur in Duval County, Florida, an area currently designated as being in attainment for all criteria pollutants.

Table 3-2
National and Florida Ambient Air Quality Standards

Pollutant and Averaging Time	Primary Standard		Secondary Standard	
	$\mu g/m^3$	ppm	$\mu g/m^3$	ppm
Carbon Monoxide				
8-hour concentration	10,000[1]	9[1]	-	
1-hour concentration	40,000[1]	35[1]	-	
Nitrogen Dioxide				
Annual Arithmetic Mean	100	0.053	Same as primary	
Ozone				
8-hour concentration	-	0.08[2]	Same as primary	
1-hour concentration	-	0.12[3]		
Particulate Matter				
PM2.5:				
Annual Arithmetic Mean	15[4]	-		
24-hour Maximum	65[5]	-	Same as primary	
PM10:				
Annual Arithmetic Mean	50[6]	-		
24-hour concentration	150[1]	-		
Lead				
Quarterly Arithmetic Mean	1.5	-	Same as primary	
Sulfur Dioxide				
Annual Arithmetic Mean	80	0.03	-	-
24-hour concentration	365[1]	0.14[1]	-	-
3-hour concentration	-	-	1300[1]	0.50[1]

Notes:
[1] Not to be exceeded more than once per year.
[2] 3-year average of the 4th highest daily maximum 8-hour concentration may not exceed 0.08 ppm.
[3] Standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.
[4] Based on 3-year average of annual averages.
[5] Based on 3-year average of annual 98th percentile values.
[6] The expected annual arithmetic mean at each monitor within an area must not exceed 50 $\mu g/m^3$.

Source: 40 CFR 50; USEPA Fact Sheets, July 1997. USEPA Press Release, March 26, 2002.

3.6.3 Local Ambient Air Quality

Air quality data in Duval County are collected by the FDEP using twelve monitoring stations throughout the county. For each criterion pollutant, Table 3-3 presents the most recent (2005) data from the closest monitoring station to the potential cemetery sites. One pollutant, lead, is not monitored because it has ceased being present in any noticeable amount in the environment. As Table 3-3 shows, all monitored ambient air concentrations were below the corresponding NAAQS.

Table 3-3
Local Ambient Air Quality (2005)

Pollutant and Averaging Time	Monitored Data	Primary Standard	Secondary Standard	Monitoring Site Location
Carbon Monoxide 8-hour maximum (ppm) 1-hour maximum (ppm)	 1.9 3.0	 9 35	 - -	Rossell/Copeland
Nitrogen Dioxide Annual Arithmetic Mean (ppm)	0.013	0.053	0.053	2900 Bennet Street
Ozone 8-hour, 3 year average of 4th highest maximum (ppm) 1-hour maximum (ppm)	0.073 0.096	0.08 0.12	0.08 0.12	13333 Lanier Road
Particulate Matter (PM2.5) Annual Arithmetic Mean, 3 year average ($\mu g/m^3$) 24-hour Maximum, 3 year average ($\mu g/m^3$)	10.4 24.6	15 65	15 65	9429 Merrill Road
Particulate Matter (PM10) Annual Arithmetic Mean ($\mu g/m^3$) 24-hour Maximum ($\mu g/m^3$)	23 74	50 150	50 150	2221 Buckman Street
Sulfur Dioxide Annual Arithmetic Mean (ppm) 24-hour Maximum (ppm) 3-hour Maximum (ppm)	0.002 0.015 0.075	0.030 0.140 -	- - 0.500	1840 Cedar Bay Road
Lead Quarterly Arithmetic Mean ($\mu g/m^3$)	-	1.5	1.5	-

Source: *USEPA AIRDATA*, 2005.

3.6.4 General Conformity

The Clean Air Act Amendments (CAAA) of 1990 expand the scope and content of the act's conformity provisions in terms of their relationship to a State Implementation Plan (SIP). Under Section 176(c) of CAAA, a project is in "conformity" if it corresponds to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. Conformity further requires that such activities would not:

1. Cause or contribute to any new violations of any standard in any area.
2. Increase the frequency or severity of any existing violation of any standard in any area.
3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The USEPA published final rules on general conformity (40 CFR Parts 51 and 93 in the *Federal Register* on November 30, 1993) that apply to federal actions in areas designated in nonattainment for any of the criteria pollutants under the CAAA. Since the potential cemetery sites are in an attainment area, the rule does not apply.

3.7 Noise

Because of the quasi-rural character of the two potential cemetery sites, noise levels are low. Primary noise sources are motor vehicles on Lannie Road and aircraft taking off and landing at Jacksonville International Airport. Noise impacts from both sources are a minor consideration. Traffic on Lannie Road is light, and most of the City Site, as well as the Wright Site in its entirety, are far removed from the roadway. Both sites also are far enough from the airport for aircraft noise to be negligible. Model aircraft flown from the model airfield currently on the City property are another source of intermittent noise. However, it is limited to the area immediately around the model airfield.

3.8 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires federal agencies to integrate consideration of historic preservation issues into the early stages of their planning projects. Under Section 106, the head of any federal agency having direct or indirect jurisdiction over a proposed federal or federally financed undertaking is required to account for the effects of this action on any district, site, building, structure, or object that is included or eligible for inclusion in the National Register of Historic Places (NRHP). Eligibility determinations are based the criteria summarized in Table 3-4.

The Florida Department of State's Division of Historical Resources (DHR) is the designated State Historic Preservation Office (SHPO) in charge of administering Section 106. The SHPO must be consulted about any potential adverse effects from a federal action to protected architectural or archaeological resources. If adverse effects are expected, appropriate mitigation measures must be developed, also in cooperation with the SHPO.

The first step in the Section 106 review process is to determine whether any protected cultural resources that might potentially be affected by the proposed action exist in the area. Only resources fully or partially located on either of the two cemetery sites being considered could be potentially affected. Therefore, the area of potential effect (APE) for this proposed action consists of the two potential sites.

Table 3-4
Criteria for Historic Significance

36 CFR 60.4, Part I
The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and: A. That are associated with events that have made a significant contribution to the broad patterns of our history; or B. That are associated with the lives of persons significant in our past; or C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or D. That have yielded, or may be likely to yield, information important in prehistory or history.
36 CFR 60.4, Part II
Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories: A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or C. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or D. A cemetery which derives its primary significance from graves or persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or G. A property achieving significance within the past 50 years if it is of exceptional importance.

3.8.1 Architectural Resources

3.8.1.1 City Site

As indicated in Section 3.1.1.1, there are only a few structures on the City Site: two small barns or cow sheds, a model airplane flying field, a playground/softball field, and an unoccupied mobile home. None of these structures presents any characteristics that would potentially qualify it for listing in the National Register of Historic Places. In a letter dated May 27, 2005 (included in Appendix A), DHR confirmed that there are no known historic sites on the property. A preliminary cultural resources evaluation conducted by Environmental Services Inc. (ESI), Jacksonville, Florida, confirmed there are no historic structures more than 50 years old present there today (Appendix B).

3.8.1.2 Wright Site

As indicated in Section 3.1.1.2, there are no structures on the Wright Site. In the letter dated May 27, 2005, referenced above, DHR confirmed that there are no known historic sites on the property.

3.8.2 Archaeological Resources

3.8.2.1 City Site

In a letter dated May 27, 2005 (Appendix A), DHR stated that there are no known archaeological sites on the City Property. However, DHR also noted that the property was environmentally similar to other areas in Florida where archaeological resources are known to exist.

Therefore, to further assess the archaeological potential of the property, a preliminary cultural resources evaluation was conducted by ESI. The evaluation consisted of a record search, evaluation of pertinent environmental conditions such as topography and soil types, a walkover survey of the property, and 19 shovel tests throughout the site. A detailed summary of ESI's report is in Appendix B of this EA.

Based on the results of the evaluation, DVA has concluded that the potential for the site to contain significant archaeological resources is minimal and that no further evaluation is warranted.

3.8.2.2 Wright Site

In a letter dated May 27, 2005 (Appendix A), DHR stated that one known archaeological site was partially located on the Wright Site: Site 8DU161—a revolutionary-era battlefield site. As shown in the map provided by DHR (Appendix A; see also Figure 3 in Appendix B), this site overlaps with the northeast corner of the property, though it is mostly located outside it. There are no other known archaeological sites on the Wright Site. However, DHR also noted that the

property was environmentally similar to other areas in Florida where archaeological resources are known to exist.

ESI addressed the Wright Site in its preliminary cultural resources evaluation. As noted in the report (Appendix B), the site is part of a larger property that ESI had already surveyed for archaeological resources. Following this survey, the property was cleared by the Florida SHPO (letter dated August 24, 2005; see Appendix B). Therefore, DVA has concluded that the Wright Site has minimal archaeological potential and that no further evaluation is warranted.

3.9 Natural Resources

3.9.1 Geology, Topography, and Soils

3.9.1.1 Geology

Several geomorphic features have been delineated within Duval County. The largest one is the Eastern Valley, which covers the southeastern part of the county. It is bounded on the west by the Duval Upland and on the north by the St. Mary's Meander Plain, which makes up the northern part of the county, and within which the two potential cemetery sites are located. The plain was formed from a network of streams with a heavy sediment load that drained the northern part of the county (NRCS, 1998).

Like most of Duval County, the St. Mary's Meander Plain is underlain by a few tens of feet of undifferentiated Quaternary sediments composed of sands, clayey sand, and clays occasionally containing limited numbers of mollusk shells. These sediments lie on Miocene Hawthorn Group sediments. Lithologic units in this group are the Penney Farms Formation, the Marks Head Formation, and the Coosawhatchie Formation. The bottom of the Hawthorn Group in the northeastern part of the county is found at approximately -420 feet NGVD (National Geodetic Vertical Datum of 1929). The Hawthorn Group in turn sits on the Ocala Limestone, consisting mostly of very pure limestone. Ranging in thickness from 250 to 400 feet, it gets progressively thicker to the northeast. The bottom of the Ocala Limestone in the St. Mary Meander Plain is found at more than -800 feet NGVD (NRCS, 1998).

3.9.1.2 Topography

City Site

Elevations at the City Site range from 15 feet in the northeast corner to 20 feet in the center and southeast corner. The site is practically flat. Parts of it are crisscrossed by artificial ditches a few feet deep. Figure 3-3 (Existing Topography – City Site) shows the topography of the City Site.

Wright Site

Like the City Site, the Wright Site is practically flat, with elevations ranging from 10 feet on the north site to 15 feet on the south site. Figure 3-4 (Existing Topography – Wright Site) shows the topography of the Wright Site.

Surrounding Area

Elevations in Duval County range from sea level to approximately 190 feet above sea level at the eastern edge of Trail Ridge, a north-south topographic feature of quartz sand hills located in the southwestern part of the county. Most of the terrain in the county is generally flat and the area immediately around the two potential cemetery sites is no exception. Elevations in the area range from below 5 feet (Thomas Creek) to 20 feet at the City Site.

3.9.1.3 Soils

Soil Types

Duval County soils are described and mapped in the *Soil Survey of City of Jacksonville, Duval County, Florida* (NRCS, 1998). The survey identifies the dominant soil unit in the area where the two potential cemetery sites are located as the Pelham/Mascotte/Sapelo/Surrency unit. This unit is characterized by nearly level, poorly and very poorly drained soils that are sandy in the upper part and loamy or sandy in the lower part. Soils are in flat woods (a broad, nearly level landform consisting of poorly drained soils that have a characteristic vegetation of open pine forest and an understory of saw palmetto and gallberry) interspersed with flats (a nearly level landform consisting mostly of broad, slightly depressional or poorly defined drainageways that do not have significant variations in curvature, slope, or elevation and are not marshes or depressions), depressions, and floodplains. Soils of this unit are predominately used for pine plantation. In central areas of the county, they underlie urban development.

A total of eight soil types are found on the potential cemetery sites:

- **Mascotte fine sand (38)**: The mascotte series consists of nearly level, poorly drained soils. It is found in flat woods. Parent material is sandy and loamy marine sediments. The soils are moderately slowly permeable and moderately permeable. The high water table in mascotte soils is generally at a depth of 6 to 18 inches. Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete.

- **Pelham fine sand (51)**: The pelham series consists of nearly level, poorly drained soils found on flats. Parent material is sandy and loamy marine sediments. The soils are moderately permeable and moderately slowly permeable. The high water table in pelham soils is at a depth of less than 12 inches on flats and at or above the surface in depressions. Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete.

Existing Topography - City Site

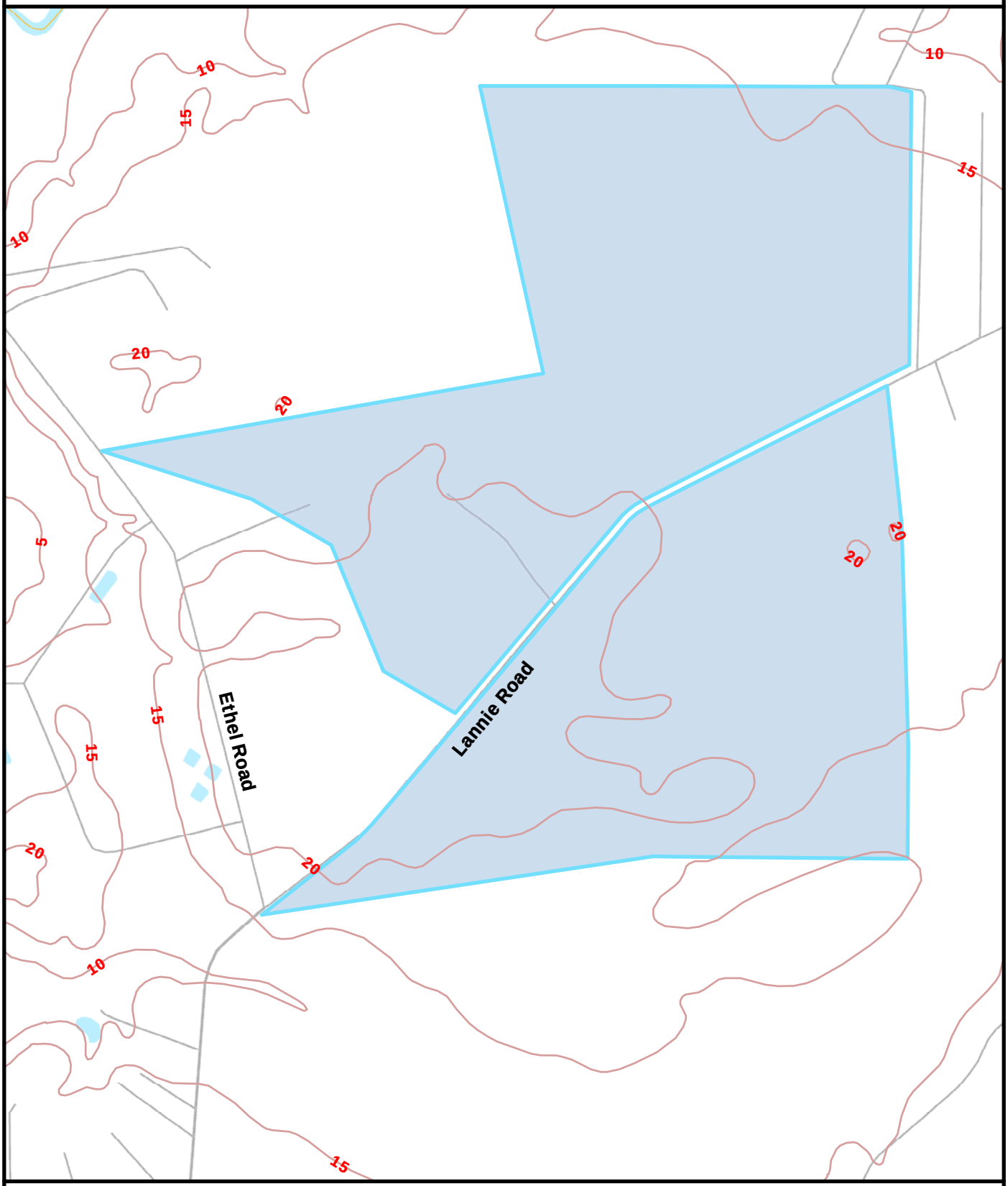

Figure 3-3

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Existing Topography - Wright Site

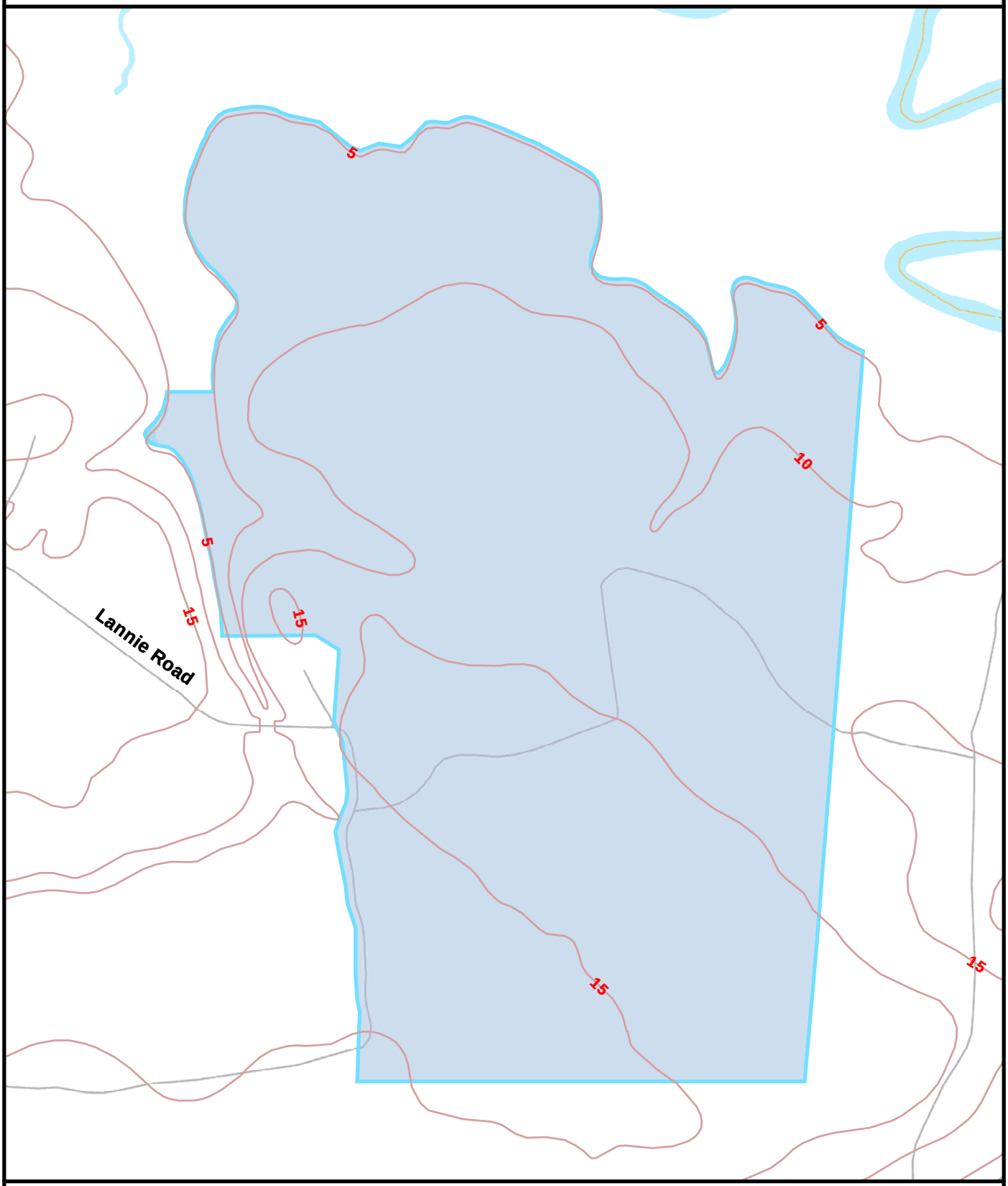

Figure 3-4

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- **Pelham fine sand depressional (82)**: Similar to the previous one, but found in depressions and very poorly drained. Shape of areas is concave.

- **Sapelo fine sand (63)**: The sapelo series consists of nearly level, poorly drained soils found in flat woods. Parent material is sandy marine sediments. The soils are moderately slowly permeable. Generally, the high water table is at a depth of 6 to 18 inches. Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete.

- **Surrency loamy fine sand depressional (66)**: The surrency series consists of nearly level, very poorly drained soils found in depressions. Parent material is sandy and loamy sediments. The soils are moderately permeable and moderately slowly permeable. The high water table generally is at or above the soil surface for very long periods. Slopes are concave and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete.

- **Yonges fine sandy loam (78)**: The yonges series consists of nearly level, poorly drained soils found in flats. Parent material is loamy marine sediments. The soils are moderately permeable and moderately slowly permeable. Generally, the high water table is at a depth of less than 12 inches. Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and moderate for concrete.

- **Yulee clay (79)**: The yulee series consists of nearly level, very poorly drained soils found in floodplains. Parent material is loamy and clayey sediments. The soils are very slowly permeable. The high water table generally is at or near the surface and the areas are subject to frequent flooding for long periods. Slopes are concave and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and moderate for concrete.

- **Yulee clay depressional (86)**: Similar to the previous one but found in depressions. The high water table generally is at or above the surface for very long periods.

Soil Suitability for Construction

The properties of soils may create constraints on their use. Natural Resource Conservation Service (NRCS) soil surveys provide planning level ratings of the suitability of soils for a number of activities, including building site development. Of the building activities for which soil suitability is rated, four are directly relevant to the proposed action considered in this EA:

- **Shallow excavations:** This category includes trenches or holes dug to a maximum depth of 5 to 6 feet for, among others, graves and utility lines. The ease of digging, filling, and compacting is affected by the depth of the bedrock or a very firm, dense layer; stone content; soil texture; and slope. The resistance of excavation walls or banks to sloughing is affected by soil texture and depth of the water table.

- **Small commercial buildings:** This category includes structures on shallow foundations without basement. It is intended to cover the construction of

administrative, visitor, and maintenance facilities as part of the proposed cemetery. A high water table, flooding, shrinking and swelling, and organic layers may cause footings to move. Depth of water table, depth of bedrock, large stones, and flooding may affect ease of excavation and construction.

- **Local roads and streets:** Depth to bedrock, depth of water table, flooding, large stones, and slopes affect the ease of excavating and grading. Soil strength, shrink-well potential, and depth of water table affect traffic-supporting capacity.

- **Lawns and landscaping:** Soil reaction, depth of water table and bedrock, and available water capacity in the upper 40 inches of soil affect plant growth.

Table 3-4 shows ratings for each of the soil series on the potential cemetery sites. A "severe limitations" rating indicates that soil properties or site features are such that special design, significant increases in construction costs, and possibly increased maintenance costs are likely to be required when developing the concerned area. A shown in Table 3-5, all the soils found at the two potential cemetery sites are rated "severe limitations" for all four types of activities considered.

Table 3-5
Suitability of Soil Types for Construction

Soil Type	Shallow Excavations	Small Commercial Buildings	Local Roads and Streets	Lawn and Landscaping
Mascotte fine sand (38)	Severe limitations: cutbanks cave, wetness	Severe limitations: wetness	Severe limitations: wetness	Severe limitations: wetness
Pelham fine sand (51)	Severe limitations: cutbanks cave, wetness	Severe limitations: wetness	Severe limitations: wetness	Severe limitations: wetness
Pelham fine sand, depressional (82)	Severe limitations: cutbanks cave, ponding	Severe limitations: wetness	Severe limitations: ponding	Severe limitations: ponding
Sapelo fine sand (63)	Severe limitations: cutbanks cave, wetness	Severe limitations: wetness	Severe limitations: wetness	Severe limitations: wetness, droughty
Surrency loamy fine sand depressional (66)	Severe limitations: cutbanks cave, ponding	Severe limitations: ponding	Severe limitations: ponding	Severe limitations: ponding
Yonges fine sandy loam (78)	Severe limitations: wetness	Severe limitations: wetness	Severe limitations: wetness	Severe limitations: wetness

Soil Type	Shallow Excavations	Small Commercial Buildings	Local Roads and Streets	Lawn and Landscaping
Yulee Clay (79)	Severe limitations: wetness	Severe limitations: flooding, wetness	Severe limitations: wetness, flooding	Severe limitations: wetness, flooding, too clayey
Yulee Clay, depressional (86)	Severe limitations: ponding	Severe limitations: ponding	Severe limitations: ponding	Severe limitations: ponding, too clayey

City Site

Figure 3-5 (Existing Soils – City Site) and Table 3-6 show the soils present on the City Site.

Table 3-6
Soils: City Site

Soil Type	Total Acres[1]	Percent of Total[2]
Mascotte fine sand (38)	228.5	40.5
Pelham fine sand (51)	205.4	36.4
Pelham fine sand, depressional (82)	20	3.5
Surrency loamy fine sand, depressional (66)	89.3	15.8
Yonges fine sandy loam (78)	6.4	1.1
Yulee Clay, depressional (86)	15	2.7

1. Acreages were calculated based on GIS data and are approximate
2. May not add up to 100 due to rounding

Wright Site

Figure 3-6 (Existing Soils – Wright Site) and Table 3-7 show the soils present on the Wright Site.

Table 3-7
Soils: Wright Site

Soil Type	Total Acres[1]	Percent of Total[2]
Mascotte fine sand (38)	192.1	26.5
Pelham fine sand (51)	354	48.9
Pelham fine sand, depressional (82)	17.2	2.4
Sapelo fine sand (63)	26.6	3.7
Surrency loamy fine sand, depressional (66)	112.2	15.5
Yonges fine sandy loam (78)	0.04	0.01
Yulee Clay (79)	21.6	3

1 Acreages were calculated based on GIS data and are approximate
2 May not add up to 100 due to rounding

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) of 1981 is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. For the purpose of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Prime farmland is defined by the US Department of Agriculture as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce economically sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. The FPPA is administered by NRCS.

Less than 0.1 percent of Duval County meets soil requirements for prime farmland, most of it in the northwest part of the county. The one type of soil meeting prime farmland requirements is Lynchburg fine sand (NRCS, 1998). This soil type is not found on either of the two potential cemetery sites.

There is no unique farmland in Duval County (Allen, 2006). Duval County soils do not support the specific crops that identify unique farmland, such as crops of tree nuts, olives, cranberries, citruses and other fruits, or vegetables.

In general, the soil types found at the two potential sites are poorly suited to agricultural production. Mascotte, pelham, sapelo, and yonges soils are rated IIIw (Class III soils have severe limitations that reduce the choice of plants or that require very careful management, or both; "w" indicates that water in or on the soils interferes with plant growth or cultivation). Surrency soils are rated VIw and yulee soils VIIw, making them generally unsuitable for cultivation (NRCS, 1998).

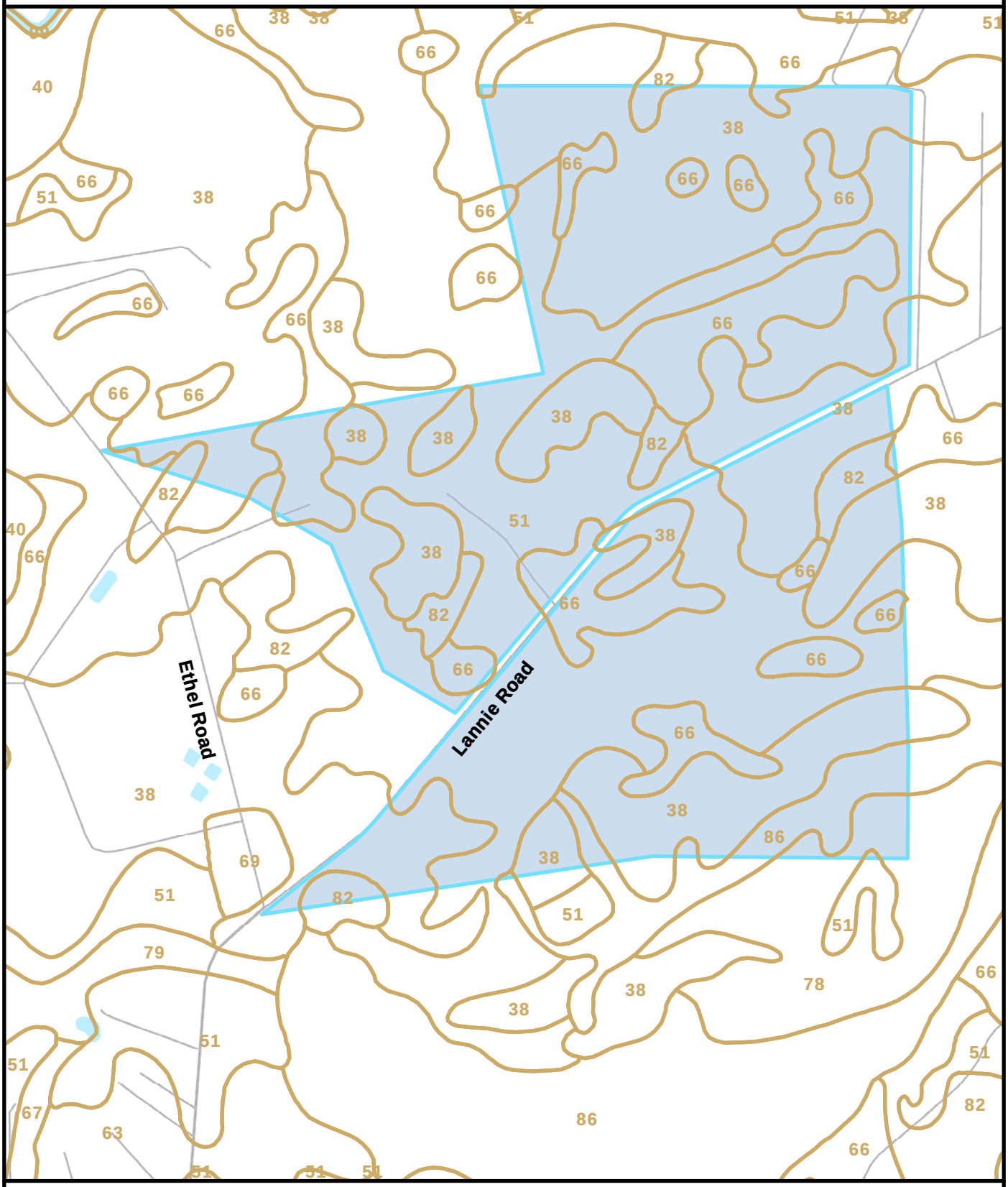
3.9.2 Water Resources

Water resources in Florida are managed by five Water Management Districts, whose responsibilities include purchasing land to manage water resources, permitting the use of water and stormwater systems, assisting local governments in planning, and developing long-term water supply plans. Duval County is within the St. Johns River Water Management District (SJRWMD), whose jurisdiction encompasses northeastern Florida.

3.9.2.1 Surface Water

There are three watersheds in Duval County. Most of the county is within the lower St. Johns River basin; a relatively small area on the southwestern flank of the county is within the St. Mary's River basin; and the northern portion of the county, including the two potential cemetery sites, is within the Nassau River basin. The potential sites drain to the Nassau River via Thomas Creek, a stream that forms the boundary between Duval and Nassau counties. Thomas Creek

Existing Soils - City Site



24 Soil Type

Potential Cemetery Site

1,100 0 1,100 Feet

300 0 300 Meters

N

Figure 3-5

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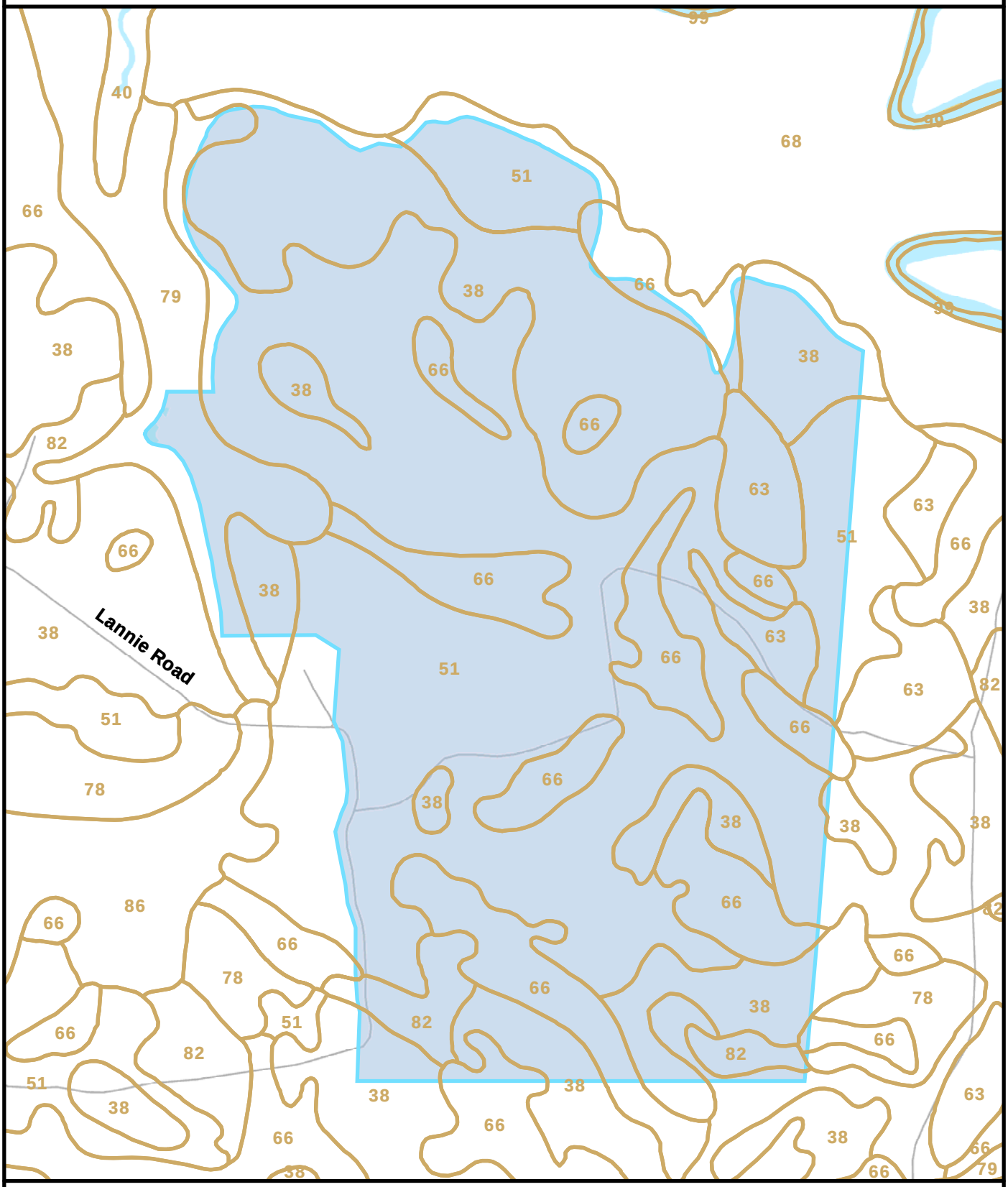
Existing Soils - Wright Site



24 Soil Type

Potential Cemetery Site

1,100 0 1,100 Feet

300 0 300 Meters

N

Figure 3-6

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runs north of both potential sites, from which it is separated by low-lying (5 feet and less above sea level) areas.

The Clean Water Act requires that the surface waters of each state be classified according to designated uses. Florida has five classes with associated designated uses, which are arranged in order of degree of protection required:

- **Class I - Potable Water Supplies**: Fourteen general areas throughout the state including: impoundments and associated tributaries, certain lakes, rivers, or portions of rivers, used as a drinking water supply.

- **Class II - Shellfish Propagation or Harvesting**: Generally coastal waters where shellfish harvesting occurs.

- **Class III - Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife**: The surface waters of the state are Class III unless otherwise described in Rule 62-302.400 F.A.C.

- **Class IV - Agricultural Water Supplies**: Generally located in agriculture areas around Lake Okeechobee.

- **Class V - Navigation, Utility and Industrial Use**: Currently, there are no designated Class V bodies of water.

The Nassau River is a Class II body of water from the mouth of Nassau Sound westerly to a point on a south-north line going through Seymore Point (62-302.400 FAC). The Nassau River west of that point (including the portion of it running north of the potential cemetery sites) and Thomas Creek are Class III waters. Criteria required to maintain a Class III classification are listed in 62-302.500 & 530 FAC.

The Clean Water Act requires states to conduct water quality surveys to determine whether the quality of their waters is sufficient to meet their designated uses. Information from the *2000 Florida Water Quality Assessment Report: 305(b) Report*, available on SJRWMD's Internet site (SJRWMD, 2006) shows that surface water quality in the areas near the potential cemetery sites for which data were available was rated "good" by the state and fully meets the classification standards.

City Site

There are no natural streams on the City Site. In several places, water is present at the surface all year round. These places include some of the artificial ditches crisscrossing portions of the site and marshes and swamps on the southern flank of the property, particularly the southeast corner.

Wright Site

There are no natural streams on the Wright Site. A small unnamed drainage channel to Thomas Creek extends in a north-south direction adjacent to the northwest corner of the property. As with the City Site, ground water permanently reaches the surface in places, creating small ponds and marshy areas.

3.9.2.2 Groundwater

The majority of ground water in Duval County is in the surficial aquifer system, which is closest to the surface, and the deeper Floridan Aquifer system (NRCS, 1998). The Floridan Aquifer covers approximately 100,000 square miles and underlies all of Florida, southern Georgia, and small parts of Alabama and South Carolina. The Hawthorn Group confines the Floridan Aquifer system and creates artesian conditions. The Floridan Aquifer, tapped via 150 artesian wells, is the source of the public water supply in Duval County and surrounding areas. Recharge to the Floridan Aquifer occurs in areas west and southwest of Jacksonville. In Duval County, the top of the Floridan Aquifer is found at depths ranging from -300 to -500 feet NGVD.

Above the Floridan Aquifer, the relatively impermeable sediments of the Hawthorn Group serve as confining units, while more permeable sand and limestone units may serve as local sources of groundwater. The top, slowly permeable layers of the Hawthorn Group serve as the base of the surficial aquifer system.

The surficial aquifer system is unconfined, and the upper surface of the aquifer is the water table. Water in the surficial aquifer is mainly replenished by precipitation, and, to a lesser extent, upward leakage from deeper aquifer systems. The height of the water table varies seasonally. In Duval County, the wettest times of the year are typically from January through March and from June through October. Though it tends to rain more in the summer than in the winter, higher rates of evaporation in warmer weather result in similar water table conditions during both seasons. November and December are typically the driest months of the year; the second driest are April and May (NRCS, 1998).

City Site

Consistent with the low topography of the site and its dominant soil types (mascotte, pelham, and surrency series), the water table at the City Site can be expected to be very close to the surface (see Section 3.9.1.3 for typical water table depth for each soil type). In some depressed areas, groundwater appears to remain permanently above ground. Heavy rains will bring the water to the surface in much of the property, as verified by a site visit conducted in early April 2005 following a wet weather spell. Shovel tests conducted throughout the site as part of a preliminary archaeological evaluation in January 2006 (see Appendix B) found water at between 10 and 20 inches below the surface. Ditches that drain parts of the property likely maintain the water table somewhat lower than it would be in its natural state.

There are three water wells on the City Site. One of those wells was observed to be freely flowing under artesian conditions during a site visit. These wells are not currently used but

appear to have been used in the past for agricultural purposes and remain available for future utilization.

Wright Site

The topography and soil types of the Wright Site are similar to those of the City Site, resulting in similar groundwater conditions. No wells are known to exist on the property.

3.9.2.3 Stormwater

City Site

Most of the City Site is fully pervious. Stormwater percolates freely though the soil and is the main source of recharge of the surficial aquifer (water table). A small exception is the model airplane field and playground located in the northern portion of the site, which include some impervious surfaces.

Wright Site

The Wright Site is entirely undeveloped and fully pervious. Stormwater percolates freely through the soil and is the main source of recharge of the surficial aquifer (water table).

3.9.3 Wetlands

A number of federal laws, regulations, and policies regulate activities in wetlands, namely:

- Section 404 of the Clean Water Act (CWA), which directs that the US Army Corps of Engineers (USACE) require permits for the discharge of dredged and fill material into "waters of the US," a term that includes rivers, lakes, and most streams and wetlands.

- Executive Order 11990, *Protection of Wetlands*, which requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

- The North American Wetlands Conservation Act, 16 USC 4408, which requires the restoration, management, and protection of wetlands and habitats for migratory birds on federal lands.

Any action requiring a Section 404 CWA permit also requires a Section 401 water quality certification from the responsible state authority (in Duval County, SJRWMD). Not every activity affecting wetlands requires a Section 404 permit/Section 401 water quality certification. Only those activities involving the discharge of dredged or fill material into a "water of the US," a term that includes most wetlands, requires these approvals.

3.9.3.1 City Site

Wetlands present on the City Site were delineated by ESI and mapped as shown in Figure 3-7 (Delineated Wetlands – City Site). The presence and extent of wetlands under the jurisdiction of SJRWMD and USACE were determined pursuant to the methodologies outlined in *Delineation of the Landward Extent of Wetlands and Surface Waters* (Chapter 62-340, FAC) and the 1987 USACE *Wetland Delineation Manual*. It was determined that the jurisdictional boundaries of the on-site wetlands were the same for both SJRWMD and USACE. The validity of the wetland delineation is subject to verification by both agencies. Approximately 203 acres (211 acres if ditches are included) of jurisdictional wetlands are found within the site. Each wetland was classified utilizing the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) and is described in detail below. The respective amounts of each wetland type for the site are shown in Table 3-8.

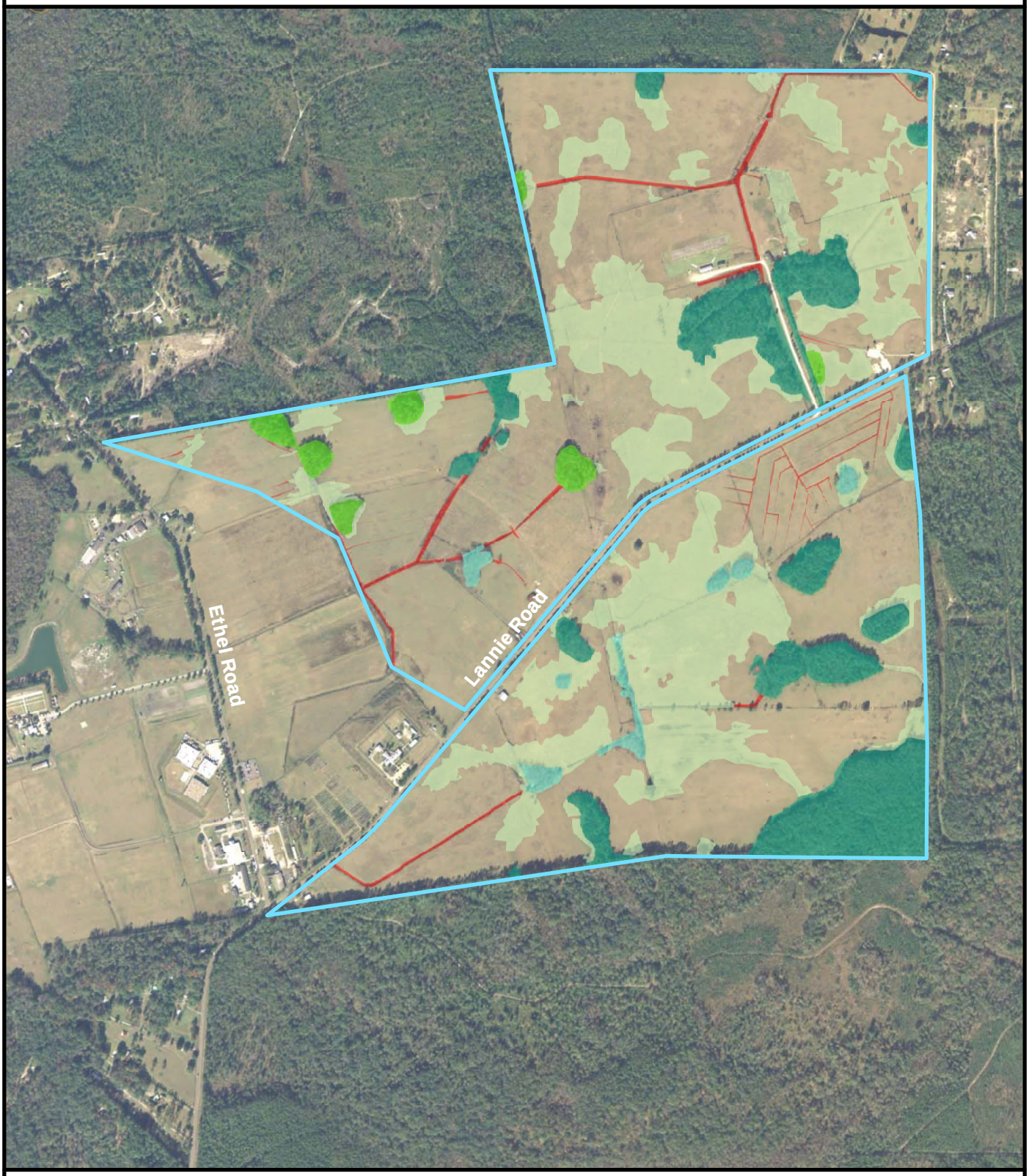
- **Improved Pastures (FLUCFCS 211w).** The majority of the City Site is composed of pastureland (FLUCFCS 211) that has been primarily used for the grazing of cattle. Some of this pasture land is wetland (FLUCFCS 211w), typically vegetated with bahia grass (*Paspalum* sp.), smartweed (*Polygonum* spp.), soft rush (*Juncus effusus*), asiatic coinwort (*Centella asiatica*), and mermaid-weed (*Proserpinaca* spp).

- **Exotic Wetland Hardwoods (FLUCFCS 619)**. These are wetland areas that have been cleared in the past, and have naturally regenerated with Chinese tallow (*Sapium sebiferum*). There are several small areas of this wetland type located near the center of the pasture south of Lannie Road. Due to a relatively dense canopy, the understory and groundcover in these areas are either absent, or consist of scattered Virginia chain fern (*Woodwardia virginica*) and smartweed.

- **Cypress Dome (FLUCFCS 621)**. Small pockets of cypress occur throughout the site. Often, these cypress stands occupy shallow depressions within areas of improved pasture. They may be situated in isolated wetland conditions or may drain to adjacent wetland communities. The cypress community overstory is dominated by bald cypress (*Taxodium distichum*), and also contains slash pine (*Pinus elliottii*), pond pine (*P. serotina*), Chinese tallow, and blackgum (*Nyssa sylvatica* var. *biflora*). The understory and groundcover are dominated by dahoon holly (*Ilex cassine*), yellow-eyed grass (*Xyris* spp.), and a wide variety of fern species.

- **Mixed Forested Wetland (FLUCFCS 630)**. In essence, this community covers those areas that cannot be classified into another specific wetland type. These areas are scattered throughout the pasture in uncleared sections. Within this community, the dominant canopy species are highly variable and include slash pine, pond pine, bald cypress, sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), blackgum, and water oak (*Quercus nigra*). The understory species includes fetterbush (*Lyonia lucida*), wax myrtle (*Myrica cerifera*), saw palmetto (*Serenoa repens*), and gallberry (*Ilex glabra*). The groundcover is dominated by Virginia chain fern, netted chain fern (*Woodwardia areolata*), and cinnamon fern (*Osmunda cinnamomea*).

Delineated Wetlands - City Site



Site Boundary
Improved Pastures (FLUCFCS 211w)
Cypress Dome (FLUCFCS 621)
Exotic Wetland Hardwood (FLUCFCS 619)
Mixed Forested Wetland (FLUCFCS 630)
Upland Cut Ditch (FLUCFCS 510)

1,100 0 1,100 Feet
300 0 300 Meters

N

Source: Aerials Express, Dec. 2004, Environmental Services, Inc. Oct. 2005.

Figure 3-7

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- **Ditches (FLUCFCS 510)**. Several ditches are located throughout the City Site. Vegetation is predominately characterized by immature canopy species such as sweetgum, red maple, and Chinese tallow. Many ditches, however, lack a canopy and consist mainly of soft rush, mermaid weed, asiatic coinwort, and in deeper ditches, pickerelweed (*Pontederia cordata*). The status of these ditches as jurisdictional wetland depends on their connection to jurisdictional "Waters of the US."

Table 3-8
Wetlands: City Site

Wetland Type	Total Acreage	Percent of Entire Site
Mixed Forested Wetland (630)	57.35	10.1
Improved Pastures (211w)	131.63	23.2
Cypress Dome (621)	8.02	1.4
Exotic Wetlands Hardwood (619)	6.20	1.1
Ditches (510)	7.70	1.35
Total	**210.9**	**37.1**

3.9.3.2 Wright Site

Wetlands on the Wright Site were delineated by ESI using the same methods as used on the City Site. Approximately 398 acres of jurisdictional wetlands fall within the site. They are shown, by type, in Figure 3-8 (Delineated Wetlands – Wright Site) and Table 3-9. Three types of wetlands occur in the Wright Site but not the City Site:

- **Wet Pine Plantation (FLUCFCS 441w)**. Areas of pine plantation that have a seasonal high water table at or very near the ground surface are jurisdictional wetlands, and are vegetatively distinct from upland pine plantation. The canopy is dominated by rows of planted slash pine. The subcanopy and groundcover layers are relatively open and are dominated by various grasses, particularly broomsedge (*Andropogon virginicus*). Other subcanopy includes red bay (*Gordonia lasianthus*), blackgum, bald cypress, wax myrtle, red maple, and myrtle leaf holly (*Ilex myrtifolia*). Other groundcover species include red root (*Lachnanthes caroliniana*), yellow-eye grass, hat pins (*Eriocaulon* sp.), and bog buttons (*Lachnocaulon* spp.).

- **Mixed Wetland Hardwood (FLUCFCS 617).** A portion of the wetlands on the Wright Site is characterized as mixed wetland hardwoods. These areas are vegetated with a canopy dominated by red bay, sweetgum, red maple, and blackgum. Understory and groundcover vegetation includes such species as wax myrtle, fetterbush, Virginia chain fern, cinnamon fern, royal fern (*Osmunda regalis*), netted chainfern, and red root.

- **Vegetated Non-forested Wetland (FLUCFCS 640).** Vegetated non-forested wetlands include marshes and seasonably flooded basins and meadows. These communities are usually confined to relatively level, low-lying areas. This category does not include areas that have a tree cover that meets the crown closure threshold for the forested categories. Sawgrass (*Mariscus jamaicensus*) and cattail (*Typha* spp.) are

the predominant species in freshwater marshes while spartina (*Spartina* spp.) and needlerush (*Juncus* spp.) are the predominant species in the saltwater marsh communities.

Table 3-9
Wetlands: Wright Site

Wetland Type	Total Acreage	Percent of Entire Site
Pine Plantation Wet (441w)	252.03	34.8
Mixed Wetland Hardwood (617)	112.06	15.5
Cypress Dome (621)	17.83	2.5
Mixed Forested Wetland (630)	12.37	1.7
Vegetated Non-forested Wetland (640)	3.70	0.5
Total	**398**	**55**

3.9.4 Floodplain Management

Executive Order 11988, *Floodplain Management*, issued on May 24, 1977, provides guidance to federal agencies to minimize flood-related impacts to human safety, health, and welfare; avoid adverse impacts associated with development in floodplains; and avoid development in floodplains when practicable alternatives are available.

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) for the area within which the two potential cemetery sites are located (Map #1200770060E) was reviewed to determine if either site is located within a floodplain. The map (included in Appendix C) shows that the 100-year floodplain associated with Thomas Creek extends along the creek up to the 5-foot elevation contour (Zone AE: Base Flood Elevation Determined).

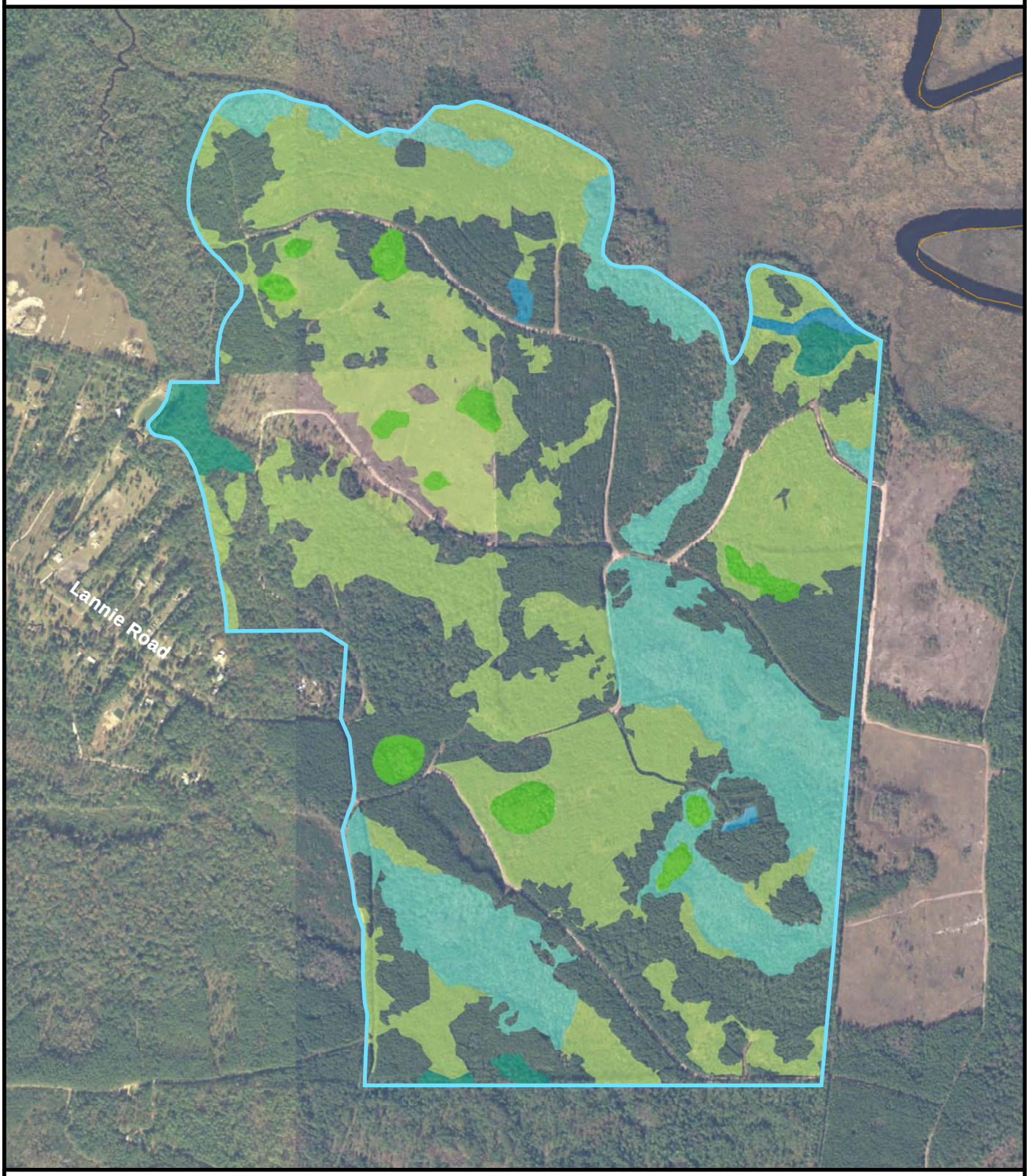
3.9.4.1 City Site

As shown by FIRM # 1200770060E, the City Site lies outside the 100-year and 500-year floodplains.

3.9.4.2 Wright Site

The Wright Site lies outside the 100-year and 500-year floodplains with one exception: a small, low-lying area north of the entry point appears to be within the 100-year floodplain, with a slightly larger area within the 500-year floodplain. This area roughly coincides with the area of yulee clay soil (79) found on the property (see Section 3.9.2 and Figure 3-7). It appears associated with an unnamed drainage channel just outside the northwest corner of the property.

Delineated Wetlands - Wright Site



Site Boundary
Wet Pine Plantation (FLUCFCS 441w)
Cypress Dome (FLUCFCS 621)
Mixed Wetland Hardwood (FLUCFCS 617)
Mixed Forested Wetland (FLUCFCS 630)
Vegetated Non-forested Wetland (FLUCFCS 640)

1,100 0 1,100 Feet

300 0 300 Meters

N

Source: Aerials Express, Dec. 2004, Environmental Services, Inc. Oct. 2005.

Figure 3-8

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3.9.5 Biological Resources

No formal biological survey was conducted for the EA. The information about wildlife provided below is general in nature and applies to both sites, which are located in proximity to each other. Wildlife observed during site visits and field work is also mentioned. Information on plant life is both general and based on information gathered as part of the wetland delineation.

Duval County is home to a wide range of animals species. Many of them could be present on the City Site or Wright Site, though the sites' potential as wildlife habitat is limited by their current predominant use as a cattle pasture and pine plantation, respectively. Forested wetland areas have the most potential for ecological diversity.

Animal species typically found in Duval County include white-tailed deer, squirrel, wild turkey, bobwhite quail, feral hogs, rabbit, armadillo, opossum, gray and red fox, and a variety of song birds, wading birds, woodpeckers, predatory birds, reptiles, amphibians, and insects. During site visits conducted in preparation of this EA, the following animals were observed: feral hogs (a nuisance species; managers of the City Site have set up traps to catch them), black vultures, wild turkeys, and chimney crayfish. Personnel from the Montgomery Correction Center reported that an alligator may be living in a small pond on the north side of the City Site. No alligator was observed during the site visits.

Based on reports from the Florida Natural Areas Inventory (FNAI; the reports are included in Appendix A of this EA), among the rarer animal species that might be present on the sites are Bachman's sparrow (*Aimophilia aestivalis*), Rafinesque's big-eared bat (*Corynorhinus refinesquii*), and the striped newt (*Notophthalmus prestriatus*) (federally and state listed species are addressed below).

For plants as for wildlife, wetland areas on both potential cemetery sites are the areas with the most potential for ecological diversity. A description of the vegetation cover characteristic of each wetland community found on the sites is provided in Section 3.9. On the Wright Site, uplands consist mostly of slash pine plantation with a small area of temperate hardwood forest in the northeast corner. Common components of this community may include a wide variety of oaks, red bay, sweet bay, sweetgum, saw palmetto, and hollies. On the City Site, uplands are mostly pasture lands, characterized by bahia grass and pennywort, with scattered broomsedge and dog fennel (*Eupatorium capillifolium*).

3.9.6 Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973 and subsequent amendments provide for the conservation of threatened and endangered species and their habitats. The ESA requires that the US Fish and Wildlife Service (USFWS) for terrestrial species, and the National Marine Fisheries Service (NMFS) for aquatic species, issue a permit prior to actions that would result in the taking (i.e., harassing, harming, pursuing, hunting, wounding, killing, or capturing) of members of a federally listed endangered or threatened species.

Information on threatened and endangered species was obtained from the website of the USFWS North Florida Field Office (USFWS, 2006a), the website of the Florida Fish and Wildlife Conservation Commission (FFWCC, 2004), and reports from FNAI (included in Appendix A). Table 3-10 shows the federally listed species that may be found in Duval County according to the USFWS. No federally listed amphibian, mollusk, crustacean, or plant species is reported as potentially occurring in Duval County. Only those species shown in bold in Table 3-10 might potentially be found on either of the sites considered. The other species are either marine or coastal (piping plover). FNAI reported no documented occurrence of any of those species on either of the sites. FNAI reported the wood stork to be a likely presence on the sites, and the eastern indigo snake to be a potential presence. FNAI reported no other federally threatened or endangered species as likely or potentially occurring on the sites.

Table 3-10
Federally Listed Species in Duval County

Scientific Name	Common Name	Status
Trichechus manatus latirostris	West Indian Manatee	Endangered
Haliaeetus leucocephalus	**Bald Eagle**	**Threatened**
Charadrius melodus	Piping Plover	Threatened
Mycteria americana	**Wood Stork**	**Endangered**
Picoides borealis	**Red-cockaded Woodpecker**	**Endangered**
Acipenser brevirostrum	Shortnose Sturgeon	Endangered
Dymarchon corais couperi	**Eastern Indigo Snake**	**Threatened**
Chelonia mydas	Green Sea Turtle	Endangered
Eremochelys imbricata	Hawksbill Sea Turtle	Endangered
Dermochelys coriacea	Leatherback Sea Turtle	Endangered
Lepidochelys kempii	Kemp's Ridley Sea Turtle	Endangered
Caretta caretta	Loggerhead Sea Turtle	Threatened

3.9.6.1 Wood Stork

The wood stork has been listed as endangered under the ESA since 1984. It is a large, long-legged wadding bird about 50 inches tall with a wingspan of 60 to 65 inches. Its habitat is freshwater and brackish wetlands. It feeds primarily on small fish, often in waters 6 to 10 inches deep. Particularly attractive are depressions in marshes or swamps where fish become concentrated during low-water periods. The wood stork is a highly colonial species usually nesting in large rookeries and feeding in flocks. In North Florida, the stork generally lays eggs from March to late May, with fledging occurring in July and August. Nests are frequently in the upper branches of large cypress trees or in mangroves. Several nests are generally found in one tree. The endangered status of the wood stork is believed to be primarily due to a loss of suitable feeding habitat (USFWS, 2006b).

Two wood storks were observed within the City Site during field work for the wetland delineation. There are no known rookeries on the site. Wood storks may use seasonally or permanently flooded portions of the site as feeding grounds. However, the wood stork is a highly

mobile species and likely uses the site on a transient basis. Though no wood storks were observed on the Wright Site, portions of it may also be used by the animal for transient feeding.

3.9.6.2 Eastern Indigo Snake

Listed as threatened since 1979, the eastern indigo snake is a large, docile, non-poisonous snake that can reach eight feet in length. Prey includes snakes, frogs, salamanders, toads, small mammals, and birds. Mating usually starts in November and continues through March. The eastern indigo snake seems to be strongly associated with high, dry, well-drained sandy soils, a similar habitat to that of the gopher tortoise. During the warmer months, it can also be found in streams and swamps. Occasionally, it is spotted in flat woods. The threatened status of the eastern indigo snake is primarily due to loss of habitat from development and over-collecting for the pet trade (USFWS, 2006c).

No eastern indigo snakes were observed during the field work associated with the wetland delineation. The poorly drained soils and general wetness on both the City and the Wright sites do not offer a very favorable habitat for this species.

3.9.6.3 Bald Eagle

The bald eagle was first listed in 1967. Delisting was recommended in 1999, based on high population numbers, but it currently remains listed as threatened under the ESA. It is the second largest North American bird of prey. Its range includes the 48 coterminous states and Alaska. Though its preferred prey is fish, it will also eat mammals, amphibians, and birds. The bald eagle is associated with aquatic habitats (coastal areas, rivers, lakes, and reservoirs). It nests in tall, super-canopy trees, mostly old living pine trees located near large bodies of water (USFWS, 2006d).

No bald eagles or bald eagle nests are known to occur on either site or have been observed during site visits and field work. The sites do not contain the type of large water bodies and nearby old, tall trees that may attract bald eagles for foraging or nesting. FNAI does not report the eagle as potentially occurring on the sites.

3.9.6.4 Red-Cockaded Woodpecker

The red-cockaded woodpecker was listed as endangered under the ESA in 1970. It is about 7 inches long and feeds on beetles, ants, and other insects, as well as on fruits and berries occasionally. Nesting season is from April through June. Its habitat consists of mature pine forests, the long-leaf pine (*Pinus palustris*) being commonly preferred. The red-cockaded woodpecker is the only woodpecker that will excavate exclusively live trees. It selects old specimens (a minimum of 80 to 120 years) often suffering from a fungal disease that softens the center of the trunk. Cavity trees are found in clusters that are in average 10 acres in size (USFWS, 2006e).

No red-cockaded woodpecker has been documented on either site or observed during site visits or field work. FNAI does not list it as a potential occurrence. Neither the City nor the Wright

sites contains the type of mature pines that would provide the species with its favored habitat. The pines on the Wright Site are planted slash pines for harvesting and have no potential as red-cockaded woodpecker habitat.

3.9.6.5 State-Listed Species

FNAI's reports identify several state-listed species as potentially occurring on the City and Wright sites. Among those is the gopher tortoise (*gopherus polyphemus*), a State Species of Special Concern. However, the gopher tortoise requires dry, well-drained soils (in general, its habitat is similar to that of the eastern indigo snake) and abundant, low-growth plants found in bright sunshine for food. Neither site offers any of those favorable conditions. The potential for gopher tortoises to occur on the sites is low.

Two State Species of Special Concern are listed by FNAI as potentially occurring on the Wright Site: Worthington's marsh wren (*Cistothorus palustris griseus*) and Sherman's fox squirrel (*Sciurus niger shermani*). Neither species was observed during field work.

White ibis (*Eudicomus albus*) and snowy egrets (*Egretta thula*), two State Species of Concern, were observed on the City Site during field work. These species preferably use relatively shallow water depths when feeding, but have often been noted feeding on lawns and pastures. Nesting colonies are usually surrounded by water, and nests tend to be in shrubby vegetation with moderate shade. While ibis and egrets may utilize the property on a transient basis for foraging, the site does not appear to contain optimal nesting habitat for the species.

State-listed plant species recorded as being potentially present on both the potential sites by FNAI include: southern milkweed (*Asclepias viridula*; threatened); purple honeycomb head (*Balduina atropurpurea*; endangered); many-flowered grass-pink (*Calopogon multiflorus*; endangered); ciliate-leaf tickseed (*Coreopsis integrifolia*; endangered); Florida tooth-ache grass (*Ctenium floridanum*; endangered); Florida spiny-pod (*Matelea floridana*; endangered); Florida mountain mint (*Pycnanthemum floridanum*; threatened); St. John's black-eyed-susan (*Rudbeckia nitida*; endangered); and silver buckthorn (*Sideroxylon alachuense*; endangered) (FFWCC, 2004).

3.10 Hazardous Waste

Generally, petroleum products and other hazardous wastes are found on a given site either because of the presence of past or current land uses that generate and release them into the environment, or because they were dumped from another location. Both the City Site and the Wright Site are undeveloped. The predominant activity on both site has been and remains agricultural (cattle grazing on the City Site; pine plantation on the Wright Site). A record search conducted by Environmental Data Resources Inc. (EDR, 2005) through a wide range of federal and state records pertaining to the regulation of hazardous substances returned no results for either site.

Site visits showed no signs of recent or past dumping, with a small exception: an area of the City Site along the south side of Lannie Road where tree and other vegetal debris from the 2004 hurricane season were temporarily stored. Therefore, it is unlikely that either site contains any significant levels of petroleum products or other pollutants that would require substantial clean-up before developing the property.

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4 Environmental Consequences

This chapter describes the environmental consequences of implementing each of the alternatives considered in this EA, including the No Action Alternative. Resources are listed in the same order as in Chapter 3.

4.1 Land Use, Zoning, and Coastal Zone Management

4.1.1 Land Use

4.1.1.1 No Action Alternative

This alternative would result in no adverse impacts on land use. Both the Wright Site and the City Site would remain in their current condition and use. The Wright Site may eventually be sold and/or developed in residential and/or commercial uses. Not constructing the proposed new national cemetery would neither impede nor facilitate growth and development in the area.

4.1.1.2 Wright Alternative

Implementation of the Wright Alternative would have no adverse impacts on land use. Currently the Wright Site is unbuilt and used, for the most part, for pine plantation, an agricultural use. Therefore, implementation of the Wright Alternative would constitute a change in land use. Changes in land use may create adverse impacts if they would directly or indirectly generate land use incompatibilities (such as, for instance, construction of an industrial facility in a residential area). Construction of a national cemetery, a park-like, landscaped, peaceful site would be compatible with the existing land uses in the surrounding area (low-density residential and undeveloped land used for agriculture or preservation and recreation), and it is unlikely to attract unwelcome new land uses to the area. Conversely, existing land uses around the site are compatible with its use as a national cemetery.

4.1.1.3 City North Alternative

Implementation of the City North Alternative would have no adverse impacts on land use. Under this alternative, the proposed new national cemetery would be built on the City Site north of Lannie Road. Currently the site is unbuilt and used for cattle grazing for the most part. The northernmost parcel contains a model airplane field and a playground/softball field. Therefore, implementation of the City North Alternative would constitute a change in land use. Construction of a national cemetery, a park-like, landscaped, peaceful site would be compatible with the existing land uses in the surrounding area and is unlikely to induce unwelcome new land uses.

A potential indirect effect on land use would result from the relocation of the model airplane field facility to make room for the cemetery (see Section 4.3.3). The new location would be determined by the City's Department of Parks, Recreation, and Entertainment, which would ensure that the facility is sited appropriately, resulting in no adverse impact.

4.1.1.4 City South Alternative

Implementation of the City South Alternative would have no adverse impacts on land use. Under this alternative, the proposed new national cemetery would be built on the City Site south of Lannie Road. Currently the site is unbuilt and used for cattle grazing for the most part. Implementation of the City South Alternative would constitute a change in land use. Construction of a national cemetery, a park-like, landscaped, peaceful site would be compatible with the existing land uses in the surrounding area and is unlikely to induce unwelcome new land uses.

4.1.1.5 Lannie Road Realigned Alternative

Implementation of the Lannie Road Realigned Alternative would have no adverse impacts on land use. Under this alternative, the proposed new national cemetery would be built on the City Site following the relocation of Lannie Road to the south of its current alignment. As under the City North Alternative and the City South Alternative, implementation of this alternative would lead to a change in land use from cattle grazing to cemetery. As under these alternatives, and for the same reasons, this change would not constitute a significant adverse impact.

4.1.2 Aesthetic Environment

4.1.2.1 No Action Alternative

The No Action Alternative would have no adverse impacts on the aesthetic environment. Both the Wright and the City sites would remain in their current conditions and uses. There would be no changes and no impacts to their appearance or the aesthetic quality of the neighborhood. Eventually, it is likely that the Wright Site would be developed in residential and/or commercial uses.

4.1.2.2 Wright Alternative

The Wright Alternative would have a moderate, long-term positive impact on the aesthetic environment. In the short term, it would have a construction-related, minor adverse impact. Construction of the proposed cemetery on the Wright Site would change its appearance from a part-natural, part-tree farm property to a park-like, landscaped expanse with roads, some buildings, ceremonial areas, and rows of graves grouped in relatively small (in the two-acre range) burial areas separated by native vegetation and landscaping. As much as possible, use would be made of the areas of natural vegetation that still exist on the property as landscaping features. This would not only minimize impacts to wetlands or wildlife, but also maintain some of the property's more distinctive features. However, much of the site is in pine plantation, with

limited aesthetic potential. It is likely that native vegetation would have to be reintroduced in portions of the property. In the end, the aesthetic quality of the property would change, but the result would be visually attractive.

The presence of a national cemetery would also enhance the visual character and appeal of the neighborhood. National cemeteries are designed to be park-like and visually pleasant from outside as well as inside; they include a dignified, ceremonial main entrance that creates the sense of entering a special place. The cemetery would become one of those community focal points the City's *North Jacksonville Shared Vision and Master Plan* aims to foster to improve the appeal of North Jacksonville.

In the short term, implementation of the first development phase would turn portions of the property into a construction site. While heavy equipment, areas of disturbed soils, trailers, and other temporary structures would detract from the visual environment, construction activities are temporary by definition. Adverse impacts would be minor.

4.1.2.3 City North Alternative

The City North Alternative would have a moderate, long-term positive impact on the aesthetic environment. In the short term, it would have a construction-related, minor adverse impact. Construction of the proposed cemetery on the north side of the City Site would change its appearance from a mowed pasture to a park-like, landscaped property with roads, some buildings, ceremonial areas, and rows of graves grouped in relatively small burial areas. Some areas currently used for cattle grazing (particularly areas of wet pasture) would likely be replanted with native vegetation to create buffers between different sections of the cemetery. Overall, the aesthetic quality of the property would change, but the result would be visually attractive.

The presence of two correctional facilities near the southwest corner of the site could detract from the aesthetic quality of the cemetery. However, the facilities would be visible only from the western edge of the site. Even there, the realigned Ethel Road would separate the cemetery and the correctional compounds. The cemetery perimeter fence along the road would create an additional visual and functional separation that could be accentuated by plantings. Therefore, the presence of the correctional facility would not significantly affect the aesthetic quality of the future cemetery.

In the short term, implementation of the first development phase would turn portions of the property into a construction site. While operating heavy equipment, areas of disturbed soils, trailers, and other temporary structures would detract from the visual environment, construction activities are temporary by definition. Adverse impacts would be minor.

4.1.2.4 City South Alternative

The City South Alternative would have a moderate, long-term positive impact on the aesthetic environment. In the short term, it would have a construction-related, minor adverse impact. Construction of the proposed cemetery on the south side of the City Site would change its

appearance from a mowed pasture to a park-like, landscaped property with roads, some buildings, ceremonial areas, and burial areas. The site contains small patches of trees, mostly in its eastern portion. As much as possible, these areas would be maintained and used for landscaping purposes. Some areas of wet pasture may be replanted with native vegetation to create additional buffers between different sections of the cemetery. Overall, the aesthetic quality of the property would change, but the result would be visually attractive.

As with the City North Alternative, the visual quality of the future cemetery might potentially be affected by the presence of two correctional facilities nearby. However, the facilities would be visible only from the parts of the site along Lannie Road west of the realigned Ethel Road. As under the City North Alternative, the perimeter fence, potentially enhanced with plantings, would mitigate potential adverse visual impacts. Therefore, any effect on the proposed cemetery would be negligible.

In the short term, implementation of the first development phase would turn portions of the property into a construction site. While heavy equipment, areas of disturbed soils, trailers, and other temporary structures would detract from the visual environment, construction activities are temporary by definition. Adverse impacts would be minor.

4.1.2.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative would have a moderate, long-term positive impact on the aesthetic environment. In the short term, it would have a construction-related, minor adverse impact. Impacts under this alternative would be similar to those under the City North and the City South alternatives. Because the proposed cemetery would surround the nearby correctional facilities on two sides (south and east) rather than just one, these facilities would be visible from a larger portion of the site than under the City North or the City South alternatives. However, the same mitigation measures could be used as under those alternatives and adverse visual effects would be negligible.

In the short term, implementation of the first development phase would turn portions of the property into a construction site. While heavy equipment, areas of disturbed soils, trailers, and other temporary structures would detract from the visual environment, construction activities are temporary by definition. Adverse impacts would be minor.

4.1.3 Zoning

4.1.3.1 No Action Alternative

The No Action Alternative would have no adverse impacts on zoning. Zoning would remain the same as it is today. As North Jacksonville develops, the City may pass zoning amendments to allow for new types of uses. Not constructing the proposed cemetery would not preclude or encourage changes in zoning.

4.1.3.2 Wright Alternative

The Wright Alternative would have no adverse impacts on zoning. The Wright Site is currently zoned *Agricultural*. Cemeteries and mausoleums are a permitted use under this designation. Therefore, development of the site as a new national cemetery would be compatible with the existing zoning. Conversely, the existing zoning around the site (see Section 3.1.3.3) is compatible with its use as a national cemetery, as it promotes low-density and low-impact uses unlikely to detract from the aesthetic quality such a facility is expected to maintain. Development of the proposed cemetery on the Wright Site would require its acquisition by the federal government. After the acquisition, the site, as federal property, would no longer be zoned by the city.

4.1.3.3 City North Alternative

The City North Alternative would have no adverse impacts on zoning. The City Site north of Lannie Road is currently zoned *Public Buildings and Facilities-1 (Government)*. Most lawful government uses are authorized under this designation, and this would include use as a national cemetery. Conversely, the existing zoning around the site (see Section 3.1.3.3) is compatible with its use as a national cemetery, as it promotes low-density and low-impact uses unlikely to detract from the aesthetic quality a cemetery is expected to maintain. Development of the proposed cemetery on the City Site north of Lannie Road would at a minimum require the acquisition of this portion of the property by the federal government. After the acquisition, the site, as federal property, would no longer be zoned by the city.

4.1.3.4 City South Alternative

The City South Alternative would have no adverse impacts on zoning. The City Site south of Lannie Road is currently zoned *Public Buildings and Facilities-1 (Government)*. Most lawful government uses are authorized under this designation, and this would include use as a national cemetery. The existing zoning around the site (see Section 3.1.3.3) is compatible with its use as a national cemetery, as it promotes low-density and low-impact uses unlikely to detract from the aesthetic quality such a facility is expected to maintain. Development of the proposed cemetery on the City Site south of Lannie Road would at a minimum require the acquisition of that portion of the property by the federal government. After the acquisition, the site, as federal property, would no longer be zoned by the city.

4.1.3.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative would have no adverse impacts on zoning. Effects pertaining to zoning under this alternative would be the same as under the City North and City South alternatives. To implement this alternative, DVA would at a minimum acquire the City Site minus the northernmost parcel. After the acquisition, the site, as federal property, would no longer be zoned by the city.

4.1.4 Plans and Ongoing Projects

4.1.4.1 No Action Alternative

The No Action Alternative would have no adverse impacts on plans and construction projects near the sites. Not constructing the proposed cemetery would not impede or slow development of North Jacksonville in keeping with the City's *North Jacksonville Shared Vision and Master Plan*.

4.1.4.2 Wright Alternative

The Wright Alternative would have no or negligible adverse impacts on existing plans. It would have a moderate indirect, long-term adverse impact on the Preserve at Thomas Creek development project.

The Wright Alternative would be compatible with the *2010 Comprehensive Plan* and *North Jacksonville Shared Vision and Master Plan*, which seeks to promote greater and better growth in North Jacksonville. The proposed new cemetery would likely become a strong visual and symbolic focus for the surrounding community, which would contribute to redefining the character of North Jacksonville in a positive way. The City of Jacksonville has expressed its concurrence with the appropriateness of building the proposed national cemetery in the general area by offering a nearby site (the City Site) for consideration by DVA.

The Wright property is an "essential parcel" of the Northeast Florida Timberlands and Watershed Reserve Project. While acquisition of the site by DVA to construct a national cemetery would preclude its possible future acquisition by the state or the city for conservation purposes, a minor adverse impact on the plan, the proposed use is a park-like, low-impact activity that would allow for the preservation and even enhancement of the most ecologically sensitive portions of the property (i.e., wetlands). DVA would work with the state and city to maximize preservation. In the long term, construction of a national cemetery on the site would ensure that it permanently remains in a park-like, low-density, low-impact use. Such a use would be more consistent with the presence of nearby preservation land than would be the type of residential or commercial development that may otherwise occur on the site. In this respect, the Wright alternative would have a minor positive impact of the preservation projects, which would offset the minor adverse noted above. Therefore, overall impacts would be negligible.

With regard to construction projects, a moderate, indirect adverse impact to the Thomas Creek Preserve development project would occur. The Wright Site is included in the development master plan submitted by the developer to the City. Should DVA decide to acquire the site, and should its owner agree to sell it to DVA, the project developer would need to substantially modify the master plan. The impact would be indirect because it would result from the site's owner's decision, not DVA's. It is expected to be moderate because the site's owner is unlikely to sell a portion of his property to DVA if this means the rest of it cannot be developed. The end-result would likely be a scaled-down development rather than no development at all.

4.1.4.3 City North Alternative

The City North Alternative would have no or negligible adverse impacts on existing plans and projects. It would be compatible with the *2010 Comprehensive Plan* and *North Jacksonville Shared Vision and Master Plan*, which seeks to promote greater and better growth in North Jacksonville. The proposed new cemetery would likely become a strong visual and symbolic focus for the surrounding community, which would contribute to redefining the character of North Jacksonville in a positive way. The City of Jacksonville has expressed its concurrence with the appropriateness of building the proposed national cemetery in the area by offering the site for consideration by DVA.

The City Site, including the portion of it north of Lannie Road, is an "essential parcel" of the Northeast Florida Timberlands and Watershed Reserve Project. While acquisition of the site by DVA to construct a national cemetery would prevent the state or the city from using it for conservation purposes, the proposed use is a park-like, low-impact activity that would allow for the preservation and even enhancement of the most ecologically sensitive portions of the property (i.e., wetlands). DVA would work with the state and city to maximize preservation opportunities. Impacts on the Northeast Florida Timberlands and Watershed Reserve Project would be negligible.

4.1.4.4 City South Alternative

The City South Alternative would have no or negligible adverse impacts on existing plans and projects. Impacts would be the same as those of the City North Alternative (see Section 4.1.4.3).

4.1.4.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative would have no or negligible adverse impacts on existing plans and projects. Impacts would be the same as those of the City North Alternative (see Section 4.1.4.3).

4.1.5 Coastal Zone Management

4.1.5.1 No Action Alternative

The No Action Alternative would have no adverse impacts on the coastal zone and would be consistent with the Florida Coastal Zone Management Program (FCMP).

4.1.5.2 Wright Alternative

The Wright Alternative's adverse impacts on coastal zone resources would range from none to minor. The alternative would be consistent with the FCMP. State review of a proposed action for consistency with the FCMP consists of evaluating the consistency of the action with the 23 Florida statutes included in the program. Information on the impacts of the proposed action on the resources regulated and protected by the 23 statutes is contained in various sections of this

EA, as shown and summarized in Table 4-1. The EA will be sent for review to the Florida Department of Environmental Protection and will constitute DVA's submission for the purpose of Coastal Zone Consistency Determination.

Table 4-1
Coastal Zone Consistency

Statute	Comments	Statute	Comment
Coastal Construction	Not Applicable. No alternative involves beaches or other coastal lands.	Living Resources	The impacts of the alternatives on biological resources are described in Section 4.9.5 of this EA. Adverse impacts would be moderate (Wright Alternative) or minor (other action alternatives).
Local Government	All alternatives are consistent with the Jacksonville Master Plan. Construction of the proposed cemetery on either site would be coordinated with the City/County authorities.	Living Resources (Freshwater)	Freshwater biological resources would not be affected.
State and Regional Planning	It is not expected that implementation of any of the alternatives would significantly adversely affect state and regional planning.	Water Resources	The impacts to water resources of the alternatives are described in Section 4.9.2 of this EA. Impacts would be negligible or minor.
Disaster Preparedness	Implementation of the alternatives would not affect local, regional, or state disaster preparedness.	Multipurpose Outdoor Recreation, Land Acquisition, Management, and Conservation	No state or local recreation or preservation land would be significantly adversely affected.
State Lands	Not applicable. No existing state lands would be affected under any of the alternatives.	Pollutant Spill Prevention	The impacts of the alternatives on hazardous wastes are addressed in Section 4.9 of this EA. All applicable laws and regulations would be complied with, and there would be no significant impacts.

Statute	Comments	Statute	Comment
Outdoor Recreation	Implementation of the Wright, City South, or Lannie Road Realigned alternatives would not affect outdoor recreation. No parks or areas used for outdoor recreation would be adversely affected. Impacts to an existing recreational facility under the City North Alternative would be mitigated through relocation in consultation with the owner and users of the facility. Impacts would be minor (see Section 4.3.3).	Oil and Gas Production	Not applicable. The alternatives would not affect oil and gas production.
Land Conservation Action of 1972	No existing state lands would be affected under any of the alternatives.	Public Health	No alternative would affect public health. Applicable public health laws and regulations pertaining to the construction and operation of cemeteries would be complied with.
Recreational Trail System	No existing recreational trails would be affected under any of the alternatives.	Developments of Regional Impact	The proposed action would not have noticeable regional impacts.
Historic Preservation	Historic Preservation issues are addressed in Sections 3.8 and 4.8 of this EA. No alternative would adversely affect historic resources.	Arthropod Control	No alternative would have an effect on arthropod control measures. Applicable laws and regulation pertaining to arthropod control would be complied with.

Statute	Comments	Statute	Comment
Tourism and Economy	Any impacts of the alternatives on tourism and economy would be positive: building and operating the proposed new cemetery would create temporary and permanent jobs in the area; the new cemetery would draw visitors to the site and to Jacksonville.	Sources of Water and Air	The impacts of the alternatives on air and water are addressed in Sections 4.6 and 4.9.2 of this EA. Impacts would be negligible.
Public Transportation	Impacts on the alternatives on transportation are analyzed in Section 4.5 of this EA. Impacts would be negligible.	Soil and Water Conservation	The impacts of the alternatives on soils and water are addressed in Sections 4.9.1 and 4.9.2 of this EA. Impacts would be negligible or minor.

4.1.5.3 City North Alternative

The City North Alternative's adverse impacts on coastal zone resources would range from none to minor. The alternative would be consistent with the FCMP. State review of a proposed action for consistency with the FCMP consists of evaluating the consistency of the action with the 23 Florida statutes included in the program. Information on the impacts of the proposed action on the resources regulated and protected by the 23 statutes is contained in various sections of this EA, as shown and summarized in Table 4-1. The EA will be sent for review to the Florida Department of Environmental Protection and will constitute DVA's submission for the purpose of Coastal Zone Consistency Determination.

4.1.5.4 City South Alternative

The City South Alternative's adverse impacts on coastal zone resources would range from none to minor. The alternative would be consistent with the FCMP. State review of a proposed action for consistency with the FCMP consists of evaluating the consistency of the action with the 23 Florida statutes included in the program. Information on the impacts of the proposed action on the resources regulated and protected by the 23 statutes is contained in various sections of this EA, as shown and summarized in Table 4-1. The EA will be sent for review to the Florida Department of Environmental Protection and will constitute DVA's submission for the purpose of Coastal Zone Consistency Determination.

4.1.5.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative's adverse impacts on coastal zone resources would range from none to minor. The alternative would be consistent with the FCMP. State review of a proposed action for consistency with the FCMP consists of evaluating the consistency of the action with the 23 Florida statutes included in the program. Information on the impacts of the

proposed action on the resources regulated and protected by the 23 statutes is contained in various sections of this EA, as shown and summarized in Table 4-1. The EA will be sent for review to the Florida Department of Environmental Protection and will constitute DVA's submission for the purpose of Coastal Zone Consistency Determination.

4.2 Socioeconomics

4.2.1 No Action Alternative

The No Action Alternative would have no adverse socioeconomic effects. The potential positive economic impacts that would result from building the cemetery would not occur. However, North Jacksonville is poised for significant economic development over the next decade and the No Action Alternative would not noticeably impede or constrain this trend.

4.2.2 Wright Alternative

The Wright Alternative would have no impacts on demography. It would have minor positive impacts on employment and the local economy. It would have a negligible long-term adverse impact on local cemeteries and real estate taxes. It would not disproportionately affect Environmental Justice communities or children.

4.2.2.1 Demographics

Construction of the proposed new national cemetery would not affect local or regional demographics patterns and trends. While it would generate some direct and indirect, temporary and permanent employment, it is likely that all or most required manpower could be found locally. No significant influx of workers and their families would result from the proposed action.

4.2.2.2 Local Economy, Income, and Employment

Constructing and operating the proposed national cemetery would cost approximately $15 to 25 million over the next 10 years (including master planning, design, and implementation of the first development phase, the largest one). DVA would contract with private firms, in most cases local firms, to design and construct the facility, resulting in a positive effect on the local economy and employment, as new temporary (design and construction) and permanent (management and maintenance) jobs would be created. It is expected that approximately 15 permanent jobs would be created to manage and operate the cemetery.

In addition to paid employees, volunteers are expected to be available to assist with running the proposed cemetery (e.g, staffing the visitor reception desk). While volunteer work does not generate direct economic benefits, it does provide welcome opportunities for citizens, particularly retired veterans, to remain active and involved in community activities, also a positive impact.

Since veterans who would elect to be buried in the proposed new cemetery would otherwise have selected a final resting place in another facility, construction of the proposed cemetery would have a small negative impact on other, existing cemeteries in and around Duval County. But most veterans do not elect to be buried in national cemeteries and the adverse impact would be negligible.

Since the cemetery would serve veterans within a 75-mile radius, it would generate trips to Jacksonville from the surrounding counties to attend a funeral, visit a grave, or simply tour the site and pay one's respect to the nation's veterans buried there. These trips would have a beneficial effect on the local economy, as visitors would buy food, lodging, and a range of consumer goods during their stay in Jacksonville. Therefore, overall economic impacts would be positive.

4.2.2.3 Real Estate Taxes

The Wright Alternative would create a small long-term adverse impact in that it would result in the acquisition by the federal government of a currently privately-owned piece of property, which thereby would cease to generate tax revenue for the county. In 2005, taxes for the five parcels making up the Wright Site totaled $2,052.50. The economic benefits resulting from the proposed action would likely offset most or all of this small revenue loss. The impact would be negligible.

4.2.2.4 Environmental Justice and Protection of Children

As shown in Section 3.2.3, the area around the potential cemetery sites does not constitute an Environmental Justice community. Therefore, the proposed action would not disproportionately affect minority or low-income populations. There are no concentrations of children near the Wright Site. During construction, the site would be fenced, which would prevent local children, if any, from entering the property. There is no potential for disproportionate effects to children's health from operating the proposed cemetery.

4.2.3 City North Alternative

The City North Alternative would have no impacts on demography. It would have minor positive impacts on employment and the local economy. It would have a negligible long-term adverse impact on local cemeteries. It would have no impacts on real estate taxes. It would not disproportionately affect Environmental Justice communities or children.

4.2.3.1 Demographics

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.1).

4.2.3.2 Local Economy, Income, and Employment

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.2).

4.2.3.3 Real Estate Taxes

The City Site is currently owned by the City of Jacksonville and does not pay real estate taxes. Implementation of the City North Alternative would result in no tax revenue loss.

4.2.3.4 Environmental Justice and Protection of Children

As shown in Section 3.2.3, the area around the potential cemetery sites does not constitute an Environmental Justice community. Therefore, the proposed action would not disproportionately affect minority or low-income populations. A juvenile correctional facility is located near the site. This facility would be separated from the proposed cemetery by Ethel Road and the proposed action would not significantly affect the inmates. Some construction activities would take place close to a playground and softball field currently on the site. There could be temporary air quality (fugitive dust) and noise impacts. These impacts would be minimized as described in Sections 4.6.3 and 4.7.3 below, and would be negligible. Also, construction sites would be fenced to prevent children using the playground from wandering in. There would be no disproportionate effects to children's health from operating the proposed cemetery.

4.2.4 City South Alternative

The City South Alternative would have no impacts on demography. It would have minor positive impacts on employment and the local economy. It would have a negligible long-term adverse impact on local cemeteries. It would have no impacts on real estate taxes. It would not disproportionately affect Environmental Justice communities or children.

4.2.4.1 Demographics

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.1).

4.2.4.2 Local Economy, Income, and Employment

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.2).

4.2.4.3 Real Estate Taxes

The City Site is currently owned by the City of Jacksonville and does not pay real estate taxes. Implementation of the City South Alternative would result in no tax revenue loss.

4.2.4.4 Environmental Justice and Protection of Children

As shown in Section 3.2.3, the area around the potential cemetery sites does not constitute an Environmental Justice community. Therefore, the proposed action would not disproportionately affect minority or low-income populations. A juvenile correctional facility is located near the site. This facility would be separated from the proposed cemetery by Lannie Road and the proposed action would not significantly affect the inmates. During construction, the site would

be fenced, which would prevent local children, if any, from entering the property. There is no potential for disproportionate effects to children's health from operating the proposed cemetery.

4.2.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative would have no impacts on demography. It would have minor positive impacts on employment and the local economy. It would have a negligible long-term adverse impact on local cemeteries. It would have no impacts on real estate taxes. It would not disproportionately affect Environmental Justice communities or children.

4.2.5.1 Demographics

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.1).

4.2.5.2 Local Economy, Income, and Employment

Impacts would be the same as under the Wright Alternative (see Section 4.2.2.2).

4.2.5.3 Real Estate Taxes

The City Site is currently owned by the City of Jacksonville and does not pay real estate taxes. Implementation of the Lannie Road Realigned Alternative would result in no tax revenue loss.

4.2.5.4 Environmental Justice and Protection of Children

As shown in Section 3.2.3, the area around the potential cemetery sites does not constitute an Environmental Justice community. Therefore, the proposed action would not disproportionately affect minority or low-income populations. A juvenile correctional facility is located near the site. This facility would be separated from the proposed cemetery by Ethel Road and Lannie Road. The proposed action would not significantly affect the inmates. Some construction activities would take place close to the playground and softball field currently on the site. There could be temporary air quality (fugitive dust) and noise impacts. These impacts would be minimized as described in Sections 4.6.5 and 4.7.5 below, and would be negligible. Also, construction sites would be fenced to prevent children using the playground from wandering in. There is no potential for disproportionate effects to children's health from operating the proposed cemetery.

4.3 Community Services

4.3.1 No Action Alternative

Under the No Action Alternative, there would be no adverse impacts to community services. Fire Station 47 would be relocated as planned (see Section 3.3).

4.3.2 Wright Alternative

Under the Wright Alternative, adverse impacts on community services would be negligible. The proposed new national cemetery would generate some additional demand on community services (fire, EMS, police, and healthcare). However, the demand from a low-density, low-use site such as a cemetery is likely to be small, particularly when compared to that that would result from the implementation of such projects as the Preserve at Thomas Creek development. The facility most likely to be noticeably affected by the proposed action is Fire Station 47, currently at the intersection of Lannie Road and Ethel Road, an all-volunteer station in poor condition which would be responsible for responding to fire and emergency calls from the cemetery. However, Fire Station 47 is scheduled for upgrading and relocation (see Section 3.3). Calls from the cemetery would likely represent a very small fraction of the overall calls the new station will be designed to answer.

None of the recreational facilities located near the Wright Site (model flying field, playground, portion of the Timucuan Preserve) would be affected by the proposed action under the Wright Alternative.

4.3.3 City North Alternative

The adverse impacts of the City North Alternative on fire, police, and health services would be negligible, for the same reasons as stated under the Wright Alternative (see Section 4.3.2). Implementation of this alternative would have minor adverse effects on the recreational facilities that currently occupy part of the site.

The land occupied by the model airfield facility and the area over which users fly their model aircraft would be needed for development of the proposed cemetery. This adverse impact on the facility would be mitigated by relocating it to an appropriate new location in cooperation with the City's Department of Parks, Recreation, and Entertainment and in consultation with the current lessee. Implementation of the alternative would be contingent on finding an appropriate new site. Preliminary contacts with the Department of Parks, Recreation, and Entertainment confirmed the City's willingness to consider alternative locations for the facility (Stine, 2005). Following relocation of the airfield, long-term impacts would be minor. In the short-time, there could be a short-term adverse impact resulting from the potential lag between the time construction of the proposed cemetery starts and the time construction of the replacement airfield ends. Careful scheduling would ensure this gap is as small as possible. Impacts would be temporary and minor.

Because of its small size and location just off Lannie Road, it is expected the proposed cemetery could be built around the existing playground and softball field. The facilities would be left in place with no resulting long-term adverse impacts. Impacts from nearby construction activities would be temporary and negligible. If, however, the land currently occupied by the playground and softball field proved to be needed for the proposed cemetery, the facilities would be appropriately replaced in a manner similar to what would be done for the model airfield. Impacts would be minor.

4.3.4 City South Alternative

Under the City South Alternative, adverse impacts on community services would be negligible, as under the Wright Alternative (see Section 4.3.2).

4.3.5 Lannie Road Realigned Alternative

The adverse impacts of the Lannie Road Realigned Alternative on fire, police, and health services would be negligible, for the same reasons as stated under the Wright Alternative (see Section 4.3.2). There would be a negligible long-term impact on the model flying field due to the realignment of the access road (see Section 4.5.1.5). Also, while the site occupied by the model airfield would not be needed for constructing the proposed cemetery, the cemetery would be close to the facility and establishment of a buffer may be needed to minimize noise impacts (see Section 4.7.5) and the risk of model planes crashing on cemetery grounds. Because of the size of the area where the flying field is located, however, it is expected that such a buffer could be implemented without significantly reducing the functionality of the facility. As much as possible, DVA would avoid locating noise sensitive functions in areas exposed to noise from the model airfield. Long-term impacts would be negligible. It is expected that the playground and softball field near the facility could be left in place. Short-term impacts from nearby construction activities on both recreational facilities would be temporary and negligible.

4.4 Utilities

4.4.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to utilities. As the area develops, existing utility lines and connections would be upgraded and new ones would be built to serve local residents and workers.

4.4.2 Wright Alternative

Under the Wright Alternative, there would be negligible adverse impacts to utilities. The proposed new cemetery would create some additional demand for electric, water, wastewater, and communications services. The increase would be modest and would not create overall capacity problems for the existing utility systems serving North Jacksonville. Overall impacts would be negligible. However, there are currently no utility connections serving the Wright Site, and new connections would have to be built. Existing sewer, telephone, and electric lines along Lannie Road could be extended onto the site. There is no water main along Lannie Road, and bringing city water to the site would likely require substantial work. However, potable water requirements would be limited to employees and visitors, and could be satisfied using bottled water. Water for irrigation and other domestic uses could be obtained from wells and stormwater retention systems. Use of groundwater could be subject to the permitting requirements described

in Section 4.9.2.2. Utility needs would be specified as part of the master planning process, after which DVA would obtain estimates from the utility companies to create the needed connections.

4.4.3 City North Alternative

Under the City North Alternative, there would be negligible adverse impacts to utilities. The increase in the demand for utilities would be the same as under the Wright Alternative (see Section 4.4.2). However, because of its location along Lannie Road, the City Site would likely be easier to connect to existing networks. Also, there are artesian wells on the site that could provide irrigation water, and possibly potable water.

4.4.4 City South Alternative

Under the City South Alternative, there would be negligible adverse impacts to utilities. The increase in the demand for utilities would be the same as under the Wright Alternative (see Section 4.4.2). However, because of its location along Lannie Road, the City Site would likely be easier to connect to existing networks. Also, there are artesian wells on the site that could provide irrigation water, and possibly potable water.

4.4.5 Lannie Road Realigned

Under the Lannie Road Realigned Alternative, there would negligible long-term adverse impacts to utilities. There would be a minor short-term adverse impact. The increase in the demand for utilities would be the same as under the Wright Alternative (see Section 4.4.2). However, because of its location along Lannie Road, the City Site would likely be easier to connect to existing networks. Also, there are artesian wells on the site that could provide irrigation water, and possibly potable water. Existing utility lines along Lannie road would have to be relocated along with the road, in coordination with the owners of the lines. This would result in a minor short-term adverse impact and negligible long-term impact.

4.5 Transportation

4.5.1 Road Network and Access

4.5.1.1 No Action Alternative

The No Action Alternative would have no adverse impacts on the road network. Both the sites considered in this EA would remain in their current state and use. Ethel Road would be realigned, as planned. Braddock Road and Lannie Road would likely be extended eastward to connect with Pecan Park Road and I-95. The No Action Alternative would have no impacts on the existing and planned public road network.

4.5.1.2 Wright Alternative

The Wright Alternative would have negligible to minor adverse impacts on the road network. Currently, access to the site is through a gate at the eastern end of Lannie Road. While this access point could become the main entrance to the cemetery, a service entrance sufficiently remote from the main gate would have to be provided, along with an access road connected to Lannie Road. The location of the service entrance and access road would be determined during the master planning stage. The impact on the existing network of constructing a service access road would be negligible.

As indicated in Section 4.1.4.2, building the proposed new cemetery on the Wright Site would have a moderate, long-term, indirect adverse impact on the proposed Preserve at Thomas Creek development project. Part of the project consists of extending Lannie Road eastward to connect to Arnold Road. The proposed alignment is through the Wright Site, and development of the proposed cemetery would make extension along the proposed alignment impossible. However, an alternative alignment (e.g., to the south of the site) would likely be available. Alternatively, extending Lannie Road might not be needed since, as noted in Section 4.1.4.2, the development project might be scaled down under this alternative. The proposed extension of Braddock Road eastward would not be affected. The adverse impact on the future road network would be minor.

4.5.1.3 City North Alternative

The City North Alternative would have no adverse impacts on the road network. The City Site would have sufficient frontage on Lannie Road and the realigned Ethel Road to allow for the provision of two separate entrances directly off either road. The exact location of the entrances would be determined as part of the master planning process. The City North Alternative would have no impact on the existing and planned public road network. The proposed extension of Lannie Road eastward to connect with Pecan Park Road and I-95, if approved and implemented, would greatly improve access to the site.

4.5.1.4 City South Alternative

The City South Alternative would have no adverse impacts on the road network. The City Site has sufficient frontage on Lannie Road to allow for the construction of two adequately separated entrances without altering the public road network. The City South Alternative would have no impact on the existing and planned public road network. The proposed extension of Lannie Road eastward to connect with Pecan Park Road and I-95, if approved and implemented, would greatly improve access to the site.

4.5.1.5 Lannie Road Realigned Alternative

The Lannie Road Realigned Alternative would have negligible adverse impacts on the road network. Under this alternative, Lannie Road would be relocated south of its current alignment approximately between the existing intersection with Ethel Road and the eastern boundary of the site, where it would rejoin the current alignment (see Figure 2-4). The portion of the existing Lannie Road east of where the new road would branch off would remain a public road providing

access to the realigned Ethel Road and the SHOP correctional facility. A new Y-shape or T-shape intersection would be created where the new road would join the existing one. The portion of existing Lannie Road east of the future Ethel Road would be included within the cemetery and would be available for reuse as an internal road, if appropriate. The new intersection would be designed so as to minimize delays. Impacts would be negligible.

No access would be lost by realigning Lannie Road, with one partial exception: access to the model airfield facility is currently via a gravel road that branches off Lannie Road from a point west of where the new road would likely join the existing one. To maintain access to the facility, the gravel road would have to be modified to connect with Lannie Road east of the junction. Presently, the access road is perpendicular to Lannie Road. The modified extended gravel road would likely run north of, and parallel to, the cemetery's perimeter fence starting from a point north of its existing intersection with Lannie Road to a new intersection east of where the old and new road would join. Impacts would be negligible.

DVA and the City of Jacksonville would need to reach an agreement on how to fund and implement the proposed road realignment. In the short-term, the impacts of realigning Lannie Road would be negligible, as the existing roadway would remain in operation until the new one opens to traffic. In the long-term, while traveling distances would be slightly increased, this increase would not be sufficient to create a significant adverse impact. In both cases, impacts would be negligible. The proposed realignment would not affect the proposed extension of Lannie Road eastward, which would, if implemented, greatly improve access to the site.

Following the proposed realignment of Lannie Road, the site would present extensive frontage on both Lannie and Ethel roads, facilitating the construction of two separate entrances. The exact location of the entrances would be determined as part of the master planning process.

4.5.2 Traffic Conditions

4.5.2.1 No Action Alternative

The No Action Alternative would generate no traffic impacts. However, in order to assess the impacts of the action alternatives, it is necessary to evaluate what traffic conditions would be like in the peak cemetery use year (2011) if the proposed cemetery were not built.

As indicated in Section 3.5, the one existing intersection that could potentially be noticeably affected by the construction and operation of the proposed cemetery is the intersection of Lem Turner and Lannie roads. Even if the cemetery were not built, traffic conditions at the intersection between now and 2011 are likely to change as traffic increases over the years in the wake of local and regional development.

It is likely that the large development projects currently being planned in North Jacksonville (see Section 3.1.4.4) would substantially affect traffic in the area. In addition to large residential and commercial developments, proposed projects include extending Lannie Road and Braddock Road eastward to establish direct connections with I-95. However, not enough information is

currently available on the scope and implementation schedule of those projects to determine how much overall traffic they would generate and how much of this traffic would pass through the Lem Turner and Lannie roads intersection.

Therefore, for the purpose of establishing a baseline against which the impacts of the proposed action can be measured, no change was assumed to Lannie Road and the same annual growth factor used to extrapolate traffic movement counts from 2000 to 2006 was used to further extrapolate traffic data to 2011. Results are shown in Table 4-2. No deterioration in level of service (LOS) is projected to occur. The intersection would remain at LOS A, meaning that most times traffic waiting at the light would be able to pass through the intersection when the light changes.

Table 4-2
Projected No Action Conditions at Lem Turner Road/Lannie Road Intersection (2011)

	Lem Turner Road Southbound		Lem Turner Road Northbound		Lannie Road Westbound		Intersection LOS
	Left	Thru	Thru	Right	Left	Right	
AM Peak	18	565	120	91	204	19	A
Mid Day Peak	18	242	279	96	91	29	A
PM Peak	30	236	646	204	69	29	A

4.5.2.2 Wright Alternative

Implementation of the Wright Alternative would result in negligible adverse impacts on traffic. Levels of Service at the Lannie Road/Lem Turner roads intersection would be unchanged from what they would be under no action conditions. To evaluate the traffic impacts of building and operating the proposed cemetery, it is necessary to calculate the number of vehicle trips it would generate. Most of those trips would be funeral corteges going to and leaving the cemetery. The yearly number of burials would vary from year to year, with the maximum number expected to occur in 2011 (1,237 burials over 250 days). Therefore, this analysis evaluates traffic impacts for 2011, when they would be at their maximum.

In 2011, it is expected that there would be approximately seven funerals a day five days a week. Based on DVA's experience, the average funeral cortege includes 17 cars. The total daily number of trips generated would thus be 238 (119 inbound trips, 119 outbound trips). All funerals would take place between the hours of 9:30 AM and 3:30 PM, and no more than three funerals would take place during the midday peak. Additionally, it was assumed that approximately 25 people (employees and volunteers) would travel to the site in the morning peak and leave it in the evening peak, for a total of 50 daily trips. While most visits are likely to take place on weekend, visitors would also likely come on week days: these weekday visits were assumed to generate an average of eight round trips to the cemetery, for a total of 16 trips. Finally, an average of one delivery a day was assumed. It is difficult to predict when during the day visits and deliveries would take place. For the purposes of the analysis, six (three in, three

out) visitor trips were assigned to the midday peak, and two each (one in, one out) to the AM and PM peaks; the delivery was assigned to the midday peak.

Finally, the trips were distributed to the roadway system based on the geographical distribution of the veterans served by the proposed cemetery: 18 percent of all trips were assumed to be coming from the north and 82 percent from the south (employee, visitor, and delivery trips are negligible for the purpose of trip distribution).

The total number of trips generated by the proposed cemetery is summarized in Table 4-3. Projected peak hour traffic counts and levels of service are shown in Table 4-4.

Table 4-3
Projected 2011 Total Daily Trip Generation

Type of Trip	Inbound	Outbound	Total
Funeral Corteges	119	119	238
Employees and Volunteers	25	25	50
Visitors	8	8	16
Deliveries	1	1	2
Total	153	153	306

Table 4-4
Projected Conditions at Lem Turner Road/Lannie Road Intersection (Action Alternatives-2011)

	Lem Turner Road Southbound		Lem Turner Road Northbound		Lannie Road Westbound		Intersection LOS
	Left	Thru	Thru	Right	Left	Right	
AM Peak	23	565	120	112	204	20	A
Mid Day Peak	28	242	279	141	136	39	A
PM Peak	31	236	646	204	90	34	A

The analysis shows the additional traffic generated by the proposed cemetery would not adversely affect the Lem Turner Road/Lannie Road intersection in any substantial way. No change in LOS from either existing and no action conditions would occur. Conditions at the intersection would remain such that most times traffic waiting at the light would be able to pass through the intersection when the light changes. Long-term impacts would be negligible.

Short-term traffic impacts would occur as a result of the construction of the cemetery. These impacts would be greater early in the development of the site and would include increased truck traffic as construction materials are brought in and debris is taken out, as well as the commuting trips of construction workers. However, these construction-related impacts would be temporary and would not substantially overlap with the operations-related impacts evaluated above because most of the work would have to be performed before the cemetery opens. Construction-related impacts would be temporary and negligible.

4.5.2.3 City North Alternative

Implementation of the City North Alternative would result in negligible adverse impacts on traffic. Levels of Service at the Lannie Road/Lem Turner roads intersection would be unchanged from what they would be under no action conditions. Because traffic impacts are not site-specific, the analysis conducted for the Wright Alternative (Section 4.5.2.2) also applies to the City North Alternative.

4.5.2.4 City South Alternative

Implementation of the City South Alternative would result in negligible adverse impacts on traffic. Levels of Service at the Lannie Road/Lem Turner roads intersection would be unchanged from what they would be under no action conditions. Because traffic impacts are not site-specific, the analysis conducted for the Wright Alternative (Section 4.5.2.2) also applies to the City South Alternative.

4.5.2.5 Lannie Road Realigned Alternative

Implementation of the Lannie Road Realigned Alternative would result in negligible adverse impacts on traffic. Levels of Service at the Lannie Road/Lem Turner roads intersection would be unchanged from what they would be under no action conditions. Because traffic impacts are not site-specific, the analysis conducted for the Wright Alternative (Section 4.5.2.2) also applies to the Lannie Road Realigned Alternative.

Under this alternative, a new intersection would be created where the new Lannie Road would branch off the existing roadway (see Section 4.5.1.5). Traffic movements through this intersection would largely depend on where the cemetery's main entrance is located. In any case, however, given the small total number of trips generated by the proposed cemetery, and the fact that most of these trips would take place outside the AM and PM peak hours, it is unlikely this intersection would experience any significant delays at any time during the day. Following completion of the master planning process, the location of the cemetery's main entrance would be established, and dominant traffic movements could be predicted and taken into account when designing the new intersection. Construction-related impacts would be the same as under the other action alternatives because the realignment of Lannie Road could be completed without closing the existing road to traffic.

4.6 Air Quality

4.6.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to air quality.

4.6.2 Wright Alternative

Implementation of the Wright Alternative would result in negligible adverse impacts. Construction and operation of the proposed new national cemetery would generate additional air pollutant emissions from two sources: the additional vehicle trips generated by the cemetery, and any boilers or generators associated with the cemetery's administration/public information center and its maintenance facility. These emissions would not be sufficient to significantly affect ambient air quality.

In the short term, construction of the proposed cemetery would generate air pollutant emissions through the use of heavy construction equipment, workers' commutes, and soil disturbing activities that may create fugitive dust. Air emissions from equipment and vehicles would be minor and temporary; fugitive dust would be controlled through the application of standard best management practices such as applications of water and seeding of exposed soils. Construction-related impacts would be temporary and negligible.

4.6.3 City North Alternative

Air quality impacts are not site-specific. Impacts under the City North Alternative would be the same as under the Wright Alternative (see Section 4.6.2). Adverse impacts would be negligible.

4.6.4 City South Alternative

Air quality impacts are not site-specific. Impacts under the City South Alternative would be the same as under the Wright Alternative (see Section 4.6.2). Adverse impacts would be negligible.

4.6.5 Lannie Road Realigned Alternative

Air quality impacts are not site-specific. Impacts under the Lannie Road Realigned Alternative would be the same as under the Wright Alternative (see Section 4.6.2). Adverse impacts would be negligible.

4.7 Noise

4.7.1 No Action Alternative

Under the No Action Alternative, there would be no impacts on noise levels.

4.7.2 Wright Alternative

Implementation of the Wright Alternative would have negligible adverse impacts. Development and operation of the proposed new national cemetery on the Wright Site would result in increased noise levels on the property, which is currently undeveloped. Grounds maintenance work would involve the use of lawn mowers and leaf blowers; delivery trucks and the vehicles of employees and visitors would be another source of noise. Additionally, funeral services often involve a performance of *Taps*, either live or recorded, while some include gun salutes with rifles. National cemeteries are being equipped with digital sound systems playing *Taps* with speakers in areas were burials are performed (DVA, 2001).

However, most noise would be from activities conducted during the day and there are few "sensitive receptors" near the proposed site, with the exception of some residences along Lannie Road, near the current entrance to the site. Only noise emanating from the immediately adjacent part of the proposed cemetery could possibly be perceptible from those residences, but impacts are likely to be minimal. The additional traffic on Lannie Road created by the operation of the proposed cemetery would also result in slightly increased noise levels in the area. But the increase in traffic would not be large enough to result in significant impacts.

There are no sources of noise near the site that might create significant impacts on the proposed cemetery. Given the relative remoteness of the Wright Site, the only noise likely to be heard on cemetery grounds would be the noise generated by cemetery operations.

In the short term, construction of the cemetery would generate noise, particularly from heavy construction equipment and trucks. Any adverse impacts could be mitigated by limiting work to daylight hours and using properly maintained, noise-efficient equipment. Most of the site is very remote from potential noise receptors (e.g., private residences). Finally, construction-related noise impacts would be temporary. Therefore, they would not constitute a significant adverse effect.

4.7.3 City North Alternative

Implementation of the City North Alternative would have negligible adverse impacts, as described in Section 4.7.2. Relocation of the model airfield facility would eliminate an existing source of noise in the area. The model airfield would be relocated by the City's Department of Parks, Recreation, and Entertainment, which would ensure that it is appropriately sited and does not create significant noise impacts. There are no significant sources of noise near the City Site that could adversely affect the cemetery, with the potential exception of Fire Station 47, which likely would be relocated by the time the cemetery begins operations.

4.7.4 City South Alternative

Implementation of the City South Alternative would have negligible adverse impacts, as described in Section 4.7.2. Additionally, under this alternative, the model airfield would remain

in its current location, potentially creating noise impacts on portions of the proposed cemetery. However, these impacts would be intermittent and minor. At least 1,500 feet and a wooded area separate the facility from Lannie Road and the potential cemetery site. Users of the field are more likely to fly their planes over the cleared area north of the runway than over and beyond the wooded area to the south. Also, only a relatively small part of the cemetery would be close enough to the airfield to possibly be affected by model airplane noise. DVA could avoid locating particularly noise-sensitive functions in this area, if needed.

4.7.5 Lannie Road Realigned Alternative

Implementation of the Lannie Road Realigned Alternative would have negligible adverse impacts, as described in Section 4.7.2. Under this alternative, the cemetery would be closer to the model airfield than under the City South Alternative and a larger area may be affected by noise from the facility. If needed, a buffer could be established to ensure that model airplanes do not fly over or too close to the cemetery. Any such measure would be taken in consultation with the users of the facility. Because of the size of the area around the flying field, it is not expected that establishment of a buffer, if needed, would significantly reduce its functionality. As much as possible, DVA would avoid locating particularly noise-sensitive functions in the areas close to the model airfield.

4.8 Cultural Resources

4.8.1 No Action Alternative

The No Action Alternative would not affect cultural resources.

4.8.2 Wright Alternative

As indicated in Section 3.8.1.1, there are no known or potential historic structures on the Wright Site. Therefore, development of the proposed cemetery on this site would have no effects on historic structures. Based on ESI's cultural resources evaluation (see Appendix B), the Wright property has minimal archaeological potential. Therefore, it is not expected that developing the site would result in significant adverse effects to archaeological resources. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and DVA would notify the SHPO immediately to develop an appropriate plan of action.

4.8.3 City North Alternative

As indicated in Section 3.8.1.2, there are no known or potential historic structures on the City Site. Therefore, implementation of the City North Alternative would have no effects on historic structures. Based on ESI's cultural resources evaluation (see Appendix B), the City Site has

minimal archaeological potential. Therefore, it is not expected that implementing the City North Alternative would result in significant adverse effects to archaeological resources. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and DVA would notify the SHPO immediately to develop an appropriate plan of action.

4.8.4 City South Alternative

As indicated in Section 3.8.1.2, there are no known or potential historic structures on the City Site. Therefore, implementation of the City South Alternative would have no effects on historic structures. Based on ESI's cultural resources evaluation (see Appendix B), the City Site has minimal archaeological potential. Therefore, it is not expected that implementing the City South Alternative would result in significant adverse effects to archaeological resources. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and DVA would notify the SHPO immediately to develop an appropriate plan of action.

4.8.5 Lannie Road Realigned Alternative

As indicated in Section 3.8.1.2, there are no known or potential historic structures on the City Site. Therefore, implementation of the Lannie Road Realigned Alternative would have no effects on historic structures. Based on ESI's cultural resources evaluation (see Appendix B), the City Site has minimal archaeological potential. Therefore, it is not expected that implementing the Lannie Road Realigned Alternative would result in significant adverse effects to archaeological resources. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and DVA would notify the SHPO immediately to develop an appropriate plan of action.

4.9 Natural Resources

4.9.1 Geology, Topography, and Soils

4.9.1.1 No Action Alternative

Under the No Action Alternative, the potential cemetery sites would remain in their current state and condition. There would be no impacts to geology, topography, or soils.

4.9.1.2 Wright Alternative

Geology

Under the Wright Alternative, there would be no adverse impacts to geology. Construction and operation of the proposed new national cemetery likely would not require performing any activities that could significantly alter the underlying geological features of the site. Disturbances would remain limited to the soil layers.

Topography

There would be minor adverse impacts to topography. While constructing the proposed cemetery would not significantly adversely alter the site because national cemeteries are designed to take maximum advantage of the existing topography, some changes in the existing topography would occur associated with the need to elevate by filling the burial areas to ensure burials are above the high water table and drain appropriately. Also, topographical alterations would likely result from the digging of one or several stormwater retention basins doubling as landscape features. These alterations would remain moderate in extent and scope, and amount to a minor long-term adverse impact.

Soils

There would be minor adverse impacts to soils. In the range of 100–150 acres of existing soil may be disturbed to build the cemetery. As shown in Section 3.9.1.3, the soils found on the Wright Site may present a challenge to the development and operation of the cemetery. Most substantial soil-disturbing activities would take place early in the development of the cemetery, as supporting structures are built and the first burial areas are being prepared.

Approximately 80 percent of burials at the proposed cemetery would be in pre-placed, concrete lawn crypts. Pre-placement of the crypts would require fairly extensive excavation work. The pre-placed crypts would be covered with a layer of soil (approximately 18 inches deep) with sod or planted grass, which would be removed, as needed, to open the underlying vault and place a casket inside. After which, the topsoil would be put back and the sod replaced. The remaining 20 percent of burials would be in standard grave sites, set up as needed.

In all cases, it is important that burials remain above the high water table. However, soil characteristics and direct observation indicate that the seasonal high water table on the site is likely to be within inches of the ground surface. In order to keep burials higher than the water table, burial areas would have to be built up to create sufficient depth for the placement of crypts and caskets above the high water table. Soil from other parts of the cemetery site would be used (for instance, spoil soil from stormwater ponds built to manage on-site runoff) as much as possible. The amount of fill required would depend on exact soil and groundwater characteristics. Those sections of the site that would require the least amount of fill would be selected in priority for development as burial areas.

Beside a high water table, the soils found on the site present other characteristics that would create challenges when designing and constructing the proposed cemetery. A majority of soil types have a high risk of corrosion for concrete, which may require using special protective measures to avoid or minimize the long term deterioration of the concrete vaults used for burials. As noted in Chapter 2, DVA is exploring the use of plastic crypts, which would remove this concern. Also, all soils present severe limitations for building activities, mostly wetness and cutback caving. This would likely increase the complexity and cost of designing, constructing, and maintaining the proposed cemetery.

Soil disturbance during construction activity may cause erosion and result in increased discharges of sediment into nearby waterways. Such impacts would be minimized through use of best management practices that may include silt fences, seeding of exposed soil areas, temporary sediment basins, or berms. After completion of the construction work, there would be no substantial areas of exposed soils in the cemetery, and no potential for significant soil erosion.

The proposed cemetery would be subject to the requirements of the Florida National Pollutant Discharge Elimination System (NPDES) Stormwater Program as a "large" construction project disturbing more than five acres of land. As the "operator" of the project, DVA would need to obtain from the Florida Department of Environmental Protection (DEP) a *Generic Permit for Stormwater Discharge from Large and Small Construction Activities* (CGP). A CGP requires submission of a Notice of Intent (NOI) to DEP, preparation of a Stormwater Pollution Prevention Plan, and submission of a Notice of Termination (NOT) when the requirements for one are met. Compliance with the CGP would ensure impacts are minimized and not significant.

4.9.1.3 City North Alternative

Impacts under the City North Alternative would be the same as under the Wright Alternative: there would be no adverse impacts to geology and minor adverse impacts to topography and soils (see Section 4.9.1.2).

4.9.1.4 City South Alternative

Impacts under the City South Alternative would be the same as under the Wright and City North alternatives: there would be no adverse impacts to geology and minor adverse impacts to topography and soils (see Section 4.9.1.2).

4.9.1.5 Lannie Road Realigned Alternative

Impacts under the Lannie Road Realigned Alternative would be the same as under the Wright, City North, and City South alternatives: there would be no adverse impacts to geology and minor adverse impacts to topography and soils (see Section 4.9.1.2).

4.9.2 Water Resources

4.9.2.1 No Action Alternative

The No Action Alternative would have no effect on surface, ground, or stormwater.

4.9.2.2 Wright Alternative

Surface Water

Implementation of the Wright Alternative would have no adverse impacts on surface water provided the site is managed in compliance with local, state, and federal standards for watershed management. Major potential sources of impacts to surface water are erosion and contaminated stormwater runoff. Erosion issues are addressed in Section 4.9.1.2; stormwater issues are addressed later in this section.

Groundwater

Adverse impacts on groundwater would be negligible. The Wright site is not in a recharge area for the Floridan Aquifer. The aquifer is the main source of water in Duval County. Maintenance of the cemetery would likely require irrigation. Use of groundwater for irrigation purposes may be subject to the Consumptive Use Permitting (CUP) program if the site operator would:

- Withdraw water from a well six inches or more in diameter.
- Use or want to use an annual average of 100,000 or more gallons of water per day.
- Have the capacity to pump 1 million gallons of water per day.

Depending on how much water operation of the cemetery would require and how it would be obtained, a CUP permit may be required. Applicants must submit a water conservation plan and investigate and use the lowest quality source of water possible. For instance, for landscape irrigation, use of stored stormwater is required when available.

In areas with a high water table, as is the case with the Wright Site, surficial groundwater could fill burial vaults and come in contact with the bodies they contain. Bodies are often embalmed before burial and contain formaldehyde, a chemical used to kill bacteria, slow down decomposition, and prevent the odors associated with it. The USEPA regulates formaldehyde as a hazardous substance, though it does not recommend testing drinking water for it and has not issued standards for acceptable concentrations in the water supply. In general, the formaldehyde used in embalming processes is a biodegradable product that binds with any protein to form stable compounds (DVA, 2001). Therefore, the potential for pollution of the surficial ground water by formaldehyde is low. However, it is not desirable that burial vaults be routinely flooded, and to avoid it, burial areas would be elevated with fill to allow burials to remain above the high water table, as indicated in Section 3.9.1.2. This would minimize any risks to surficial groundwater quality.

Stormwater

Construction of the proposed cemetery would have minor adverse impacts on stormwater. Currently, the Wright Site is unbuilt and entirely or almost entirely pervious. Construction of the proposed cemetery would substantially increase the amount of impervious surfaces on the site. The amount of impervious surface created cannot be estimated until the project moves into the master planning phase. However, because of the size of the Wright Site, it is likely that constructing the proposed cemetery on this property would require building more roads and, therefore, more impervious surface than the City North, City South, and Lannie Road Realigned alternatives would. Additional effects on stormwater may result from the changes in topography that would result from elevating the burial areas.

Therefore, design of the proposed cemetery would include design of a stormwater management system. The purpose of such a system would be to minimize effects on the quantity and quality of runoff. It would likely include retention/detention basins, which may double up as landscape features. Stored stormwater would be available for irrigation. Stormwater management systems are subject to permitting from SJRWMD, as per Chapter 40C-42 FAC. DVA would need to file a *Joint Application for an Environmental Resource Permit (ERP)* with SJRWMD (see also Section 4.9.3.2). Design and operation of a permitted stormwater management system would minimize adverse impacts.

4.9.2.3 City North Alternative

The impacts of the City North Alternative would be similar to those of the Wright Alternative, described in Section 4.9.2.2: no impacts on surface water provided the site is managed in compliance with local, state, and federal standards for watershed management; negligible adverse impacts on groundwater; and minor adverse impacts on stormwater. Mitigation and permit requirements would be the same as under the Wright Alternative (see Section 4.9.2.2). Because of the smaller size of the site, it is likely that the City North Alternative would result in less impervious surface than the Wright Alternative because fewer roads would be necessary.

4.9.2.4 City South Alternative

The impacts of the City South Alternative would be similar to those of the Wright and City North alternatives (see Section 4.9.2.2): no impacts on surface water provided the site is managed in compliance with local, state, and federal standards for watershed management; negligible adverse impacts on groundwater; and minor adverse impacts on stormwater. Mitigation and permit requirements would be the same as under the Wright Alternative (see Section 4.9.2.2). Because of the smaller size of the site, it is likely that the City South Alternative would result in less impervious surface than the Wright Alternative because fewer roads would be necessary.

4.9.2.5 Lannie Road Realigned Alternative

The impacts of the Lannie Road Realigned Alternative would be similar to those of the Wright, City North, and City South alternatives (see Section 4.9.2.2): no impacts on surface water

provided the site is managed in compliance with local, state, and federal standards for watershed management; negligible adverse impacts on groundwater; and minor adverse impacts on stormwater. Mitigation and permit requirements would be the same as under the Wright Alternative (see Section 4.9.2.2). Because of the proposed realignment of Lannie Road, this alternative may result in somewhat more new impervious surface than the other City Site alternatives.

4.9.3 Wetlands

4.9.3.1 No Action Alternative

Under the No Action Alternative, there would be no impacts to wetlands.

4.9.3.2 Wright Alternative

Implementation of the Wright Alternative would have a direct, long-term adverse impact on wetlands. As shown in Figure 3-8, the Wright Site contains a substantial amount of wetlands (55 percent of the site) subject to the jurisdiction of the USACE and SJRWMD. DVA would design the cemetery to minimize impacts to these wetlands. Development would be limited to upland areas as much as possible. However, while there are enough upland areas on the Wright Site (a total of approximately 326 acres) to accommodate all program requirements, the distribution of uplands and wetlands across the site would make it unavoidable to fill some wetlands (e.g., to construct connecting roads), though it is not possible at this stage to provide a quantitative estimate of the impacts. The minimization of impacts to wetlands would present a serious challenge to the master planning and design teams. The need to take maximum advantage of the upland areas would likely result in a widely spread out cemetery.

DVA would be required to obtain confirmation of the 2005 delineation by the USACE and SJRWMD and to file a *Joint Application for an ERP* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. The level of mitigation required would be established once the extent and characteristics of the affected wetland communities are determined. Types of mitigation available include preservation of existing wetlands, enhancement of existing wetlands, and creation of new wetlands or acquisition of wetland credits from a wetland mitigation bank. When on-site mitigation is not possible, it must preferably take place within the same wetland basin. The Wright Site is located within the Nassau River Mitigation Basin. Completion of the permitting process and subsequent mitigation would ensure that impacts to wetlands are minimal and not significant.

In the short term, impacts on wetlands from construction activities would be minimized by applying best management practices designed to prevent impacts from sedimentation and stormwater contamination (see Section 4.9.2.2). Wetlands have been delineated on the site, and marked. Wetland areas planned for retention would be fenced during construction to ensure they are not damaged. Contractors working on the site would be required to avoid wetland areas when storing or moving equipment and vehicles.

4.9.3.3 City North Alternative

Implementation of the City North Alternative would have a direct, long-term adverse impact on wetlands. Under this alternative, the proposed new national cemetery would be constructed on the City Site north of Lannie Road. As shown in Figure 3-7, there is a substantial amount of jurisdictional wetlands on that portion of the site. As much as possible, DVA would design the cemetery so as to avoid affecting any wetland. There are enough upland areas on the site (218 acres, or about 69 percent of the site) to accommodate DVA's program for the cemetery without using any wetland. However, as with the Wright Site, the distribution of wetlands and uplands across the site would likely make it impossible to entirely avoid affecting some wetlands, for instance to construct connecting roads.

At this stage, it is not possible to provide an estimate of the quantity of wetlands that would have to be filled under the City North Alternative. The level of impact would be determined as part of the master planning and design process. While designing the cemetery to minimize impacts to wetland would present a challenge, it would likely be somewhat easier to do than under the Wright Alternative, as the site is more compact and areas of uplands less scattered. On the other hand, the total amount of upland available for development is less than on the Wright Site, which would result in a denser cemetery than under the Wright alternative.

DVA would be required to obtain confirmation of the 2005 delineation by the USACE and SJRWMD and to file a *Joint Application for an ERP* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. The level of mitigation required would be established once the extent and characteristics of the affected wetland communities are determined. Types of mitigation available include preservation of existing wetlands, enhancement of existing wetlands, and creation of new wetlands or acquisition of wetland credits from a wetland mitigation bank. When on-site mitigation is not possible, it must preferably take place within the same wetland basin. The City Site is located within the Nassau River Mitigation Basin. Completion of the permitting process and subsequent mitigation would ensure that impacts to wetlands are minimal and not significant.

In the short term, impacts on wetlands from construction activities would be minimized by applying best management practices designed to prevent impacts from sedimentation and stormwater contamination (see Section 4.9.2.2). Wetlands have been delineated on the site, and marked. Wetland areas planned for retention would be fenced during construction to ensure they are not damaged. Contractors working on the site would be required to avoid wetland areas when storing or moving equipment and vehicles.

4.9.3.4 City South Alternative

Implementation of the City South Alternative would have a direct, long-term adverse impact on wetlands. Under this alternative, the proposed new national cemetery would be built on the City Site south of Lannie Road. As shown in Figure 3-7, this portion of the property contains a substantial amount of jurisdictional wetlands. As much as possible, DVA would design the cemetery so as to avoid affecting any wetlands. There are in principle enough upland areas on the site (143 acres, or about 56.7 percent of the site) to accommodate DVA's program for the

cemetery without using any wetland. However, as would be the case with the Wright Site and the City Site north of Lannie Road, the distribution of wetlands and uplands across the site would likely make it impossible to entirely avoid affecting some wetlands, for instance to construct connecting roads.

At this stage, it is not possible to provide an estimate of the quantity of wetland that would have to be filled under the City South Alternative. The level of impact would be determined as part of the master planning and design process. Designing the cemetery to minimize impacts to wetlands would present a challenge. Portions of the site would have to remain unused (e.g., the swampy southeastern corner). Though this would likely contribute to the aesthetic appeal of the cemetery, it would also force DVA to implement its program on a relatively small area: the total amount of uplands available is the smallest of the four action alternatives, which would result in a fairly compact and dense cemetery.

DVA would be required to obtain confirmation of the 2005 delineation by the USACE and SJRWMD and to file a *Joint Application for an ERP* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. The level of mitigation required would be established once the extent and characteristics of the affected wetland communities are determined. Types of mitigation available include preservation of existing wetlands, enhancement of existing wetlands, and creation of new wetlands or acquisition of wetland credits from a wetland mitigation bank. When on-site mitigation is not possible, it must preferably take place within the same wetland basin. The City Site is located within the Nassau River Mitigation Basin. Completion of the permitting process and subsequent mitigation would ensure that impacts to wetlands are minimal and not significant.

In the short term, impacts on wetlands from construction activities would be minimized by applying best management practices designed to prevent impacts from sedimentation and stormwater contamination (see Section 4.9.2.2). Wetlands have been delineated on the site, and marked. Wetland areas planned for retention would be fenced during construction to ensure they are not damaged. Contractors working on the site would be required to avoid wetland areas when storing or moving equipment and vehicles.

4.9.3.5 Lannie Road Realigned Alternative

Implementation of the Lannie Road Realigned Alternative would have a direct, long-term adverse impact on wetlands. Under this alternative, Lannie Road would be relocated south of its current alignment and the proposed new cemetery would be built on the City Site north of the new road. As under the other action alternatives, there would be a substantial amount on wetlands on the site. As much as possible, DVA would design the cemetery so as to avoid affecting any wetland. Also, the new alignment of Lannie Road would be determined so as to minimize any impacts to wetlands. Once Lannie Road is realigned, there would be in principle enough upland areas on the site (around 245 acres, or about 67 percent of the site) to accommodate DVA's program for this cemetery without using any wetlands. However, as under the other action alternatives, the distribution of wetlands and uplands across the site would likely make it impossible to entirely avoid affecting some wetlands, for instance to construct connecting roads. It is also likely that some impacts would result from realigning Lannie Road.

At this stage, it is not possible to provide an estimate of the quantity of wetland that would have to be filled under the Lannie Road Realigned Alternative. The level of impact would be determined as part of the master planning and design process. Designing the cemetery to minimize impacts to wetlands would present a challenge, though the site would offer fairly compacts areas of upland, particularly on its northern flank.

DVA would be required to obtain confirmation of the 2005 delineation by the USACE and SJRWMD and to file a *Joint Application for an ERP* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. The level of mitigation required would be established once the extent and characteristics of the affected wetland communities are determined. Types of mitigation available include preservation of existing wetlands, enhancement of existing wetlands, and creation of new wetlands or acquisition of wetland credits from a wetland mitigation bank. When on-site mitigation is not possible, it must preferably take place within the same wetland basin. The City Site is located within the Nassau River Mitigation Basin. Completion of the permitting process and subsequent mitigation would ensure that impacts to wetlands are minimized and not significant.

In the short term, impacts on wetlands from construction activities would be minimized by applying best management practices designed to prevent impacts from sedimentation and stormwater contamination (see Section 4.9.2.2). Wetlands have been delineated on the site, and marked. Wetland areas planned for retention would be fenced during construction to ensure they are not damaged. Contractors working on the site would be required to avoid wetland areas when storing or moving equipment and vehicles.

4.9.4 Floodplain Management

4.9.4.1 No Action Alternative

The No Action Alternative would not affect floodplains.

4.9.4.2 Wright Alternative

As indicated in Section 3.9.4, a small portion of the Wright Site may be located in the floodplain associated with Thomas Creek and a local unnamed drainage channel. Any impacts could be avoided by not developing the portion of the site in question. There is enough developable land within the Wright Site for this limitation to be only a minor constraint on the planning effort. Therefore, the floodplain would not be affected.

4.9.4.3 City North Alternative

The City Site in its entirety is outside the floodplain. Therefore, the City North Alternative would not affect the floodplain.

4.9.4.4 City South Alternative

The City Site in its entirety is outside the floodplain. Therefore, the City South Alternative would not affect the floodplain.

4.9.4.5 Lannie Road Realigned Alternative

The City Site in its entirety is outside the floodplain. Therefore, the Lannie Road Realigned Alternative would not affect the floodplain.

4.9.5 Biological Resources

4.9.5.1 No Action Alternative

This alternative would result in no adverse impacts to biological resources or to threatened and endangered species. Eventually, it is likely that the Wright property would be developed. Impacts to protected species would be addressed as part of the permitting process for such a development.

4.9.5.2 Wright Alternative

Moderate adverse impacts to wildlife and plants would result from constructing the proposed new national cemetery on the Wright Site because substantial portions of the property (in the range of 100 to 150 acres) would be developed to build support structures and create burial areas. Development of this largely wooded site would cause removal mainly of pine plantation and some natural forest, and wildlife that makes their home, forage, or breed in the affected area would be displaced. The severity of the impacts would be substantially tempered by the fact that most of the areas that would be disturbed now consist of pine plantation, which supports a limited number of plant species, is cut periodically, and hence has limited usefulness as wildlife habitat. Impacts, therefore, would not be significant.

The areas of the site with the most potential for biological diversity (wetlands) would experience minimal impacts (see Section 4.9.3.2). Much of the wetland is pine plantation; it is possible that at least part of those low-quality wetlands would be restored to their natural state for aesthetic and mitigation purposes, resulting in a positive impact on plant and wildlife diversity and population sizes.

Landscape plantings that would be added as part of the development plan would also help to ameliorate adverse impacts on wildlife species. Using native plants for landscaping would be done to the maximum extent possible to provide new habitat and to minimize the need for watering and the use of herbicides and pesticides for maintenance. Careful selection of plantings to provide cover and sources of berries and seeds could effectively mitigate much of the loss of wildlife habitat caused by cutting the pine plantations.

When construction begins, mobile species would likely relocate. Alternative habitat may be available for the long term on the nearby properties of the Preservation Project Jacksonville and

other undeveloped areas. However, competition for food and shelter on the neighboring properties with wildlife already there might not allow for effective relocation of displaced animals. Burrowing and less mobile species would unavoidably experience some degree of mortality from construction activities.

Construction-related activities, which would create noise and increased human presence and activity on the site, may disturb wildlife even in those portions of the site that would not be developed. Such disturbances would be temporary, and few animals are likely to be permanently driven away if their habitat remains untouched. The Wright Site is currently farmed and any wildlife present there already experiences some degree of noise and other human-generated disturbance. Noise associated with the operation of the proposed cemetery (such as ceremonial music or rifle salutes) would be occasional and limited to the areas near commitment shelters. Animals, like people, would grow accustomed to regularly repeated noises.

DVA would comply with Executive Order 13112, *Invasive Species,* which requires federal agencies to prevent the introduction of invasive species and provide for controlling and minimizing the impacts their introduction may have on the natural and human environment. Any identified non-native species would be removed from the selected site, and if needed, a long-term management plan would be developed to ensure control of those species and comply with the executive order.

Feral hogs are found on the Wright site and would have to be kept out to avoid the damage their rooting and foraging could cause. The proposed cemetery would have a perimeter fence that would be designed to prevent wild hogs from entering the site.

Of the federally listed threatened or endangered species known to occur in Duval County, only the wood stork is likely to be found on the Wright site. The ESI wetland survey crew observed a pair of wood storks foraging on the City Site, but not on the Wright site. Though the property does not seem to contain much favorable wood stork habitat and no nests were observed, a survey may be needed to establish whether wood storks are using the site to forage. During the master planning and design process DVA would consult with USFWS and the Florida Wildlife Commission to identify and mitigate any potential impacts the proposed action might have on the wood stork. The wood stork favors marshy and wet areas which, if present on the site, would mostly remain undeveloped and available for use by the stork. Therefore, no adverse effects on the wood stork are expected. No other federally listed species are likely to be present on the site. Therefore, there would be no significant adverse effects to endangered and threatened species.

A survey may be needed to establish whether any state-listed species occur on the site. It is DVA's policy to work with state agencies during the master planning and design process to minimize impacts to endangered and threatened species. If the presence of state-listed species were established, DVA would work in consultation with the Florida Wildlife Commission to develop avoidance, minimization, or mitigation strategies. Any impacts to state-listed species, therefore, are expected to be minor.

4.9.5.3 City North Alternative

Under this alternative, impacts to plants and wildlife would be similar in nature to those described for the Wright Alternative but would be minor in intensity because much of the land is in pasture. Pastures support relatively few plant species and are mowed, or cropped by cattle, which greatly reduces their value as cover and food source for wildlife species. Many of the wetland areas, particularly those covered by forest, would be preserved, so that the natural areas that support the most wildlife species would remain. Some wetlands areas now in the pastures might be restored as wetlands, which would enhance the wildlife habitat available.

Other mitigation measures described for the Wright Alternative would be taken under this alternative as well. Because most of the site is in pasture, there would be no need for any substantial tree cutting. Landscaping plans would emphasize native plants. Invasive species, which often are of little value to wildlife and crowd out native plants, would be controlled. Wild hogs would be fenced out of the cemetery.

As noted for the Wright Alternative, a pair of federally listed endangered wood storks was observed by the ESI wetland survey crew foraging on the city site. During the master planning and design, process DVA would consult with USFWS and the Florida Wildlife Commission to identify and mitigate any potential impacts the proposed action might have on the wood stork. The wood stork favors marshy and wet areas which, if present on the site, would mostly remain undeveloped and available for use by the stork. Therefore, no adverse effects on the wood stork are expected.

A survey may be needed to establish whether any state-listed species occur on the site. It is DVA's policy to work with state agencies during the master planning and design process to minimize impacts to endangered and threatened species. If the presence of state-listed species were established, DVA would work in consultation with the Florida Wildlife Commission to develop avoidance, minimization, or mitigation strategies. Any impacts to state-listed species, therefore, are expected to be minor.

4.9.5.4 City South Alternative

Adverse impacts to plants and wildlife under this alternative would be similar to those under the City North Alternative (see Section 4.9.5.3), and would be minor.

4.9.5.5 Lannie Road Realigned Alternative

Adverse impacts to plants and wildlife under this alternative would be similar to those under the City North and City South alternatives (see Section 4.9.5.3), and would be minor.

4.10 Hazardous Waste

4.10.1 No Action Alternative

The No Action Alternative would have no hazardous waste-related impacts.

4.10.2 Wright Alternative

The Wright Alternative would result in no hazardous waste-related impacts. As indicated in Section 3.10, there is no indication that the Wright Site may contain contaminated areas. Implementation of the Wright Alternative would not require extensive environmental testing and cleanup. Construction and operation of the proposed cemetery may result in the use, generation, and disposal of a limited amount of hazardous substances, including fuels and oils, paints, cleaners, and pesticides. Hazardous wastes are regulated under the Resource Conservation and Recovery Act (RCRA). Depending on the quantities involved, the generation and storage of hazardous wastes may require permitting under RCRA. DVA would ensure that all transport and disposal of hazardous waste is performed by permitted operators, as required. Compliance with applicable local, state, and federal laws and regulations pertaining to hazardous substances would ensure the proposed action has no adverse impacts.

4.10.3 City North Alternative

Like the Wright Alternative and for the same reasons (see Section 4.10.2), the City North Alternative would result in no hazardous waste-related impacts.

4.10.4 City South Alternative

Like the Wright and City North alternatives, and for the same reasons (see Section 4.10.2), the City South Alternative would result in no hazardous waste-related impacts.

4.10.5 Lannie Road Realigned Alternative

Like the other alternatives, and for the same reasons (see Section 4.10.2), the Lannie Road Realigned Alternative would result in no hazardous waste-related impacts.

4.11 Cumulative Impacts

Cumulative impacts are impacts on the environment that result from “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless

of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

4.11.1 No Action Alternative

Under the No Action Alternative, there would be no cumulative impacts. The proposed cemetery would not be built. Therefore, there would be no "incremental impacts" added to "past, present, and reasonably foreseeable future actions."

4.11.2 Wright Alternative

The Wright Alternative would generate negligible cumulative impacts. As noted in Section 3.1.4.5, the area of North Jacksonville where the potential cemetery sites are located is poised to experience substantial growth over the next decade. This expected growth is not related to, nor does it depend on, building the proposed new national cemetery. Cumulative impacts will result from development in North Jacksonville. Aspects of the human and natural environment that are most likely to be affected include land use, demography and economy, transportation, community services and utilities, transportation, air quality, water resources, and biological resources, including wetlands. Generally, it can be expected that the population of the area will increase, as will demands on the transportation network, community services, and utilities. More traffic and buildings will result in more air emissions, more impervious surfaces, and loss of wetlands and other natural areas currently providing habitat for a range of common and rare animal and plant species.

To help guide and manage this expected development, the City of Jacksonville has developed the *North Jacksonville Shared Vision and Master Plan.* Conservation projects such as the Preservation Project Jacksonville and the Northeast Florida Timberlands and Watershed Reserve Project are in place to allow local and state authorities to effectively manage and grow the portion of their land holdings devoted to conservation. Continued implementation of those plans and projects will help establish a balance between economic and environmental needs. Compliance with local, state, and federal review and permitting requirements that apply to private and public projects will ensure that development-related adverse impacts are minimized and mitigated, as required.

While construction and operation of the proposed new cemetery on the Wright Site would contribute to some cumulative adverse impacts (for instance with regard to transportation or impervious surfaces), this contribution would be overall negligible. Additionally, implementation of the Wright Alternative would result in effects that would help offset some of the cumulative impacts of foreseeable development in North Jacksonville because it would ensure that a substantial tract of land located next to properties of the Preservation Project Jacksonville permanently remains in a low-density, low-impact, park-like use.

4.11.3 City North Alternative

Cumulative impacts under the City North Alternative would be similar to those under the Wright Alternative (see Section 4.11.2) and would be negligible.

4.11.4 City South Alternative

Cumulative impacts under the City South Alternative would be similar to those under the Wright and City North alternatives (see Section 4.11.2) and would be negligible.

4.11.5 Lannie Road Realigned Alternative

Cumulative impacts under the Lannie Road Realigned Alternative would be similar to those under the Wright, City North, and City South alternatives (see Section 4.11.2) and would be negligible.

4.12 Potential for Generating Public Controversy and Public Involvement

4.12.1 No Action Alternative

The No Action Alternative would likely generate substantial public controversy among veterans of the Jacksonville area and other groups and individuals who have expressed support for the proposed new cemetery.

4.12.2 Wright Alternative

As noted in Section 2.2.1.2, both the potential cemetery sites considered in this EA have received substantial public support. While some veterans and veterans groups favored a location in Flagler County, there are solid and convincing reasons to rule out such an option, as documented in Section 2.2. Given these reasons, there is little potential for the Wright Alternative to encounter significant opposition. The alternative would be implemented only if the site's owner agreed to sell the land to DVA at conditions acceptable to both parties; therefore, the action would be unlikely to create any more opposition from private economic interests than would any similar private land deal.

4.12.3 City North Alternative

As noted in Section 2.2.1.2, construction of the proposed cemetery in North Jacksonville has received substantial public support. Implementation of the City North Alternative is as unlikely as the Wright Alternative to create substantial public controversy. However, under this alternative, an active model airplane flying field would have to be relocated. Users of the facility may be critical of this action. However, implementation of the City North Alternative would be contingent on finding an appropriate new location for the airfield, in consultation with its users. Early consultation and participation in the decision-making process would ensure the field's users are heard and their interests taken into account when selecting a new location for the airfield.

4.12.4 City South Alternative

As noted in Section 2.2.1.2, construction of the proposed cemetery in North Jacksonville has received substantial public support. Implementation of the City South Alternative is unlikely to create substantial public controversy.

4.12.5 Lannie Road Realigned

As noted in Section 2.2.1.2, construction of the proposed cemetery in North Jacksonville has received substantial public support. Implementation of the Lannie Road Realigned Alternative is unlikely to create substantial public controversy. Under this alternative, the access road to the existing model airfield on the City Site would need to be modified and measures to minimize potential noise impacts on the cemetery may be needed. Users of the field would be consulted prior to making any decisions on these issues. Early consultation and involvement in the master planning process would ensure the field's users are heard and their interests taken into account.

4.13 Conclusion

Based on the above analyses, DVA has determined that implementing the proposed action under any of the action alternatives considered would not have any significant impacts on the human environment. Therefore, an EIS is not required and will not be prepared.

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6 Acronyms

APE	Area of potential effect
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Generic Permit for Stormwater Discharge from Large and Small Construction Activities
CO	Carbon monoxide
CUP	Consumptive Use Permit
CWA	Clean Water Act
DBH	Diameter-at-breast-height
DHR	Division of Historical Resources
DVA	Department of Veterans Affairs
EA	Environmental assessment
EIS	Environmental impact statement
EO	Executive Order
EMS	Emergency medical service
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ESI	Environmental Services Inc.
FAC	Florida Administrative Code
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FFWCC	Florida Fish and Wildlife Conservation Commission
FIRM	Flood insurance rate map
FLUCFCS	Florida land use, cover and forms classification system
FPPA	Farmland Protection Policy Act
FNAI	Florida Natural Areas Inventory
FONSI	Finding of no significant impact
FS	Florida statute
JEA	Jacksonville Electric Authority
LOS	Level of service
MCC	Montgomery Correctional Center
NAAQS	National ambient air quality standards
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service

NO_2	Nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
Pb	Lead
PM	Particulate matter
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SHOP	Tiger Serious Habitual Offender Program
SIP	State Implementation Plan
SJRWMD	St. Johns River Water Management District
SO_2	Sulfur dioxide
USACE	US Army Corps of Engineers
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VA	Veterans Affairs
µg	Microgram

7 Preparers

This Environmental Assessment was prepared by:

EarthTech
A Tyco International Ltd. Company

675 N. Washington Street, Suite 300
Alexandria, VA 22314

Key personnel included:

Jeffrey Briggs, Wetlands: 35 years of experience in zoology, ecological sciences and environmental assessment. University of Denver, 1965, BS, Zoology; Oregon State University, 1968, MA, Ecology/Oceanography; Oregon State University, 1970, Ph.D. Ecology/Oceanography

Laurent Cartayrade, Project Manager: 7 years of experience in environmental planning. University of Paris IV-Sorbonne, 1984, BA; University of Maryland-College Park, 1991, MA, History; 1997, PhD, History.

Nick Dais, Traffic Impacts: 6 years of experience in transportation engineering and planning. Aristotle University of Greece, 1994, BS, Civil Engineering; University of Maryland at College Park, 1999, ME, Transportation Engineering and Planning.

Penelope Douglas, Natural Resources: 32 years of experience in environmental and natural resources planning and environmental impact assessment. University of Michigan, 1970, BS, Natural Resource Planning; University of Maryland, 1985, MA, Geography/Environmental Analysis.

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Landscape Architects
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Vienna, VA 22182

Prime Consultant

Mark Gionet, ASLA, AICP: 24 years of experience in landscape architecture, planning and cemetery design. Union College, 1977, BA, History; University of Massachusetts, 1982, MLA Landscape Architecture.

Environmental Services Inc.
7220 Financial Way, Suite 100
Jacksonville, FL 32256

Sub-consultant for Wetlands Delineation and Cultural Resources Evaluation

David Dickson, Senior Project Manager: 14 years of experience in environmental planning and analysis. Florida State University, 1991, BS, Interdisciplinary Program in Social Sciences.

Michael Thomas, Senior Scientist: 10 years of experience in environmental science. Jacksonville University, 1996, BS, Environmental Science.

Marsha Chance, Senior Archaeologist: 20 years of experience in archaeology and cultural resources management. Florida State University, 1974, MS, Anthropology.

US Department of Veterans Affairs
National Cemetery Administration

Donald G. Campbell, Environmental Engineer

Michael Elliott, Director, Project Service Support

Lu Richards, Project Manager

APPENDIX A

Coordination Letters

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675 North Washington Street, Suite 300, Alexandria, Virginia 22314

April 29, 2005

Mr. Dave Hankla, Field Supervisor
U. S. Fish & Wildlife Service
North Florida Field Office
6620 Southpoint Drive South, Suite 310
Jacksonville, FL 32216-0958

Re.: Environmental Assessment for New National Cemetery in Jacksonville, Florida, and Section 7 Consultation.

Dear Mr. Hankla:

Earth Tech, Inc. is under contract to the Department of Veterans Affairs (VA) to prepare an environmental assessment (EA) for the construction of a new national cemetery in Jacksonville, Florida. The EA is being prepared in compliance with the National Environmental Policy Act (NEPA). This letter is being sent to you consistent with Section 7 of the Endangered Species Act.

Telephone
703.549.8728
Facsimile
703.549.9134

Presently, the VA Department is considering four potential sites for the proposed new cemetery. As shown on the enclosed location map, all four sites are located close to the northern boundary of Duval County, just north of Jacksonville International Airport. Two of the four sites (City I and City II) are contiguous, extending north and south of Lannie Road, respectively. More detailed aerial views of each site, showing parcel numbers and surface areas, are also enclosed. Construction of the proposed cemetery would involve land clearing, site development of areas to be used for interments, construction of internal roads and cemetery support facilities, and landscaping.

In addition to notifying you of the proposed action and beginning of the NEPA review process, this letter is to request that you review your files for information on threatened and endangered species, or their habitat, that are known to occur at or near the sites being considered.

Thank you for providing the requested information at your earliest convenience. Please do not hesitate to call me at (703) 706-0114 if you have any questions on the proposed action.

Yours truly,
Earth Tech, Inc.

Laurent Cartayrade
Project Manager

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675 North Washington Street, Suite 300, Alexandria, Virginia 22314

April 29, 2005

Mr. Frederick Gaske, Director
Division of Historical Resources
500 S. Bronough Street
Tallahassee, Florida 32399-0250

Re.: Environmental Assessment for New National Cemetery in Jacksonville, Florida, and Section 106 Review.

Dear Mr. Gaske:

Earth Tech, Inc. is under contract to the Department of Veterans Affairs (VA) to prepare an environmental assessment (EA) for the construction of a new national cemetery in Jacksonville, Florida. The EA is being prepared in compliance with the National Environmental Policy Act (NEPA). Review of this federal undertaking under Section 106 of the National Historic Preservation Act (NHPA) will be conducted in coordination with the NEPA review process. We understand that, as Director of the Division of Historical Resources, you are the designated State Historic Preservation Officer for Florida.

Telephone
703.549.8728
Facsimile
703.549.9134

Presently, the VA Department is considering four potential sites for the proposed new cemetery. As shown on the enclosed location map, all four sites are located close to the northern boundary of Duval County, just north of Jacksonville International Airport. Two of the four sites (City I and City II) are contiguous, extending north and south of Lannie Road, respectively. More detailed aerial views of each site, showing parcel numbers and surface areas, are also enclosed. Construction of the proposed cemetery would involve land clearing, site development of areas to be used for interments, construction of internal roads and cemetery support facilities, and landscaping. Any potential effects would be contained within the boundaries of the cemetery site.

The VA Department is not aware of the presence on or near the potential sites of any buildings, structures, or archaeological sites listed or eligible for listing in the National Register of Historic Places that could be affected by the proposed action. In addition to notifying you of the proposed action and beginning of the NEPA and Section 106 review processes, this letter is to request that you review your files for any information you may have on existing or potential historic or archaeological resources at any of the sites considered.

We are also interested in any records you may have of Native-American tribes with a potential interest in any of the considered sites under the Native American Graves Protection and Repatriation Act or the American Indian Religious Freedom Act.

April 29, 2005
Mr. Frederick Gaske, Director
Division of Historical Resources

Thank you for providing the requested information at your earliest convenience. Please do not hesitate to call me at (703) 706-0114 if you have any questions on the proposed action.

Very truly yours,

Earth Tech, Inc.

Laurent Cartayrade
Project Manager

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Laurent Cartayrade
Earth Tech
675 North Washington Street, Suite 300
Alexandria, Virginia 22314

May 27, 2005

RE: DHR Project File Number: 2005-4441
Received by DHR May 3, 2005
U.S. Department of Veterans Affairs
Environmental Assessment for New National Cemetery in Jacksonville
Four Proposed Sites: City Site I, City Site II, Wright Northeast, and Wright Southwest
Jacksonville, Duval County

Dear Mr. Cartayrade:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties* and the *National Environmental Policy Act of 1969,* as amended. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

City Site I, City Site II, and Wright Southwest: A review of the Florida Master Site File indicates that there are no known archaeological or historical sites within the areas under consideration. However, since these areas have never been subjected to professional archaeological investigation, this is not necessarily indicative of the absence of archaeological materials. The proposed project will affect a sizable area that is environmentally similar to regions within Duval County that are known to have yielded archaeological remains.

Wright Northeast: A review of the Florida Master Site File indicates the presence of one previously recorded archaeological site (8DU161 *–battlefield site*) in the areas under consideration (see map). No other archaeological or historical sites are recorded within the properties. However, since these areas have never been subjected to professional archaeological investigation, this is not necessarily indicative of the absence of archaeological materials. The proposed project will affect a sizable area that is environmentally similar to regions within Duval County that are known to have yielded archaeological remains.

Therefore, it is the recommendation of this office that prior to any ground disturbing activities, a professional archaeological and historical investigation be conducted for the selected site. Its purpose will be to determine if archaeological or historic resources are present within the project area, and the

significance of any resources located. The resultant report should conform to the specifications set forth in Chapter 1A-46, *Florida Administrative Code*, and be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties. The results of the investigations will determine if significant archaeological resources would be disturbed by this project. In addition, if significant remains are located, the data described in the report and the consultant's conclusions will assist this office in determining measures that must be taken to avoid, minimize, or mitigate adverse impacts to historic properties listed, or eligible for listing in the *National Register of Historic Places*, or otherwise of historic or archaeological significance.

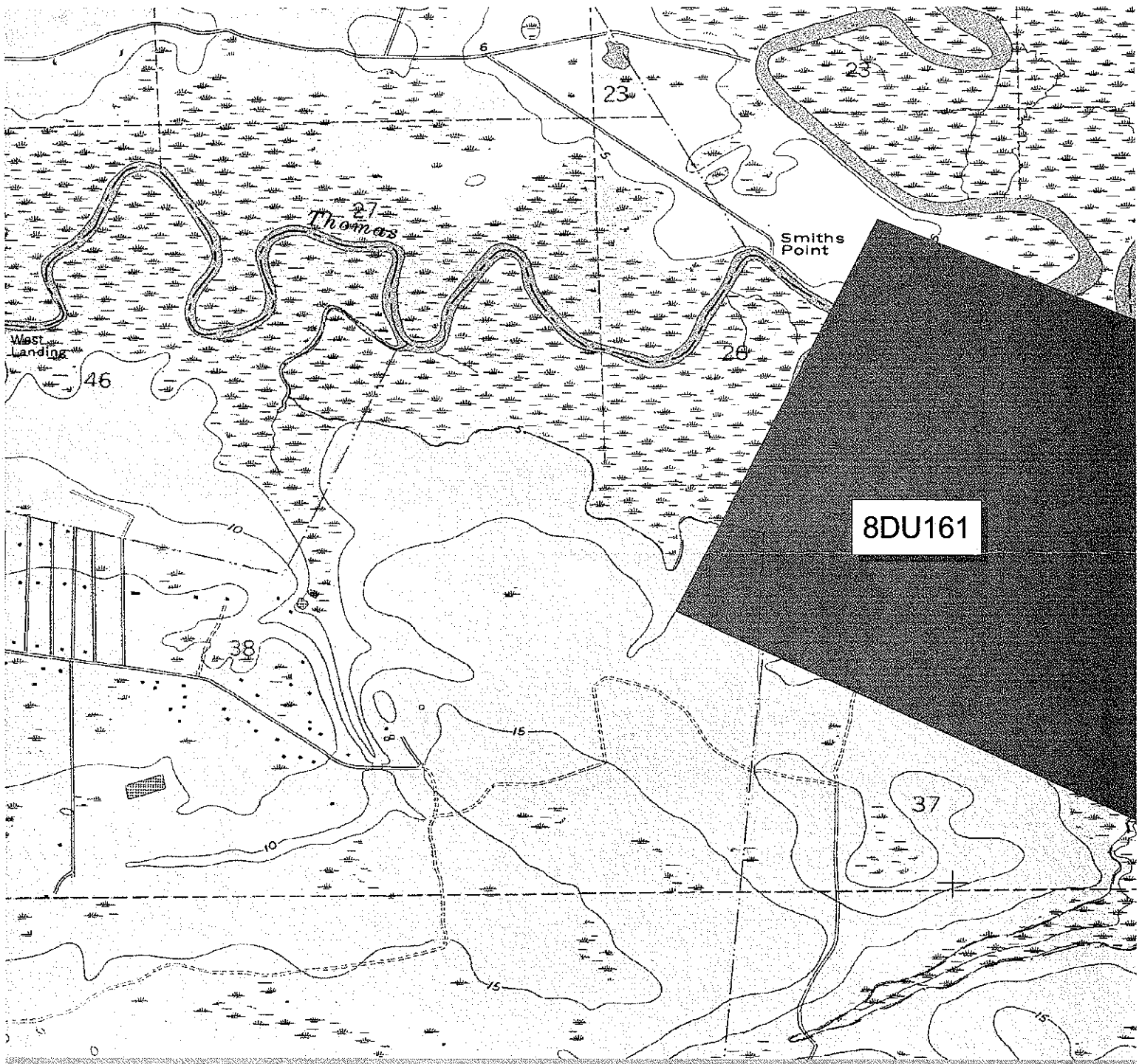
If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

for Laura A. Kammerer, Deputy SHPO

Frederick P. Gaske, Director, and
State Historic Preservation Officer

Enclosure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www.earthtech.com

January 4, 2006

Mr. Dave Hankla, Field Supervisor
U. S. Fish & Wildlife Service
North Florida Field Office
6620 Southpoint Drive South, Suite 310
Jacksonville, FL 32216-0958

Re.: Environmental Assessment for New National Cemetery in Jacksonville, Florida, and Section 7 Consultation.

Dear Mr. Hankla:

Earth Tech, Inc. is under contract to the Department of Veterans Affairs (VA) to prepare an environmental assessment (EA) for the construction of a new national cemetery in Jacksonville, Florida. The EA is being prepared in compliance with the National Environmental Policy Act (NEPA). This letter is being sent to you consistent with Section 7 of the Endangered Species Act.

The VA Department is considering several potential sites for the proposed new cemetery, as shown on the enclosed figure (however, please note that Site 3.2 has been removed from consideration; only Sites 4.1, 4.2, and 3.1 are presently being considered). The sites are located close to the northern boundary of Duval County, just north of Jacksonville International Airport. Sites 4.1 and 4.2 mostly consist of an open pasture used for cattle grazing. Much of Site 3.1 is in pine plantation, with areas of natural vegetation. Construction of the proposed cemetery would involve land clearing, site development of areas to be used for interments, construction of internal roads and cemetery support facilities, and landscaping.

This letter is to request that you review your files for information on threatened and endangered species, or their habitat, that may be known to occur at or near the potential sites, and let us know of any comments or concerns you may have with regard to any of the sites.

A similar request was sent to you on April 29, 2005. To date, it has remained without a response. Absent a response to this follow-up letter within 30 days, we will assume you have no comments on the proposed action and no further Section 7 consultation is needed.

Please do not hesitate to call me at (703) 706-0114 if you have any questions on the proposed action.

Yours truly,
Earth Tech, Inc.

Laurent Cartayrade
Project Manager

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www.earthtech.com

January 4, 2006

Director
Species Conservation Planning Section
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600

Re.: Environmental Assessment for New National Cemetery in Jacksonville, Florida, and Section 7 Consultation

Dear Sir or Madam:

Earth Tech, Inc. is under contract to the Department of Veterans Affairs (VA) to prepare an environmental assessment (EA) for the construction of a new national cemetery in Jacksonville, Florida. The EA is being prepared in compliance with the National Environmental Policy Act (NEPA). This letter is being sent to you consistent with Section 7 of the Endangered Species Act.

The VA Department is considering several potential sites for the proposed new cemetery, as shown on the enclosed figure (however, please note that Site 3.2 has been removed from consideration; only Sites 4.1, 4.2, and 3.1 are presently being considered). The sites are located close to the northern boundary of Duval County, just north of Jacksonville International Airport. Sites 4.1 and 4.2 mostly consist of an open pasture used for cattle grazing. Much of Site 3.1 is in pine plantation, with areas of natural vegetation. Construction of the proposed cemetery would involve land clearing, site development of areas to be used for interments, construction of internal roads and cemetery support facilities, and landscaping.

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Please do not hesitate to call me at (703) 706-0114 if you have any questions on the proposed action.

Yours truly,
Earth Tech, Inc.

Laurent Cartayrade
Project Manager

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FLORIDA
Natural Areas
INVENTORY

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

January 23, 2006

Jessica Gribbon
Earth Tech
675 N. Washington Street, Suite 300
Alexandria, VA 22314

Dear Ms. Gribbon:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project:	Site 3.1, Wright
Date Received:	January 12, 2006
Location:	Township 1 N, Range 26 E, Sections 39 & 42 Township 2 N, Range 26 E, Sections 26, 36-38, & 46 Duval County

Element Occurrences

A search of our maps and database indicates that currently we have no Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the most rare species tracked by the Inventory, including all federally listed species.

Florida Resources and Environmental Analysis Center

Institute of Science and Public Affairs

The Florida State University

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

Managed Areas

Portions of the site appear to be located within the Timucuan Ecological & Historic Preserve, managed by the US Department of the Interior, National Parks Service. Portions of the site also appear to be located within the Thomas Creek Conservation Area, managed by the St. Johns Water Management District.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

Land Acquisition Projects

This site appears to be located within the Northeast Florida Timberlands & Watershed Reserve Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. A description of this project is enclosed. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no regulatory authority over these lands until they are purchased.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/data.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Jason A. Griffin

Jason A. Griffin
Data Services Coordinator

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1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

FLORIDA Natural Areas INVENTORY

Site 3.1, Wright

Site boundaries are approximate.

Duval County

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Point Indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-93
- FL Fish & Wildlife Cons. Comm. Breeding Bird Atlas Project (1986-91) center point of 10 sq mi survey block

Conservation Lands

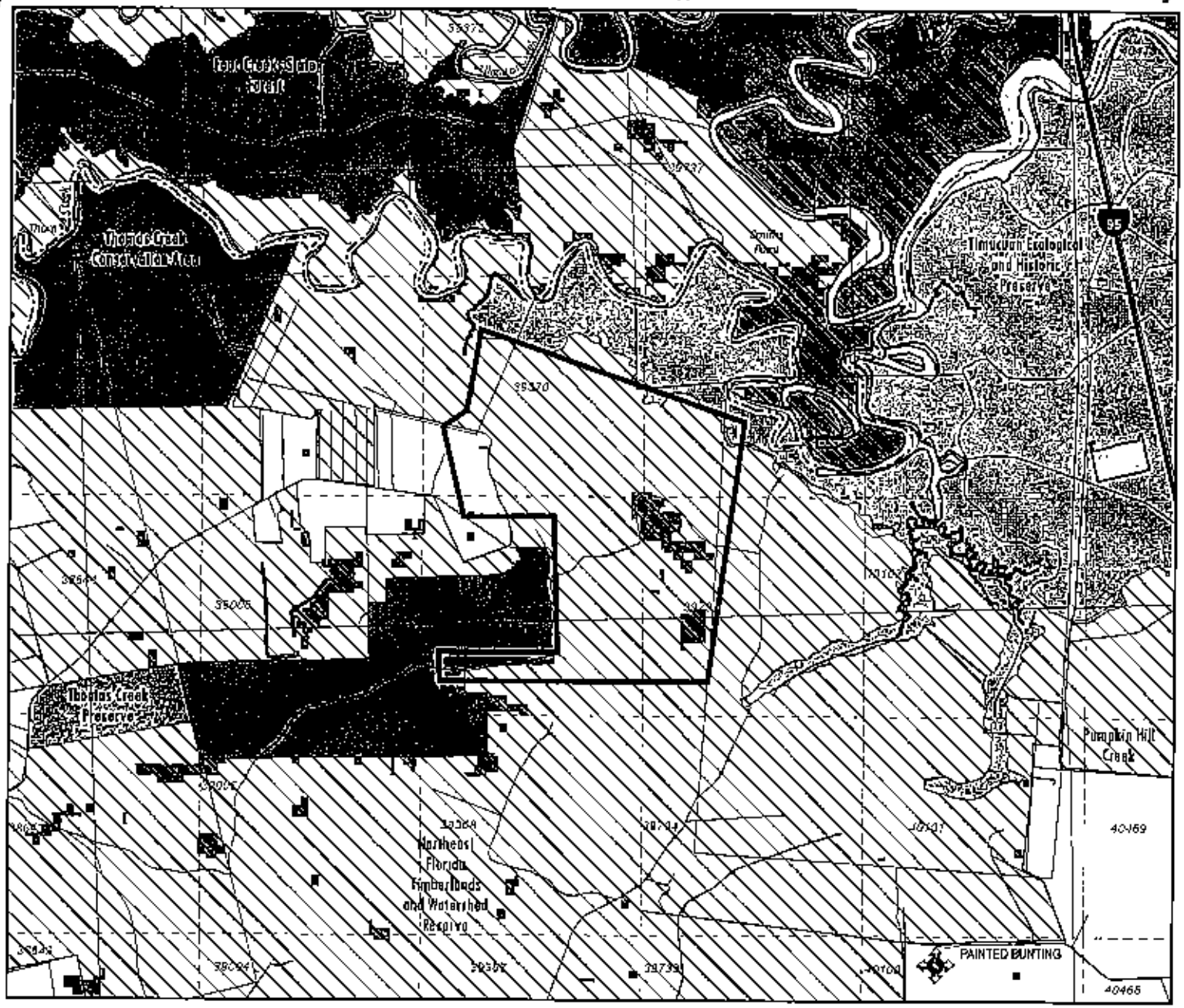
- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Water



Map produced by JAO
Map Date, 23 JAN 2009

NOTE
Map should not be interpreted without accompanying documents.

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1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
FNAI Biodiversity Matrix Unit ID:	**39369**				
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N
FNAI Biodiversity Matrix Unit ID:	**39370**				
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Ammodramus maritimus macgillivraii	Macgillivray's Seaside Sparrow	G4T2	S2	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Cistothorus palustris griseus	Worthington's Marsh Wren	G5T3	S2	N	LS
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N
FNAI Biodiversity Matrix Unit ID:	**39735**				
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Ammodramus maritimus macgillivraii	Macgillivray's Seaside Sparrow	G4T2	S2	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Cistothorus palustris griseus	Worthington's Marsh Wren	G5T3	S2	N	LS
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

FNAI Biodiversity Matrix Unit ID: 39736

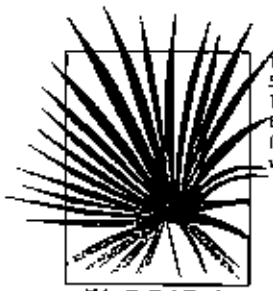
Likely

Mycteria americana	Wood Stork	G4	S2	LE	LE

Potential

Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Ammodramus maritimus mirabilivrati	Mangilivray's Seaside Sparrow	G4T2	S2	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Cistothorus palustris griseus	Worthington's Marsh Wren	G5T3	S2	N	LS
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Trichechus manatus	Manatee	G2	S2	LE	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

DEFINITIONS:
DOCUMENTED - Rare species and natural communities documented on or near this site.
DOCUMENTED-HISTORIC - Rare species and natural communities documented, but not observed/reported within the last twenty years.
LIKELY - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
POTENTIAL - This site lies within the known or predicted range of the species listed.



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FLORIDA
Natural Areas
INVENTORY

GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21-100 occurrences or less than 10,0000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of range).
G5	Demonstrably secure globally.
G#?	Tentative rank (e.g., G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (e g., G2G3)
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GH	Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GNA	Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
GNR	Not yet ranked (temporary)
GNRTNR	Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
GX	Believed to be extinct throughout range
GXC	Extirpated from the wild but still known from captivity/cultivation
GU	Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

FEDERAL AND STATE LEGAL STATUSES PROVIDED BY FNAI FOR INFORMATION ONLY.

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE	Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
LE,XN	An experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants.
PE	Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
LT	Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
LT,PDL	Species currently listed threatened but has been proposed for delisting.
PT	Proposed for listing as Threatened Species.
C	Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Taxa for which the USFWS currently has substantial information on hand or in possession to support the biological appropriateness of proposing to list the species as endangered or threatened.
PS	Partial listing status (species is listed for only a portion of its geographic range).
SAT	Threatened due to similarity of appearance to a threatened species.
SC	Species of concern. Species is not currently listed but is of management concern to USFWS.
N	Not currently listed, nor currently being considered for addition to the List of endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

Animals (Florida Fish and Wildlife Conservation Commission- FFWCC)

LE	Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
LT	Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. LT* (for Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest.
LS	Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. LS* indicates that a species has LS status only in selected portions of its range in Florida.
N	Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505.

LE Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

PE Proposed by the FDACS for listing as Endangered Plants.

LT Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.

PT Proposed by the FDACS for listing as Threatened Plants.

CE Listed as a Commercially Exploited Plant in the Preservation of Native Flora of Florida Act. Defined as species native to state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

PC Proposed by the FDACS for listing as Commercially Exploited Plants.

(LT) Listed threatened as a member of a larger group but not specifically listed by species name.

N Not currently listed, nor currently being considered for listing.

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Tracking Florida's Biodiversity

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Northeast Florida Timberlands and Watershed Reserve

Group A
Full Fee and Less Than Fee

Nassau, Duval and Clay Counties

Purpose for State Acquisition
The three-county corridor of the Northeast Florida Timberlands and Watershed Reserve would create a conservation landscape connecting several high-quality managed areas. The original 114,650 acres of pine woods, bottomland forests and the basin swamps in this project have been combined with a 17,800-acre addition to the Etoniah/Cross Florida Greenway to make this a 132,450-acre project. The project would connect and enhance the protection of the Jennings State Forest, the Cecil Field Conservation Corridor, the Cary State Forest, and the Timucuan Ecological and Historic Preserve. The project will also touch two military reservations in this area, Camp Blanding and the Whitehouse Naval Outlying Field. At the south end, the project will adjoin the existing Etoniah/Cross Florida Greenway. The project's size and diversity makes it desirable for use and management as a state forest.

Manager
Division of Forestry (DOF) of the Florida Department of Agriculture and Consumer Services (DACS)

General Description
This project describes a northeast-southwest diagonal along the west side of Duval County, stretching from the Nassau River north of Jacksonville to Trail Ridge in Clay County, near the town of Lawtey. Another section of the project makes a north-south connection about 12 miles long, between the Camp Blanding Military Reservation and the Etoniah Creek State Forest. About 75 percent of this land is used, or has been used, for silviculture. It also includes mesic flatwoods, cypress and hardwood swamp, sandhills and associated plant communities.

Public Use
The Division of Forestry will promote recreation and environmental education in the natural environment. There is a possibility of an intermediate and long-term need for some type of developed recreation facilities. If such facilities are developed, the use of low-impact, rustic facilities will be stressed. If an organized recreation area is desired, it will be assessed and evaluated to minimize any possible adverse effects on the natural environment. Unnecessary roads, firelines and hydrological disturbances will be abandoned and/or restored to the greatest extent practical.

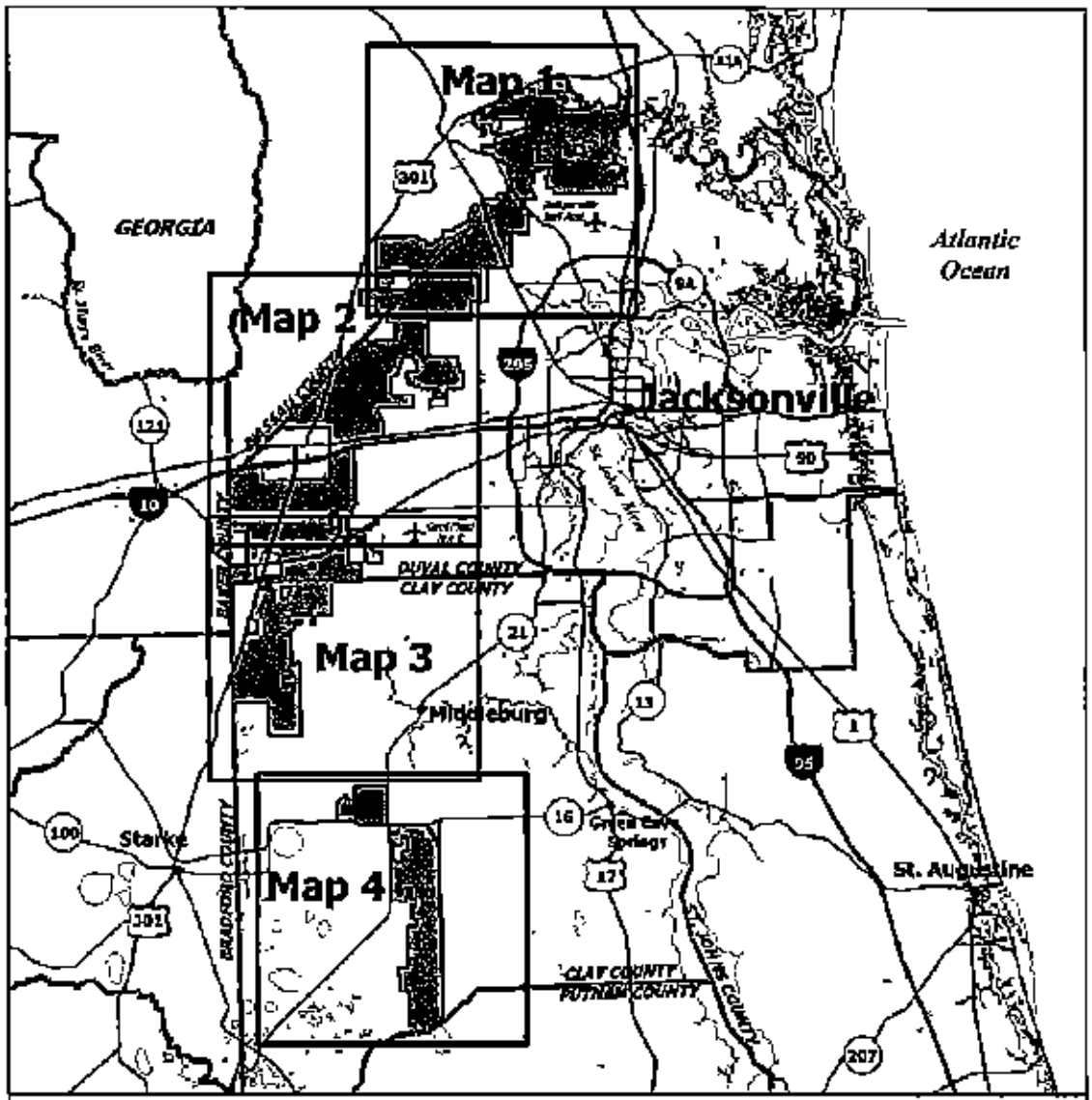
Acquisition Planning and Status
The Northeast Florida Timberlands and Watershed Reserve was added to the 2002 Florida Forever project list at the December 6, 2001 meeting of the Acquisition and Restoration Council. The 139,847 acres in this project are divided among more than 150 owners and several hundred parcels over a three-county area (Nassau, Duval and Clay counties). The following 37 ownerships have been identified as essential parcels: Gilman, Jackson, Carter, Owen, Nemours, Miller, Bostiwick, Klieg, Bullock, 1st Bank and Trust, Rayonier, International Paper, Motes, Boyd, S. Regional Industrial Realty,

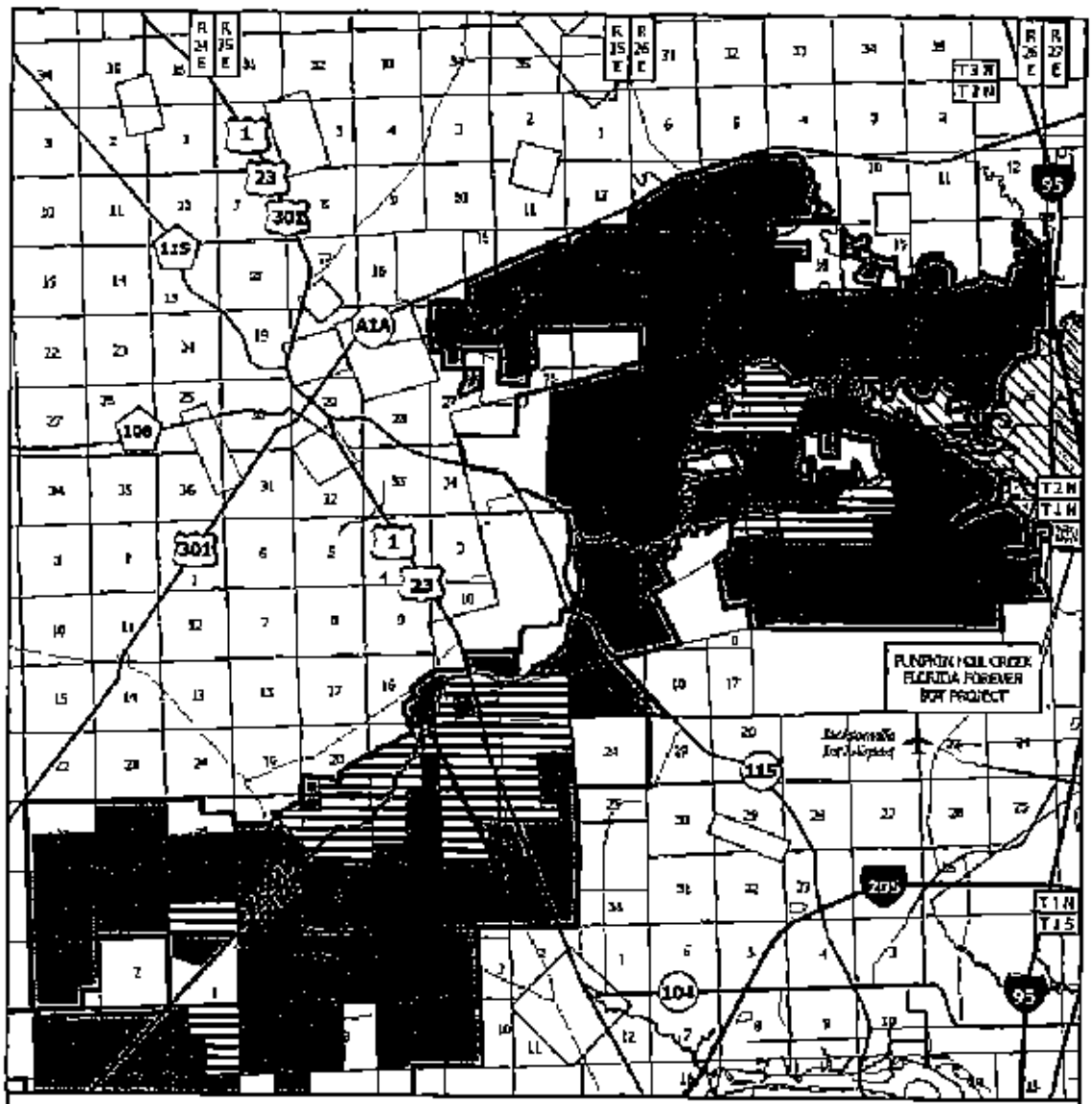
(Continued Page 314)

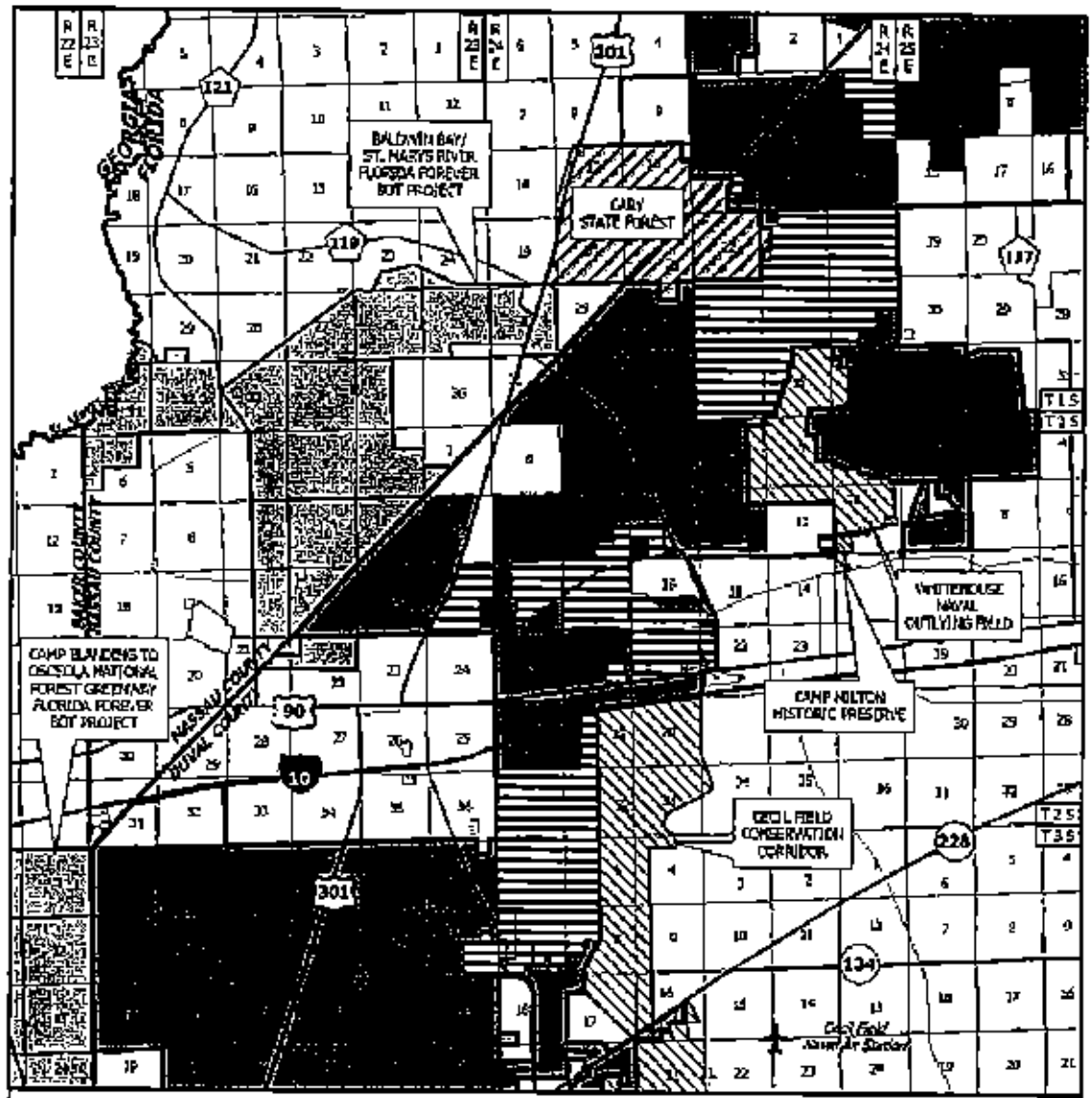
FNAI Elements	
Gopher tortoise	G3/S3
Southeastern weasel	G5T4/S3?
Flatwoods salamander	G2G3/S2S3
Eastern indigo snake	G4T3/S3
Bartram;s ixia	G2/S2
Hartwrightia	G2/S2
St. John black-eyed susan	G2/S2
Pondspice	G2/S2
8 elements known from project	

Placed on list	**2001**
Project Area (acres)	**143,347**
Acres Acquired	**33,826***
At a Cost of	**$85,872,385***
Acres Remaining	**109,521**
With Estimated (tax assessed) Value of	**$40,277,060**

*Includes acreage and expenditures by the City of Jacksonville, JEA and St. Johns River Water Mgt. District


Map 1
Map 2
Map 3
Map 4
GEORGIA
Atlantic Ocean
Jacksonville
Middleburg
Starke
St. Augustine
DUVAL COUNTY
CLAY COUNTY
CLAY COUNTY
PUTNAM COUNTY
BRADFORD COUNTY
ST JOHNS COUNTY
NORTHEAST FLORIDA TIMBERLANDS: OVERVIEW
DUVAL, NASSAU, AND CLAY COUNTIES
N
W
E
S
0 5 10 20
Miles
Northeast Florida Timberlands
Atlantic Ocean
DECEMBER 2004


NORTHEAST FLORIDA TIMBERLANDS: MAP 1 OF 4
DUVAL AND NASSAU COUNTIES
Florida Forever BOT Project Boundary
Acquired
Essential Parcel(s) Remaining
Other Florida Forever BOT Projects
Other Conservation Lands
0 1 2 4
Miles
DECEMBER 2003

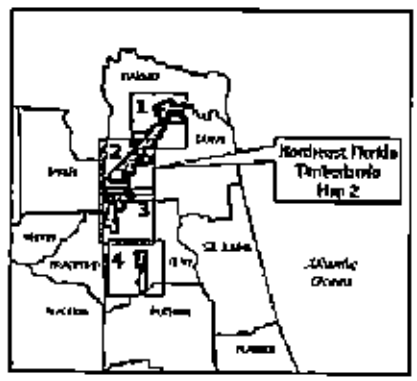


NORTHEAST FLORIDA TIMBERLANDS: MAP 2 OF 4

DUVAL AND NASSAU COUNTIES

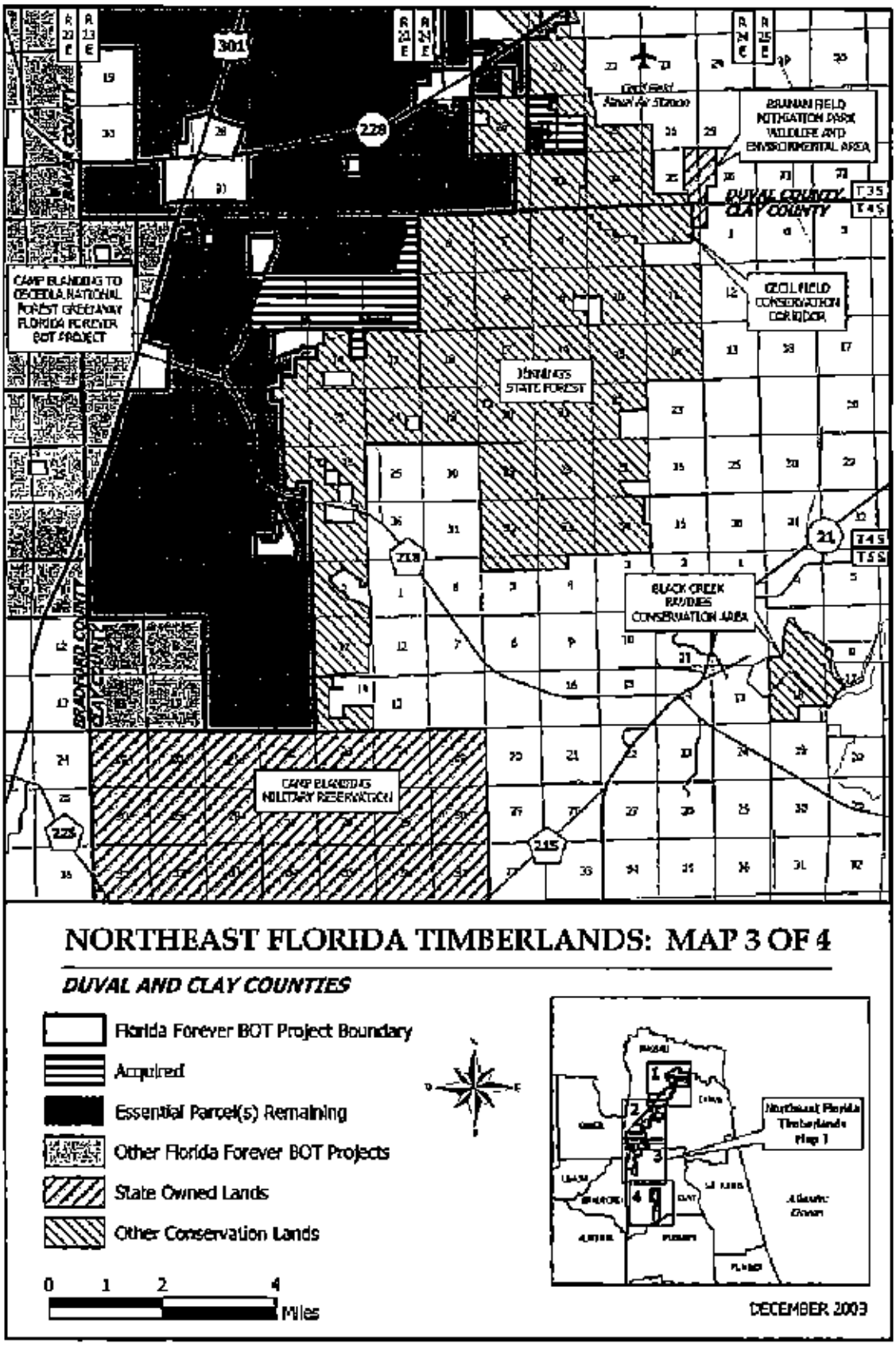
- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands

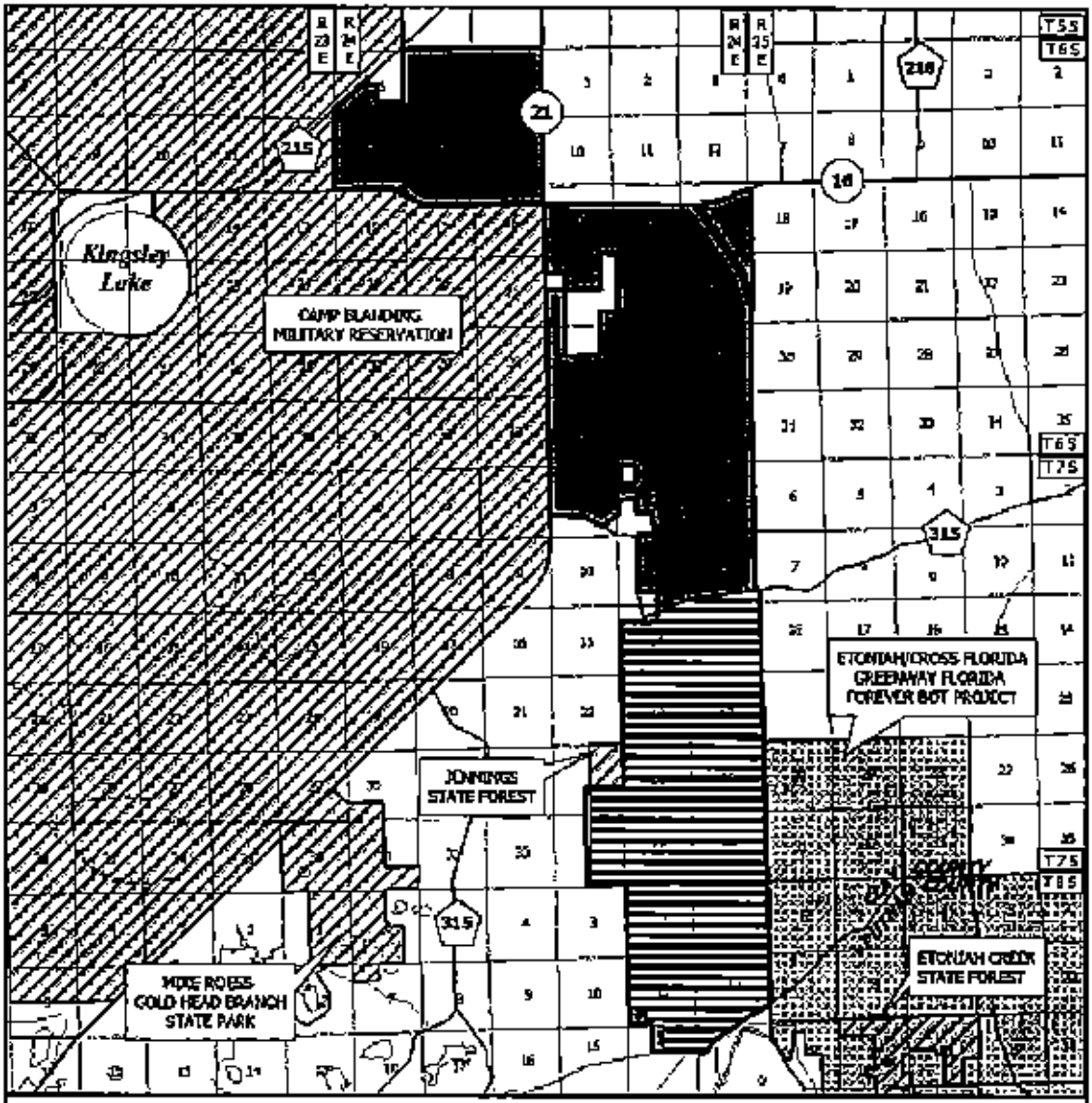
0 1 2 4 Miles



DECEMBER 2003

Northeast Florida Timberlands and Watershed Reserve - Group A/Full Fee/Less Than Fee



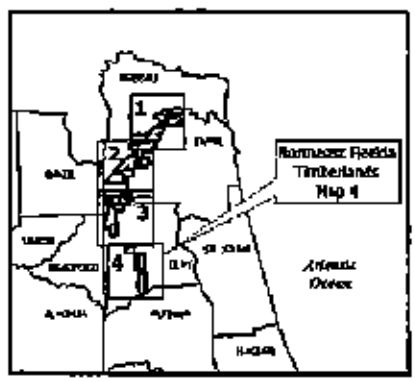


NORTHEAST FLORIDA TIMBERLANDS: MAP 4 OF 4

DUVAL, NASSAU, AND CLAY COUNTIES

- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Lands

0 1 2 4 Miles



DECEMBER 2004

East Fiftone Partners, Monticello Drugs, St. Joe, Barnett Bank Trustee, Anheuser-Busch, Inc., Travelers Ins., Foster, Tison, Castleton, Wright, Buck, Logan, Higgenbotham, Betz, Ogilvie, Milne, Kaleel & Roberts, Grey, Sythe, Pharr, Wilkinson, and Helmer.

On June 6, 2003, ARC added the 506-acre Norfolk Southern Tract in Duval County to the project boundaries.

On December 5, 2003 ARC added the 7,043-acre Four Creeks Forest Tract to the project boundaries.

On December 3, 2004 ARC addded the 3,500-acre Bull Creek tract in Clay County to the project boundaries .

Coordination

This project will be acquired in partnership with the St. Johns River Water Management District (SJRWMD) and Duval County. The SJRWMD and Duval County will likely take the lead under a 161 Agreement and/or a Multi-Party Acquisition Agreement.

Management Policy Statement

The Division of Forestry proposes to manage the project under a multiple-use management regime consistent with the DOF management of the Cary State Forest, the Jennings State Forest and the Cecil Field Conservation Corridor, all of which are adjacent to this project. The acquisition goals and objectives as approved by ARC would include timber management and restoration, low-impact diverse recreation uses, and management of archeological and historic sites, habitat and other biological resources.

Management Prospectus

Qualifications for state designation

The project's size and diversity makes it desirable for use and management as a state forest. Management by the Division of Forestry as a state forest is contingent on acquiring fee-simple title to the core parcels adjacent to the existing state forests and to approximately 60 percent of the project.

Manager

The Division of Forestry of the Florida Department of Agriculture and Consumer Services is recommended to be the lead managing agency.

Conditions affecting intensity of management

Much of the parcel has been disturbed by past pine plantings and will require restoration work. This area of Florida is experiencing rapid urban growth, so that any prescribed burning to restore the forest will have to be carefully planned. The level of management and the related management costs are expected to initially be high to obtain necessary information to restore and manage portions as a state forest. It is recognized that a portion of the project will be less-than-fee simple. This technique is valuable on the fringes of urban growth because it allows the landowners to manage the property as they have been managing it, and continuing to produce forest products for Florida's economy, while protecting the property from conversion to urban growth.

Timetable for implementing management, and provisions for security and protection of infrastructure

Once the core areas of the project are acquired and assigned to the Division of Forestry, initial public access will be provided for diverse, low-intensity outdoor recreation activities. Initial and intermediate management efforts will concentrate on site security, public and resource management access, prescribed burns, reforestation, and restoration activity.

Revenue-generating potential

Timber sales will be conducted as needed to improve or to maintain the desirable ecosystem conditions. These sales will primarily take place in the marketable pine stands and will provide a variable source of revenue, depending on a variety of factors. The existing condition of the timber stands on the property is such that the revenue-generating potential is expected to be moderate. Other compatible state forest sources of income will be considered.

Cooperators in management activities

The Division of Forestry will cooperate with, and seek the assistance of, other state agencies, local government agencies, other interested parties as appropriate, and with the Florida Natural Areas Inventory (FNAI). The Division intends to coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) regarding game and non-game management activity and related public use of the property.

Management costs and sources of revenue

It is anticipated that management funding will come from the CARL Trust Fund. Budget needs for interim management are estimated as follows.

Management Cost Summary/FWC (including salaries for 4 full-time employees)

Salary (4 FTEs)	$154,357
Expense	$620,000
Operating Capital Outlay	$146,076
TOTAL	$887,007

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www.fnai.org

January 23, 2006

Jessica Gribbon
Earth Tech
675 N. Washington Street, Suite 300
Alexandria, VA 22314

Dear Ms. Gribbon:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project:	Sites 4.1 & 4.2, Wright
Date Received:	January 12, 2006
Location:	Township 1 N, Range 26 E, Sections 39-41 Township 2 N, Range 26 E, Sections 38, 40, & 41 Duval County

Element Occurrences

A search of our maps and database indicates that currently we have no Element Occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the most rare species tracked by the Inventory, including all federally listed species.

Florida Resources and Environmental Analysis Center

Institute of Science and Public Affairs

The Florida State University

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

Managed Areas

Portions of the site appear to be located within the Thomas Creek Preserve, managed by the City of Jacksonville.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

Land Acquisition Projects

This site appears to be located within the Northeast Florida Timberlands & Watershed Reserve Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. A description of this project is enclosed. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no regulatory authority over these lands until they are purchased.

The Inventory always recommends that professionals familiar with Florida's flora and fauna should conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/data.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Jason A. Griffin

Jason A. Griffin
Data Services Coordinator

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fax 850-681-9364
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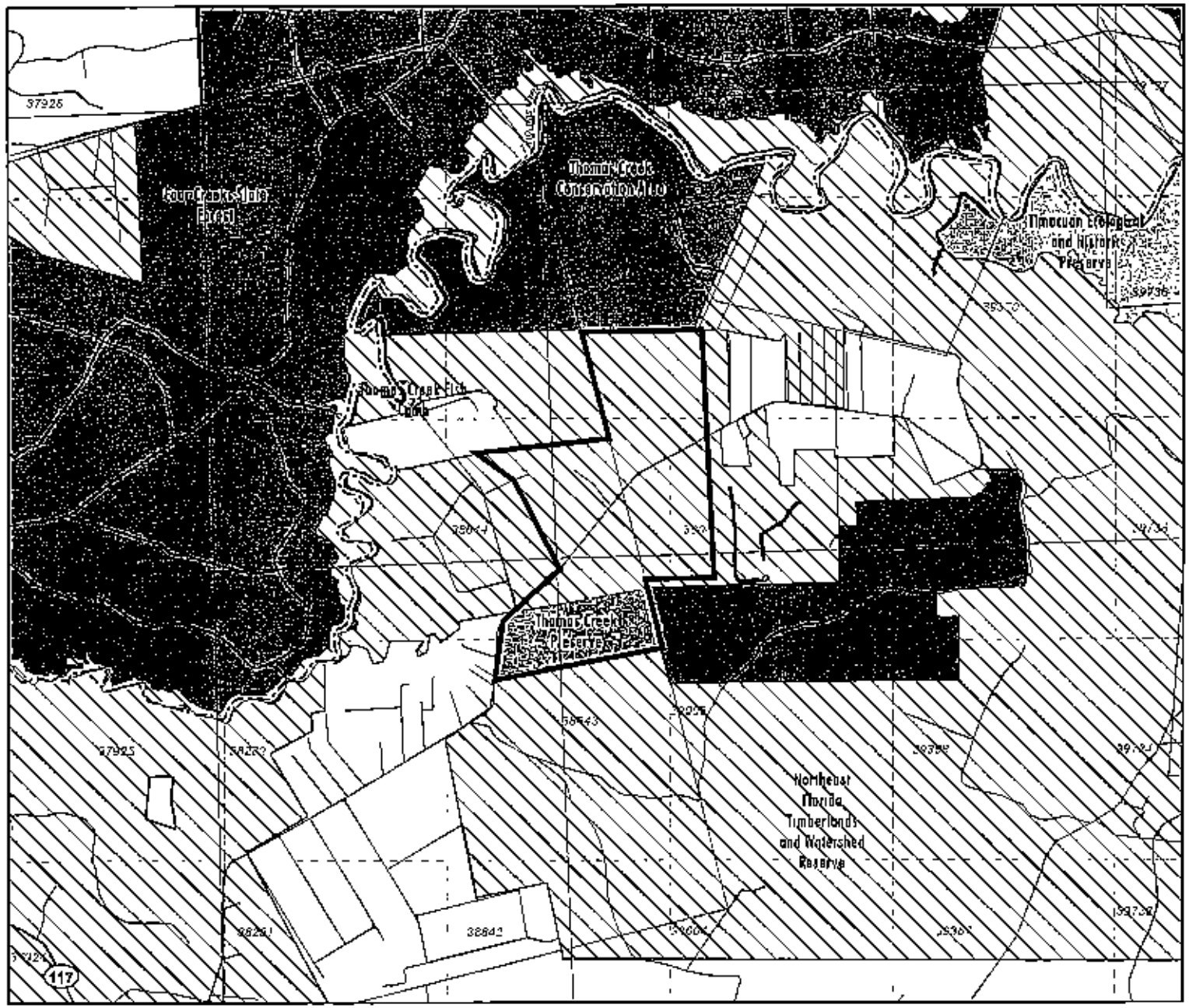
FLORIDA Natural Areas INVENTORY

Sites 4.1 & 4.2, City

Site boundaries are approximate.

Duval County



Element Occurrences

- Animals
- Plants
- Communities
- Other
- Point indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-93
- FL Fish & Wildlife Cons. Comm. Breeding Bird Atlas Project 1986-91 center point of 10 sq mi survey block

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever Board of Trustees Projects
- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Water

Map produced by JAO
Map Date: 23 JAN 2008

N W E S

NOTE
Map should not be interpreted without accompanying documents

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
FNAI Biodiversity Matrix Unit ID: 38643					
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rhynchospora thornei	Thorne's Beaksrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N
FNAI Biodiversity Matrix Unit ID: 38644					
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Rhynchospora thornei	Thorne's Beaksrush	G3	S1S2	N	N
Rudbeckia nitida	St. John's Black-eyed-susan	G3	S2	N	LE
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N
FNAI Biodiversity Matrix Unit ID: 38645					
Likely					
Mycteria americana	Wood Stork	G4	S2	LE	LE
Potential					
Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Asclepias viridula	Southern Milkweed	G2	S2	N	LT

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

FNAI Biodiversity Matrix Unit ID: 39006

Likely

Mycteria americana	Wood Stork	G4	S2	LE	LE

Potential

Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Asclepias viridula	Southern Milkweed	G2	S2	N	LT
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

FNAI Biodiversity Matrix Unit ID: 39007

Likely

Mycteria americana	Wood Stork	G4	S2	LE	LE

Potential

Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	LS
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Balduina atropurpurea	Purple Honeycomb-head	G2	S1	N	LE
Calopogon multiflorus	Many-flowered Grass-pink	G2G3	S2S3	N	LE
Coreopsis integrifolia	Ciliate-leaf Tickseed	G1G2	S1	N	LE
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Ctenium floridanum	Florida toothache-grass	G2	S2	N	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LS
Matelea floridana	Florida Spiny-pod	G2	S2	N	LE
Mustela vison lutensis	Atlantic Salt Marsh Mink	G5T3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Pycnanthemum floridanum	Florida Mountain-mint	G3	S3	N	LT
Sideroxylon alachuense	Silver Buckthorn	G1	S1	N	LE

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Verbesina heterophylla	Variable-leaf Crownbeard	G2	S2	N	N

DEFINITIONS:
DOCUMENTED - Rare species and natural communities documented on or near this site.
DOCUMENTED-HISTORIC - Rare species and natural communities documented, but not observed/reported within the last twenty years.
LIKELY - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
POTENTIAL - This site lies within the known or predicted range of the species listed.

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FLORIDA
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GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an **element** as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21-100 occurrences or less than 10,0000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of range).
G5	Demonstrably secure globally.
G#?	Tentative rank (e.g., G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (e.g., G2G3)
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GH	Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GNA	Ranking is not applicable because element is not a suitable target for conservation (e.g. as for hybrid species)
GNR	Not yet ranked (temporary)
GNRTNR	Neither the full species nor the taxonomic subgroup has yet been ranked (temporary)
GX	Believed to be extinct throughout range
GXC	Extirpated from the wild but still known from captivity/cultivation
GU	Unrankable. Due to lack of information, no rank or range can be assigned (e.g., GUT2).

STATE RANK DEFINITIONS

Definition parallels global element rank: substitute "S" for "G" in above global ranks, and "in Florida" for "globally" in above global rank definitions.

FEDERAL AND STATE LEGAL STATUSES PROVIDED BY FNAI FOR INFORMATION ONLY.

For official definitions and lists of protected species, consult the relevant state or federal agency.

FEDERAL LEGAL STATUS

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

LE	Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range.
LE,XN	An experimental population of a species otherwise Listed as an Endangered Species in the List of Endangered and Threatened Wildlife and Plants.
PE	Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
LT	Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
LT,PDL	Species currently listed threatened but has been proposed for delisting.
PT	Proposed for listing as Threatened Species.
C	Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants, Category 1. Taxa for which the USFWS currently has substantial information on hand or in possession to support the biological appropriateness of proposing to list the species as endangered or threatened.
PS	Partial listing status (species is listed for only a portion of its geographic range).
SAT	Threatened due to similarity of appearance to a threatened species.
SC	Species of concern. Species is not currently listed but is of management concern to USFWS.
N	Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants.

FLORIDA LEGAL STATUSES

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

Animals (Florida Fish and Wildlife Conservation Commission- FFWCC)

LE	Listed as Endangered Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.
LT	Listed as Threatened Species by the FGFWFC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. LT* (for Florida black bear) indicates that LT status does not apply in Baker and Columbia counties and in the Apalachicola National Forest.
LS	Listed as Species of Special Concern by the FGFWFC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. LS* indicates that a species has LS status only in selected portions of its range in Florida.
N	Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505.

LE	Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.
PE	Proposed by the FDACS for listing as Endangered Plants.
LT	Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered. LT* indicates that a species has LT status only in selected portions of its range in Florida.
PT	Proposed by the FDACS for listing as Threatened Plants.
CE	Listed as a Commercially Exploited Plant in the Preservation of Native Flora of Florida Act. Defined as species native to state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.
PC	Proposed by the FDACS for listing as Commercially Exploited Plants.
(LT)	Listed threatened as a member of a larger group but not specifically listed by species name.
N	Not currently listed, nor currently being considered for listing.

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Tracking Florida's Biodiversity

Northeast Florida Timberlands and Watershed Reserve

Group A
Full Fee and Less Than Fee

Nassau, Duval and Clay Counties

Purpose for State Acquisition

The three-county corridor of the Northeast Florida Timberlands and Watershed Reserve would create a conservation landscape connecting several high-quality managed areas. The original 114,650 acres of pine woods, bottomland forests and the basin swamps in this project have been combined with a 17,800-acre addition to the Etoniah/Cross Florida Greenway to make this a 132,450-acre project. The project would connect and enhance the protection of the Jennings State Forest, the Cecil Field Conservation Corridor, the Cary State Forest, and the Timucuan Ecological and Historic Preserve. The project will also touch two military reservations in this area, Camp Blanding and the Whitehouse Naval Outlying Field. At the south end, the project will adjoin the existing Etoniah/Cross Florida Greenway. The project's size and diversity makes it desirable for use and management as a state forest.

Manager

Division of Forestry (DOF) of the Florida Department of Agriculture and Consumer Services (DACS)

General Description

This project describes a northeast-southwest diagonal along the west side of Duval County, stretching from the Nassau River north of Jacksonville to Trail Ridge in Clay County, near the town of Lawtey. Another section of the project makes a north-south connection about 12 miles long, between the Camp Blanding Military Reservation and the Etoniah Creek State Forest. About 75 percent of this land is used, or has been used, for silviculture. It also includes mesic flatwoods, cypress and hardwood swamp, sandhills and associated plant communities.

Public Use

The Division of Forestry will promote recreation and environmental education in the natural environment. There is a possibility of an intermediate and long-term need for some type of developed recreation facilities. If such facilities are developed, the use of low-impact, rustic facilities will be stressed. If an organized recreation area is desired, it will be assessed and evaluated to minimize any possible adverse effects on the natural environment. Unnecessary roads, firelines and hydrological disturbances will be abandoned and/or restored to the greatest extent practical.

Acquisition Planning and Status

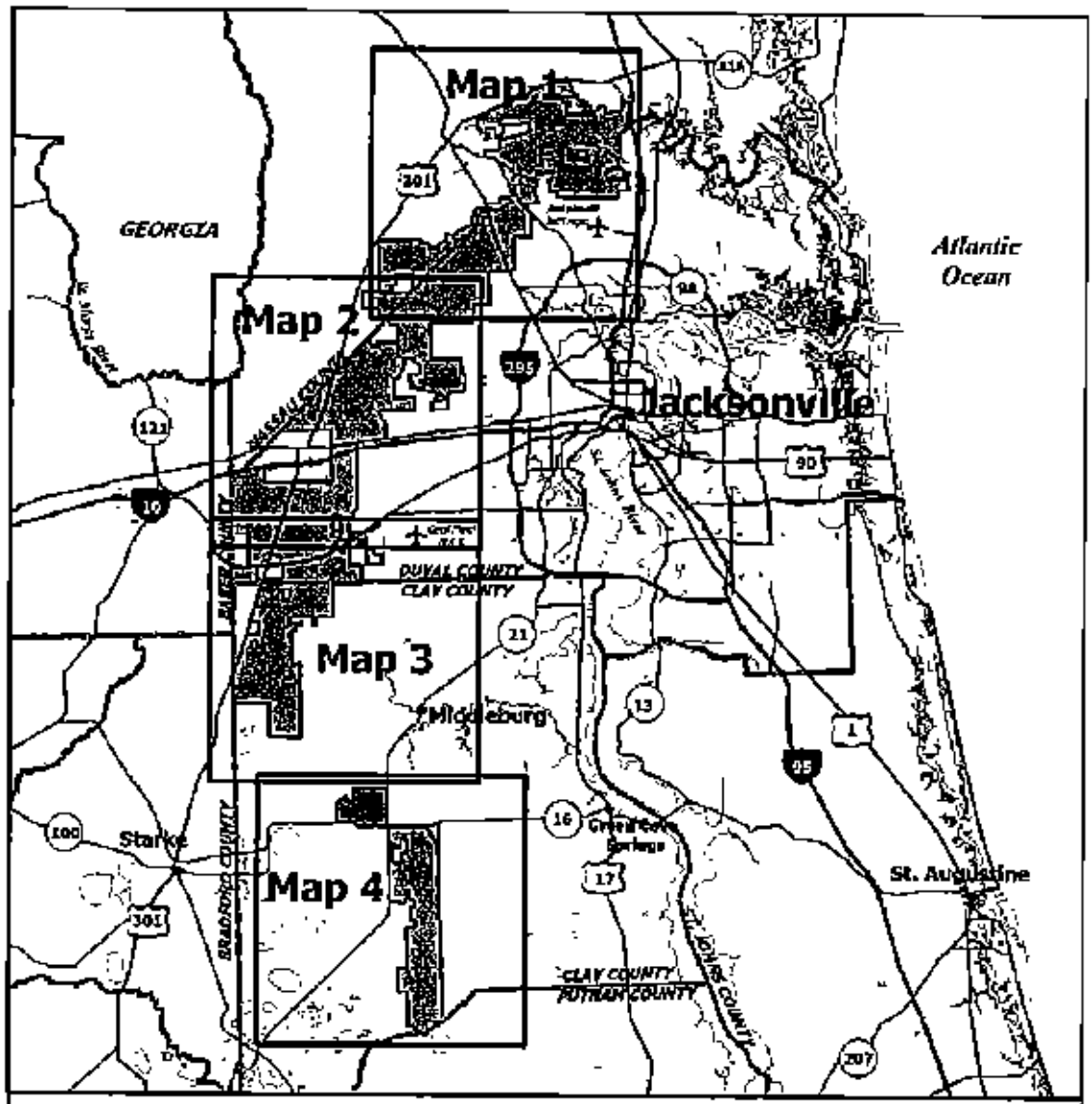
The Northeast Florida Timberlands and Watershed Reserve was added to the 2002 Florida Forever project list at the December 6, 2001 meeting of the Acquisition and Restoration Council. The 139,847 acres in this project are divided among more than 150 owners and several hundred parcels over a three-county area (Nassau, Duval and Clay counties). The following 37 ownerships have been identified as essential parcels: Gilman, Jackson, Carter, Owen, Nemours, Miller, Bostiwick, Klieg, Bullock, 1st Bank and Trust, Rayonier, International Paper, Motes, Boyd, S. Regional Industrial Realty,

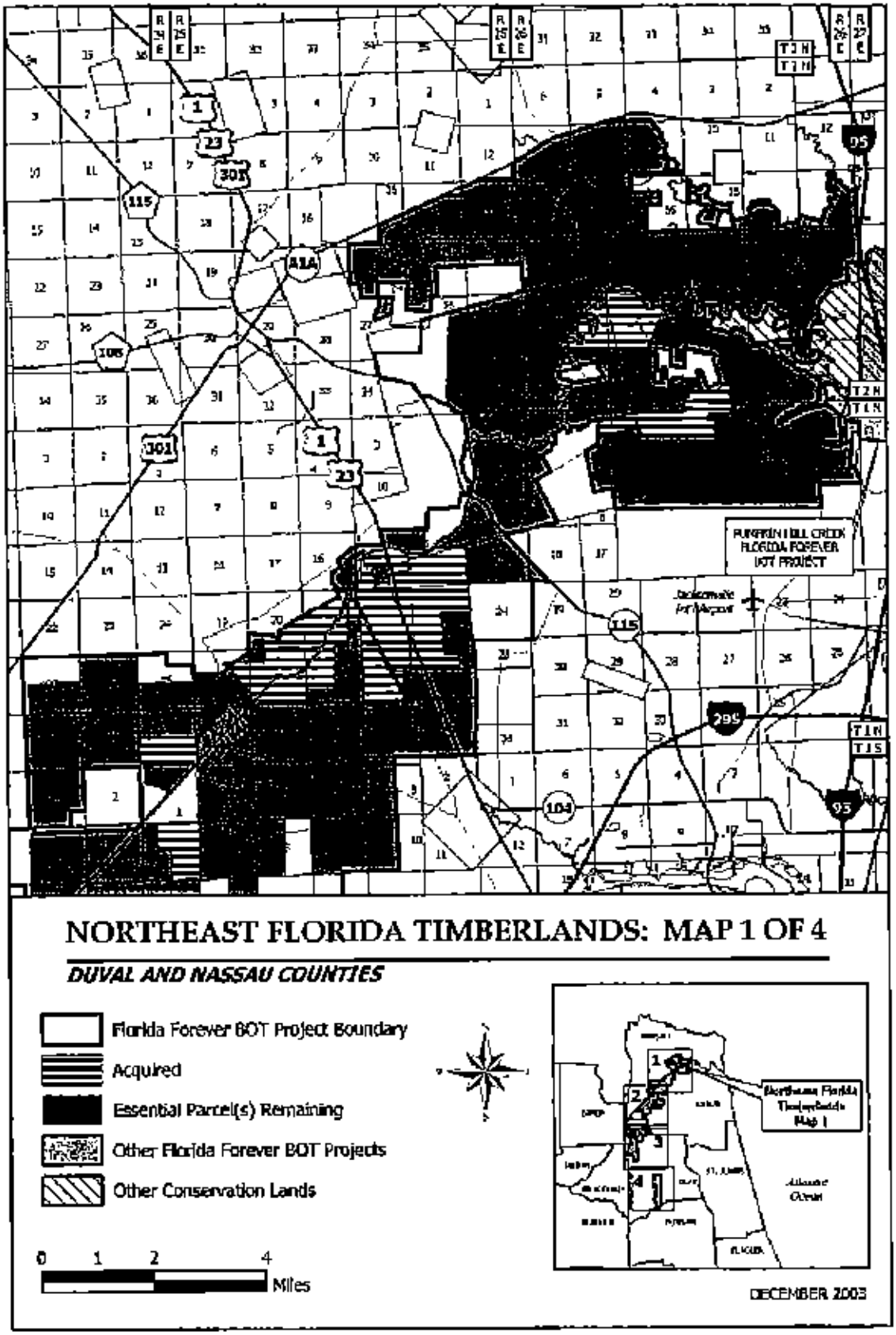
(Continued Page 314)

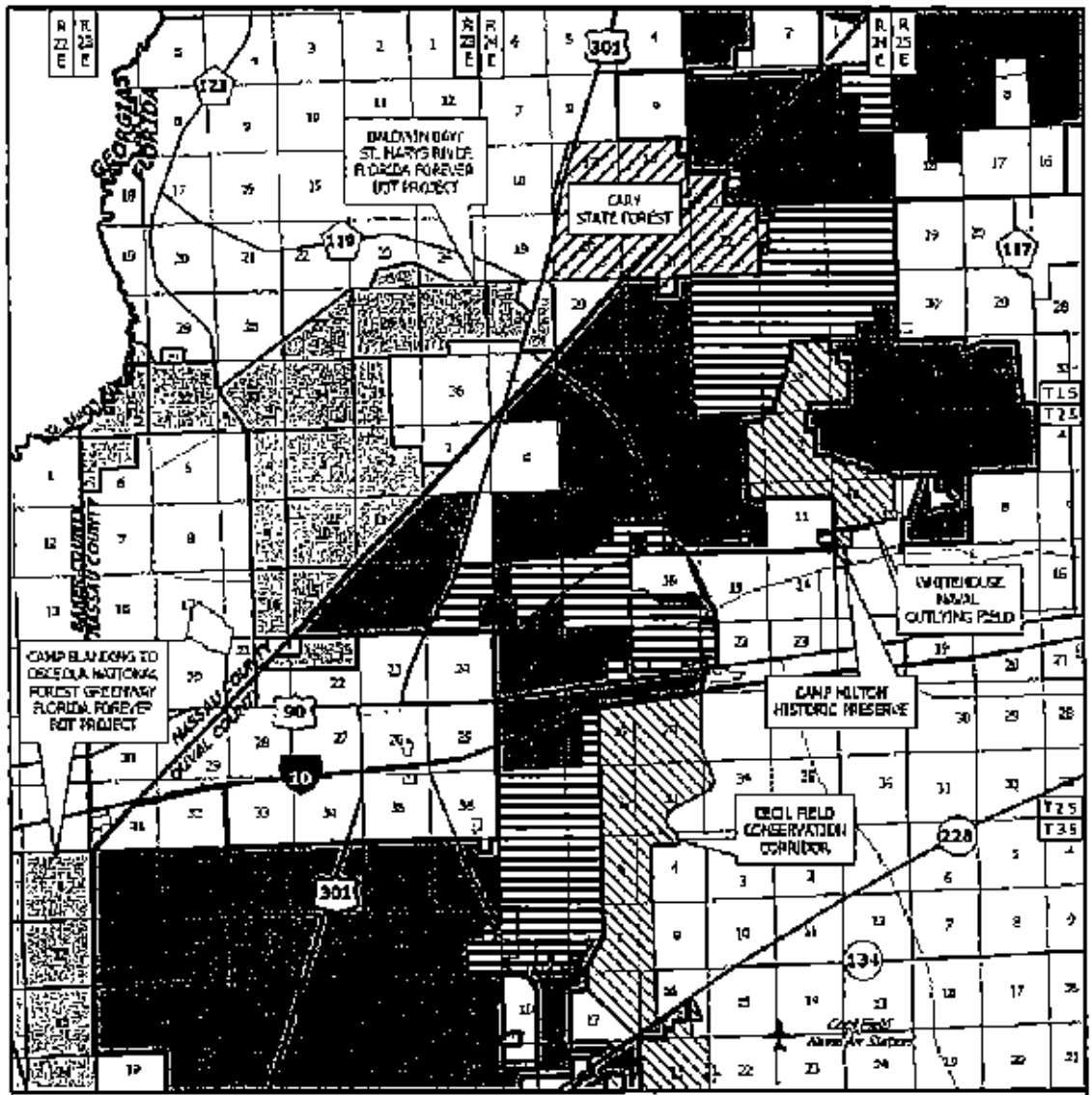
FNAI Elements	
Gopher tortoise	G3/S3
Southeastern weasel	G5T4/S3?
Flatwoods salamander	G2G3/S2S3
Eastern indigo snake	G4T3/S3
Bartram;s ixia	G2/S2
Hartwrightia	G2/S2
St John black-eyed susan	G2/S2
Pondspice	G2/S2
8 elements known from project	

Placed on list	**2001**
Project Area (acres)	**143,347**
Acres Acquired	**33,826***
At a Cost of	**$85,872,385***
Acres Remaining	**109,521**
With Estimated (tax assessed) Value of	**$40,277,060**

*Includes acreage and expenditures by the City of Jacksonville, JEA and St. Johns River Water Mgt. District


Map 1
Map 2
Map 3
Map 4
GEORGIA
Atlantic Ocean
Jacksonville
Middleburg
Starke
St. Augustine
DUVAL COUNTY
CLAY COUNTY
CLAY COUNTY
PUTNAM COUNTY
BRADFORD COUNTY
ST. JOHNS COUNTY
NORTHEAST FLORIDA TIMBERLANDS: OVERVIEW
DUVAL, NASSAU, AND CLAY COUNTIES
0 5 10 20
Miles
DECEMBER 2004


NORTHEAST FLORIDA TIMBERLANDS: MAP 1 OF 4
DUVAL AND NASSAU COUNTIES
Florida Forever BOT Project Boundary
Acquired
Essential Parcel(s) Remaining
Other Florida Forever BOT Projects
Other Conservation Lands
0 1 2 4
Miles
DECEMBER 2003
PUNKIN HILL CREEK
FLORIDA FOREVER
BOT PROJECT

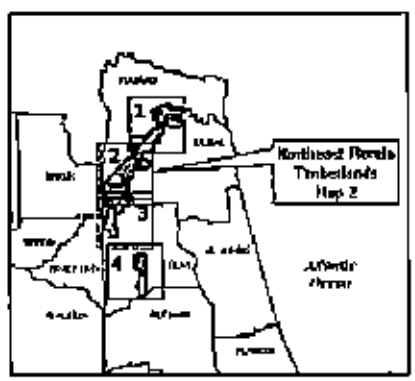


NORTHEAST FLORIDA TIMBERLANDS: MAP 2 OF 4

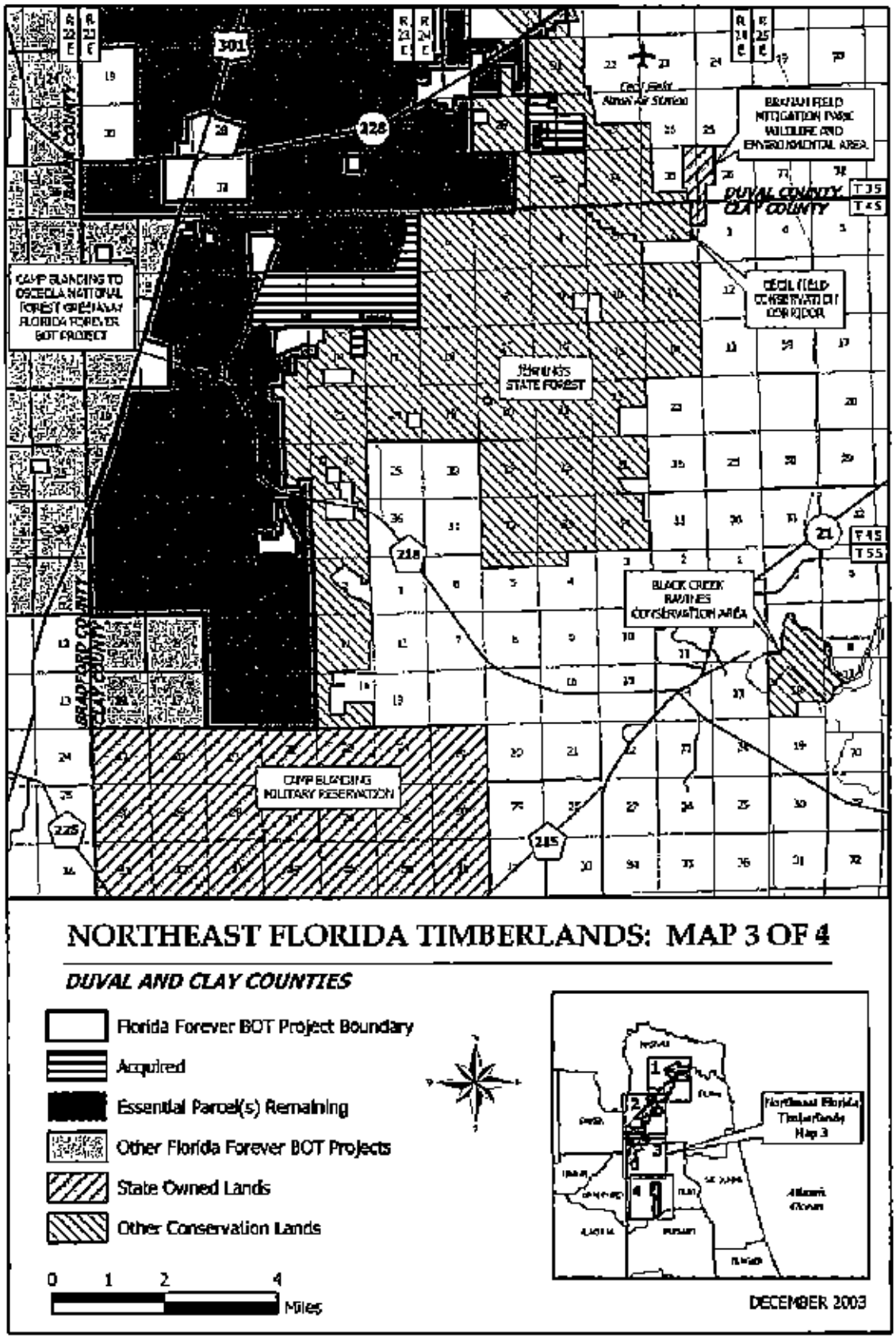
DUVAL AND NASSAU COUNTIES

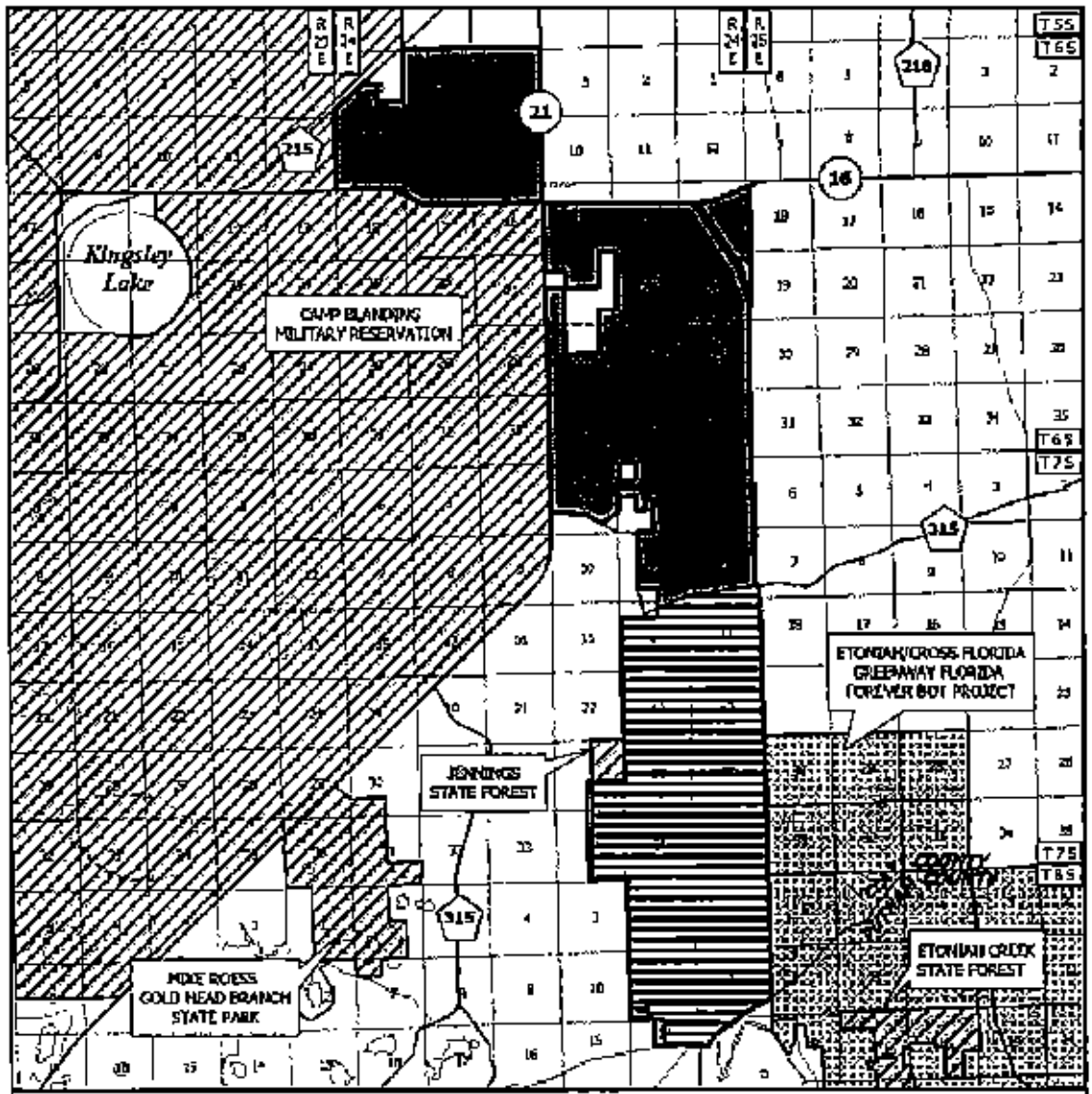
- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands

0 1 2 4 Miles



DECEMBER 2003


301
228
218
225
215
21
CAMP BLANDING TO OCEOLA NATIONAL FOREST GREENWAY FLORIDA FOREVER BOT PROJECT
CAMP BLANDING MILITARY RESERVATION
BLACK CREEK RAVINES CONSERVATION AREA
DUVAL COUNTY
CLAY COUNTY
BAKER COUNTY
GRADY AND CO
T3S
T4S
T4S
T5S
NORTHEAST FLORIDA TIMBERLANDS: MAP 3 OF 4
DUVAL AND CLAY COUNTIES
Florida Forever BOT Project Boundary
Acquired
Essential Parcel(s) Remaining
Other Florida Forever BOT Projects
State Owned Lands
Other Conservation Lands
0 1 2 4
Miles
DECEMBER 2003

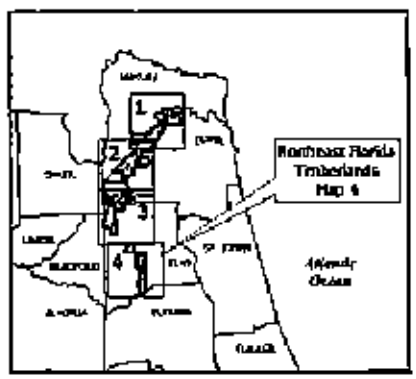


NORTHEAST FLORIDA TIMBERLANDS: MAP 4 OF 4

DUVAL, NASSAU, AND CLAY COUNTIES

- Florida Forever BOT Project Boundary
- Acquired
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Lands

0 1 2 4 Miles



DECEMBER 2004

East Fiftone Partners, Monticello Drugs, St. Joe, Barnett Bank Trustee, Anheuser-Busch, Inc., Travelers Ins., Foster, Tison, Castleton, Wright, Buck, Logan, Higgenbotham, Betz, Ogilvie, Milne, Kaleel & Roberts, Grey, Sythe, Pharr, Wilkinson, and Helmer.

On June 6, 2003, ARC added the 506-acre Norfolk Southern Tract in Duval County to the project boundaries.

On December 5, 2003 ARC added the 7,043-acre Four Creeks Forest Tract to the project boundaries.

On December 3, 2004 ARC addded the 3,500-acre Bull Creek tract in Clay County to the project boundaries.

Coordination

This project will be acquired in partnership with the St. Johns River Water Management District (SJRWMD) and Duval County. The SJRWMD and Duval County will likely take the lead under a 161 Agreement and/or a Multi-Party Acquisition Agreement.

Management Policy Statement

The Division of Forestry proposes to manage the project under a multiple-use management regime consistent with the DOF management of the Cary State Forest, the Jennings State Forest and the Cecil Field Conservation Corridor, all of which are adjacent to this project. The acquisition goals and objectives as approved by ARC would include timber management and restoration, low-impact diverse recreation uses, and management of archeological and historic sites, habitat and other biological resources.

Management Prospectus

Qualifications for state designation

The project's size and diversity makes it desirable for use and management as a state forest. Management by the Division of Forestry as a state forest is contingent on acquiring fee-simple title to the core parcels adjacent to the existing state forests and to approximately 60 percent of the project.

Manager

The Division of Forestry of the Florida Department of Agriculture and Consumer Services is recommended to be the lead managing agency.

Conditions affecting intensity of management

Much of the parcel has been disturbed by past pine plantings and will require restoration work. This area of Florida is experiencing rapid urban growth, so that any prescribed burning to restore the forest will have to be carefully planned. The level of management and the related management costs are expected to initially be high to obtain necessary information to restore and manage portions as a state forest. It is recognized that a portion of the project will be less-than-fee simple. This technique is valuable on the fringes of urban growth because it allows the landowners to manage the property as they have been managing it, and continuing to produce forest products for Florida's economy, while protecting the property from conversion to urban growth.

Timetable for implementing management, and provisions for security and protection of infrastructure

Once the core areas of the project are acquired and assigned to the Division of Forestry, initial public access will be provided for diverse, low-intensity outdoor recreation activities. Initial and intermediate management efforts will concentrate on site security, public and resource management access, prescribed burns, reforestation, and restoration activity.

Revenue-generating potential

Timber sales will be conducted as needed to improve or to maintain the desirable ecosystem conditions. These sales will primarily take place in the marketable pine stands and will provide a variable source of revenue, depending on a variety of factors. The existing condition of the timber stands on the property is such that the revenue-generating potential is expected to be moderate. Other compatible state forest sources of income will be considered.

Cooperators in management activities

The Division of Forestry will cooperate with, and seek the assistance of, other state agencies, local government agencies, other interested parties as appropriate, and with the Florida Natural Areas Inventory (FNAI). The Division intends to coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) regarding game and non-game management activity and related public use of the property.

Management costs and sources of revenue

It is anticipated that management funding will come from the CARL Trust Fund. Budget needs for interim management are estimated as follows.

Management Cost Summary/FWC (Including salaries for 4 full-time employees)

Salary (4 FTEs)	$154,357
Expense	$620,000
Operating Capital Outlay	$146,075
TOTAL	$887,007

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February 7, 2006

Mr. Frederick Gaske, Director
Division of Historical Resources
500 S. Bronough Street
Tallahassee, Florida 32399-0250

Re.: DHR Project File Number 2005-4441
Environmental Assessment (EA) for New National Cemetery in Jacksonville, Florida, and Section 106 Review.

Dear Mr. Gaske:

This letter is a follow-up to our initial letter dated April 29, 2005 and your response dated May 27, 2005. As stated in our original letter, Earth Tech, Inc. is under contract to the Department of Veterans Affairs (VA) to prepare an environmental assessment (EA) for the construction of a new national cemetery in Jacksonville, Florida.

Following preliminary site evaluation, the VA Department is considering two potential sites, as shown in Figure 1 of Enclosure 1. Both sites are in Duval County, just north of Jacksonville International Airport. Construction of the proposed cemetery on either site would involve land clearing, site development of areas to be used for interments, construction of internal roads and cemetery support facilities, and landscaping. Any potential effects would be contained within the boundaries of the cemetery site.

In your letter dated May 27, 2005, you made the following comments:

- With regard to the City Property: *A review of the Florida Master Site File indicates that there are no known archaeological or historical sites within the areas under consideration. However, since these areas have never been subjected to professional archaeological investigation, this is not necessarily indicative of the absence of archaeological materials. The proposed project will affect a sizable area that is environmentally similar to regions within Duval County that are known to have yielded archaeological remains.*

- With regard to the Wright Property: *A review of the Florida Master Site File indicates the presence of one previously recorded archaeological site (8DU161 -battlefield site) in the areas under consideration (see map). No other archaeological or historical sites are recorded within the properties. However, since these areas have never been subjected to professional archaeological investigation, this is not necessarily indicative of the absence of archaeological materials. The proposed project will affect a sizable area that is environmentally similar to regions within Duval County that are known to have yielded archaeological remains.*

EarthTech
A Tyco International Ltd. Company

February 7, 2006
Mr. Frederick Gaske, Director
Division of Historical Resources

In the light of these comments, Earth Tech contracted with Environmental Services Inc. (ESI) of Jacksonville, Florida, to conduct a preliminary archaeological evaluation of the two potential sites. Based on the report submitted by ESI (see Enclosure 1 of 1), the VA Department proposes to conclude the following in the EA:

- With regard to the **City Property**: the property has minimal potential for archaeological resources and implementation of the proposed action on this property is expected to have no adverse effects on cultural resources. No further evaluation is warranted for this site. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and the VA Department would notify the SHPO immediately to develop an appropriate plan of action.

- With regard to the **Wright Property**: a previous survey conducted by ESI and reviewed by the Florida SHPO has established that the property has no archaeological potential. No further evaluation is warranted for this site. Implementation of the proposed action would have no adverse effects on cultural resources. However, should any archaeological artifacts be unearthed during construction activities, construction would stop and the VA Department would notify the SHPO immediately to develop an appropriate plan of action.

We request you provide your concurrence with, or comments on, these findings within 30 days or less. Please do not hesitate to call me at (703) 706-0114 if you have any questions.

Very truly yours,

Earth Tech, Inc.

Laurent Cartayrade
Project Manager

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

March 13, 2006

Mr. Laurent Cartayrade
Earth Tech
675 North Washington Street, Suite 300
Alexandria, Virginia 22314

RE: DHR Project File Number: 2005-4441-B
Additional Information Received by DHR February 9, 2006
U.S. Department of Veterans Affairs
Environmental Assessment for New National Cemetery in Jacksonville
Four Proposed Sites: City Site I, City Site II, Wright Northeast, and Wright Southwest
Jacksonville, Duval County

Dear Mr. Cartayrade:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties* and the *National Environmental Policy Act of 1969*, as amended. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

Based on the additional information provided, it is the opinion of this office that the proposed project will have no effect on historic properties. However, there are possibilities that there may be historical or pre-historical artifacts or unmarked human remains might be uncovered at the proposed sites. The U.S. Department of Veterans Affairs will need to make contingency plans for any fortuitous finds uncovered during the construction phase of this project.

If historic artifacts, such as pottery or ceramics, metal implements, historic building materials, or any other physical remains that could be associated with early American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The U.S. Department of Veterans Affairs should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at (850) 245-6333 or (800) 847-7278. Project activities should not resume without verbal and/or written authorization from the

Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper federal authorities notified in accordance with the Native American Graves Protection and Repatriation Act (federal guidelines enclosed), as well as the proper state authorities under Section 872.05, *Florida Statutes*.

If you have any questions concerning our comments, please contact James Toner, Historic Sites Specialist, by electronic mail at *jetoner@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick P. Gaske, Director, and
State Historic Preservation Officer

Enclosure

Inadvertent Discoveries on Federal Lands After November 16, 1990

An *inadvertent* discovery is one for which no plan of action was developed prior to the discovery.

Notification

The person who makes the discovery must **immediately notify the responsible Federal official** by telephone and provide written confirmation to the responsible Federal official.

Stop Work

If the inadvertent discovery occurred in connection with an on-going activity, the person must **cease the activity** in the area of the inadvertent discovery and **make a reasonable effort to protect the human remains and other cultural items.**

Initiating Consultation

No later than three working days after receiving written confirmation of the notification, the responsible Federal agency official must **certify receipt of the notification**, and take immediate steps, if necessary, to **further secure and protect the human remains and other cultural items. NOTE:** activity that resulted in the discovery may resume thirty days after the Federal agency official certifies receipt of the notification.

The responsible Federal agency official must also **notify by telephone** (with written confirmation) and **initiate consultation** with **any known lineal descendant** and the **Indian tribes and Native Hawaiian organizations –**

- **who are or are likely to be culturally affiliated with the human remains and other cultural items;**
- **on whose aboriginal lands the remains and cultural items were discovered; and**
- **who are reasonably known to have a cultural relationship to the human remains and other cultural items.**

Consultation is initiated with a written notification. The written notification must propose a time and place for meetings or consultation.

During Consultation

The **purpose** of consultation is to **help the Federal agency determine who is entitled to custody** of the human remains and other cultural items under NAGPRA so that the disposition process can be completed, and **to discuss the Federal agency's proposed treatment** of the human remains and other cultural items pending disposition.

The Federal agency official must **provide in writing –**

- a list of all lineal descendants, Indian tribes, or Native Hawaiian organizations that are being, or have been, consulted; and
- an indication that additional documentation will provided on request.

The Federal agency official **must request, as appropriate –**

- names and addresses of the Indian tribe official who will act as the tribe's representative in consultation;
- names and appropriate methods to contact lineal descendants;
- recommendations on how consultation should be conducted; and
- the kinds of cultural items that are considered to be unassociated funerary objects, sacred objects, or objects of cultural patrimony.

After Consultation – Written Plan of Action

The Federal agency official must prepare, approve, and sign a written plan of action. The plan of action must document the kinds of objects to be considered as cultural items; the planned treatment, care, and handling, including traditional treatment, of human remains and other cultural items; the planned archeological recording of the human remains and other cultural items; the kinds of analysis planned for each kind of object; and the nature of reports to be prepared.

The written plan of action must also include --

- the **specific information used to determine custody** of the human remains and other cultural items; and
- the **planned disposition** of the human remains and other cultural items.

Custody must determined in accordance with 25 USC 3002 (a), "Priority of Ownership," and 43 CFR 10.6, "Priority of Custody."

(over)

Will the human remains and other cultural items be left in place?

Yes
The Federal agency secures the site of discovery, and the disposition process does not continue further.

OR

No
Excavation or removal of the human remains and other cultural items must take place following the requirements of the Archeological Resources Protection Act (ARPA) (16 U.S.C. 470aa et seq.) and its implementation regulations. This includes issuance of an excavation permit by the cognizant Federal agency where required by ARPA.

Prior to Disposition – Notice of Intended Disposition

At least 30 days prior to transferring the human remains and other cultural items to the claimant entitled to custody, the responsible Federal agency must first publish a **Notice of Intended Disposition**. The Notice must –

- be published two times (at least a week apart) in a newspaper of general circulation in the area in which the human remains and other cultural items were discovered;
- be published two times (at least a week apart) in a newspaper of general circulation in the area or areas in which the affiliated Indian tribes or Native Hawaiian organization members now reside;
- provide information as to the nature and affiliation of the human remains and other cultural items; and
- solicit further claims to custody.

The Federal agency official must send a copy of the notice and information on when and where it was published to the National NAGPRA program.

Disposition

Disposition is the formal transfer of Native American human remains and other cultural items excavated or inadvertently discovered on Federal or tribal lands after November 16, 1990, to the lineal descendants, Indian Tribes, or Native Hawaiian organizations that have been determined to be the legitimate claimants.

In completing the disposition, the claimant formally accepts custody (ownership). Disposition should be documented, must be consistent with 25 USC 3002 (a), "Priority of Ownership," and 43 CFR 10.6, "Priority of Custody." Physical transfer may take place 30 days after the publication of the second Notice of Intended Disposition, as agreed upon by the claimant and the Federal agency official.

Some Disposition Options

Claimant Takes Physical Custody

The legitimate claimant takes physical possession of the human remains and other cultural items. Where allowable, and upon agreement with the claimant, the Federal agency may provide temporary care until the claimant is able to take physical custody.

Reburial on Federal Land

The human remains and other cultural items may be reburied on Federal land, if the agency's policies and procedures permit such activities.

Relinquishment

Under NAGPRA [25 USC 3002(e)], the governing body of an Indian tribe or Native Hawaiian organization may expressly relinquish control over any Native American human remains, or title to or control over any funerary object or sacred object.

APPENDIX B

Cultural Resources Evaluation

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CULTURAL RESOURCE EVALUATION OF
PROPOSED VA CEMETERY SITES
DUVAL COUNTY, FLORIDA

January 2006

Introduction

The cultural resource staff of Environmental Services, Incorporated (ESI) of Jacksonville, Florida, led by Marsha A. Chance, Senior Archaeologist, recently conducted a preliminary cultural resource evaluation of the proposed V.A. Cemetery tracts located within Duval County, Florida on behalf of Earth Tech, Inc. (Figure 1). This project was conducted to assist the client in determining the archaeological and historical potential of the parcels. The goal of the project was to provide the client with information concerning the relative site probability of the parcels, whether known sites or historic structures occur on the properties, the identification of high site probability areas, and identification of areas where future subsurface testing might encounter archaeological sites. The term "cultural resources" as used herein is meant to refer to sites or objects that are archaeological, architectural, and/or historical in nature. Cultural resources typically consist of historic and prehistoric archaeological sites, as well as structures.

Preliminary background research included a review of state records to determine whether the tracts contained previously recorded archaeological sites; an analysis of soils; and a review to determine proximity to water and tract elevation. The latter are environmental characteristics often associated with the presence of cultural resources.

Of the two tracts, “City Property” and “Wright Property,” one was fully surveyed by ESI in recent months for a separate client and one was subjected to a preliminary evaluation on behalf of Earth Tech. For this reason, the two tracts are described separately in this report.

Background Research

Background research included a review of the archaeological site files maintained by the Florida Master Site File at the Division of Historical Resources (FMSF-DHR), to determine the presence of previously recorded archaeological sites within or near the study area; an examination of United States Department of Agriculture, Soil Conservation Service (USDA-SCS) soil maps for the area; perusal of aerial photographs to identify anomalies, waterways, vegetation patterns, and greatly disturbed areas; and the attainment of familiarity with the USGS topographic map of the project area so that elevation data could be utilized to pinpoint possible site locations. In addition, data regarding past settlement and subsistence patterns within the region were considered.

Environmental Setting

The topography of the project area ranges from 10 to 20 feet above mean sea level (amsl). Examination of the soil map for the area indicates the fact that the tracts contain a variety of soil types, primarily including poorly and very poorly drained soils. The best drained soils are classified as poorly drained. Some of these soil types occur in association with an unnamed creek on the western boundary of the Wright Property and with the floodplain of Thomas Creek. They are illustrated in Figure 2.

Vegetation within the City Property consists of wetland species in the intermittent wetlands throughout the tract, coupled with pasture grasses in the majority of the tract. The natural upland communities have been mostly removed from the tract to create pastures and other agricultural areas. Natural community types in the general area include oak overstories with pine and palmetto understories. Vegetation in the Wright Property consists primarily of planted pines, small areas of hardwood forest and larger areas of wetland vegetation. In this tract vegetation reflects the topography and drainage capacities of the soils upon which they occur.

I. CITY PROPERTY

Project Location

The City Property is generally located south of Thomas Creek and north of Jacksonville International Airport. It lies west of I-95 and is astride Lannie Road. The tract can be found on the Trout River and Italia, Florida, USGS quadrangle maps (photorevised, 1989), in Sections 39 and 40, Township 1 South, Range 25 East.

Results

A review of the archaeological site file records maintained by the Florida Master Site File of the Division of Historical Resources indicated that there are no previously recorded archaeological sites within the tract. However, several sites have been recorded just beyond one mile of the tract. Site 8DU161 was originally recorded as the possible general vicinity location of the Revolutionary War era Thomas Creek Battlefield. This site, as originally plotted, lay northeast of the study area covering a large area of marsh and multiple meanders of Thomas Creek. It is doubtful that the battle site could be in this area, since the environmental character of much of the location is not conducive to human use. Additionally, site 8DU14668 was recorded in 2002 by ESI. Site 8DU15983 was recorded in 2004. In the spring of 2005 ESI conducted a survey of a large tract adjacent to the City Property, and recorded 4 sites, 8DU16190, 8DU16191, 8DU16192 and 8DU16196. All of these sites lie west of the tract, at a distance of one mile to just over one mile from the eastern boundary. ESI found sites 8DU16191 and 16190 to be potentially eligible for listing on the *National Register of Historic Places* (NR), and evaluated them further in the fall of 2005. Site 8DU16190 had yielded a minor amount of material dating to the time of the Revolutionary War. Additional testing, however, did not yield additional comparable artifacts. Testing at this site included traditional shovel testing, followed by the use of a metal detector and ground penetrating radar, in an effort to locate historic metallic artifacts such as those that might have been associated with battlefield and/or encampment activities. Neither of these sites was found to be eligible for NR listing. All site locations are shown in Figure 3 and site definitions are discussed below.

Table 2. Nearby Sites

8DU161 (gv)	Possible Thomas Creek Battlefield, Revolutionary War
8DU14668	Prehistoric/Historic scatter; early 19th century
8DU15983	Prehistoric Campsite (no further description available)
8DU16190	Historic/prehistoric scatter; 18th to 20th Century; Swift Creek
8DU16191	Historic/prehistoric scatter; late 19th/early 20th Century
8DU16192	Prehistoric scatter
8DU16196	Prehistoric scatter

Prehistoric components were encountered in each of the five sites recorded by ESI but all were minimal. Site 8DU14668 yielded 3 prehistoric and 41 historic artifacts. The former were 3 chert flakes (11-20mm) and the latter were ceramics(9), nails (10), glass (1) and unidentified iron fragments dating to the mid to late 18th century. No features were found.

Site 8DU16190 yielded 33 prehistoric and 11 historic artifacts. The prehistoric assemblage contained 4 Swift Creek (500 BC-AD 750) and 5 plain sherds. A musket ball, a buck shot and a brass button were also recovered, with the button dating from between 1726 and 1776. The Button was indicative of the Revolutionary War era, prompting further site investigation. The second investigation using a metal detector did not yield any additional material related to the appropriate time period.

Site 8DU16191 contained 1 prehistoric chert flake and 24 historic artifacts, including whiteware and Albany slipped stoneware, indicating an 1880 to 1920 range of occupation. A structure is located on the 1918 quadrangle map in this location, and additional work was conducted in the area. Portions of a brick structure were encountered but not found to be NR eligible.

Site 8DU16192 and 8DU16196 each yielded 3 prehistoric chert flakes and no historic material. In both cases, the flakes were all recovered from a single test.

Thus only one site contained diagnostic prehistoric material. The presence of minimal historic scatters indicates minor usage of the area in early times, and the single button dating to the 18th century remains a tantalizing clue.

Preliminary Testing

Archaeological site probability zones are delineated on the basis of soil drainage capacity, elevation, and proximity to water, as well as the occurrence of previously recorded sites. On this basis, it can be concluded that areas of better drained soils, especially when in direct juxtaposition with waterways, might be expected to contain archeaeological sites. The proposed City Property is not directly adjacent to, nor does it incorporate, any flowing streams or lakes. In addition, it is dominated by soils that are relatively poorly drained. Elevations are also comparatively low. Thus, the tract does not contain any high site probability zones. Medium probability zones can be delineated within the tract based on soil characteristics, but the lack of a nearby water source would not have been conducive to use by prehistoric populations; therefore the possibility of a significant site being present is minimal. Historic settlers may have used the tract, but historic maps do not indicate the presence of historic land grants or of structures on the

property. In addition, there are no historic structures over 50 years old present there today.

In an effort to further evaluate the archaeological potential of the tract, ESI conducted preliminary fieldwork in January of 2006. The study area was subjected to a walkover, and nineteen shovel tests were excavated in the upland portions of the property. The locations of these tests are shown in Figure 4. While these tests were distributed throughout a large area, findings in each case were similar. The water table was encountered in every case, at between 25 and 50 cm below surface. No cultural material was found.

II. WRIGHT PROPERTY

Project Location

The Wright Property is located east and slightly north of the City Property. It is bounded on the north by the Thomas Creek floodplain and has few other geographical or developed features within it or adjacent to it. An unnamed drainage flows along the western boundary into the Thomas Creek wetlands. The tract is found on the Italia, Florida, USGS quadrangle map (photorevised 1989), in Sections 38 and 40, Township 1 South, Range 25 East.

Background Research

Background research for this tract was identical to that described for the City Property.

Results

The archaeological sites discussed previously in relation to the City Property are within one mile of the Wright Property. They occur to the east and southeast of the study area, as shown on Figure 3.

Testing

The Wright Property was initially investigated by ESI in the spring of 2005. It was part of a 3700-acre tract subjected to a cultural resource assessment study. At that time, shovel tests were dug at 25, 50 and 100-meter intervals in site probability area and a pedestrian survey was carried out throughout the tract. All cleared areas, road cuts, eroded banks and other disturbance were investigated for the presence of cultural material. Thirty-six positive shovel tests resulted, and four archaeological sites were recorded. These were sites 8DU16190, 16191, 16192 and 16196, as discussed earlier in this report. Metal detecting was also carried out at two of the sites. In the fall of 2005, additional investigations at two of these sites were completed by ESI. However, all of these sites are outside of the current project boundaries. No cultural remains were found within what is, for the present purposes, the Wright Property. A clearance/concurrence letter has been received.

Appendix: Regional Cultural History

The following review of regional cultural history will serve as a framework for understanding human land use and settlement in the project vicinity. The study area lies within the East and Central Lake District, as defined by Milanich (1994) with each temporal period based on distinct cultural and technological characteristics recognized by archaeologists. From oldest to most recent, the four temporal periods include Paleoindian, Archaic, Woodland and Mississippian (Table 1).

Paleoindian Period (12,000-8,000 BC)

The earliest evidence for human occupation in Florida dates to the Paleoindian Period, which began approximately 10,000 to 12,000 years BC (Cockrell and Murphy 1978; Clausen et al. 1979).

Radiocarbon dates clustering at 10,000 BC have been generated from sites located in counties along the gulf coast (Cockrell and Murphy 1978; Clausen et al. 1979), but this period is poorly known in northeast Florida. To date, no unequivocal evidence of a Paleoindian presence has been uncovered in the project region. It is possible that sites attributable to the Paleoindian period might exist on the continental shelf beneath ocean waters.

Table 1. Prehistoric Cultural Chronology (adapted from Milanich 1994).

CULTURAL PERIOD	TEMPORAL PLACEMENT
PALEOINDIAN	**12,000 - 8,000 BC**
ARCHAIC	
Early	**8,000 - 5,000 BC**
Middle	**5,000 - 3,000 BC**
Late	**3,000 - 500 BC**
Orange	**2,000 - 500 BC**
WOODLAND	**500 BC - AD 750**
Deptford	
Swift Creek	
St. Johns I	
MISSISSIPPIAN	**AD750 - 1565+**
St. Johns II	
Savannah	
HISTORIC	**A.D. 1565 - Present**

Archaic Period (8,000-500 BC)

The environment of the Archaic Period was characterized by drier climatic conditions and higher sea levels that resulted in the emergence of a mesic oak-hickory forest (Milanich 1994). Archaic period Indians focused their subsistence strategies on the procurement of smaller game, fish, wild plant foods, and in some cases, shellfish, and thus, the period seems to have been characterized by changes in subsistence patterns, tool manufacturing techniques, and the surrounding environment.

The earliest Archaic populations exhibit settlement patterns similar to those used by their predecessors, suggesting strong continuity between Early Archaic and previous Paleoindian life-ways (Milanich 1994:63). It is generally assumed that Early Holocene populations were composed of small, nomadic bands that followed seasonal rounds on the basis of resource abundance, and familiarity with a specific region probably resulted in seasonal reuse of the same locations.
Within the Archaic Tradition, two distinct subsistence systems appear to have evolved. Hunting was emphasized in upland areas, while shellfish collection was relied upon in lowland aquatic and coastal zones. A third type of Archaic site now being investigated in Florida is located in peat bogs. Such sites contain buried human remains in association with a variety of other preserved organic artifacts.

In Florida, Early Archaic (8000-5000 BC) components are generally distinguished through the presence of distinct projectile point types such as Kirk, Bolen, Santa Fe, and Tallahassee (Bullen 1975; Milanich 1994:63). Archaic stone tools are different from those of the earlier Paleoindian era in that, they were more expediently produced than were those of the Paleoindian period.

Past researchers postulated that Middle Archaic (5000-3000 BC) peoples of Florida lived almost exclusively in the interior of the state, with occasional ventures to the Atlantic coast. It has now become clear, however, that preceramic groups were occupying the Atlantic coast on a regular basis during the Middle Archaic period (Russo 1988, 1992; Bond 1992), exploiting aquatic estuarine resources.

A shift in subsistence patterns apparently occurred among the later Archaic people of northeast Florida as they became more dependent upon riverine resources. They continued to migrate seasonally, but large freshwater shell middens began to occur along the banks of the St. Johns. In northeast Florida, the Late Archaic Period is known as the Mount Taylor period (4,000-2,000 BC), and is represented in shell deposits along the St. Johns River and its tributaries as well as in the use of charnel houses and secondary burial practices (Milanich 1994). Coastal shell middens were common and artifacts traded in from distant regions have been found in Late Archaic sites as well. During the Orange Period (2,000 - 1,000 BC), trade became more prevalent and cultivation began to occur. The Late Archaic peoples of northeast Florida possessed the same material culture as their predecessors, with fired-clay pottery occurring around 2000 BC (Milanich 1994). This distinct type, known as Orange pottery, was tempered with plant fibers.

At the end of the Orange Phase, referred to by Bullen (1959, 1971) as the Florida Transitional period (about 1200-500 BC), changes in technology and lifestyle marked the beginning of the

Formative Period. Sand tempered and limestone-tempered pottery began to take the place of fiber tempered pottery. Three different projectile point styles (notched, corner-notched, and stemmed) began to occur in contemporaneous deposits, differentiating this period from earlier culture stages and suggesting population movement and social interaction. Cultural change during this period may have accompanied an increase in the utilization of plant foods and increased sedentism.

Woodland Period (500 BC - AD 750)

The St. Johns tradition that characterized North Florida during early Woodland times is most noticeably manifest in archaeological assemblages by a distinct pottery made of clays containing fossil sponge spicules (Borremans and Shaak 1986). The pottery is very lightweight and chalky to the touch. The St. Johns way of life seems to have developed out of the previous Orange culture, as evidenced by St. Johns chalky wares, and the post-Archaic period witnessed an increase in population and settlement numbers. Cultural traits of the St. Johns period included the construction of burial mounds; a continued reliance on coastal/riverine resources; the appearance of new ceramics styles; and a perceived rise in plant cultivation (Milanich 1994:243-274). The St. Johns tradition is divided into two major periods, St. Johns I and II, which are further subdivided based on observable changes in material culture (Goggin 1952:40; Milanich 1994:247).).

Originating around 500 BC and lasting to AD 600 on the Atlantic coast (Milanich 1971, 1973), the Deptford culture represents a continuation of the coastal way of life. Communities were situated in maritime hammocks near tidal marshes, with subsistence centered essentially on the exploitation of estuarine and maritime forest resources. Deptford groups may have moved inland seasonally to the river valleys to gather plant foods, hunt game, and trade with non-coastal peoples (Milanich 1973). Deptford ceramics, defined regionally as sand- and/or grit-tempered plain, check stamped, and simple stamped wares, are a common occurrence at archaeological sites in Northeast Florida, particularly along the coast (Milanich and Fairbanks 1980; Vernon 1984).

The occurrence of Swift Creek ceramics in Northeast Florida was first recognized by Goggin (1952), who observed them in mounds in association with Hopewellian inspired mortuary items. In Northwest Florida, Early Swift Creek pottery and exotic Hopewell-like artifacts and/or raw materials are part of a ceremonial complex known as Green Point, whereas Late Swift Creek wares are affiliated with the Weeden Island ceremonialism (Sears 1962; Milanich et al. 1984). Interaction networks probably allowed Swift Creek wares and design concepts to spread from the Northwest Gulf coast to the Northeast Florida Atlantic coast. In addition, the recovery of Late Swift Creek pottery types similar to those found along the coast to the north suggests movement of coastal Swift Creek groups from south Georgia to the mouth of the St. Johns River.

Mississippian Period (AD 750-1565+)

The Mississippian period begins around AD 750, with the introduction of check stamping on St. Johns chalky wares in northeast Florida. As with the preceding period, coastal sites are characterized by diffuse shell middens composed mostly of oyster. Large mounds of shell refuse

are common along the Atlantic coast and inland rivers in the St. Johns heartland (Goggin 1952:55), but are conspicuously absent near the river's mouth (Russo 1992:118). Sand burial mounds increase in use, and the rise in the number of village and mound sites implies greater cultural complexity.

Subsistence activities characteristic of the Mississippian period were similar to that of the Woodland period and emphasized the capture of estuarine fish and shellfish along the coast and freshwater species along the river (Milanich and Fairbanks 1980; Milanich 1994; Russo 1992). It has been hypothesized that there was an increased dependence on horticulture in the region at that time (Goggin 1952; Milanich and Fairbanks 1980).

Late prehistoric (ca AD 750-1565) pottery assemblages recovered at sites near the mouth of the St. Johns River include pure St. Johns and Savannah-related ceramic complexes. However, mixed assemblages containing varying quantities of St. Johns Check Stamped, Savannah Cord Marked, and sand-tempered plain wares are more characteristic of late prehistoric sites in the area (Russo 1992:117). The cultural affiliations and relationships between these wares at sites in the St. Mary's region are unclear at this time.

Historical Overview of the Vicinity

Historic accounts and archaeological data have helped identify a number of the indigenous populations throughout the state. The major northeast Florida groups were Timucuans, agriculturists who were descendants of the St. Johns, Alachua, and other known societies. They were particularly dependent on the resources of the St. John River and the coastal lagoons (Goggin 1952). At the time of contact they comprised a loose affiliation of villages with local and regional leaders.

Duval County was first occupied by Europeans in 1564, when the French Huguenots built Fort Caroline on the banks of the St. Johns River. The fort was soon destroyed by the Spanish military, which had set up an encampment to the south. In later years, Franciscan missionaries were sent north and west from St. Augustine to establish Christianity among the Indians. Eventually, a chain of mission settlements extended northward through what is now Duval County to Santa Elena in South Carolina.

The Guale/Yamasee Indians remained loyal to Spanish forces and moved south into the missions of the Timucua area as the British military took control of their Georgian coastal and interior homelands. (Hemmings and Deagan 1973, Milanich and Larson 1977, Milanich and Saunders 1986, Saunders 1992). In 1763, Britain received control of Florida from the Spanish government, and northeast Florida experienced an influx of British settlers. During this period, Jacksonville (known at the time as Cow Town) and northward to the St. Marys River was being settled.

The Second Spanish Period lasted from 1784 to 1821, and was first marked by economic inactivity and later by an economic boom. The Spanish government gave generous land grants, and African slaves were used to produce exports of timber, cotton, rice, and sugar. The Second Spanish Period ended in 1821, when Florida was ceded to the United States. In 1821 Florida became a U.S. Territory and in 1845, a state. The city of Cowford (Jacksonville) flourished near

the mouth of the St. Johns River. It was strategic to the development of agriculture and the timber trade, and developed into a shipping center of large proportion.

History of the Thomas Creek Battle

A brief summary of the battle at Thomas Creek can be found on the state historic marker that has been placed on U.S. 1 where it crosses Thomas Creek. It reads as follows:

> When the American War of Independence began, the new British colonies of East and West Florida remained comparatively free from serious fighting throughout the course of the Revolutionary War. In the summer of 1777, however, Americans initiated an invasion aimed at capturing St. Augustine. The expedition was composed of Continental Army troops and Georgia Militia forces under the command of Lt. Colonel Samuel Elbert. Preparations for the defense of East Florida involved the East Rangers and Indian allies.
>
> On May 17, 1777, a portion of the invading American expedition was attacked by a detachment of British Regulars under Colonel Thomas Brown and Indians. The battle took place at a site on Thomas Creek south of its confluence with the Nassau River. After suffering heavy casualties, the Americans, already discouraged by lack of supplies and the heat, began their retreat from Florida. Only one more unsuccessful invasion of East Florida occurred during the remaining years of the American Revolution.

The site of the Battle of Thomas Creek is important to Florida history because it was one of the only Revolutionary War battles in northeast Florida. The Thomas Creek engagement and its location have been the subject of considerable speculation by amateur and professional historians, since military records apparently do not provide details or maps. Charles E. Bennett thought that the site should be west of and adjacent to I-95 where it intersects the Nassau River. He based his theory on the fact that General Prevost had cited that few Americans could have escaped without their horses, because they had a "deep river to pass after they were defeated (Stowell 1996)". Local historians James Robertson and Dena Snodgrass suggested that the battle occurred farther west, near the King's Road and the headwaters of Thomas Creek. Contemporary accounts were limited and imprecise (Stowell 1996).

According to a report prepared by Daniel Stowell for the National Park Service in 1996, "Colonel Baker's force of 150-180 horsemen had camped at the site for only one night when they were attacked by the East Florida Rangers and their Indian allies. A substantial number of Baker's men fled immediately without firing, and the rest made only a brief stand. The entire battle was over in only a few minutes and involved no more than 400 men on both sides." A more detailed account also implies a short battle, but indicates that the intruders from Georgia may have been encamped for several days before being discovered by the British (Cashin 1999).

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FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Ms. Marsha Chance
Environmental Services, Inc.
7720 Financial Way Suite 100
Jacksonville, Florida 32256

August 24, 2005

Re: DHR Project File No. 2005-4952B / Revised Per Your Request of August 23, 2005
An Intensive Cultural Resource Assessment Survey of the Thomas Creek Preserve Property, Duval County, Florida

Dear Ms. Chance:

Our office received and reviewed the above referenced survey report in accordance with procedures outlined in Chapters 267 and 373 of the *Florida Statutes*, for possible adverse impact to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*.

In February and March of 2005, Environmental Services, Inc. (ESI) conducted an archaeological and historical survey of the Thomas Creek Preserve property on behalf of Montgomery Land Company. One previously recorded archaeological site and four previously unrecorded archaeological sites were identified within the project area during the investigation.

The Thomas Creek Battlefield site (8DU161), a revolutionary era battlefield with a general vicinity plot, was listed as existing within the project area. ESI was unable to relocate the portion of 8DU161 during investigation of the project area. ESI recommended that no further work be conducted within the area presently recorded as site 8DU161.

The Thomas Creek A site (8DU16190), a multicomponent archaeological site with a Swift Creek occupation as well as artifacts dating to the Revolutionary War time period, was identified within the project area. Due to further research potential and the possibility of intact features or cultural strata, it is the opinion of ESI that 8DU16190 appears potentially eligible for listing in the *NRHP*. ESI recommends that further work be conducted to further evaluate the eligibility of 8DU16190. ESI notes that the identification of the Thomas Creek Battlefield has the potential to be important on the national scale, as well as locally and regionally. ESI recommends that the archaeological evaluation be accompanied by comprehensive historical research, so that all relevant information on the site appears in a single document.

The Thomas Creek K site (8DU16191), a multicomponent archaeological site, was identified within the project area. Due to further research potential and intact features or cultural strata, it is the opinion of ESI that 8DU16191 appears potentially eligible for listing in the *NRHP*. ESI recommends that further work be conducted to further evaluate the eligibility of 8DU16191.

The Thomas Creek O site (8DU16192), a low density lithic scatter, was identified within the project area. Due to low research potential and the lack of intact features or cultural strata, it is the opinion of ESI that 8DU16192 does not appear eligible for listing in the *NRHP*. ESI recommends no further work be conducted on 8DU16192.

The Thomas Creek A South site (8DU16196), a low-density lithic scatter, was identified within the project area. Due to low research potential and the lack of intact features or cultural strata, it is the opinion of ESI that 8DU16196 does not appear eligible for listing in the *NRHP*. ESI recommends no further work be conducted on 8DU16196.

Based on the information provided, our office concurs with these determinations and finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*. Please note that in future reports a Site Plan & USGS Map (1:3600 versus 1:24000 for Survey Log Sheet) is a required attachment for each archaeological site form.

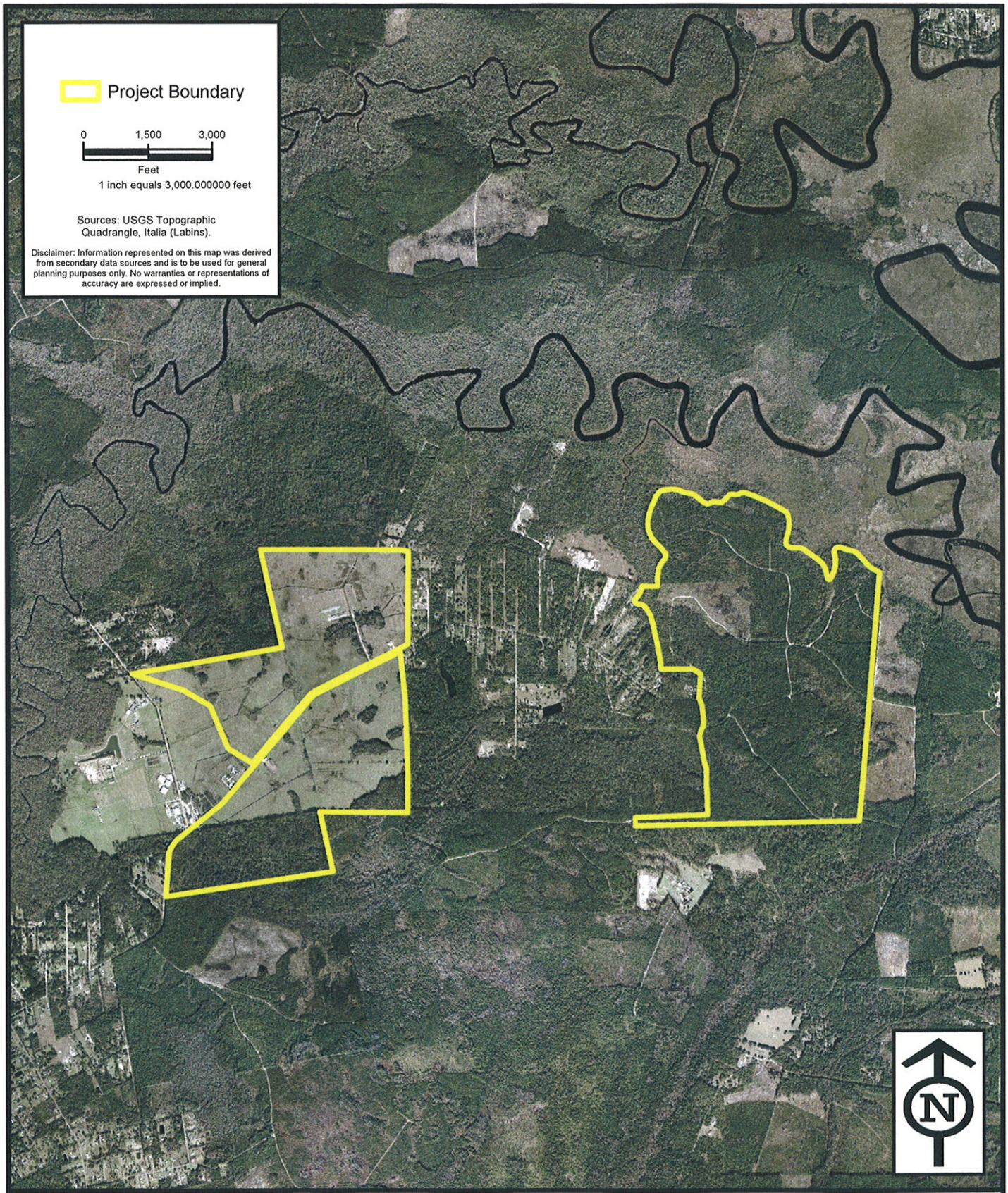
In addition, we noted that previously recorded site 8DU14668, the Dylan James Allen Site, located northwest of 8DU16190, is also recorded within the property boundaries. This primarily historic period site was determined not eligible for listing in the *NRHP* in 2002 when reviewed by this office.

If you have any questions concerning our comments, please contact Laura Kammerer, Historic Preservationist Supervisor, by phone at (850) 245-6333. Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for Frederick P. Gaske, Director, and
State Historic Preservation Officer



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7220 Financial Way, Suite 100
Jacksonville, Florida 32256
(904) 470-2200
(904) 470-2112 Fax
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www.environmentalservicesinc.com

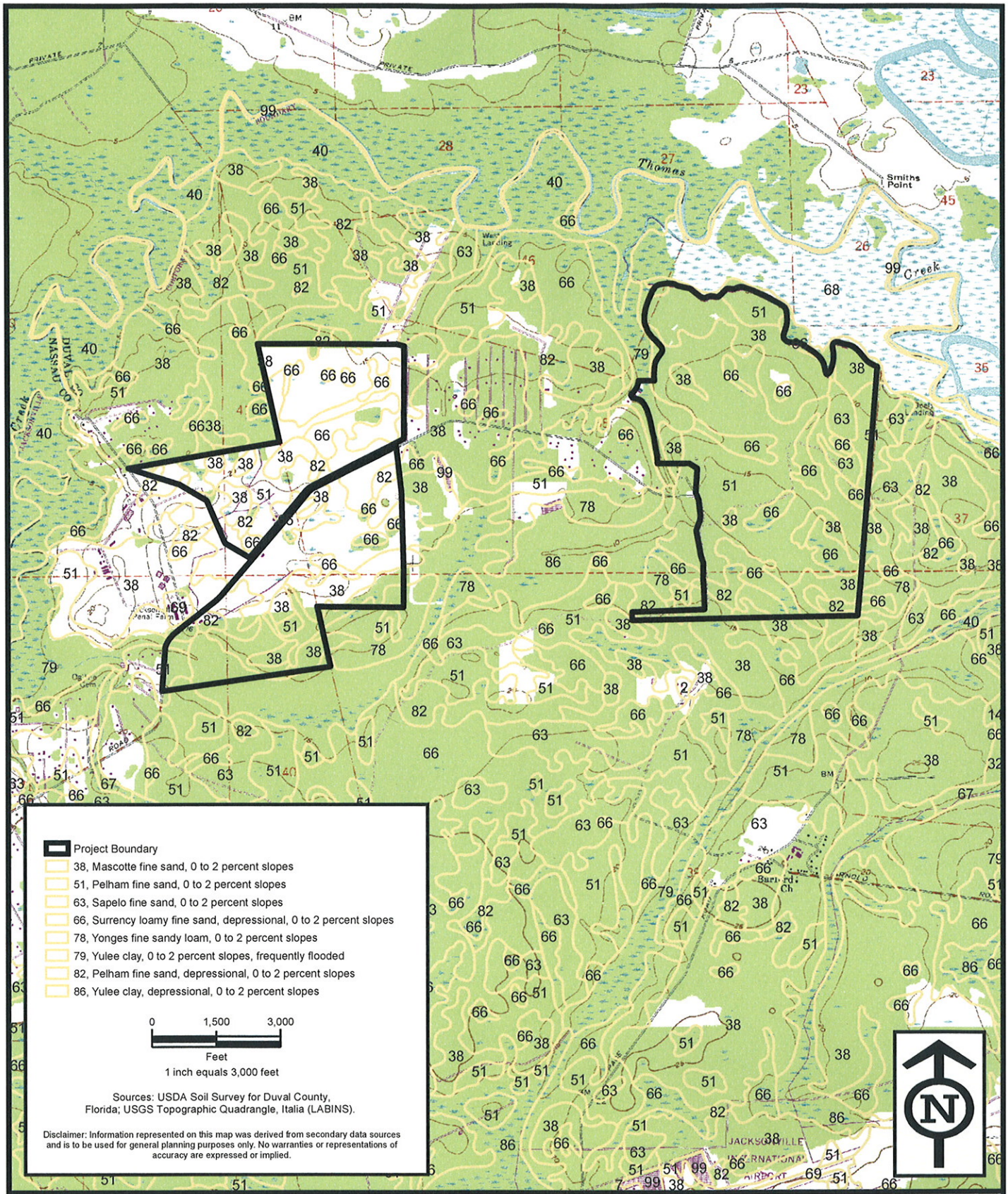
Project Location Map

Earth Tech / V.A. Cemetary

Jacksonville, Duval County, Florida

Project:	EJ05270.00
Date:	January 2006
Drwn/Chkd:	JB / GH
Figure:	1

File: Q:\2005_Projects\EJ05270.00\Maps\arch\location.mxd Printed: 01/26/2006 4:28 pm



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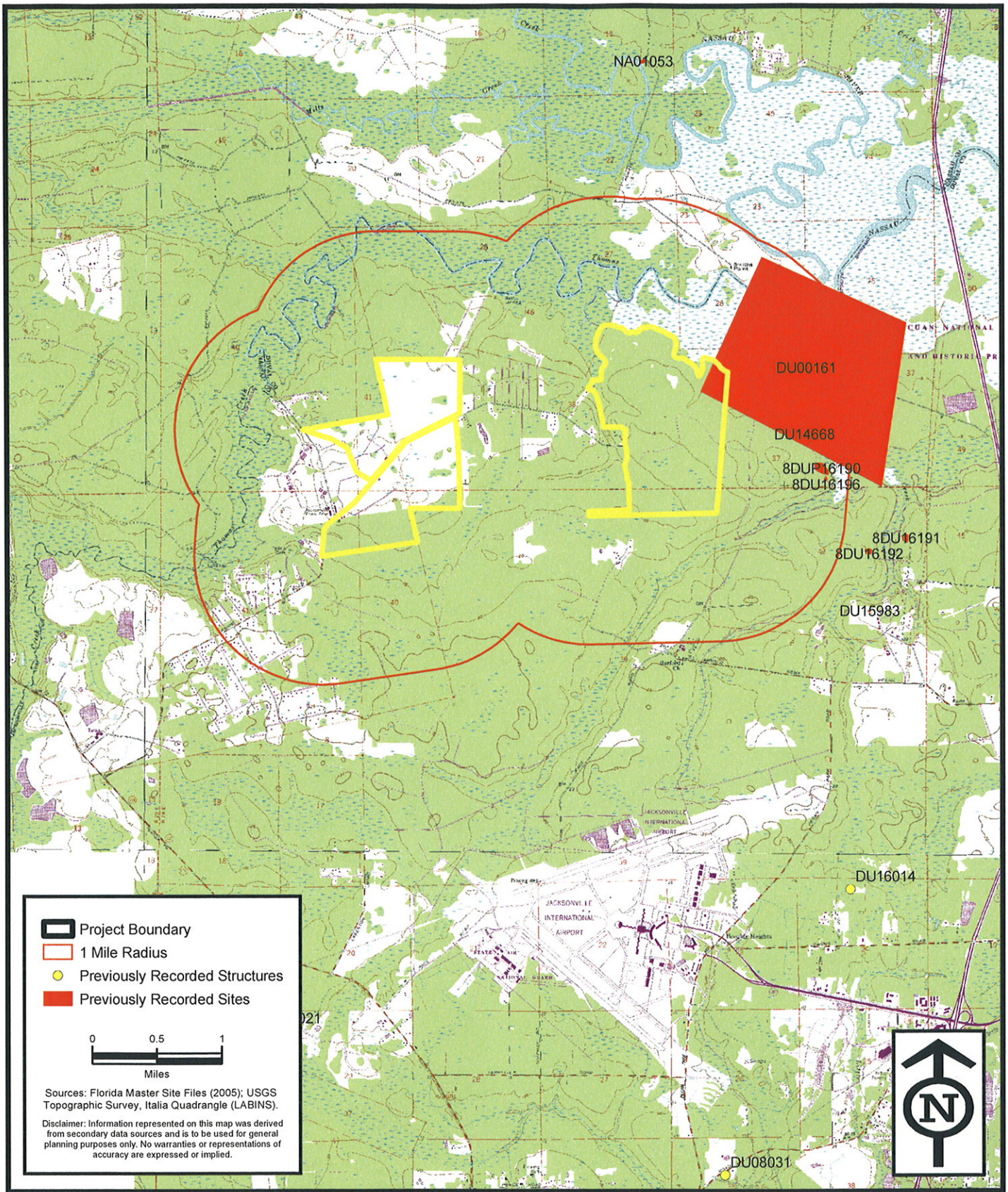
Soils Map

Earth Tech / V.A. Cemetary

Jacksonville, Duval County, Florida

Project:	EJ05270.00
Date:	January 2006
Drwn/Chkd:	JB / GH
Figure:	2

File: Q:\2005_Projects\EJ05270.00\Maps\arch\soils.mxd Printed: 01/27/2006 9:36 am



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Previously Recorded Cultural Resources

Earth Tech / V.A. Cemetary

Jacksonville, Duval County, Florida

Project:	EJ05270.00
Date:	January 2006
Drwn/Chkd:	JB / GH
Figure:	3

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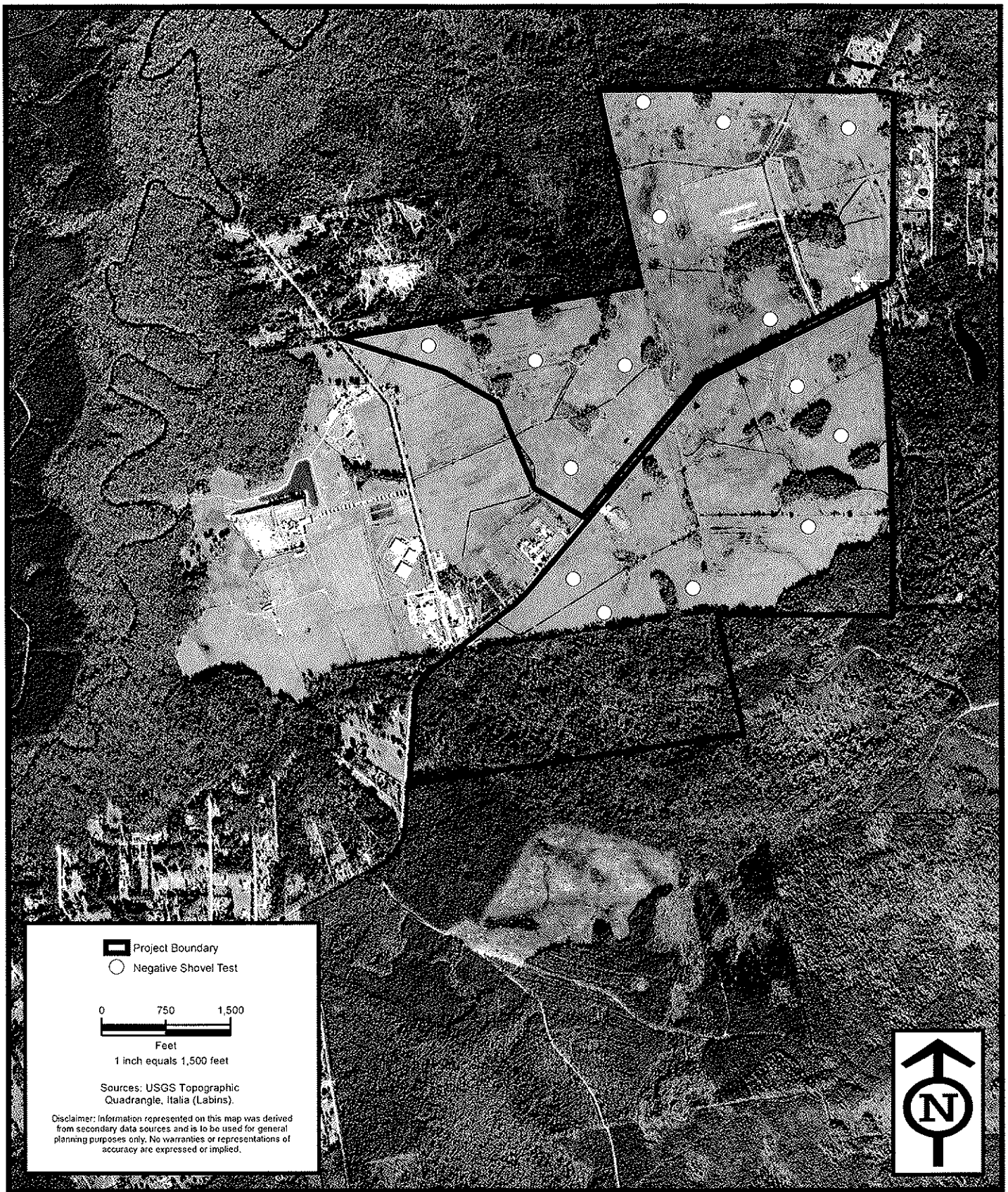

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Testing Results

Earth Tech / V.A. Cemetary

Jacksonville, Duval County, Florida

Project:	EJ05270.00
Date:	January 2006
Drwn/Chkd:	JB / GH
Figure:	4

File: Q:\2005_Projects\EJ05270.00\Maps\arch\shovel_test.mxd Printed: 01/26/2006 9:44 am

APPENDIX C

Floodplain Map

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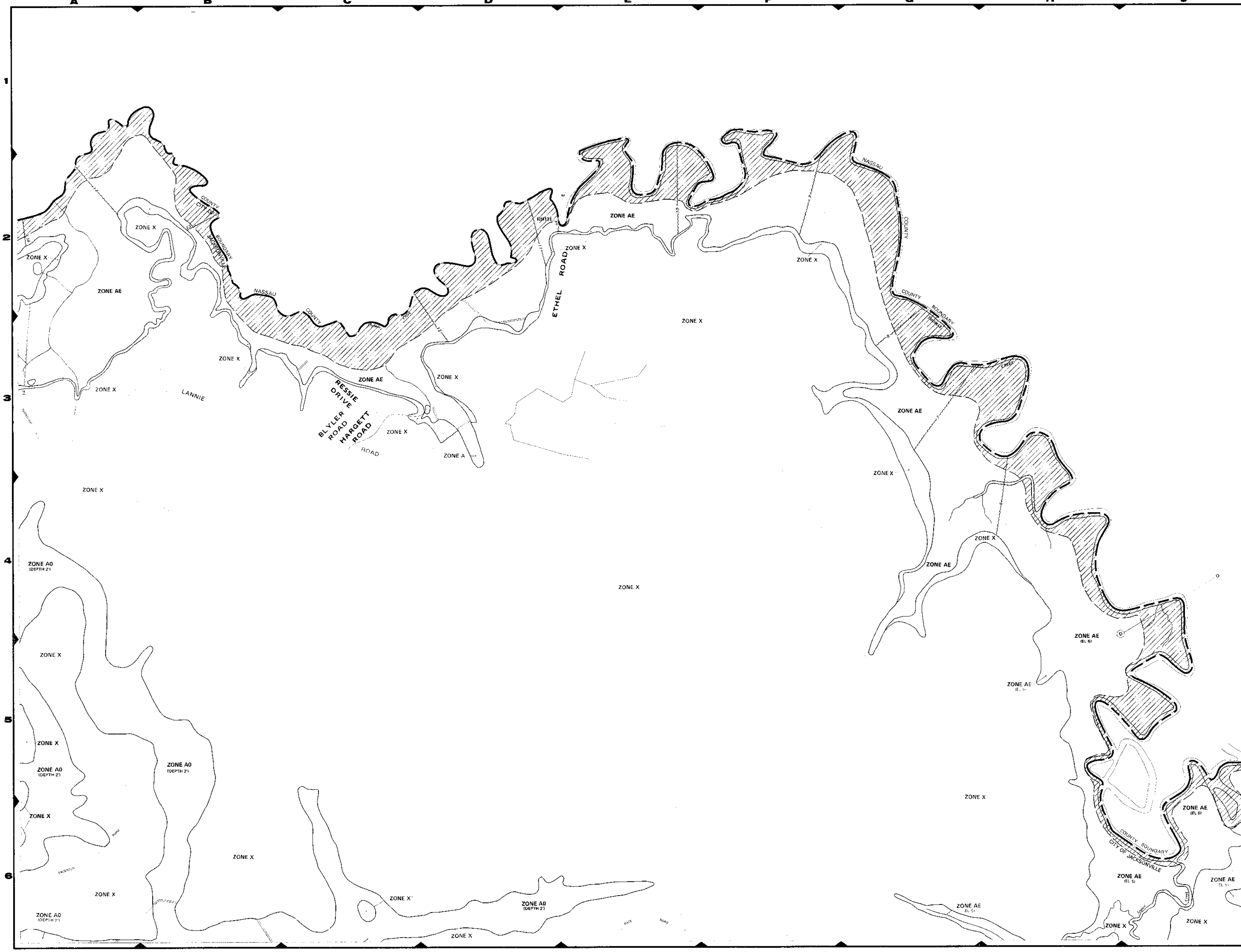

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A	No base flood elevations determined.
ZONE AE	Base flood elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE A99	To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
ZONE V	Coastal flood with velocity hazard (wave action); no base flood elevations determined.
ZONE VE	Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X	Areas determined to be outside 500-year flood plain.
ZONE D	Areas in which flood hazards are undetermined.

	Flood Boundary
	Floodway Boundary
	Zone D Boundary
	Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
513	Base Flood Elevation Line; Elevation in Feet*
(D)—(D)	Cross Section Line
(EL 987)	Base Flood Elevation in Feet Where Uniform Within Zone*
RM7 x	Elevation Reference Mark
• M1.5	River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Certain areas not in the Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.

Coastal base flood elevations apply only landward of the shoreline.

Elevation reference marks are described in the Flood Insurance Study Report.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For adjoining panels, see separately printed Map Index.

MAP REPOSITORY

[illegible]

INITIAL IDENTIFICATION
JANUARY 31, 1975

FLOOD HAZARD BOUNDARY MAP REVISIONS
AUGUST 20, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE
DECEMBER 1, 1977

FLOOD INSURANCE RATE MAP REVISIONS

[illegible]

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
JACKSONVILLE,
FLORIDA
DUVAL COUNTY

PANEL 60 OF 310
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
120077 0060 E

MAP REVISED:
AUGUST 15, 1989

Federal Emergency Management Agency

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APPENDIX D

Additional Supporting Information

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Comparison of Site Characteristics
Jacksonville, Florida Area National Cemetery

	Site COUNTY	Acres	Distance In miles*	Access	Price	Attributes	Suitability
1	Rayonier site (Timber Company) **BRADFORD**	500	50	5-mi. south of Starke on Hwy 100	$2500 / acre	Rural, Slash Pine timber production; flat topo, sandy soils; power lines. Power nearby, otherwise only rural services. No evidence of prior development; no structures.	Substantial travel distance from center of Jacksonville population
2	Rayonier site (Timber Company) **BRADFORD**	500	40	10-mi. north of Starke on US 301	$2500 / acre	Rural, Slash Pine timber production; flat topo, sandy soils. Power nearby, otherwise only rural services. No evidence of prior development; no structures.	Substantial travel distance from center of Jacksonville population
3	Wright Trust -- Wolfbay Tract (Privately owned) **DUVAL**	2200	**19**	North of Airport, off of Kite Rd	$10,000 / ac	Mostly wooded pine plantation, sandy soils. Good regional location & near Pecan Park interchange, but local access is not adequate. Parks, conservation areas, & recreation planned. Could be wetlands; study in progress.	Good appearance; Good potential access from I-95; Short travel distance.
4	Thomas Creek Preserve (City of Jacksonville) **DUVAL**	600+	**19**	North of Airport; Route 115 Exit off of I-295, north to Lannie Road.	City has not quoted an asking price	Cleared, open land; mostly pasture; flat topo. Rural character; near correctional facility. City willing to consider enhancing immediate access to site. Good regional location & access. Sandy soils; wetlands not visible, but not defined. Parks, conservation areas, & recreation planned.	Good appearance; Good access from I-295; Short travel distance.
5	Plum Creek site (Timber Co.) **BAKER**	300-500	43	6-miles off I-10 on US 90 heading towards Lake City	Similar to Bradford Co. sites.	Pine plantation. State Correctional facility on east side; Civil War Battlefield State Park & Osceola National Forest to the north. Power nearby, otherwise only rural services. No evidence of development; no structures.	Substantial travel distance from center of Jacksonville population
6	Spencer's Park (Privately owned) **CLAY**	600+	27	Route 218, 3-miles west of Route 21	Asking price not defined.	Heavily wooded with mixed timber; could have wetlands. Could not view interior. All utilities nearby. Awkward small corner frontage on SR 218. Unappealing neighboring uses.	Marginal appearance & Marginal immediate access

7	Arahatchee LLC (Private) **CLAY**	485 +/-	30	Intersection of Rt. 16 & Rt. 21. Future beltway planned nearby.	Asking price not defined.	Mostly open with scrub brush at corner; partially wooded in interior. Fairly flat. Good corner frontage, access & visibility. Power available on road frontage, other utilities not evident.	Good immediate access, but moderate character.
8	Reinhold (Private) **CLAY**	600 +/-	30	Route 16 near Penny Farms. Future beltway planned nearby.	Asking price not defined.	Heavily wooded with large deciduous trees. Could have wetlands, could not view interior. Power available on road frontage, other utilities not evident.	Marginal to Good
9	Wachovia (Bank Trust) **CLAY & BRADFORD**	1367	32	US Hwy 301 as it crosses into Bradford County	Asking price not defined.	If access is required off of Hwy 301 -- the very heavy traffic, including a great number of trucks—could be difficult to hazardous for corteges. Other trust sites may be available, but no information provided.	Marginal to Good
10	Newco Distributors **PUTNAM**	500 +/-	46	1214 N. Hwy 17, Palatka	Owner would not quote asking price.	Many wet areas; next to railroad; immediate access is limited; junk on site. No permanent structures. Utilities nearby.	Could be problematic site, plus substantial travel distance
11	Plum Creek (Timber Co.) **PUTNAM**	2239	60	6-miles west of Palatka on SR100, north side	Similar to Bradford Co. sites.	Pine plantation; some wet areas. Power nearby, otherwise only rural services. No evidence of prior development; no structures.	Substantial travel distance from center of Jacksonville population
12	Palm Coast site (Developer) **FLAGLER**	450 +/-	56	Fronts on US Hwy 1, SW of FL Agriculture Museum	$7 million	Good upland (high & dry) acreage; part of large planned unit development / golf course community. Near Ag Museum. Hulett Creek runs through site. All utilities will eventually be available nearby.	Substantial travel distance from center of Jacksonville population
13	Rayonier, SR206 site (Timber Co.) **ST. JOHNS**	500 (two parcels avail.)	49	Just east of I-95 & fronts on south side of SR 206	$15,000 / ac	High percentage of wetlands – low ground; reforested after extensive burn in 1996. No utilities. No evidence of prior development; no structures.	Substantial travel distance from center of Jacksonville population
14	Rayonier site, Pellicer Crk (Timber Co.) **ST. JOHNS**	600	55	West of I-95 & US Hwy1, fronting on south side of SR 206, near Flagler Co. line	$15,000 – 25,000 / ac (may bargain on price per Comp. Plan)	High ground, sloping down to nice creek & hardwood woodland band – beautiful live oaks; near 100-yr old Pellicer Creek Cemetery. No utilities. No evidence of prior development; no structures.	Substantial travel distance from center of Jacksonville population

*Distance from intersection of I-95 & I-10

Note:

A parcel of the Preservation Project Jacksonville located to the south of the City Site was originally included in the site. Following further consultation with the City of Jacksonville, this parcel was removed from consideration. It is still shown on some of the maps and figures prepared in the early stages of the impact analysis, such as Figure 6 of this appendix. However, the parcel is not included in the City Site as defined in the main body of the EA and is not considered for acquisition and development by DVA.

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Preliminary Wetlands Evaluation (Sites 3.1, 3.2, 4.1, and 4.2)

The amount of wetlands present at each of the four sites shown in Table 1 was estimated based on:

- Review of National Wetlands Inventory Map
- Review of City of Jacksonville's GIS
- Review of regular and infrared aerial photographs
- Review of Soil Conversation Service soil types
- Partial field-checking by Earth Tech's natural resources specialists during a second site visit (May 16-19, 2005)

No formal wetlands delineation was conducted at this stage; however, the relative extent of the wetlands on each site shown in Table 1 can be considered a close approximation for the purpose at hand. Our field-checking of wetlands on the two Wright sites on May 16-19 confirmed that wetlands had been professionally delineated on both sites. We checked the extent of the delineated wetlands against the city's GIS mapping and infrared mapping and combined the information thus obtain to produce Table 1 and Figures 6, 7, and 8.

Our results show that Wright Southwest performs extremely poorly on the wetlands criterion. Not only does this site contain the highest proportion of wetlands of all four sites; these wetlands are distributed in a manner that is likely to make it difficult to work around them to minimize impacts; consequently, mitigation costs are likely to be significantly higher for this site than for the other sites.

Wright Northeast also has a high proportion of wetlands; however, the size of the site and distribution of the wetland areas would make it easier to avoid developing wetlands and work around them; mitigation costs would very likely be substantially less than for Wright Southwest.

The two City Sites have the lowest estimated amount of wetlands, although it should be noted that the estimates are likely to be on the low side because of the presence of mowed areas and ditches that, upon delineation, may be determined to qualify as wetlands under either federal or state criteria.

Table 1

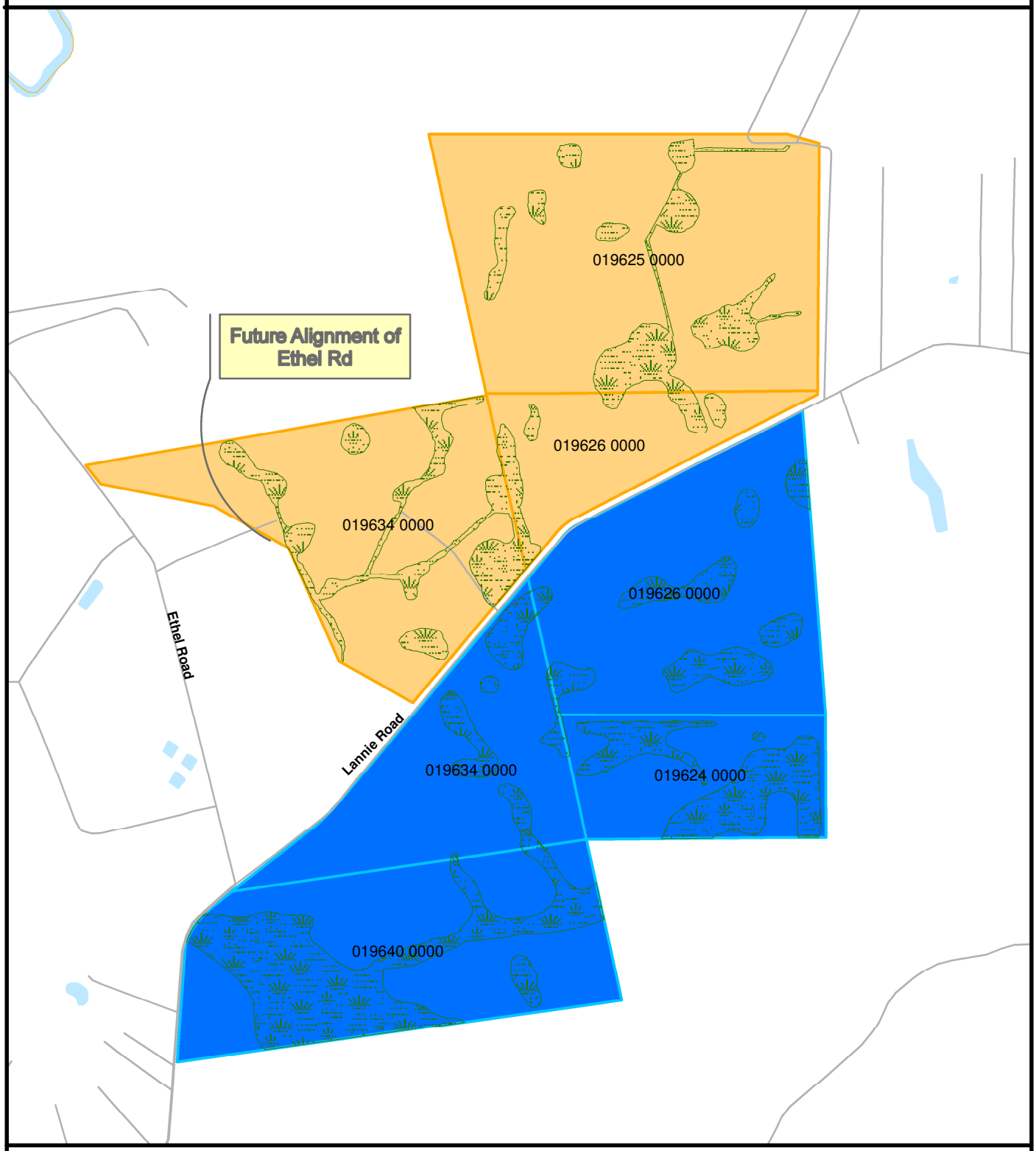
Soils

Map Unit				City Site I		City Site II		Wright NE		Wright SW	
Code	Map Unit Name	Hydric	Non-hydric	Total acres	Hydric acres	Total acres	Hydric acres	Total acres	Hydric acres	Total acres	Hydric acres
38	Mascotte fine sand, 0 to 2 % slope	4%	95%	142.8	5.712	126.2	5.048	204.5	8.18	134.2	5.368
51	Pelham fine sand, 0 to 2 % slope	40%	60%	112.7	45.08	136.3	54.52	359.2	143.68	210.1	84.04
63	Sapelo fine sand, 0 to 2 % slope	4%	96%			2.7	0.108	26.7	1.068	68	2.72
66	Surrency loamy fine sand, depressional	100%	0%	61	61	30.4	30.4	119.7	119.7	58.6	58.6
78	Yonges Fine Sandy	95%	5%			7.9	7.505	0.05	0.0475		
79	Yulee Clay	100%	0%			2.8	2.8	23.5	23.5		
81	Stockade Fine Sandy	100%	0%							24.2	24.2
82	Pelham fine sand, depressional	95%	5%	11.9	11.305	12	11.4	20.2	19.19	11	10.45
86	Yulee Clay, depressional	100%	0%			56.5	56.5			2	2
	Site Total (acres)			328.4		374.8		753.85		508.1	
	Hydric Soils (acres)				123.1		168.3		315.4		187.4
	Percent Hydric Soil			37.48%		44.90%		41.83%		36.88%	

Preliminary Wetland Estimate

	Total acres	Wetland	Total acres	Wetland	Total acres	Wetland	Total acres	Wetland
	328.4	49.84	374.8	97.18	753.85	215.1	508.1	242.4
	15.18%		25.93%		28.53%		47.71%	

ESTIMATED WETLANDS - City Sites



Proposed Sites

- City Site I
- City Site II
- Estimated Wetlands

925 462.5 0 925 1,850 Feet

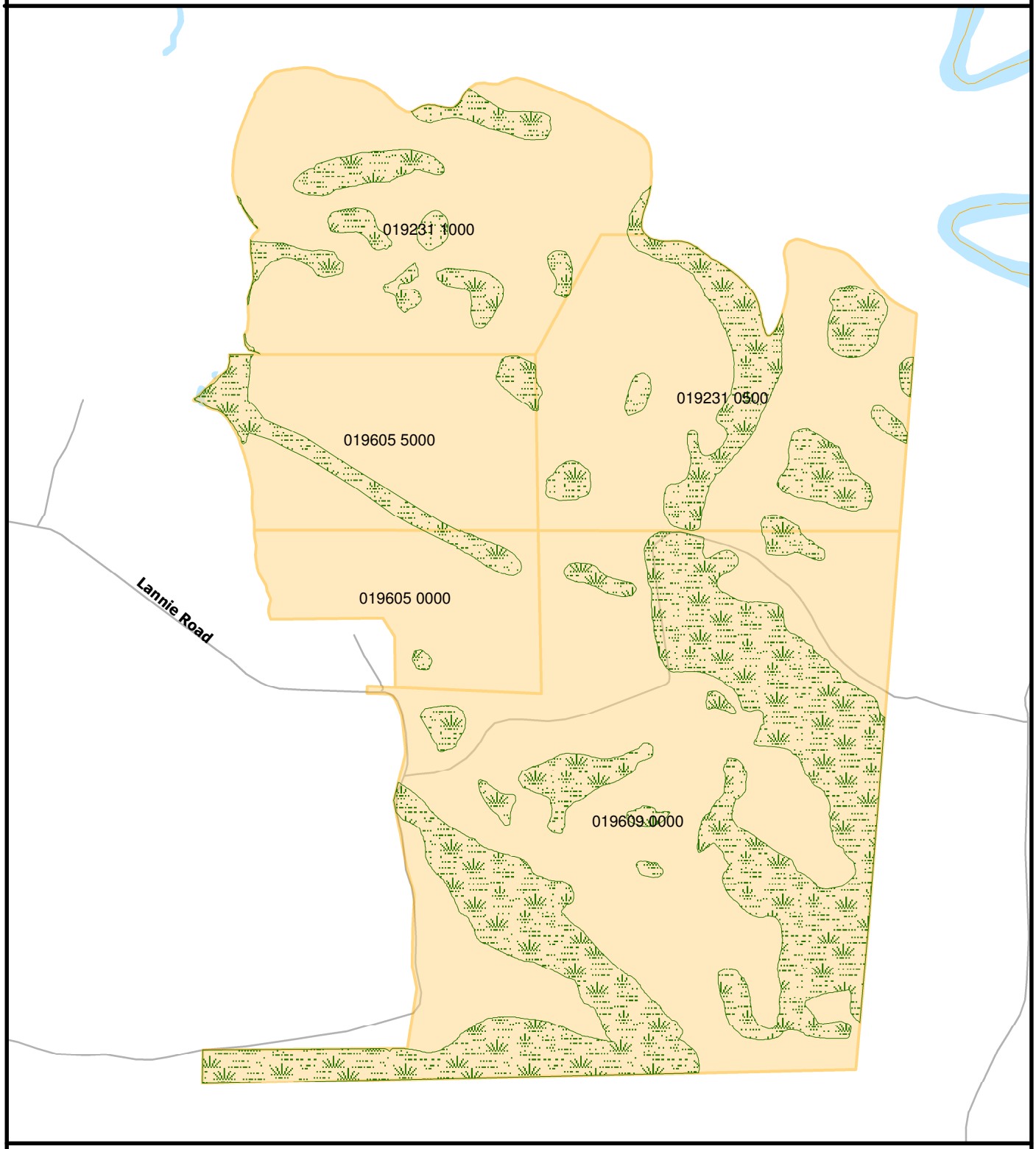
250 125 0 250 500 Meters

N

Source: City of Jacksonville, 1995. Earth Tech Site Survey 2005

Figure 6

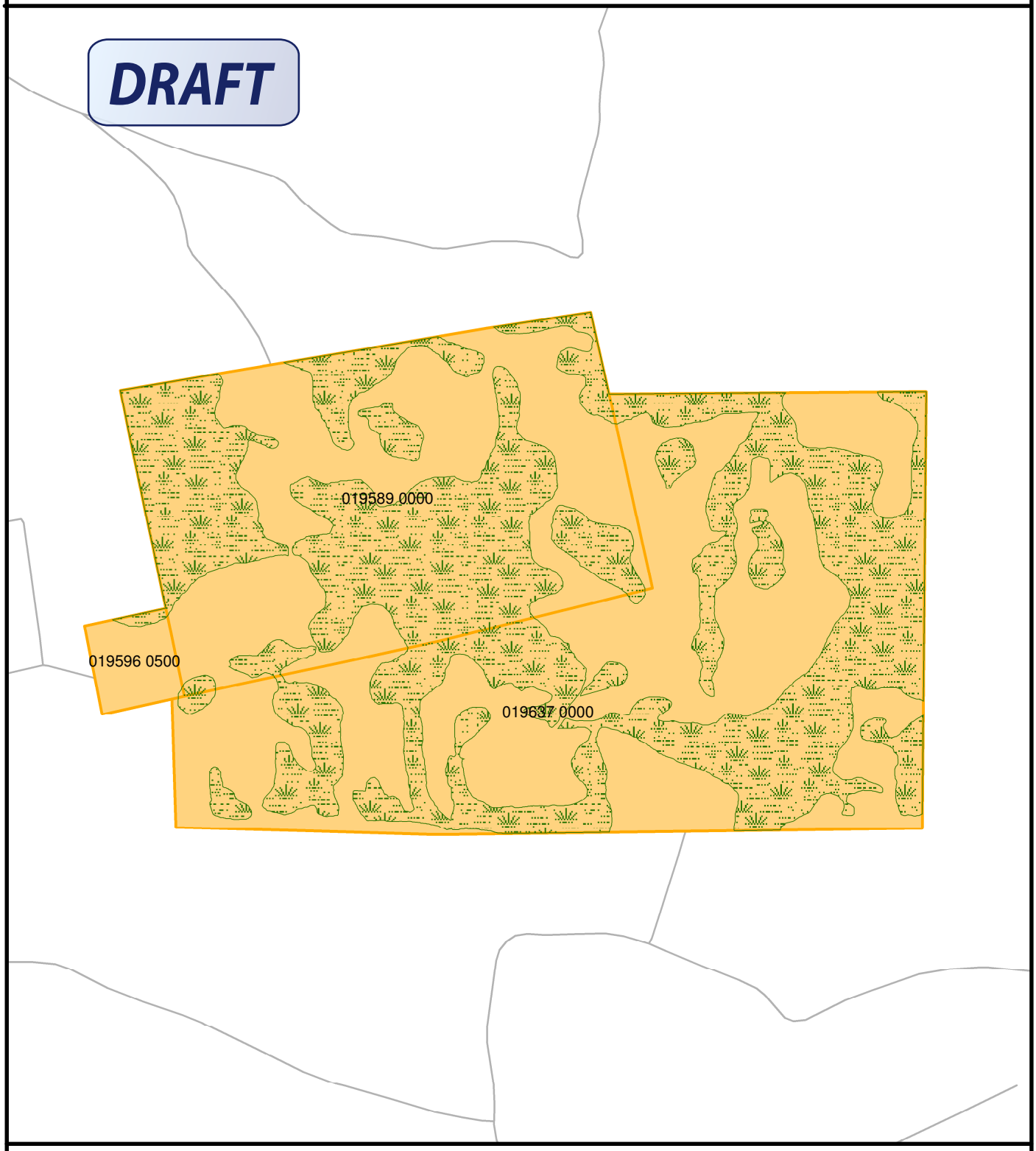
ESTIMATED WETLANDS - Wright Northeast Site



Source: City of Jacksonville, 1995. Earth Tech 2005

Figure 7

ESTIMATED WETLANDS - Wright Southwest Site



Source: City of Jacksonville, 1995. Earth Tech 2005

Figure 8

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APPENDIX E

Agency and Public Review of the EA

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Agency and Public Review of the EA

The Department of Veterans Affairs (DVA) made the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) available for government agency and public review from March 7, 2006 through April 7, 2006.

E.1 Distribution of the EA and FONSI

E.1.1 Notice of Availability

A Notice of Availability was published in the Florida Times-Union on March 7, 2006 with information on how to obtain the documents and where to send comments (a copy of the notice is included in this appendix).

E.1.2 Online Publication

The EA and FONSI were made available for download from the following location:
http://www.cem.va.gov/whatsnew.htm

E.1.3 Public Libraries

Printed copies of the EA and FONSI were deposited in three local public libraries:

Main Library
303 North Laura Street
Jacksonville, FL 32202

Highlands Regional Library
1826 Dunn Ave
Jacksonville, FL 32218

Bradham Brooks Northwest Regional Library
1755 Edgewood Ave W
Jacksonville, FL 32208

E.1.4 Mailings

Individual copies of the EA and FONSI were mailed to the following federal, state, and local agencies, groups, and individuals:

Federal Agencies

Mr. Dave Hankla, Field Supervisor
U. S. Fish & Wildlife Service
North Florida Field Office
6620 Southpoint Drive South, Suite 310
Jacksonville, FL 32216-0958

Mr. Michael Ornella
US Army Corps of Engineers – Jacksonville District
Program and Project Management Division
701 San Marco Boulevard
Jacksonville, FL 32207

Ms. Marie Burns, Chief
Environmental Branch
US Army Corps of Engineers – Jacksonville District
701 San Marco Boulevard
Jacksonville, FL 32207

Ms. Kelly Unger
Biologist
US Army Corps of Engineers – Jacksonville District
PO Box 4970
Jacksonville, FL 32232-0019

Mr. Edward Wright
Environmental Liaison
USDA - National Resources Conservation Service
2614 NW 43rd Street
Gainesville, FL 32606-6611

The Hon. Corrine Brown
US House of Representatives
2444 Rayburn House Office Building
Washington, DC 20515

The Hon. Ander Crenshaw
US House of Representatives
127 Cannon House Office Building,
Washington, DC 20515

The Hon. Cliff Stearns
US House of Representatives
2370 Rayburn House Office Building
Washington, D.C. 20515

Ms. Barbara Goodman, Superintendent
Timucuan Ecological and Historic Preserve
12713 Fort Caroline Rd
Jacksonville, FL 32225

State Agencies

Ms. Lauren P. Milligan (12 copies)
Environmental Consultant
Florida State Clearing House
Department of Environmental Protection
3900 Commonwealth Blvd. MS 47
Tallahassee, Florida 32399-3000

Mr. David Miracle, P.E., Director
St. Johns River Water Management District
Jacksonville Service Center
7775 Baymeadows Way, Suite 102
Jacksonville, FL 32256

Mr. Frederick Gaske, Director
Division of Historical Resources
500 S. Bronough Street
Tallahassee, Florida 32399-0250

Mr. Rocky McPherson
Executive Director
Florida Department of Veterans' Affairs
1607 St. James CT.
Tallahassee, FL., 32308

Mr. Charley Price
External Affairs Director
Florida Department of Veterans' Affairs
1607 St. James CT.
Tallahassee, FL., 32308

Mr. Joe A. Quetone - Executive Director
Florida Governors' Council on Indian Affairs, Inc.
1341 Cross Creek Circle
Tallahassee, Florida 32301

Director
SHOP Facility
4501 Lannie Road
Jacksonville, FL 32218

Local Agencies

Mr. John Crofts, AICP
Deputy Director - Planning and Development Department
Florida Theatre Building, Suite 700
128 East Forsyth Street
Jacksonville, FL 32202

Mr. Ron Stine
Assistant Planning Manager
Department of Parks, Recreation, and Entertainment
Division of Planning, Research, and Grants
851 North Market Street
Jacksonville, FL 32202

Sheriff John H. Rutherford
Police Memorial Building
501 E. Bay Street, Room 204
Jacksonville, FL 32202

Director
Montgomery Correctional Center
4727 Lannie Rd.
Jacksonville, FL 32218

Mr. Brad Thoburn
Director of State and Federal Affairs
City Hall at St. James
117 West Duval Street, Suite 400
Jacksonville, FL 32202

Mr. John Culbreth, Director
Department of Parks, Recreation, and Entertainment
851 North Market St.
Jacksonville, FL 32202

Mr. Ebenezer Gujjarlapudi, P.E., Chief
Environmental Quality Division
117 West Duval Street, Suite 225
Jacksonville, FL 32202

Mr. Alan Mosley, P.E. – Director
Department of Public Works
220 E. Bay Street, Rm 1207
Jacksonville, Florida 32202

Mr. Walter M. Lee III, President
Jacksonville Chamber of Commerce
3 Independent Dr.
Jacksonville, FL 32202

Government Relations
JEA
21 West Church Street
Jacksonville, Florida 32202

The Hon. Warren Alvarez
City Council Member – District 11
117 W. Duval Street
City Hall, Suite 425
Jacksonville, FL 32202

Ms. Kelley Boree
Preservation Project Jacksonville
851 N. Market St.
Jacksonville, FL 32202

Private Groups and Individuals

Mr. William Wright
2591 Arnold Road
Jacksonville, FL 32218

Mr. Steven Davis, ASLA
England- Thims & Miller, Inc.
14775 St. Augustine Road
Jacksonville, FL 32258

Mr. Dale V. Traylor, PSM
Survey Manager
Bowyer-Singleton & Associates, Inc.
200 Business Park Circle, Suite 113
St. Augustine, FL 32905

Gateway R/C Inc.
c/o Mr. Bob Davis
2730 Hidden Village Drive
Jacksonville, FL 32216

E.2 Comments

DVA received a total of 60 comments by letter, email, or telephone.

Three public agencies commented:

- The Jacksonville Department of Public Works found that topography indicates no floodplain or site drainage issues beyond standard design criteria will be associated with either of the sites considered.
- The Jacksonville Sheriff's Office expressed concern about its ability to expand and upgrade the Montgomery Correction Facility.
- Through the State Clearinghouse, the State of Florida concurred that the project is consistent with its Coastal Zone Management Program, but indicated that continued concurrence is contingent upon successful resolution of the issues during the permitting process. The St. Johns River Water Management District emphasized the requirement to obtain an Environmental Resource Permit.

DVA prepared and sent formal responses to all three agencies. Copies of the letters and responses are included in this appendix.

In addition, DVA received 57 comments from members of the public. These comments are summarized in the table below, with DVA's responses.

Number of Similar Comments	Summary of Comments	DVA's Response
25 (mostly from members of the Gateway Radio Control Club)	Object to any initiative that would jeopardize the Radio Control facility currently located on the City Site, though they support the cemetery project in general.	Potential impacts to and from the Radio Control facility are addressed in the following sections of the EA: 4.1.1.3; 4.3.3; 4.3.5; 4.5.1.5; 4.7.4, 4.7.5; and 4.12.3. The facility and the land it stands on are currently in the ownership of the City of Jacksonville. As indicated in the EA, if DVA acquires the parcel for the proposed cemetery, the City will consult with the facility's current user to plan for an adequate replacement.
14	Object to the City Site alternatives due to shallow depth of groundwater.	DVA is aware of the high water table at the City Site and Wright Site. DVA's approach to mitigate this constraint is described in Section 4.9 of the EA. DVA would elevate the burial areas with fill to minimize any risk of burial flooding.
8	Ask questions regarding eligibility for burial, opening date, and how to make a reservation.	These comments are not pertinent to the environmental impacts of constructing and operating the cemetery. Whenever possible, DVA has provided these commenters with the specific information they requested.
3	Support the reconsideration of sites in Bradford County.	DVA's site selection process is described in Chapter 2 of the EA. DVA originally considered two locations in Bradford County and eliminated them due to excessive distance from the Focal Point.
3	Support the Cemetery in general.	DVA notes and appreciates the support.
2	Oppose the cemetery in general.	In 2003, Congress passed the National Cemetery Expansion Act (Public Law 108-109), which mandates that DVA construct a new national cemetery in the Jacksonville, FL area. DVA must comply with the Act.
1	Expresses concern about noise generated by the Duval County Police gun range nearby.	The gun range is part of the training facility located west of Ethel Road. It is located more than 2,000 feet from the closest portion of the City Site (southwest corner) and is surrounded by earth berms. Any noise impacts from the gun range on the proposed cemetery would be small, intermittent, and limited to those areas of the cemetery closest to the range. DVA could minimize any such impacts by locating noise-sensitive functions (e.g., committal shelters) outside these areas.
1	Expresses concern about increase in traffic on Lannie Road.	The impacts on traffic of constructing the proposed cemetery are described in Section 4.5.2 of the EA. The cemetery is expected to generate approximately 306 daily trips (weekdays only) during its peak operating year. Most of those trips (238) would be funeral corteges, and therefore, occur in clusters and move at a low speed. Between funerals, traffic conditions on Lannie Road would be similar to those existing at present.

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Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

April 21, 2006

Mr. Michael Elliott
Department of Veterans Affairs
National Cemetery Administration
810 Vermont Avenue, NW
Washington, DC 20420

RE: Department of Veterans Affairs – Environmental Assessment (EA) for Jacksonville Area National Cemetery – Jacksonville, Duval County, Florida.
SAI # FL200603091986C

Dear Mr. Elliott:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the referenced EA.

The St. Johns River Water Management District (SJRWMD) advises that the proposed project will require an Environmental Resource Permit. Please contact Robin Harrell, Compliance Manager, in the SJRWMD Jacksonville Service Center, at (904) 448-7907 or rharrell@sjrwmd.com for further information and assistance.

Based on the information contained in the EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed activity is consistent with the Florida Coastal Management Program (FCMP). The agency must, however, address the concerns identified by the reviewing agencies prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Suzanne E. Ray at (850) 245-2172.

Sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/ser
Enclosures
cc: Geoffrey Sample, SJRWMD

MAY 3 2006

DEPARTMENT OF PUBLIC WORKS

Jacksonville
Where Florida Begins.

March 29, 2006

Mr. Michael Elliott
Department of Veterans Affairs
National Cemetery Administration
810 Vermont Avenue, NW
Washington DC 20420

RE: Jacksonville, FL Area National Cemetery Siting Report
City of Jacksonville Preliminary Review of Locations

Dear Mr. Elliott:

The Department of Public Works received a copy of the Environmental Assessment for the Jacksonville Area National Cemetery, dated March 20006, prepared by Earth Tech. Earth Tech has asked the City to provide comments for the potential sites listed in the report.

The report indicates that two siting alternatives (referenced as sites 3 & 4) are within the City of Jacksonville. Both of the sites are located on the north side of the City in the vicinity of Lem Turner Road and Lannie Road. Neither of the sites topography indicates that floodplain or site drainage issues beyond standard design criteria will be associated with the sites.

The Department of Public Works looks forward to working with the Department of Veterans Affairs (DVA) and the DVA's design team to facilitate review of the design elements of the proposed project.

Sincerely,

John P. Pappas, P.E.
Chief, Engineering Division

Cc: Laurent Cartayrade, Earth Tech, Inc.

JPP:GMS:dsw

C:\transmittals\proj-trans\Jacksonville Area Cemetery.doc

220 E. Bay Street, Suite 901 Jacksonville, FL 32202 Phone: 904.630.1363 | Fax: 904.630.1126 www.coj.net

Engr Div. Review & prepare resp by [illegible]

EarthTech
A tyco International Ltd. Company

675 North Washington Street
Suite 300
Alexandria, VA 22314

P 703.549.8728
F 703.549.9134
www.earthtech.com

Mike Sands:
→ Please have each site reviewed for
1) Flood Plain
2) Ash Restricted
3) Drainage Basins.

List issues for each site in 1 letter form - we can help.

*Due the 1st of next week.

RECEIVED
MAR 09 2006
DIRECTOR OF PUBLIC WORKS

recvd. 3/15/06

March 6, 2006

Mr. Alan Mosley, P.E. – Director
Department of Public Works
220 E. Bay Street, Room 1207
Jacksonville, Florida 32202

Re.: Environmental Assessment and Finding of No Significant Impact for Jacksonville Area National Cemetery

Dear Mr. Mosley:

The US Department of Veterans Affairs (DVA) has contracted with Earth Tech, Inc. to prepare an Environmental Assessment (EA) for the construction and operation of a new national cemetery in Jacksonville, Florida. Based on the EA, DVA has drafted a Finding of Significant Impact (FONSI). The EA and FONSI have been prepared in compliance with the National Environmental Policy Act of 1969 and the implementing regulations contained in 40 Code of Federal Regulations 1500-1508.

The EA and FONSI are enclosed for your review. The 30-day review period begins on March 7, 2006. Please send your comments before April 7, 2006 to:

Mr. Michael Elliott
Department of Veterans Affairs
National Cemetery Administration
810 Vermont Avenue, NW
Washington, DC 20420
Tel. (202) 565-5892
Email: mike.elliott@va.gov

Do not hesitate to contact Mr. Elliott or myself if you have any questions.

Very truly yours,

Earth Tech, Inc.

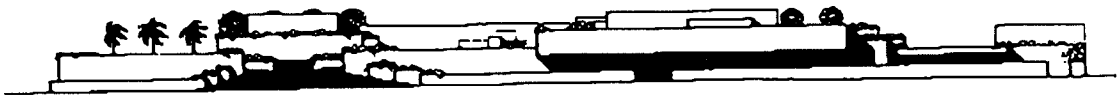
Laurent Cartayrade
Project Manager

RECEIVED
MAR 14 2006
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

Enclosure
Environmental Assessment for Jacksonville Area National Cemetery (includes FONSI)

OFFICE OF THE SHERIFF

CONSOLIDATED CITY OF JACKSONVILLE



501 EAST BAY STREET • JACKSONVILLE, FLORIDA 32202-2975

John H. Rutherford
Sheriff

March 23, 2006

Mr. Michael Elliott
Department of Veteran's Affairs
National Cemetery Administration
810 Vermont Avenue NW.
Washington, DC 20420

RE: Jacksonville Area National Cemetery

Dear Mr. Elliott:

My staff and I have had an opportunity to review the Environmental Assessment for the Jacksonville Area National Cemetery provided by Earth Tech, Inc., for the proposed construction and operation of a new national cemetery in Jacksonville. I appreciate the opportunity to review this assessment.

The review of the materials provided raised questions warranting further clarification. Initial discussions regarding this project left my staff with the understanding that property identified for use consisted of all of the property south of Lannie Road (excluding property on which the Montgomery Correctional Center's water utilities are currently sited) as well as a portion of the property north of Lannie Road as denoted on the color map which is attached. It now appears the U. S. Department of Veterans Affairs is requesting a larger portion of the northwest side, extending the western boundary significantly. If the new proposal is correctly understood, this may have an adverse impact on our ability to expand to meet future correctional facility needs. The new configuration incorporates the parcel of land on which the existing water utilities facilities for Montgomery Correctional Center are located. And finally, the new proposal (Ethel Road re-route) will leave the corrections facility with a truncated parcel of land on the northeastern portion of the current property without ready access to the parcel (black and white map attached).

Please understand that I am in support of this project. However, the aforementioned issues warrant clarification and further discussion. I appreciate the opportunity to have reviewed the proposal and offer input into the process. Please feel free to contact me at (904) 630-2120 for further discussion.

Sincerely,

John H. Rutherford, Sheriff

DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION
WASHINGTON DC 20420

MAY 12 2006

Mr. John Pappas, P.E.
Chief, Engineering Division
Jacksonville Department of Public Works
220 E. Bay Street, Suite 901
Jacksonville, Florida 32202

Dear Mr. Pappas:

The Department of Veterans Affairs (DVA) acknowledges receipt of the Jacksonville Department of Public Works' comments on the Environmental Assessment (EA) for the Jacksonville area national cemetery to be located in Duval County, Florida. We understand that your finding is that neither of the sites' topography indicates that floodplain or site drainage issues beyond standard design criteria will be associated with the sites.

Thank you for reviewing and commenting on the EA. DVA looks forward to working with your office and the City of Jacksonville on this important project.

Sincerely,

Michael Elliott
Director, Project Support Service

DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION
WASHINGTON DC 20420

MAY 12 2006

John. H. Rutherford, Sheriff
501 E. Bay Street
Jacksonville, Florida 32202

Dear Sheriff Rutherford:

The Department of Veterans Affairs (DVA) acknowledges receipt of your comments on the Environmental Assessment (EA) for the Jacksonville area national cemetery to be located in Duval County, Florida. We understand that you support the project, but have concerns with regard to the extent of the City Site, one of the two properties considered for acquisition by DVA.

We take note of these concerns and thank you for bringing them to our attention. For the purposes of the EA, the City Site was defined based on interviews with personnel from the City of Jacksonville and the Montgomery Correctional Center. We concluded from these interviews that the property, as shown, was available for potential acquisition and development. However, the boundaries shown in the EA are for planning purposes only and are subject to reasonable adjustments as we proceed with the project.

We trust that, as much of the property is currently under your jurisdiction, your office will be actively involved in the acquisition process. We look forward to further discussing your concerns and requirements as part of this process, and are confident that a solution will be found that meets the needs of all parties.

Sincerely,

Michael Elliott
Director, Project Support Service

DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION
WASHINGTON DC 20420

MAY 1 1 2006

Sally B. Mann, Director
Office of Intergovernmental Programs
Florida Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Dear Ms. Mann:

The Department of Veterans Affairs (DVA) acknowledges receipt of the State of Florida's comments on the Environmental Assessment (EA) for the Jacksonville area national cemetery to be located in Duval County, Florida (SAI # FL200603091986C). We understand that the State finds, at this stage, the proposed action consistent with the Florida Coastal Management Program (FCMP). However, continued concurrence will be contingent, in part, on the adequate resolution of issues identified during this and subsequent reviews. Final concurrence will be determined during the environmental permitting stage.

DVA also understands that an Environmental Resource Permit is required for the proposed action, as indicated in the EA and confirmed by the St. Johns River Water Management District.

As we move forward with this important project, DVA will take all necessary steps to ensure compliance with the applicable laws, regulations, and policies of the State of Florida.

Sincerely,

Michael Elliott
Director, Project Support Service

FINDING OF NO SIGNIFICANT IMPACT

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US DEPARTMENT OF VETERANS AFFAIRS
NATIONAL CEMETERY ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT
for
JACKSONVILLE AREA NATIONAL CEMETERY

May 2006

In accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations contained in 40 Code of Federal Regulations 1500-1508, the US Department of Veterans Affairs (DVA) has prepared an environmental assessment (EA) for the construction and operation of a new national cemetery in Jacksonville, Florida. The purpose and need for the proposed action is to comply with the National Cemetery Expansion Act of 2003 (Public Law 108-109), which directs the Secretary of Veterans Affairs to establish six new national cemeteries, including one in the Jacksonville area. The proposed cemetery will be developed in phases, starting in 2008. At build-out, in 2030, it will accommodate 25,000 gravesites, including sites for casketed and cremated remains. The first interments are expected to take place in 2009.

Alternatives and Impacts

The DVA originally considered 14 potential cemetery sites in northeast Florida. After an initial selection process, as documented in the EA, DVA retained two sites located in north Jacksonville for further consideration: the "City Site," a 568-acre property on Lannie Road presently owned by the City of Jacksonville; and the "Wright Site," a privately-owned, 724-acre tract, also accessed from Lannie Road. The City Site was reconfigured into three distinct alternative sites. In addition to the No Action Alternative, the EA evaluates the following alternatives:

- Construct and operate the proposed cemetery on the Wright Site (Wright Alternative)
- Construct and operate the proposed cemetery on the portion of the City Site located north of Lannie Road (City North Alternative)
- Construct and operate the proposed cemetery on the portion of the City Site located south of Lannie Road (City South Alternative)
- Realign the portion of Lannie Road that traverses the City Site to the south of its current location and construct and operate the proposed cemetery on the City Site north of the realigned road (Lannie Road Realigned Alternative)

As documented in the EA, none of the alternatives would result in significant adverse impacts on the environment. The action alternatives would have no or negligible adverse impacts on the following: land use, socioeconomics, Environmental Justice, utilities, community services, transportation, cultural resources, air quality, noise, geology, surface and ground water, floodplains, and hazardous waste.

Under the City North Alternative, land occupied by a model airfield and the area over which users fly their model aircraft would be needed for development of the proposed cemetery. This adverse impact would be mitigated by relocating the facility to an appropriate new location in cooperation with Jacksonville's Department of Parks, Recreation, and Entertainment, and in consultation with the current users of the site. This minor adverse impact would not occur under the other alternatives.

Under all action alternatives, there would be some changes to the selected site's topography because future burial areas would have to be elevated with fill to ensure burials remain above the high water table. Adverse impacts on stormwater due to the increase in impervious surfaces would be mitigated by construction and operation of a permitted stormwater management system. Impacts would be minor.

Under all action alternatives, the future cemetery site would include wetlands. DVA would design the cemetery to minimize impacts to these wetlands and development would be limited to upland areas as much as possible. However, while there are enough upland areas to accommodate all program requirements under any alternative, the distribution of uplands and wetlands across the sites would make it unavoidable to fill some wetlands, for instance to construct connecting roads. DVA would be required to obtain confirmation by the US Corps of Engineers (USACE) and the St. Johns River Water Management District (SJRWMD) of the wetland delineation conducted in 2005 for the EA, and to file a *Joint Application for an Environmental Resource Permit* with both agencies. Adverse impacts would be mitigated in consultation with the USACE and SJRWMD. Following implementation of mitigation measures, impacts would be minimal and not significant.

There would be moderate (Wright Alternative) or minor (other action alternatives) impacts to wildlife and vegetation, partially offset by the creation of new habitat in newly landscaped areas and/or wetland mitigation purposes; therefore, impacts would not be significant. Under all action alternatives, a survey may be needed to establish whether wood storks, a federally listed endangered species, are using the site to forage. During the master planning and design process, DVA would consult with the US Fish and Wildlife Service and the Florida Wildlife Commission to identify and mitigate any potential impacts the proposed action might have on the wood stork. The wood stork favors marshy and wet areas that, if present on the selected site, would mostly remain undeveloped and available for use by the stork. No adverse effects on the wood stork are expected. No other federally-listed species are likely to be present on the potential sites. The alternatives would have no significant adverse effects on endangered and threatened species.

A survey may be needed to establish whether any state-listed species occur on the selected site. If the presence of state-listed species were established, DVA would work in consultation with the Florida Wildlife Commission to develop avoidance, minimization, or mitigation strategies. Any impacts to state-listed species, therefore, would be minor and not significant.

Under all action alternatives, there would be construction-related, short-term, adverse impacts on air quality, noise, and stormwater. These temporary impacts would be minimized through the use of standard best management practices. Because construction of the cemetery would require disturbing more than five acres, DVA would need to obtain from the Florida Department of

Environmental Protection a *Generic Permit for Stormwater Discharge from Large and Small Construction Activities*.

The EA and FONSI were made available for agency and public review for 30 days from March 7, 2006. A Notice of Availability was published in the Florida Times-Union on March 7, 2006 with information on how to obtain the documents and where to send comments. The EA and FONSI were deposited in three local public libraries and made available for online downloading. A total of 43 copies of the EA and FONSI were sent for review to federal, state, and local agencies, groups, and individuals.

Finding of No Significant Impact

After reviewing the EA and the comments received from the public and agencies during the review period, DVA has concluded that implementation of any of the action alternatives would not have any significant impacts on the quality of the human environment within the meaning of Section 102(2c) of NEPA. Implementation of the proposed action under any of the alternatives is unlikely to generate substantial public controversy. Therefore, preparation of an Environmental Impact Statement (EIS) is not required.

Michael Elliott
Department of Veterans Affairs
National Cemetery Administration

May 2, 2006
Date

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