APPENDICES

Appendix A – Background Documents
Appendix B – Regulatory Communications
Appendix C – Environmental Survey Reports
Appendix D – Public Involvement
Appendix A – Background Documents
February 9, 2009

Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

SUBJECT: Formal Wetland Determination
Petition Number 16-031-112145-1, Duval County

Dear Sir/Madam:

Enclosed is your Formal Wetland Determination as authorized by the staff of the St. Johns River Water Management District on February 9, 2009. This determination will expire on February 09, 2014.

Issuance of this wetland determination does not relieve you from the responsibility of obtaining permits from any federal, state and/or local agencies or the District for construction on the property.

In the event you sell your property, the determination can be transferred to the new owner, if we are notified by you within thirty days of the sale. Please assist us in this matter so as to maintain a valid determination for the new property owner.

Thank you for your cooperation and if this office can be of any further assistance to you, please do not hesitate to contact us.

Sincerely,

Quenteria Johnson, Regulatory Information Management
Division of Regulatory Information Management

cc: District Permit File

Agent: Environmental Services
7220 Financial Way, Suite 100
Jacksonville, FL 32256
The formal determination of the landward boundary of wetlands and other surface waters as defined by the District and as depicted on the certified survey(s) stamped approved by the District 17 December 2008. The 546.29-acre project site is located along the north and south sides of Lannie Road approximately three miles northeast of the intersection of Lem Turner Boulevard and Lannie Road on the north side of Jacksonville, Duval County. More specifically the site is located in a portion of section 38 of the Charles Seton grant, section 40 of the William Gibson and others grant, and section 41 of the William Gibson and others or Charles Seton grant, township 2-north, and range 26-east, Duval County, together with a portion of section 39 of the Charles Seton grant, section 40 of the William Gibson and others or Charles Seton grant, and section 41 of the William Gibson and others grant, township 1-north, and range 26-east, Duval County.

LOCATION:

Section(s): 40, 41 Township(s): 1N Range(s): 26E
38, 40, 41 2N 26E

Duval County

Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

This document and the enclosed survey serve as the Chapter 40C-4.042, F.A.C., Formal Wetland Determination issued by the St. Johns River Water Management District. This determination is a legal document and should be kept with your other important records. The District may transfer this determination after the receipt of written notification of transfer of ownership or control of the real property.

This formal wetland determination is binding for a period of five (5) years from the date of this determination provided physical conditions on the property do not change so as to alter the wetland boundaries during that period. The District's Governing Board may revoke the Formal Wetland Determination upon finding that the petitioner has submitted inaccurate information to the District. This determination is not a permit and does not authorize any construction.

AUTHORIZED BY: St. Johns River Water Management District

By: [Signature]
Kenneth A. John, Assistant Director

By: [Signature]
Kirby B. Green, III, Executive Director
Notice Of Rights

1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwm.com, within twenty-six (26) days of the District depositing notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing notice of District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 5 below. Mediation pursuant to Section 120.573, Florida Statutes, is not available.

2. If the Governing Board takes action that substantially differs from the notice of District decision, a person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the District, but this request for administrative hearing shall only address the substantial deviation. Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) at the office of the District Clerk at the mail/street address or email address described in paragraph no. 1 above, within twenty-six (26) days of the District depositing notice of final District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing the notice of final District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of final District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. Mediation pursuant to Section 120.573, Florida Statutes, is not available.

3. A person whose substantial interests are or may be affected has the right to a formal administrative hearing pursuant to Sections 120.569 and 120.57(1), Florida Statutes, where there is a dispute between the District and the party regarding an issue of material fact. A petition for formal hearing must also comply with the requirements set forth in Rule 28-106.201, Florida Administrative Code.

4. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.
Notice Of Rights

5. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida. Petitions received by the District Clerk after 5:00 p.m., or on a Saturday, Sunday, or legal holiday, shall be deemed filed as of 8:00 a.m. on the next regular District business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sirwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.

6. Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).

7. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District's final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.

8. A person with a legal or equitable interest in real property who believes that a District permitting action is unreasonable or will unfairly burden the use of their property, has the right, within 30 days of receipt of the notice of District decision regarding a permit application, apply for a special magistrate proceeding under Section 70.51, Florida Statutes, by filing a written request for relief at the Office of the District Clerk located at District Headquarters, P. O. Box 1429, Palatka, FL 32178-1429 (4049 Reid St., Palatka, FL 32177). A request for relief must contain the information listed in Subsection 70.51(6), Florida Statutes. Requests for relief received by the District Clerk after 5:00 p.m., or on a Saturday, Sunday, or legal holiday, shall be deemed filed as of 8:00 a.m. on the next regular District business day.

9. A timely filed request for relief under Section 70.51, Florida Statutes, tolls the time to request an administrative hearing under paragraph nos. 1 or 2 above. (Paragraph 70.51(10)(b), Florida Statutes). However, the filing of a request for an administrative hearing under paragraph nos. 1 or 2 above waives the right to a special magistrate proceeding. (Subsection 70.51(10)(b), Florida Statutes).

10. Failure to file a request for relief within the requisite time frame shall constitute a waiver of the right to a special magistrate proceeding. (Subsection 70.51(3), Florida Statutes).
Notice Of Rights

11. Any person whose substantial interests are or may be affected who claims that final action of the District constitutes an unconstitutional taking of property without just compensation may seek review of the action in circuit court pursuant to Section 373.617, Florida Statutes, and the Florida Rules of Civil Procedures, by filing an action in circuit court within 90 days of rendering of the final District action, (Section 373.617, Florida Statutes).

12. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

13. A party to the proceeding before the District who claims that a District order is inconsistent with the provisions and purposes of Chapter 373, Florida Statutes, may seek review of the order pursuant to Section 373.114, Florida Statutes, by the Florida Land and Water Adjudicatory Commission, by filing a request for review with the Commission and serving a copy on the Florida Department of Environmental Protection and any person named in the order within 20 days of the rendering of the District order.

14. A District action is considered rendered, as referred to in paragraph nos. 11, 12, and 13 above, after it is signed on behalf of the District, and is filed by the District Clerk.

15. Failure to observe the relevant time frames for filing a petition for judicial review as described in paragraph nos. 11 and 12 above, or for Commission review as described in paragraph no. 13 above, will result in waiver of that right to review.
Notice Of Rights
Certificate of Service

I HEREBY CERTIFY that a copy of the foregoing Notice of Rights has been sent by U.S. Mail to:

Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

At 4:00 p.m. this 11th day of February, 2009.

Gloria Lewis, Director
Division of Regulatory Information Management
St. Johns River Water Management District
Post Office Box 1429
Palatka, FL 32178-1429
(386) 329-4152
May 30, 2012

US Department of Veterans Affairs
810 Vermont Ave NW NCA Team 00CFM3B4
Washington, DC 20420

SUBJECT: Permit Number 4-031-115730-3
Jacksonville VA National Cemetery Phase 2

Dear Sir/Madam:

Enclosed is your permit issued by the St. Johns River Water Management District on May 30, 2012. This permit is a legal document and should be kept with your other important documents. Permit issuance does not relieve you from the responsibility of obtaining any necessary permits from any federal, state, or local agencies for your project.

Technical Staff Report:
If you wish to review a copy of the Technical Staff Report (TSR) that provides the District’s staff analysis of your permit application, you may view the TSR by going to the Permitting section of the District’s website at floridaswater.com/permitting. Using the “search applications and permits” feature, you can use your permit number or project name to find information about the permit. When you see the results of your search, click on the permit number.

Noticing Your Permit:
For noticing instructions, please refer to the noticing materials in this package regarding closing the point of entry for someone to challenge the issuance of your permit. Please note that if a timely petition for administrative hearing is filed, your permit will become nonfinal and any activities that you choose to undertake pursuant to your permit will be at your own risk.

Compliance with Permit Conditions:
To submit your required permit compliance information, go to the District’s website at floridaswater.com/permitting. Under the “Apply for a permit or submit compliance data” section, click to sign-in to your existing account or to create a new account. Select the “Compliance Submittal” tab, enter your permit number, and select “No Specific Date” for the Compliance Due Date Range. You will then be able to view all the compliance submittal requirements for your project. Select the compliance item that you are ready to submit and then attach the appropriate information or form.

The forms to comply with your permit conditions are available at floridaswater.com/permitting under the section “Handbooks, forms, fees, final orders”. Click on forms to view all permit compliance forms, then scroll to the ERP application forms section and select the applicable compliance forms. Alternatively, if you have difficulty finding forms or need copies of the appropriate forms, please contact the Bureau of Regulatory Support at (386) 329-4570.
Transferring Your Permit:
As required by a condition of your permit, you must notify the District in writing within 30 days of any sale, conveyance or other transfer of a permitted system or facility, or within 30 days of any transfer of ownership or control of the real property where the permitted system or facility is located. You will need to provide the District with the information specified in District rule 40C-1.612, Florida Administrative Code (name and address of the transferee and a copy of the instrument effectuating the transfer). Please note that a permittee remains liable for any corrective actions that may be required as a result of any permit violations that occur before the sale, conveyance, or other transfer of the system or facility, so it is recommended that you request a permit transfer in advance.

Thank you and please let us know if you have additional questions. For general questions contact e-permit@sjrwmd.com or (386) 329-4570.

Sincerely,

Victor Castro, Director
Bureau of Regulatory Support
St. Johns River Water Management District
4049 Reid Street
Palatka, FL 32177

Enclosures: Permit with EN Form(s), if applicable

cc: District Permit File

Consultant: Paul Hutchinson
England Thims & Miller Inc
14775 Old St Augustine Rd
Jacksonville, FL 32258
PERMIT NO. 4-031-115730-3

DATE ISSUED: May 30, 2012

PROJECT NAME: Jacksonville VA National Cemetery Phase 2

A PERMIT AUTHORIZING:

Construction of a Stormwater Management System with stormwater treatment by Wet Detention for Jacksonville VA National Cemetery Phase 2, a 274 - acre project to be constructed and operated as per plans received by the District on January 17, 2011.

LOCATION:

Section(s): 38, 41
Township(s): 2N
Range(s): 26E
Duval County

ISSUED TO:

US Department of Veterans Affairs
810 Vermont Ave NW NCA Team 00CFM3B4
Washington, DC 20420

Permittee agrees to hold and save the St. Johns River Water Management District and its successors harmless from any and all damages, claims, or liabilities which may arise from permit issuance. Said application, including all plans and specifications attached thereto, is by reference made a part hereof.

This permit does not convey to permittee any property rights nor any rights or privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation or requirement affecting the rights of other bodies or agencies. All structures and works installed by permittee hereunder shall remain the property of the permittee.

This permit may be revoked, modified or transferred at any time pursuant to the appropriate provisions of Chapter 373, Florida Statutes:

PERMIT IS CONDITIONED UPON:

See conditions on attached "Exhibit A", dated May 30, 2012

AUTHORIZED BY: St. Johns River Water Management District

By:

David Miracle
Service Center Director
1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner which do not cause violations of state water quality standards.

4. Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988), which are incorporated by reference, unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan. If site specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988). The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

5. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

6. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a Construction Commencement Notice Form No. 40C-4.900(3) indicating the actual start date and the expected completion date.

7. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an Annual Status Report Form No. 40C-4.900(4). These forms shall be submitted during June of each year.

8. For those systems which will be operated or maintained by an entity which will require an easement or deed restriction in order to provide that entity with the authority necessary to operate or maintain the system, such easement or deed restriction, together with any other final operation or maintenance documents as are required by subsections 7.1.1 through 7.1.4 of the Applicant's Handbook: Management and Storage of Surface Waters, must be submitted to the District for approval. Documents meeting the requirements set forth in these subsections of the Applicant's Handbook will be approved. Deed restrictions, easements and other operation and maintenance
documents which require recordation either with the Secretary of State or the Clerk of
the Circuit Court must be so recorded prior to lot or unit sales within the project served
by the system, or upon completion of construction of the system, whichever occurs first.
For those systems which are proposed to be maintained by county or municipal entities,
final operation and maintenance documents must be received by the District when
maintenance and operation of the system is accepted by the local governmental entity.
Failure to submit the appropriate final documents referenced in this paragraph will result
in the permittee remaining liable for carrying out maintenance and operation of the
permitted system.

9. Each phase or independent portion of the permitted system must be completed in
accordance with the permitted plans and permit conditions prior to the initiation of the
permitted use of site infrastructure located within the area served by the portion or phase
of the system. Each phase or independent portion of the system must be completed in
accordance with the permitted plans and permit conditions prior to transfer of
responsibility for operation and maintenance of that phase or portion of the system to
local government or other responsible entity.

10. Within 30 days after completion of construction of the permitted system, or independent
portion of the system, the permittee shall submit a written statement of completion and
certification by a registered professional engineer or other appropriate individual as
authorized by law, utilizing As Built Certification Form 40C-1.181(13) or 40C-1.181(14)
supplied with this permit. When the completed system differs substantially from the
permitted plans, any substantial deviations shall be noted and explained and two copies
of as-built drawings submitted to the District. Submittal of the completed form shall serve
to notify the District that the system is ready for inspection. The statement of completion
and certification shall be based on on-site observation of construction (conducted by the
registered professional engineer, or other appropriate individual as authorized by law, or
under his or her direct supervision) or review of as-built drawings for the purpose of
determining if the work was completed in compliance with approved plans and
specifications. As-built drawings shall be the permitted drawings revised to reflect any
changes made during construction. Both the original and any revised specifications must
be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All
surveyed dimensions and elevations shall be certified by a registered surveyor. The
following information, at a minimum, shall be verified on the as-built drawings: 1.
Dimensions and elevations of all discharge structures including all weirs, slots, gates,
pumps, pipes, and oil and grease skimmers; 2. Locations, dimensions, and elevations of
all filter, exfiltration, or underdrain systems including cleanouts, pipes, connections to
control structures, and points of discharge to the receiving waters; 3. Dimensions,
elevations, contours, or cross-sections of all treatment storage areas sufficient to
determine state-storage relationships of the storage area and the permanent pool depth
and volume below the control elevation for normally wet systems, when appropriate; 4.
Dimensions, elevations, contours, final grades, or cross-sections of the system to
determine flow directions and conveyance of runoff to the treatment system; 5.
Dimensions, elevations, contours, final grades, or cross-sections of all conveyance
systems utilized to convey off-site runoff around the system; 6. Existing water
elevation(s) and the date determined; and Elevation and location of benchmark(s) for the
survey.

11. The operation phase of this permit shall not become effective until the permittee has
submitted the appropriate As-Built Certification Form, the District determines the system
to be in compliance with the permitted plans, and the entity approved by the District in
accordance with subsections 7.1.1 through 7.1.4 of the Applicant's Handbook:
Management and Storage of Surface Waters, accepts responsibility for operation and
maintenance of the system. The permit may not be transferred to such an approved
operation and maintenance entity until the operation phase of the permit becomes
effective. Following inspection and approval of the permitted system by the District, the
permittee shall request transfer of the permit to the responsible approved operation and
maintenance entity, if different from the permittee. Until the permit is transferred
pursuant to section 7.1 of the Applicant's Handbook: Management and Storage of
Surface Waters, the permittee shall be liable for compliance with the terms of the permit.

12. Should any other regulatory agency require changes to the permitted system, the
permittee shall provide written notification to the District of the changes prior
implementation so that a determination can be made whether a permit modification is
required.

13. This permit does not eliminate the necessity to obtain any required federal, state, local
and special district authorizations prior to the start of any activity approved by this
permit. This permit does not convey to the permittee or create in the permittee any
property right, or any interest in real property, nor does it authorize any entrance upon or
activities on property which is not owned or controlled by the permittee, or convey any
rights or privileges other than those specified in the permit and chapter 40C-4 or chapter
40C-40, F.A.C.

14. The permittee shall hold and save the District harmless from any and all damages,
claims, or liabilities which may arise by reason of the activities authorized by the permit
or any use of the permitted system.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the
permit application, including plans or other supporting documentation, shall not be
considered specifically approved unless a specific condition of this permit or a formal
determination under rule 40C-1.1006, F.A.C., provides otherwise.

16. The permittee shall notify the District in writing within 30 days of any sale, conveyance,
or other transfer of ownership or control of the permitted system or the real property at
which the permitted system is located. All transfers of ownership or transfers of a permit
are subject to the requirements of rule 40C-1.612, F.A.C. The permittee transferring the
permit shall remain liable for any corrective actions that may be required as a result of
any permit violations prior to such sale, conveyance or other transfer.

17. Upon reasonable notice to the permittee, District authorized staff with proper
identification shall have permission to enter, inspect, sample and test the system to
insure conformity with the plans and specifications approved by the permit.

18. If historical or archaeological artifacts are discovered at any time on the project site, the
permittee shall immediately notify the District.

19. The permittee shall immediately notify the District in writing of any previously submitted
information that is later discovered to be inaccurate.

20. This permit for construction will expire five years from the date of issuance.

21. At a minimum, all retention and detention storage areas must be excavated to rough
grade prior to building construction or placement of impervious surface within the area to
be served by those facilities. To prevent reduction in storage volume and percolation
rates, all accumulated sediment must be removed from the storage area prior to final
grading and stabilization.

22. All wetland areas or water bodies that are outside the specific limits of construction
authorized by this permit must be protected from erosion, siltation, scouring or excess
turbidity, and dewatering.
23. Prior to construction, the permittee must clearly designate the limits of construction on-site. The permittee must advise the contractor that any work outside the limits of construction, including clearing, may be a violation of this permit.

24. The wetland mitigation areas must be planted prior to any of the following events (whichever occurs first): issuance of the first certificate of occupancy; use of the infrastructure for its intended use; or transfer of responsibility for operation and maintenance of the system to a local government or other responsible entity.

25. The Permittee must furnish the District with two copies of an annual monitoring report in the month of August on District form EN-55, for the time period stated in this permit's success criteria condition.

26. Successful establishment of the wetland mitigation will have occurred when: a. At least 80 percent of the planted individuals in each stratum have survived throughout the monitoring period and are showing signs of normal growth, based upon standard growth parameters such as height and base diameter, or canopy circumference; and, b. At least 80 percent cover by appropriate wetland herbaceous species has been obtained; and, c. Hydrologic conditions generally conform to those specified in the mitigation plan; and, d. The above criteria have been achieved by the end of a 5-year period following initial planting.

27. If successful establishment has not occurred as stated above, the permittee must apply to the District for a permit modification no later than 30 days following the termination of the monitoring period. The application must include a narrative describing the type and causes of failure and contain a complete set of plans for the redesign and/or replacement planting of the wetland mitigation area so that the success criteria will be achieved. Within 30 days of District approval and issuance of the permit modification, the permittee must implement the redesign and/or replacement planting. Following completion of such work, success criteria as stated above or modified by subsequent permit must again be achieved. In addition, the monitoring required by these conditions must be conducted.

28. In the event that 50% or greater mortality of planted wetland species in any stratum within the mitigation area occurs, the Permittee must undertake a remediation program approved by District staff.

29. This permit requires the recording of a conservation easement. Description of Conservation Easement Area The permittee shall provide to the District for review and written approval a copy of: (a) the preliminary plat showing the area to be encumbered by the conservation easement, or (b) a surveyor's sketch and legal description of the area to be placed under the conservation easement, per the approved mitigation plan, at least 45 days prior to (1) dredging, filling, or clearing any wetland or surface water for which mitigation is required, (2) clearing any upland within a Riparian Habitat Protection Zone for which mitigation is required, (3) the sale of any lot or parcel, (4) the recording of the subdivision plat, or (5) use of the infrastructure for its intended use, whichever occurs first. If the impacts to an upland within a Riparian Habitat Protection Zone or to a wetland or surface water for which mitigation is required will occur in discrete phases, the areas to be preserved to offset such impacts may be placed under conservation easement in phases such that impacts are offset during each phase. Such phasing of preservation shall only occur if it has been proposed in the mitigation plan and approved by the permit, or if it is approved in writing by the District. A surveyor's sketch and legal description of the area to be placed under conservation easement during each phase must be submitted in accordance with the previous paragraph. Recording of Conservation Easement Prior to (1) dredging, filling, or clearing any wetland or surface
water for which mitigation is required, (2) clearing any upland within a Riparian Habitat Protection Zone for which mitigation is required, (3) the sale of any lot or parcel, (4) the recording of the subdivision plat, or (5) use of the infrastructure for its intended use, whichever occurs first, the permittee shall record a conservation easement which shall include restrictions on the real property pursuant to section 704.06, Florida Statutes, and be consistent with section 12.3.8, Applicant's Handbook, Management and Storage of Surface Waters (February 16, 2010). The conservation easement shall be in the form approved in writing by the District and, if no plat has been submitted, the easement shall include the approved legal description and surveyor's sketch. If the District does not provide written comments on the preliminary plat or surveyor's sketch and legal description within 45 days of receipt, then the permittee may record the conservation easement with the legal description and surveyor's sketch or plat reference previously submitted. If the District provides written disapproval of the preliminary plat or surveyor's sketch and legal description, the permittee shall, within ten (10) days of receipt of the disapproval, correct all errors with the conservation easement, including the preliminary plat or legal description and surveyor's sketch, and record the conservation easement. Pursuant to section 704.06, Florida Statutes, the conservation easement shall prohibit all construction, including clearing, dredging, or filling, except that which is specifically authorized by this permit, within the mitigation areas delineated on the final plans and/or mitigation proposal approved by the District. The easement must contain the provisions set forth in paragraphs 1(a)-(h) of section 704.06, Florida Statutes, as well as provisions indicating that the easement may be enforced by the District, and may not be amended without written District approval. Additional Documents Required The permittee shall ensure that the conservation easement identifies, and is executed by, the correct grantor, who must hold sufficient record title to the land encumbered by the easement. If the easement's grantor is a partnership, the partnership shall provide to the District a partnership affidavit stating that the person executing the conservation easement has the legal authority to convey an interest in the partnership land. If there exist any mortgages on the land, the permittee shall also have each mortgagee execute a consent and joinder of mortgagee subordinating the mortgage to the conservation easement. The consent and joinder of the mortgagee shall be recorded simultaneously with the conservation easement in the public records of the county where the land is located. Within 30 days of recording, the permittee shall provide the District with: (a) the original recorded easement (including exhibits) showing the date it was recorded and the official records book and page number, (b) a copy of the recorded plat (if applicable), (c) a surveyor's sketch of the easement area plotted on the appropriate USGS topographic map, and (d) the original recorded consent and joinder(s) of mortgagee (if applicable). Demarcation of Conservation Easement Area Prior to lot or parcel sales, all changes in direction of the easement area boundaries must be permanently monumented above ground on the project site.

30. The operation and maintenance entity shall inspect the stormwater or surface water management system once within two years after the completion of construction and every two years thereafter to determine if the system is functioning as designed and permitted. The operation and maintenance entity must maintain a record of each required inspection, including the date of the inspection, the name, address, and telephone number of the inspector, and whether the system was functioning as designed and permitted, and make such record available for inspection upon request by the District during normal business hours. If at any time the system is not functioning as designed and permitted, then within 14 days the entity shall submit an Exceptions Report to the District, on form number 40C-42.900(6), Exceptions Report for Stormwater Management Systems Out of Compliance.

31. The surface water management system must be constructed and operated as per plans received by the District on January 17, 2011.
32. The mitigation plan must be implemented as per plans received by the District on May 14, 2012.

33. Within 30 days of the installation of the pond liner, the permittee shall submit to the District, a completion report, signed and sealed by an appropriate Registered Professional, which certifies that the liner was installed according to the design specifications of the approved plans.
1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-six (26) days of the District depositing the notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing the notice of District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 4 below.

2. Please be advised that if you wish to dispute this District decision, mediation may be available and that choosing mediation does not affect your right to an administrative hearing. If you wish to request mediation, you must do so in a timely-filed petition. If all parties, including the District, agree to the details of the mediation procedure, in writing, within 10 days after the time period stated in the announcement for election of an administrative remedy under Sections 120.569 and 120.57, Florida Statutes, the time limitations imposed by Sections 120.569 and 120.57, Florida Statutes, shall be tolled to allow mediation of the disputed District decision. The mediation must be concluded within 60 days of the date of the parties’ written agreement, or such other timeframe agreed to by the parties in writing. Any mediation agreement must include provisions for selecting a mediator, a statement that each party shall be responsible for paying its pro-rata share of the costs and fees associated with mediation, and the mediating parties’ understanding regarding the confidentiality of discussions and documents introduced during mediation. If mediation results in settlement of the administrative dispute, the District will enter a final order consistent with the settlement agreement. If mediation terminates without settlement of the dispute, the District will notify all the parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Florida Statutes, is resumed. Even if a party chooses not to engage in formal mediation, or if formal mediation does not result in a settlement agreement, the District will remain willing to engage in informal settlement discussions.

3. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

4. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District’s regular business hours. The District’s regular business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District’s regular business hours shall be deemed filed as of 8:00 a.m. on the District’s next regular business day. The District’s acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District’s Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at floridasaswater.com. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable
of being stored and printed by the District. Further, pursuant to the District’s Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.

5. Failure to file a petition for an administrative hearing within the requisite timeframe shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).

6. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District’s final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District’s final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.

7. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

8. A District action is considered rendered, as referred to in paragraph no. 7 above, after it is signed on behalf of the District and filed by the District Clerk.

9. Failure to observe the relevant timeframes for filing a petition for judicial review as described in paragraph no. 7 above will result in waiver of that right to review.

NOR.Decision.DOC.001
Revised 12.7.11
Notice Of Rights

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Notice of Rights has been sent to the permittee:

US Department of Veterans Affairs
810 Vermont Ave NW NCA Team 00CFM3B4
Washington, DC 20420

This 30th day of May, 2012.

Victor Castro, Director
Bureau of Regulatory Support
St. Johns River Water Management District
4049 Reid Street
Palatka, FL 32177
(386) 329-4570
Dear Permittee:

Please be advised that the St. Johns River Water Management District has not published a notice in the newspaper advising the public that it has issued a permit for this project.

Newspaper publication, using the District’s form, notifies members of the public of their right to challenge the issuance of the permit. If proper notice is given by newspaper publication, then there is a 21-day time limit to file a petition challenging the issuance of the permit.

To close the point of entry for filing a petition, you may publish (at your own expense) a one-time notice of the District’s decision in a newspaper of general circulation within the affected area as defined in Section 50.011 of the Florida Statutes. If you do not publish a newspaper notice, the time to challenge the issuance of your permit will not expire.

A copy of the notice and a partial list of newspapers of general circulation are attached for your convenience. However, you are not limited to those listed newspapers. If you choose to close the point of entry and the notice is published, the newspaper will return to you an affidavit as proof of publication. Please submit this original affidavit of publication to:

Victor Castro, Director
Bureau of Regulatory Support
4049 Reid Street
Palatka, FL 32177

If you have any questions, please contact the Bureau of Regulatory Support at (386) 329-4570.

Sincerely,

Victor Castro, Director
Bureau of Regulatory Support
NOTICE OF AGENCY ACTION TAKEN BY THE
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Notice is given that the following permit was issued on ____________________:

(Name and address of applicant)_______________________________________

permit#____________________. The project is located in _____________County, Section
________, Township ________ South, Range ________ East. The permit authorizes a surface
water management system on ________ acres for ________________________________________
known as ______________________. The receiving water body is ________________.

A person whose substantial interests are or may be affected has the right to request an
administrative hearing by filing a written petition with the St. Johns River Water Management
District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative
Code (F.A.C.), the petition must be filed (received) either by delivery at the office of the District
Clerk at District Headquarters, P.O. Box 1429, Palatka FL 32178-1429 (4049 Reid St, Palatka,
FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty six (26) days
of the District depositing the notice of intended District decision in the mail (for those persons to
whom the District mails actual notice), within twenty-one (21) days of the District emailing notice
of intended District decision (for those persons to whom the District emails actual notice), or
within twenty-one (21) days of newspaper publication of the notice of intended District decision
(for those persons to whom the District does not mail or email actual notice). A petition must
comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes (F.S.), and Chapter 28-
106, F.A.C. The District will not accept a petition sent by facsimile (fax). Mediation pursuant to
Section 120.573, F.S., is not available.

A petition for an administrative hearing is deemed filed upon receipt of the complete petition by
the District Clerk at the District Headquarters in Palatka, Florida during the District’s regular
business hours. The District's regular business hours are 8 a.m. – 5 p.m., excluding weekends
and District holidays. Petitions received by the District Clerk after the District's regular business
hours shall be deemed filed as of 8 a.m. on the next regular District business day. The District's
acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District’s
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include, but are not limited to, the petition being in the form of a PDF or TIFF file and being
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The right to an administrative hearing and the relevant procedures to be followed are governed
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1.1007, Florida Administrative Code. Because the administrative hearing process is designed to
formulate final agency action, the filing of a petition means the District's final action may be
different from the position taken by it in this notice. **Failure to file a petition for an
administrative hearing within the requisite time frame shall constitute a waiver of the
right to an administrative hearing. (Rule 28-106.111, F.A.C.).**

If you wish to do so, please visit http://floridaswater.com/noticeofrights/ to read the complete
Notice of Rights to determine any legal rights you may have concerning the District's intended
decision(s) on the permit application(s) described above. You can also request the Notice of
Rights by contacting the Director, Bureau of Regulatory Support (RS), 4049 Reid St., Palatka,
FL 32177-2529, tele. no. (386)329-4570.
# NEWSPAPER ADVERTISING

## ALACHUA
The Alachua County Record, Legal Advertising  
P. O. Box 806  
Gainesville, FL  32602  
352-377-2444/ fax 352-338-1986

## BRAFORD
Bradford County Telegraph, Legal Advertising  
P. O. Drawer A  
Starke, FL  32901  
904-964-6305/ fax 904-964-8628

## CLAY
Clay Today, Legal Advertising  
1560 Kinsley Ave., Suite 1  
Orange Park, FL  32073  
904-264-3200/ fax 904-264-3285

## FLAGLER
Flagler Tribune, c/o News Journal  
P. O. Box 2831  
Daytona Beach, FL  32120-2831  
386- 681-2322

## LAKE
Daily Commercial, Legal Advertising  
P. O. Drawer 490007  
Leesburg, FL  34749  
352-365-8235/fax 352-365-1951

## NASSAU
News-Leader, Legal Advertising  
P. O. Box 766  
Fernandina Beach, FL  32035  
904-261-3696/fax 904-261-3698

## ORANGE
Sentinel Communications, Legal Advertising  
633 N. Orange Avenue  
Orlando, FL  32801  
407-420-5160/ fax 407-420-5011

## PUTNAM
Palatka Daily News, Legal Advertising  
P. O. Box 777  
Palatka, FL  32178  
386-312-5200/ fax 386-312-5209

## SEMINOLE
Seminole Herald, Legal Advertising  
300 North French Avenue  
Sanford, FL  32771  
407-323-9408

## BAKER
Baker County Press, Legal Advertising  
P. O. Box 598  
Macclenny, FL  32063  
904-259-2400/ fax 904-259-6502

## BREVARD
Florida Today, Legal Advertising  
P. O. Box 419000  
Melbourne, FL  32941-9000  
321-242-3832/ fax 321-242-6618

## DUVAL
Daily Record, Legal Advertising  
P. O. Box 1769  
Jacksonville, FL  32201  
904-356-2466 / fax 904-353-2628

## INDIAN RIVER
Vero Beach Press Journal, Legal Advertising  
P. O. Box 1268  
Vero Beach, FL  32961-1268  
772-221-4282/ fax 772-978-2340

## MARION
Ocala Star Banner, Legal Advertising  
2121 SW 19th Avenue Road  
Ocala, FL  34474  
352-867-4010/fax 352-867-4126

## OKEECHOBEE
Okeechobee News, Legal Advertising  
P. O. Box 639  
Okeechobee, FL  34973-0639  
863-763-3134/fax 863-763-5901

## OSCEOLA
Little Sentinel, Legal Advertising  
633 N. Orange Avenue  
Orlando, FL  32801  
407-420-5160/ fax 407-420-5011

## ST. JOHNS
St. Augustine Record, Legal Advertising  
P. O. Box 1630  
St. Augustine, FL  32085  
904-819-3436

## VOLUSIA
News Journal Corporation, Legal Advertising  
P. O. Box 2831  
Daytona Beach, FL  32120-2831  
(386) 681-2322
Appendix B – Regulatory Communications
April 27, 2018

Mr. Paul Backhouse, Ph.D.
Seminole Tribe of Florida
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Dear Mr. Backhouse,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) is seeking to determine whether any historic properties may be affected by the Proposed Action to construct and operate an approximately 30-acre Phase II expansion within the existing 526-acre Jacksonville National Cemetery property. The proposed expansion would be constructed according to the VA’s Master Plan, and would involve land clearing and grading to provide new interment and memorial areas, new roadways, and stormwater management systems within the expansion area.

Previous archaeological investigations in 2006 were conducted by VA’s contractor Earth Tech, Inc. within the entire property. Based on those investigations, no significant cultural resources were identified. During the Final Environmental Assessment process that evaluated the entire property, the Florida Division of Historic Resources (DHR) confirmed in a letter dated May 27, 2005 (DHR Project File No: 2005-4441) that no known historic sites exist on the property. A preliminary cultural resources evaluation also conducted during this time by Environmental Services Inc. (ESI), confirmed there are no historic structures more than 50 years old present on the entire site. The State Historic Preservation Office (SHPO) concluded that development of the cemetery would not affect any historic properties. No archaeological resources have been recorded within the project area, and it is our tentative conclusion that the proposed expansion at the Jacksonville National Cemetery will not have an adverse effect on any historic properties.

We would appreciate receiving your advice about any historic preservation or related issues you believe may be involved in our conduct of this undertaking. Attached for your reference and use is a map depicting the proposed expansion area boundary, a copy of the 2005 letter from DHR, and a summary of the 2006 cultural resources investigation.

In accordance with 36 CFR 800.4(d)(1)(i), we would appreciate receiving any comments in response to this letter and attachments within 30 days. We feel that this undertaking should have No Adverse Effect on historic properties. If construction activities uncover any archaeological remains, it is recommended that activity in the immediate area be stopped while a professional archaeologist evaluates the remains. In the event that human remains are found during construction or maintenance activities, the provisions of Chapter 872.05, F.S. will apply. If you have any comments or require any additional information in order to concur with this finding, please contact me at (202) 632-5879 or Glenn.Elliott@va.gov.

Sincerely,

Glenn Elliott, Program/Project Manager
Office of Construction & Facilities Management

Enclosure: Jacksonville National Cemetery – Proposed Phase II Expansion Area

Cc: Mr. Andrew Glucksman, Mabbett & Associates, Inc.
Mr. Mark Martinkovic, MA, RPA, AECOM Archaeologist
April 27, 2018

Ms. Natalie Harjo
The Seminole Nation of Oklahoma
Tribal Historic Preservation Officer
PO Box 1498
Wewoka, OK 74884

Dear Ms. Harjo,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) is seeking to determine whether any historic properties may be affected by the Proposed Action to construct and operate an approximately 30-acre Phase II expansion within the existing 526-acre Jacksonville National Cemetery property. The proposed expansion would be constructed according to the VA’s Master Plan, and would involve land clearing and grading to provide new interment and memorial areas, new roadways, and stormwater management systems within the expansion area.

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Sincerely,

Glenn Elliott, Program/Project Manager
Office of Construction & Facilities Management

Enclosure: Jacksonville National Cemetery – Proposed Phase II Expansion Area

Cc: Mr. Andrew Glucksman, Mabbett & Associates, Inc.
    Mr. Mark Martinkovic, MA, RPA, AECOM Archaeologist
April 27, 2018

Florida Department of State
State Historic Preservation Office
500 Bronough Street
Tallahassee, Florida 32399-0250

Dear Dr. Timothy Parsons,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) is seeking to determine whether any historic properties may be affected by the Proposed Action to construct and operate an approximately 30-acre Phase II expansion within the existing 526-acre Jacksonville National Cemetery property. The proposed expansion would be constructed according to the VA’s Master Plan, and would involve land clearing and grading to provide new interment and memorial areas, new roadways, and stormwater management systems within the expansion area.

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Sincerely,

Glenn Elliott, Program/Project Manager
Office of Construction & Facilities Management

Enclosure: Jacksonville National Cemetery – Proposed Phase II Expansion Area

Cc: Mr. Andrew Glucksman, Mabbett & Associates, Inc.
Mr. Mark Martinkovic, MA, RPA, AECOM Archaeologist
### SENDER: COMPLETE THIS SECTION
- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

<table>
<thead>
<tr>
<th>1. Article Addressed to:</th>
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<tbody>
<tr>
<td>Mr. Paul Backhouse, PhD</td>
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<tr>
<td>Seminole Tribe of Florida</td>
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<tr>
<td>30290 Josie Bill, Hwy 1884</td>
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<tr>
<td>Clewiston, Florida 33440</td>
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- B. Received by (Printed Name)
- C. Date of Delivery
- D. Is delivery address different from item 1? If YES, enter delivery address below:

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<td>Return Receipt for Merchandise</td>
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<td>The Seminole Nation</td>
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<tr>
<td>of Oklahoma</td>
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<tr>
<td>Tribal Historic Preservation Office</td>
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<tr>
<td>P.O. Box 1498</td>
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<tr>
<td>WeWoka, OK 74868</td>
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- C. Date of Delivery
- D. Is delivery address different from item 1? If YES, enter delivery address below:

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<td>■ Print your name and address on the reverse so that we can return the card to you.</td>
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<td>■ Attach this card to the back of the mailpiece, or on the front if space permits.</td>
<td>C. Date of Delivery 03-01-18</td>
</tr>
<tr>
<td>1. Article Addressed to:</td>
<td>D. Is delivery address different from item 1? □ Yes □ No</td>
</tr>
<tr>
<td>Dr. Timothy Parsons</td>
<td></td>
</tr>
<tr>
<td>State Historic Preservation Office</td>
<td></td>
</tr>
<tr>
<td>500 Bronough Street</td>
<td></td>
</tr>
<tr>
<td>Tallahassee, Florida 32399</td>
<td></td>
</tr>
<tr>
<td>2. Article Number</td>
<td>7015 0640 0005 7525 5273</td>
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<tr>
<td>(Transfer from service label)</td>
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<td>PS Form 3811, February 2004</td>
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</table>
June 05, 2018

Glenn Elliott
Program/Project Manager
Office of Construction & Facilities Management
Phone: 202-632-5879
Email: Glenn.Elliott@va.gov

Subject: Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL
THPO #: 0030846

Dear Mr. Elliott,

Thank you for contacting the Seminole Tribe of Florida – Tribal Historic Preservation Office (STOF-THPO) regarding the Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL. The proposed undertaking does fall within the STOF Area of Interest. We have reviewed the documents provided and would respectfully like to request some additional information. We would respectfully like to request a copy of the Cultural Resources Assessment Surveys that were conducted for the project area so that we may complete our assessment pursuant to Section 106 of the National Historic Preservation Act and 36 CFR 800.

Thank you and feel free to contact us with any further questions.
Respectfully,

[Signature]

Victoria L. Menchaca, MA, Compliance Review Specialist
STOF-THPO, Compliance Review Section
30290 Josie Billie Hwy, PMB 1004
Clewiston, FL 33440
Office: 863-983-6549 ext 12216
Email: victoriamenchaca@semtribe.com
Web: www.stofthpo.com
June 20, 2018

Victoria L. Menchaca, MA  
Compliance Review Specialist  
STOF-THPO, Compliance Review Section  
Phone: (863) 983-6549 ext 12216  
Email: victoriamenchaca@semtribe.com

Subject: Dept. of Veterans Affairs Florida National Cemetery Expansion, Sumter County, FL  
THPO #: 0030848

Dear Ms. Menchaca,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) thanks you for your comments and request for additional information regarding the Florida National Cemetery Expansion, Sumter County, FL. Please find the following enclosed materials in support of your review:

- A topographic map outlining the project site;
- A detailed description of the Affected Environment (Cultural Resources and Archaeological Resources);
- A detailed description of the Affected Environment (Cultural Resources and Archaeological Resources) from the Final Environmental Impact Statement dated April 1983;
- A Reconnaissance Level Survey conducted 1983;
- A Site Characteristics Report conducted by SouthArc, Inc. in 2005;
- A letter from the Advisory Council on Historic Preservation, 1982; and
- A letter dated May 18, 2018 from the DHR and State Historic Preservation Officer.

The VA wishes to ensure that issues of concern are addressed and welcomes any comments you may have about the proposed action. Please contact: Mr. Glenn Elliott, U.S. Department of Veterans Affairs, Office of Construction & Facilities Management, 425 I (eye) Street, NW, Room 6W417a, Washington, D.C., 20001, via email to glenn.elliott@va.gov, or by telephone at (202) 632-5879.

Sincerely,

Glenn Elliott, Program/Project Manager  
U.S. Department of Veterans Affairs  
Office of Construction & Facilities Management

Enclosure(s)
Figure 2. 2007 Master Plan for the Jacksonville National Cemetery
Figure 3. Aerial photo of the proposed expansion area
1.1 Cultural Resources

1.1.1 Existing Environment

The proposed expansion area has been identified as the Area of Potential Effect (APE), which is the geographical area or areas within which an undertaking may cause changes to the character or use of historic properties.

Cultural resources are generally defined as the physical remains of a people’s way of life and include historical architecture and archaeology. The baseline age established by the National Historic Preservation Act (NHPA) for historic resources is 50 years of age or older. Although the Jacksonville National Cemetery is not 50 years of age, the National Park Service (NPS) has determined that all National Cemeteries are exceptionally significant places that are eligible for listing in the National Register of Historic Places (NRHP). However, the NPS has provided guidance that unimproved portions of a National Cemetery that have only been set aside for future use and not ready to receive burials are not eligible for the NRHP.

There are no structures within the proposed 50-acre expansion area; outside of the expansion area and within the Phase 2 boundary, the only structures include the Model Airplane Flying facility, a playground/softball field, and an unoccupied mobile home. None of these structures present any characteristics that would potentially qualify it for listing in the NRHP.

During the 2006 Final EA process that evaluated the entire property (including the expansion area), the Florida Department of Historical Resources (DHR) confirmed in a letter dated May 27, 2005, that no known historic sites exist on the property. This letter also stipulated that a cultural resources assessment survey was required of the entire property. In 2006, two separate studies within the property were conducted by two firms on behalf of the VA. The first study was performed by ESI, who conducted a preliminary cultural resources evaluation, including 19 shovel tests at the property in January 2006. No cultural material was found. The second study was performed by Earth Tech, Inc., who conducted archaeological studies within the entire property. No significant cultural resources were identified; this was concurred by the Florida DHR in a letter dated March 13, 2006. However, Florida DHR stated that historical or pre-historical artifacts or unmarked human remains might be uncovered, and that the VA would need to make contingency plans should any artifacts or remains be uncovered during construction.

During the 2006 Final EA, the VA contacted the Florida Governors' Council on Indian Affairs. It does not appear that a response was received. However, individual federally-recognized Native American Tribes were not contacted during the 2006 Final EA to solicit input regarding religious or cultural significance at the property.

As part of the current NEPA evaluation for the proposed expansion, the VA has requested input from the two federally-recognized tribes, Miccosukee Tribe of Indians and the Seminole Tribe of Florida, as required by NEPA, NHPA, the Native American Graves Protection and Repatriation Act (NAGPRA), and Executive Order (EO) 13175. The VA sent a letter to these tribes for comment regarding the Proposed Action. The Responses will be addressed and incorporated into the Final SEA.

1.1.2 Environmental Consequences

The Section 106 Criteria for Adverse Effect (36 CFR 800.5) defines an undertaking (action) as having an adverse effect on historic properties if the undertaking would alter, directly or indirectly, any of the characteristics that qualify a property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. The analysis considers potential effects to cultural resources located in and within view of the project area.
1.1.2.1 Proposed Action

Construction. Based on the prior cultural resources investigations, no archeological sites or historic properties are known to exist at the Jacksonville National Cemetery. Therefore, the VA concludes that the Proposed Action will not have an adverse effect on any cultural resources. If human remains or other cultural items as defined by NAGPRA be discovered during construction of any phase of the Proposed Action, the construction contractor will immediately cease work until the VA, a qualified archaeologist, the Florida DHR, and the two federally-recognized Native American Tribes are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal law(s). Likewise, should any other cultural or historic artifacts or resources become uncovered during construction during any phase of the Proposed Action, ground-disturbing activities will cease, and the Construction Supervisor will immediately contact the VA for guidance on the next steps to be taken.

Operation. Due to the need to raise the elevation of the existing grade using fill, excavation for individual burial sites does not pose a potential for inadvertent discovery of human remains or cultural resources. Accordingly, the likelihood of discovery is considered negligible, and therefore no potential impacts to cultural resources are anticipated during operation of the Proposed Action.

1.1.2.2 No Action

No changes to the Proposed Action areas would occur from implementation of the No Action alternative; therefore, no impacts to cultural resources would occur.
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

<table>
<thead>
<tr>
<th>36 CFR 60.4, Part I</th>
</tr>
</thead>
<tbody>
<tr>
<td>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:</td>
</tr>
<tr>
<td>A. That are associated with events that have made a significant contribution to the broad patterns of our history; or</td>
</tr>
<tr>
<td>B. That are associated with the lives of persons significant in our past; or</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>D. That have yielded, or may be likely to yield, information important in prehistory or history.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>36 CFR 60.4, Part II</th>
</tr>
</thead>
<tbody>
<tr>
<td>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:</td>
</tr>
<tr>
<td>A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or</td>
</tr>
<tr>
<td>G. A property achieving significance within the past 50 years if it is of exceptional importance.</td>
</tr>
</tbody>
</table>
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.
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

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8DU161 (gv)</td>
<td>Possible Thomas Creek Battlefield, Revolutionary War</td>
</tr>
<tr>
<td>8DU14668</td>
<td>Prehistoric/Historic scatter; early 19th century</td>
</tr>
<tr>
<td>8DU15983</td>
<td>Prehistoric Campsite (no further description available)</td>
</tr>
<tr>
<td>8DU16190</td>
<td>Historic/prehistoric scatter; 18th to 20th Century; Swift Creek</td>
</tr>
<tr>
<td>8DU16191</td>
<td>Historic/prehistoric scatter; late 19th/early 20th Century</td>
</tr>
<tr>
<td>8DU16192</td>
<td>Prehistoric scatter</td>
</tr>
<tr>
<td>8DU16196</td>
<td>Prehistoric scatter</td>
</tr>
</tbody>
</table>

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 archeological 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).

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

5
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 lifeways (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).
REFERENCES CITED

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1980 *Florida Archeology*. Gainesville: University Presses of Florida,

Milanich, Jerald T. and Rebecca Saunders

Milanich, Jerald T. Jefferson Chapman, Ann S. Cordell, Stephen Hale, and Rochille A. Marmnan

Russo, Michael

Saunders, Rebecca A.

Sears, William H.

Stowell, Daniel W.

Vernon Richard
Ms. Marsha Chance
Environmental Services, Inc.
7720 Financial Way Suite 100
Jacksonville, Florida 32256

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 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.

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,

[Signature]

Frederick P. Gaske, Director, and State Historic Preservation Officer
Sources: USGS Topographic Quadrangle, Italia (Labron).

Disclaimer: Information represented on this map was derived from secondary data sources and is to be used for general planning purposes only. No warranties or representations of accuracy are expressed or implied.
Project Boundaries:

- 38, Mascotte fine sand, 0 to 2 percent slopes
- 51, Pelham fine sand, 0 to 2 percent slopes
- 63, Sapelo fine sand, 0 to 2 percent slopes
- 66, Surrency loamy fine sand, depressional, 0 to 2 percent slopes
- 78, Yonges fine sandy loam, 0 to 2 percent slopes
- 79, Yulee clay, 0 to 2 percent slopes, frequently flooded
- 82, Pelham fine sand, depressional, 0 to 2 percent slopes
- 86, Yulee clay, depressional, 0 to 2 percent slopes

Sources: USDA Soil Survey for Duval County, Florida; USGS Topographic Quadrangle, Italia (LABINS).

Disclaimer: Information represented on this map was derived from secondary data sources and is to be used for general planning purposes only. No warranties or representations of accuracy are expressed or implied.
Project Boundary
Circle Negative Shovel Test

0 750 1,500 Feet

1 inch equals 1,500 feet

Sources: USGS Topographic Quadrangle, Italia (Labins)

Disclaimer: Information represented on this map was derived from secondary data sources and is to be used for general planning purposes only. No warranties or representations of accuracy are expressed or implied.

Testing Results
Earth Tech / V.A. Cemetery
Jacksonville, Duval County, Florida

Project: EJ05270.00
Date: January 2006
Dwn/Chkd: JB / GH
Figure: 4
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.
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.”
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.
Mr. Laurent Cartayrade
Earth Tech
675 North Washington Street, Suite 300
Alexandria, Virginia 22314

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,

[Signature]
Frederick P. Gaske, Director, and State Historic Preservation Officer

Enclosure
From: Victoria Menchaca [mailto:VictoriaMenchaca@semtribe.com]
Sent: Tuesday, January 08, 2019 1:28 PM
To: Elliott, Glenn (CFM) <Glenn.Elliott@va.gov>
Subject: [EXTERNAL] RE: Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL

Glenn,

Ok, that made it a lot easier to understand the stuff in the attachment! Please see our letter of no objection below.

Thanks,
Victoria
Oh, sorry it is a bit confusing. Just the area on page 4. Thanks
Glenn

From: Victoria Menchaca  [mailto:VictoriaMenchaca@semtribe.com]
Sent: Tuesday, January 08, 2019 1:15 PM
To: Elliott, Glenn (CFM) <Glenn.Elliott@va.gov>
Subject: [EXTERNAL] RE: Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL

Glenn,

I am a little confused on this one. What is the area that we are being asked to consult on. Is it the area on page 4 of the PDF Figure 3? Or is it both areas on page 26 and 25 of the PDF the map labeled Earth Tech/V.A Cemetery?

Victoria

From: Elliott, Glenn (CFM) <Glenn.Elliott@va.gov>
Sent: Tuesday, January 08, 2019 12:53 PM
To: Victoria Menchaca
Subject: FW: Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL
Importance: High

Victoria,

I checked and it seems we attempted to send the document back in June, not sure what happened but here is an electronic copy. If needed I can also have a hard copy sent.
Thank you.
Glenn

From: Victoria Menchaca  [mailto:VictoriaMenchaca@semtribe.com]
Sent: Friday, January 04, 2019 9:01 AM
To: Elliott, Glenn (CFM) <Glenn.Elliott@va.gov>
Subject: [EXTERNAL] Dept. of Veterans Affairs Jacksonville National Cemetery Expansion, Duval County FL

Dear Ms. Elliott,

Thank you for the additional information regarding the Jacksonville National Cemetery Expansion, Duval County FL. However, we still require further information in order to complete our review pursuant to Section 106 of the National Historic Preservation Act and 36 CFR 800. We never received the complete Cultural Resources Assessment Survey report(s) for the area and would again respectfully like to request a copy of the CRAS report(s) that cover the proposed cemetery expansion areas. If your office does not have a copy of the reports, could you please provide us with the Florida Master Site File (FMSF) survey numbers so that we may download them from the FMSF website.

Thank you and feel free to contact us with any further questions.
Mr. Elliott:

The Florida State Historic Preservation Officer reviewed the referenced project for possible effects on historic properties listed, or eligible for listing, in the National Register of Historic Places. The review was conducted in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800: Protection of Historic Properties.

Based on the information provided, this office concurs with the Department of Veterans Affairs’ determination that the proposed project should have No Adverse Effect on historic properties. However, since the project includes ground disturbance activities the following special condition regarding unexpected discoveries should be included during project activities:

- If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

If you have any questions, please contact Corey Lentz, Historic Sites Specialist, by email at Corey.Lentz@dos.myflorida.com, or by telephone at 850.245.6339 or 800.847.7278.

Sincerely,

Timothy A Parsons, Ph.D.
Director, Division of Historical Resources & State Historic Preservation Officer
Larry,

Thank you for the response. We will incorporate your comments into the draft document and provide a final document link once we have concluded the process. We will be adhering to all permit requirements. I will also forward on the BMP link regarding diesel use / controls to the project manager for review. Thank you again.

Glenn

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From: Elliott, Glenn (CFM)
Sent: Wednesday, February 06, 2019 8:45 AM
To: 'Gissentanna, Larry' <Gissentanna.Larry@epa.gov>
Cc: Militscher, Chris <Militscher.Chris@epa.gov>; Buskey, Traci P. <Buskey.Traci@epa.gov>
Subject: RE: RE: Jacksonville National Cemetery Draft Site-Specific Environmental Assessment

Larry,

Thank you for the response. We will incorporate your comments into the draft document and provide a final document link once we have concluded the process. We will be adhering to all permit requirements. I will also forward on the BMP link regarding diesel use / controls to the project manager for review. Thank you again.

Glenn

Glenn Elliott  Senior PP/M
Environmental Officer
Construction and Facilities Management Office
425 “i” Street NW
Washington, DC 20001
Office – 202 632-5879
Mobile – 202 360-1243

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From: Gissentanna, Larry [mailto:Gissentanna.Larry@epa.gov]
Sent: Wednesday, February 06, 2019 8:38 AM
To: Elliott, Glenn (CFM) <Glenn.Elliott@va.gov>
Cc: Militscher, Chris <Militscher.Chris@epa.gov>; Buskey, Traci P. <Buskey.Traci@epa.gov>
Subject: [EXTERNAL] RE: Jacksonville National Cemetery Draft Site-Specific Environmental Assessment

U.S. Department of veteran Affairs
Construction & Facilities Management Office
Attn: Mr. Glenn Elliott
425 I Street, NW Room 6W417a
Washington D.C. 20001

Re: Draft Site-Specific Environmental Assessment: Proposed Construction and Operation of the Jacksonville National Cemetery Phase 2 Expansion Jacksonville, Duval County, Florida

Dear Mr. Elliott:

The U.S. Environmental Protection Agency (EPA) received the Draft Site-Specific Environmental Assessment (EA) for the National Cemetery Administration (NCA). Within this Site-Specific Environmental Assessment (SEA), the U.S. Department
of Veterans Affairs (VA), National Cemetery Administration (NCA) identifies, analyzes, and documents the potential physical, environmental, cultural, and socioeconomic impacts associated with the Proposed Action to construct and operate an approximately 50-acre cemetery expansion at the Jacksonville National Cemetery at 4083 Lannie Road, Jacksonville, Duval County, Florida. The cemetery expansion would extend the longevity of the Jacksonville National Cemetery and allow the VA to continue providing burial opportunities needed by Veterans and their families in northern Florida. The cemetery expansion would provide additional casket, columbarium, and in-ground cremation sites, as well as expanded infrastructure including roadways, irrigation, landscaping, and stormwater management systems.

The EPA understands that the Proposed Action to expand the Jacksonville National Cemetery within an approximately 50 acre portion of the Phase 2 development area was identified in the 2007 Master Plan (VA, 2007). The expansion area is located adjacent to and east of the existing Phase 1 cemetery and is currently leased for use as cattle pasture. The Proposed Action would provide approximately 8,050 preplaced crypt sites, 4,400 cremains sites, and 5,760 columbarium niches; extend existing roadways to these new burial areas; create a new stormwater retention basin to accommodate new stormwater runoff; and extend irrigation utilities to support the newly landscaped burial areas. The Proposed Action will extend the longevity of the Jacksonville National Cemetery and accommodate long-term burial needs of future generations of Veterans and their families in northern Florida.

The NCA analyzed the following two alternatives for Phase 2 development area:

The Proposed Action would expand the Jacksonville National Cemetery within an approximately 50-acre portion of the Phase 2 development area identified in the 2007 Master Plan (VA 2007). The expansion area is located adjacent to and east of the existing Phase 1 cemetery and is currently leased for use as cattle pasture. The Proposed Action would provide approximately 8,050 preplaced crypt sites, 4,400 cremains sites, and 5,760 columbarium niches; extend existing roadways to these new burial areas; create a new stormwater retention basin to accommodate new stormwater runoff; expand an existing stormwater retention pond by approximately 3 acres; and extend existing irrigation utilities to help maintain new landscaping in the expansion area. The Proposed Action will extend the longevity of the Jacksonville National Cemetery and accommodate long-term burial needs of future generations of Veterans and their families in northern Florida.

The No Action alternative would maintain the Jacksonville National Cemetery as it presently exists, and not implement the proposed expansion. Under the No Action alternative, future burial options would be limited to the remaining capacity of the Phase 1 cemetery. This would ultimately reduce the longevity of the Jacksonville National Cemetery. Future generations of eligible Veterans and their families increasingly would not have long-term, reasonable access to burial benefits at a National Cemetery in northern Florida. The nearest National Cemetery open to new interments is the Cape Canaveral National Cemetery, which is located approximately 150 miles south of the Jacksonville National Cemetery, followed by the Florida National Cemetery in Bushnell, Florida located 160 miles south, the Tallahassee National Cemetery located 175 miles west, and the South Florida National Cemetery located 310 miles south. The No Action alternative would not meet the identified purpose or need for the action and would place an undue burden on Veterans, their families, and visitors, by requiring extended travel to reach a National Cemetery outside of northern Florida.

The EPA suggests the following concerns be considered during the proposed project activities:

The NCA must adhere to the permit requirements issued by the St. Johns River Water management District (SJRWMD) and the US Army Corps of Engineers (USACE) within the Proposed Action expansion area that will impact approximately 11.87 acres of jurisdictional wetlands. Also as we understand it, these unavoidable wetland impacts were anticipated during construction of the Phase 2 cemetery (based on the 2007 Master Plan).

The EPA recommends the use of diesel controls, cleaner fuel, and BMPs for on-road and off-road equipment used for transportation, soil movement, or other project activities, including: Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts,
repowers, or newer, cleaner equipment. For more information on diesel emission controls in construction projects, please visit: http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf

We appreciate the opportunity to provide comments on the proposed project. Once the Final Environmental Assessment is completed and the FONSI is signed, please provide an electronic link to the document and/or a hard copy to the address below:
USEPA Region 4
NEPA Program Office
61 Forsyth Street, SW; Mailcode 9T25
Atlanta, Georgia 30303
If you have any questions regarding these comments, please contact me at the information below.

Sincerely,

Larry O. Gissentanna
DoD and Federal Facilities, Project Manager

U.S. Environmental Protection Agency/ Region 4
Resource Conservation and Restoration Division
National Environmental Policy Act (NEPA) Program Office
61 Forsyth Street, SW
Atlanta, GA 30303-8960
Office: 404-562-8248
gissentanna.larry@epa.gov
DIESEL EMISSION CONTROLS IN CONSTRUCTION PROJECTS

MODEL CONTRACT SPECIFICATION

December 2010

Introduction

The model contract specification outlined below offers guidance to private institutions and public entities interested in addressing pollution from construction sources through future construction contracts. The goal of this model document is to encourage institutions and agencies to adopt contract language which will help to reduce the impact of diesel emissions from construction equipment and promote the widespread use of emission controls in the construction sector.

The Northeast Diesel Collaborative (NEDC), a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel technology, includes the NEDC Construction Workgroup. The Workgroup - comprised of a diverse set of stakeholders representing government agencies, private sector firms, trade organizations and others involved in construction related activities - works to advance cost-effective strategies to improve air quality and reduce diesel emissions from construction projects in the northeast states and Caribbean territories. The NEDC Construction Workgroup recently reached consensus in revising the following model contract specification – originally established in 2008 - to make them more practical and user friendly, with the goal of broadening their use and ultimately help in reaching the goal of improving air quality through reduction of diesel emissions from construction equipment.

The contract specification below provides a comprehensive model that is technically sound and grounded in field experience. It addresses not only the level of emission control, but also key considerations such as idling, exemptions, and compliance. It incorporates improvements in retrofit technology already underway to meet both market demand and tighter federal standards for new engines.

This model specification recommends that institutions and agencies (“developer” in the text below) undertaking large construction projects:

- Require the highest level of emission control available
- Include the widest range of diesel onroad vehicles, nonroad equipment, and generators
- Implement and/or enforce idle-reduction policies
- Require the use of ultra-low sulfur diesel fuel

NEDC acknowledges that existing contract requirements, policy adoption processes, procurement rules, and financial resources differ considerably among the institutions, municipalities, and state agencies in the region and therefore affect options for developing or amending a retrofit program. For example, those with successful clean construction initiatives may revise or expand them only through a stakeholder process. In creating a new program, some may need to adopt a narrower scope (e.g., picking a higher project dollar threshold or initially targeting particular horsepower ranges) while others opt for broader or more aggressive coverage (e.g., requiring retrofits in all projects regardless of their budget). The model contract specification provides a robust standard and an implementation
framework that can be adapted for consistency with established contract specifications or protocols and does not preclude or override existing, state-specific models.

NEDC recommends that contracts for all construction projects require the diesel control measures outlined in the following pages. As the public health risks from exposure to diesel exhaust are of paramount concern, institutions, municipalities, agencies and private contractors that want a phased adoption of contract requirements could focus initially on projects including, but not limited to, those located (1) in urban areas, (2) within 500 feet of a school, hospital, daycare facility, elderly housing, convalescent facility, or similar facility, (3) in poor air quality areas, (4) in densely populated areas or (5) in any other areas which receive a disproportionate quantity of air pollution from diesel fleets.

The NEDC Steering Committee wishes to thank the representatives from the emission control manufacturers, environmental organizations, private companies, construction industry, state agencies, and U.S. EPA who contributed to the development of this document, either by fully participating in the work of the task force for the initial development of the model, being an active member of NEDC’s Construction Workgroup which has successfully revised and refined the model or by offering valuable perspective on key elements in any other capacity throughout this process.
MODEL CONTRACT SPECIFICATION

1. Diesel Emission Control Technology

a. Diesel Onroad Vehicles
   All diesel onroad vehicles on site for more than 10 total days must have either (1) engines that meet U.S. Environmental Protection Agency (EPA) 2007 onroad emissions standards or (2) emission control technology verified by EPA or the California Air Resources Board (CARB) to reduce PM emissions by a minimum of 85%.2

b. Diesel Generators
   i. All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.

c. Diesel Nonroad Construction Equipment
   i. All nonroad diesel engines on site must be Tier 2 or higher. Tier 0 and Tier 1 engines3 are not allowed on site.
   ii. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 50hp and greater and by a minimum of 20% for engines less than 50hp.

d. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 nonroad emissions standards or emission control technology, as specified above, installed and functioning, the developer will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the developer.

e. Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.

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1 Diesel emission control technology requirements apply to all equipment onsite powered by diesel engines, whether owned, leased or rented by the contractor.
2 In all instances “verified” means verified for use with the specific onroad, nonroad, or generator engine. For EPA’s list of verified technology: http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm. For CARB’s list of verified technology: http://www.arb.ca.gov/diesel/verdev/verifiedtechnologies/vt.htm.
3 Machines with engines which have been repowered by Tier 2 engines, or engines upgraded from Tier 0 or 1 to Tier 2 using original equipment manufacturers approved conversion kit and certified by the original equipment manufacturer to Tier 2 standard performance are acceptable.
f. All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less.

2. Idling Requirements

a. During periods of inactivity, idling of diesel onroad vehicles and nonroad equipment shall be minimized and shall not exceed the time allowed under state and local laws. In the absence of state or local idling regulations, idling shall not exceed three minutes in any sixty-minute period.

b. Exemptions, if any, from state or local idling laws are specified by those laws, which shall be enforced on site. In locations without prevailing state or local idling regulations, idling for more than three minutes over a sixty-minute period is permitted only under the following circumstances:

   i. When an onroad diesel vehicle or nonroad construction equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control;

   ii. To bring the onroad diesel vehicle, nonroad construction equipment, or generator to the manufacturer’s recommended operating temperature;

   iii. When there are regulations requiring temperature control for driver or passenger comfort and there are no auxiliary power sources available to provide temperature control;

   iv. When it is necessary to operate auxiliary equipment that is located in or on the diesel vehicle or construction equipment, to accomplish the intended use of the vehicle or equipment (for example, cranes and cement mixers);

   v. When the onroad diesel vehicle, nonroad construction equipment, or generator is being repaired, if idling is necessary for such repair; and/or

   vi. When the onroad diesel vehicle, nonroad construction equipment, or generator is queued for inspection, if idling is necessary for such inspection.

3. Exemptions

   i. Onroad diesel vehicles, nonroad construction equipment, and generators on site for 10 working days or less over the life of the project need not install emission control technology. This equipment must be included on

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4 Biodiesel blends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf.

5 Idling regulations for the Northeast states are available on the NEDC website at www.northeastdiesel.org.

6 Exemptions in this section apply only to emission control technology requirements and do not in any way exempt the contactor from meeting the requirement that all engines onsite must be Tier 2 or higher as specified in section 1.c.
the equipment list submitted by the contractor and approved by the developer.

ii. Until December 31, 2012, if the contractor can prove to the developer's satisfaction that a piece of nonroad construction equipment planned for use on site had been retrofitted with emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 20% prior to the award of this contract and provided that the emission control technology is in working order and within its useful life, the contractor need not install additional or alternative emission control technology on the specified piece of nonroad construction equipment.

iii. If the contractor can prove to the developer’s satisfaction that for a particular class of onroad diesel vehicle, nonroad construction equipment, or generator, (1) no alternative equipment with a Tier 4 engine is available, (2) it is not technically feasible to meet the control level specified above with a verified device, or (3) installing the control device would create a safety hazard or impaired visibility for the operator, then the contractor may, with the developer’s written approval, drop down to a lower level of control.

iv. The developer’s representative may create an exemption when there is a compelling emergency need to use diesel vehicles or engines that do not meet the contract conditions for emission controls. An example would be the need for rescue vehicles or other equipment to prevent or remedy harm to human beings or nearby property. Meeting contract deadlines, failure to rent equipment in a timely manner, planned unavailability, or lack of advance planning are not considered compelling emergencies.

v. The developer may provide an exemption lasting no more than 30 days to a contractor, if the contractor can prove with valid documentation and to the developer's satisfaction that the appropriate emission control equipment has been ordered in a timely manner after the bid was awarded, but has yet to be installed due to delays attributable to the equipment manufacturer and beyond the control of the contractor. The contractor must install the retrofit as soon as practicable once it has been delivered, and shall submit proof thereof when installation is complete. Provided, however, that such exemption shall not be available to a contractor who already owns an equivalent piece of equipment that meets the engine requirements for the project, as the contractor may use that piece of equipment.

4. Additional Diesel Requirements
a. Construction shall not proceed until the contractor submits a certified list of all
diesel vehicles, construction equipment, and generators to be used on site. The
list shall include the following:

i. Contractor and subcontractor name and address, plus contact person
responsible for the vehicles or equipment.

ii. Equipment type, equipment manufacturer, equipment serial number,
engine manufacturer, engine model year, engine certification (Tier
rating), horsepower, engine serial number, and expected fuel usage and
hours of operation.

iii. For the emission control technology installed: technology type, serial
number, make, model, manufacturer, EPA/CARB verification
number/level, and installation date and hour-meter reading on
installation date.

iv. The Certification Statement signed and printed on the contractor’s
letterhead.

b. If the contractor subsequently needs to bring on site equipment not on the list,
the contractor shall submit written notification within 24 hours that attests the
equipment complies with all contract conditions and provide information asked
for in 4(a).

c. All diesel equipment shall comply with all pertinent local, state, and federal
regulations relative to exhaust emission controls and safety.

d. The contractor shall establish generator sites and truck-staging zones for
vehicles waiting to load or unload material on site. Such zones shall be located
where diesel emissions have the least impact on abutters, the general public, and
especially sensitive receptors such as hospitals, schools, daycare facilities,
elderly housing, and convalescent facilities.

5. Reporting

a. The contractor shall submit to the developer’s representative a monthly report
that, for each onroad diesel vehicle, nonroad construction equipment, or
generator onsite, includes:

i. Hour-meter readings on arrival on-site, the first and last day of every
month, and on off-site date

ii. Any problems with the equipment or emission controls.

iii. Certified copies of fuel deliveries for the time period that identify:

1. Source of supply

2. Quantity of fuel

3. Quality of fuel, including sulfur content (percent by weight).

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7 USEPA’s Construction Fleet Inventory Guide is a useful tool in identifying the information required:

8 The NEDC Model Certification Statement can be found in Appendix A.
6. Compliance

All onroad diesel vehicles, nonroad construction equipment, and generators must be compliant with these provisions whenever they are present on the project site. The contractor’s compliance with this notice shall not be grounds for claims as outlined in Section ____.[developer inserts reference to appropriate section in its standard contract]

7. Non-Compliance

a. If any onroad diesel vehicle, nonroad construction equipment, or generator is found to be in non-compliance with the contract terms, the equipment will be immediately removed from the job site and [developer inserts penalties consistent with others specified in contract].

b. Once the contractor has brought previously non-compliant machinery into compliance, the developer’s representative shall promptly issue the contractor a written acknowledgment of compliance.

8. Costs [developer chooses one of the following options]

[Option 1]

a. All costs associated with the acquisition and installation of emission control technology shall be fully funded by the developer, provided that the contractor submits documentation, as outlined in Section 4(a) and Section 5(a) above, provided that the technology was installed specifically for this project and certifying that the expenditure for installation was not previously reimbursed by any public agency or public contract.

b. Retrofits installed with the developer’s funds from this project, shall remain on the onroad vehicle, nonroad construction equipment, or generator for the useful life of the emission control device or the machine.

[Option 2]

a. Any and all costs associated with the acquisition and installation of emission control technology is not to be included in the total project cost and shall not be considered a factor in the competitive bidding process.

b. All costs associated with the acquisition and installation of emission control technology shall be fully funded by the developer, provided that the contractor submits documentation, as outlined in Section 4(a) and Section 5(a) above, provided that the technology was installed specifically for this project and certifying that the expenditure for installation was not previously reimbursed by any public agency or public contract.

c. Retrofits installed with the developer’s funds from this project, shall remain on the onroad vehicle, nonroad construction equipment, or generator for the useful life of the emission control device or the machine.

[Option 3]

All costs associated with the acquisition and installation of emission control technology are considered incidental to the cost of the project; no additional compensation will be provided.
Appendix A:

Model Certification Statement
Northeast Diesel Collaborative Clean Construction Workgroup
MODEL CERTIFICATION STATEMENT

I hereby certify:

1. That the vehicle(s) identified in the attached spreadsheet that will be retrofitted are essential to the construction activities I have agreed to perform under contract with Organization/Company Name.

2. That I am fully aware that some Authorized Installers require the vehicle(s) to be retrofitted be brought to their shop to install the approved retrofits, and that this cost is not covered by either this program or the Authorized Installer, but instead is the responsibility of the vehicle owner(s).

3. That the retrofit device(s) will remain on the vehicle, and in working order, for a minimum of 3 years after installation. [Note: This does not apply to rental retrofit device(s)]

4. That any discrepancy to the above will be reported to Organization/Company Name point of contact within 10 business days.

5. That all of the above conditions will be followed. Any deviation will be considered a breach in the agreement.

I understand that my vehicle(s) are subject to random and scheduled inspections to verify that the device(s) are installed and operating properly.

APPLICANT CERTIFICATION

I certify to the best of my knowledge that I will comply with the items listed above and that I am a legally authorized signatory or designee for the applicant.

__________________________________________
Signature

__________________________________________
(Print Name)

__________________________________________
Company Name

__________________________________________
Organization/Company Name

__________________________________________
Organization/Company Address

__________________________________________
Attn: Organization/Company Contact Name

__________________________________________
Organization/Company Contact Email

Phone Number

Company Address

Please return the completed application to:

Organization/Company Name

Organization/Company Address

Attn: Organization/Company Contact Name

Organization/Company Contact Email

9 Northeast Diesel Collaborative Model Contract Specification 12/10
While it is covered by EO 12372, the Florida State Clearinghouse does not select any of the projects for review since you have already obtained an ERP. You may proceed with your project.

Please send future electronic requests directly to the State Clearinghouse email address, State.Clearinghouse@dep.state.fl.us

Good Luck.

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3800 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
State.Clearinghouse@floridadep.gov

Hi Chris,

As discussed yesterday, please find attached the ERPs for the proposed Jacksonville National Cemetery Phase 2 expansion. As you know, additional permit information is accessible from SJRWMD. Also attached is the Draft SEA NOA (published Dec 14 and 16 2018) with the download link for the Draft SEA (https://www.cem.va.gov/cem/EA.asp).

Appreciate your responsiveness.

Please let me know if any questions.

Thank you,
December 3, 2018

Mayor Lenny Curry
City Hall at St. James Building
117 W. Duval Street, Suite 400
Jacksonville, FL 32202

Dear Mayor Curry,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

The Phase 2 expansion would extend the longevity of the Jacksonville National Cemetery by providing new interment sites within the north central portion of the existing property boundary, in an area currently used as cattle pasture. No new real property would be purchased under this Proposed Action. Construction of the Phase 2 expansion would last approximately 18 months and require land grading, extension of roadways, expansion of an existing stormwater retention pond and construction of one new pond to provide irrigation water for landscaped grounds within the designated expansion area. Construction would not disrupt or interfere with on-going memorial services held elsewhere at the Jacksonville National Cemetery. Operation would provide approximately 18,000 new burial sites and extend the professionally-maintained park-like setting of the Jacksonville National Cemetery to the Phase 2 expansion area.

The VA prepared the Draft SEA in accordance with the National Environmental Policy Act (NEPA), (Public Law 91-190, 42 USC 4321-4347 January 1, 1970), amendments, and VA’s Implementing Regulations (38 CFR Part 26).

The VA invites your organization to review the Draft SEA and provide comments within 30 days of receipt of this letter. The Draft SEA is available for review at the Jacksonville National Cemetery and the Jacksonville Public Main Library at 303 North Laura Street, Jacksonville, Florida, 32202, and can be downloaded in electronic format from the VA website at http://www.cem.va.gov/cem/EA.asp. The VA has also published a Notice of Availability (NOA) of the Draft SEA in the Florida Times-Union to inform and solicit comment from the general public during the 30-day review period. All agency and public comments on the Draft SEA will be addressed and documented in the Final SEA. The VA will inform your organization in writing, and publish a NOA, upon completion of the Final SEA.

The VA wishes to take every opportunity to work together in a relationship where a Federal, State or local agency has decision-making authority or special expertise that can enhance VA’s decision-making efforts. Once again, if you would like to provide comments or request additional information, please contact: Mr. Glenn Elliott, U.S. Department of Veterans Affairs, Construction & Facilities Management Office, 425 I (eye) Street, NW, Room 6W417a, Washington, D.C., 20001, via email to glenn.elliott@va.gov, or by telephone at (202) 632-5879. Please reference “Jacksonville National Cemetery” in all correspondence.

Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

Mr. Fred Dayhoff
Miccosukee Tribe of Indians of Florida
Section 106 and NAGPRA Coordinator
HC 61 - SR box 68 Old Loop Road
Ochopee, FL 34141

Dear Miccosukee Tribe of Indians of Florida,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

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Sincerely,
U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

Chris Stahl, Clearinghouse Coordinator
Office of Intergovernmental Programs
Department of Environmental Protection
3900 Commonwealth Blvd., Mail Station 47
Tallahassee, FL 32399

Dear Florida Clearinghouse,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

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Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

Mr. Paul Backhouse, Ph.D.
Seminole Tribe of Florida
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

Dear Seminole Tribe of Florida,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

The Phase 2 expansion would extend the longevity of the Jacksonville National Cemetery by providing new interment sites within the north central portion of the existing property boundary, in an area currently used as cattle pasture. No new real property would be purchased under this Proposed Action. Construction of the Phase 2 expansion would last approximately 18 months and require land grading, extension of roadways, expansion of an existing stormwater retention pond and construction of one new pond to provide irrigation water for landscaped grounds within the designated expansion area. Construction would not disrupt or interfere with on-going memorial services held elsewhere at the Jacksonville National Cemetery. Operation would provide approximately 18,000 new burial sites and extend the professionally-maintained park-like setting of the Jacksonville National Cemetery to the Phase 2 expansion area.

The VA prepared the Draft SEA in accordance with the National Environmental Policy Act (NEPA), (Public Law 91-190, 42 USC 4321-4347 January 1, 1970), amendments, and VA’s Implementing Regulations (38 CFR Part 26).

The VA invites your organization to review the Draft SEA and provide comments within 30 days of receipt of this letter. The Draft SEA is available for review at the Jacksonville National Cemetery and the Jacksonville Public Main Library at 303 North Laura Street, Jacksonville, Florida, 32202, and can be downloaded in electronic format from the VA website at http://www.cem.va.gov/cem/EA.asp. The VA has also published a Notice of Availability (NOA) of the Draft SEA in the Florida Times-Union to inform and solicit comment from the general public during the 30-day review period. All agency and public comments on the Draft SEA will be addressed and documented in the Final SEA. The VA will inform your organization in writing, and publish a NOA, upon completion of the Final SEA.

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Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

U.S. Army Corps of Engineers
Public Affairs Office, Jacksonville District, North
4070 Boulevard Center, Suite 201
Jacksonville, FL 32207

Dear U.S. Army Corps of Engineers,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

The Phase 2 expansion would extend the longevity of the Jacksonville National Cemetery by providing new interment sites within the north central portion of the existing property boundary, in an area currently used as cattle pasture. No new real property would be purchased under this Proposed Action. Construction of the Phase 2 expansion would last approximately 18 months and require land grading, extension of roadways, expansion of an existing stormwater retention pond and construction of one new pond to provide irrigation water for landscaped grounds within the designated expansion area. Construction would not disrupt or interfere with on-going memorial services held elsewhere at the Jacksonville National Cemetery. Operation would provide approximately 18,000 new burial sites and extend the professionally-maintained park-like setting of the Jacksonville National Cemetery to the Phase 2 expansion area.

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Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

U.S. Department of Agriculture
National Resources Conservation Service, Tavares Service Center
1725 David Walker Drive, Suite C
Tavares, FL 32778

Dear U.S. Department of Agriculture,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion ("Phase 2 expansion") within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

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Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

U.S. Environmental Protection Agency, Region 4
Office of Policy and Management
61 Forsyth Street, SW
Atlanta, GA 30303

Dear U.S. Environmental Protection Agency,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (“Phase 2 expansion”) within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

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Sincerely,

U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
December 3, 2018

U.S. Fish and Wildlife Service
North Florida Ecological Services Office
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256

Dear U.S. Fish and Wildlife Service,

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion ("Phase 2 expansion") within the existing 526-acre Jacksonville National Cemetery, located at 4038 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be constructed within the expansion boundary specified in the VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. Figures 1 and 2, enclosed with this letter, depict the location of the Jacksonville National Cemetery and the Phase 2 expansion area.

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Sincerely,
U.S. Department of Veterans Affairs

Glenn Elliott, Senior PP/M
Environmental Officer
Construction & Facilities Management Office
| Article Addressed to: | U.S. Environmental Protection Agency, Region 4  
Office of Policy and Management  
61 Forsyth Street, SW  
Atlanta, GA 30303 |
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| U.S. Department of Agriculture  
National Resources Conservation Service  
1725 David Walker Drive, Suite C  
Tavares, FL 32778 | U.S. Fish and Wildlife Service  
North Florida Ecological Services Office  
7915 Baymeadows Way, Suite 200  
Jacksonville, FL 32256 |
I. Article Addressed to:

Mr. Paul Backhouse, Ph.D.
Seminole Tribe of Florida
30290 Josie Billie Highway, PMB 1004
Clewiston, FL 33440

II. Article Number

A. Signature

Mr. Fred Dayhoff, Section 106 and NAGPRA Coordinator
Miccosukee Tribe of Indians of Florida
HC 61 - SR box 68 Old Loop Road
Okeechobee, FL 34414

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Mayor Lenny Curry
City Hall at St. James Building
117 W. Duval Street, Suite 400
Jacksonville, FL 32202

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B. Received by (Printed Name)

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Domestic Return Receipt

PS Form 3811, July 2015 PSN 7530-02-000-9053

Prioritize this and delivery to:

Domestic Return Receipt

PS Form 3811, July 2015 PSN 7530-02-000-9053

Prioritize this and delivery to:
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1 INTRODUCTION

This Endangered Species Report has been prepared for the U.S. Department of Veterans Affairs (VA) as part of the VA’s proposed expansion of the Jacksonville National Cemetery, located at 4083 Lannie Road, Jacksonville, Duval County, Florida (Figure 1). This location is in Sections 38, 40, and 41 of Township 2 North, Range 26 East and Sections 39, 40, and 41 of Township 1 North, Range 26 East. The purpose of the proposed expansion is to create new burial capacity and other physical infrastructure within a portion of the Phase 2 development area, as identified in the VA’s 2007 Master Plan for the Jacksonville National Cemetery. The proposed expansion would extend the longevity of the Jacksonville National Cemetery for Veterans and their eligible family members in northeast Florida.

The purpose of this report is to identify the potential effects of the proposed cemetery expansion on listed species and their associated habitats. The process used to identify potential impacts included literature and database reviews and a field survey of habitats within and adjacent to the proposed expansion area. A summary of the methodologies and results are provided below.

1.1 Proposed Expansion of the Jacksonville National Cemetery

The Jacksonville National Cemetery is located in a rural area north of the city of Jacksonville, in the northern portion of Duval County. The cemetery property covers approximately 526 acres; Lannie Road bisects the northern and southern portions of the property. In 2007, the VA completed a Master Plan for the northern portion of the property. This Master Plan identified where phased development and environmental protection areas would be located over the next 100 years. In 2009, the first phase (Phase 1 cemetery) of the Master Plan was constructed in the western portion of the northern area, and the first burials occurred that same year.

The Phase 1 cemetery is currently anticipated to reach capacity within the next several years. As a result, the VA has begun planning for the next phased cemetery expansion in accordance with the Master Plan, which identified an approximately 200-acre area (to the east of the Phase 1 cemetery) for a future Phase 2 cemetery. To date, no development has occurred within the Phase 2 cemetery boundary. However, as described in the following sections, the VA has already applied for and received state and federal permits issued for the conceptual development of the Phase 2 cemetery based on the Master Plan. These permits also define regulated resources and preservation areas within the Phase 2 boundary and the mitigation that would be required once construction and operation occur.

As part of the current expansion planning process, the VA identified an approximately 60-acre area for the proposed expansion within the southwestern portion of the Phase 2 boundary (Figure 2). This 60-acre area is identified in this report as the Proposed Expansion Area, however, only approximately 45 acres within the 60-acre area would be developed, because an approximately 15-acre preservation area (where development is prohibited) is already present within the eastern portion of the 60-acre area (Figure 3). In summary, the proposed 45-acre expansion would be designed according to the Master Plan and would provide new burial sections, roadways, and a stormwater management pond. Although the proposed expansion would impact wetlands, it would entirely avoid impacting existing preservation areas present within the Phase 2 boundary. A discussion of these impacts was described in the Wetland Delineation Report for the Proposed Expansion of the Jacksonville National Cemetery, submitted to the VA under separate cover on July 21, 2017.

1.2 Jacksonville National Cemetery Regulatory Planning History

An Environmental Assessment (EA) was completed by the VA in May 2006 to evaluate the physical, biological, and cultural resources effects of developing a new National Cemetery at one of two sites (“City Site” or the “Wright Site”) along Lannie Road in Jacksonville, Florida. Following completion of the 2006 Final EA, the VA selected and purchased the City Site, developed the phased Master Plan, and secured the following permits from the St. Johns River Water Management District (SJRWMD) and the U.S. Army Corps of Engineers (USACE) to construct Phases 1A, 1B, and 2 based on the conceptual design presented in the Master Plan.
SJRWMD Permits

SJRWMD Permit ERP-115730-1 was issued on June 2, 2008, to construct Phase 1A of the Jacksonville National Cemetery. This permit authorized the construction of a stormwater management system within the 18.06-acre Phase 1A area. There were no wetlands within this phase of construction.

The SJRWMD issued a formal jurisdictional determination on February 9, 2009 (Appendix A). The VA’s contractor Environmental Services, Inc. (ESI) delineated boundaries of onsite wetlands pursuant to the methodology provided within Chapter 62-340, Florida Administrative Code, “Delineation of the Landward Extent of Wetlands and Surface Waters” during field evaluations for the future proposed development of the Phase 2 cemetery as designed in the Master Plan. These wetland boundaries were verified in the field by the SJRWMD and used in the formal determination and subsequent permitting efforts described below.

SJRWMD Permit ERP-115730-2 was issued July 13, 2009, to modify and expand the stormwater management system serving the cemetery to authorize construction of the Phase 1B cemetery. Improvements included site filling and grading, curb and gutter roadways, parking, administrative and maintenance buildings, inlets and storm sewers, and four wet detention ponds. This permit authorized 5.18 acres of wetland impacts; 4.86 acres of wooded wetlands and 0.32 acres of herbaceous wetlands within the Phase 1B project area. The mitigation proposed consisted of 58.83 acres of wetlands to be preserved, along with an adjacent upland buffer preservation area of 4.95 acres. The wetland preservation areas are located adjacent to the model airplane field access road and also throughout the VA property located immediately south of Lannie Road. These areas were required to be placed under conservation easement, which was recorded October 1, 2009, within Duval County Official Records (OR) Book 15023 and Page 1214.

SJRWMD Permit ERP-115730-3 was issued on May 30, 2012, to construct a stormwater management system for the future proposed Phase 2 cemetery. This permit authorized the impact to 17.02 acres of wetlands and 4.81 acres of upland cut ditches. This permit required compensatory mitigation through the creation of 30.35 acres of wetlands adjacent to 6.16 acres of upland preservation. These creation and preservation areas are located within the VA property south of Lannie Road, adjacent to the wetland preservation parcels identified for mitigation within ERP-115730-2. These creation areas were also placed under conservation easement, which was recorded June 22, 2012 within the Duval County OR Book 15976, Page 2098.

Application Number 115730-5 was submitted to the SJRWMD on June 27, 2016, to modify ERP-115730-3 to allow for the construction of the Jacksonville National Cemetery Access Road (SJRWMD Permit ERP-140622-3. This modification request includes only changes to the mitigation plan; with no changes being proposed to the engineering or permitted impacts. The proposed modification is comprised of the release of 0.83 acres of the upland buffer conservation easement recorded in Duval County OR Book 15976, Page 2098. Along with this release request, an in-kind replacement of 0.83 acres of upland buffer was proposed to be added elsewhere within the project site. SJRWMD submitted a request for additional information on July 25, 2016. A partial RAI response was submitted on November 4, 2016. This modification request remains open and has neither been granted nor denied.

USACE Permits

USACE Nationwide Permit SAJ-2006-02208 (NW-BAL) was issued on June 19, 2008, to construct Phase 1A of the Jacksonville National Cemetery. This permit authorized the construction of access roads, ponds, and additional cemetery features within the 18.06-acre Phase 1A area, and authorized 0.06 acres of impact to upland cut ditches that did not require compensatory mitigation.

USACE Standard Permit SAJ-2006-02208 (SP-BAL) was issued on August 18, 2009, to authorize unavoidable impacts to 27.38 acres of wetlands (including 6.76 acres of ditch impacts) to construct the Phase 1B cemetery, as well as for future proposed development of the Phase 2 cemetery as designed in the Master Plan. This permit required compensatory mitigation in the form of 58.52 acres of wetlands located adjacent to the Model Airplane Field access road and within the VA property south of Lannie Road. Within these preservation areas, USACE requires wetland enhancement achieved by removing Chinese tallow (Sapium sebiferum) and additional hydrologic...
improvements through the plugging of several on-site ditches. Once these improvements are performed, USACE requires a time-zero report and semi-annual compliance reports for the first three years, and annual monitoring for no less than five years thereafter. These 58.52 acres of wetlands were also required to be placed under conservation easement. The conservation easement was recorded on October 1, 2009 within the Duval County OR Book 15023 and Page 1214.

SAJ-2006-02208 was modified on March 21, 2011, to authorize an additional 1.62 acres of wetland impacts in the northwestern portion of the future Phase 2 cemetery boundary, along the Model Airplane Field Access Road that were inadvertently labeled as “wetland preservation” on the permit drawings. In addition, a 0.05-acre impact located along the Model Airplane Field access road was not included on the permit drawings. As a result of these required modifications, additional wetland impacts (totaling 1.62 acres) were added to the permit. The addition of these impacts required mitigation through the creation of 1.1 acres of wetlands, which are located at the southeast corner to the cemetery property, directly adjacent to the previously identified wetland creation area. This permit remains valid through August 18, 2024.

**Summary of Remaining Permitting Needs**

Based upon a review of permits previously issued by the SJRWMD and the USACE, prior to engaging in construction of Phase 2 and/or the proposed expansion area, VA will be required to finalize their request for ERP-115730-05. If the application for ERP-115730-05 is either denied or abandoned, then VA must obtain reauthorization of the recently expired ERP-115730-003 or obtain a new authorization; whichever is deemed appropriate by the SJRWMD. Phase 2 construction details would need to incorporate the previously authorized impacts and mitigation authorized under USACE Permit SAJ-2006-02208 (SP-BAL); deviations would require a permit modification.

**Summary of Remaining Mitigation Requirements**

To date, none of the proposed Phase 2 cemetery has been constructed. However, unavoidable wetland impacts anticipated by this construction and the requisite compensatory mitigation requirements were reviewed and approved by regulatory agencies. A total of 64.69 acres of preservation (58.53 acres of wetlands and 6.16 acres of uplands) have been preserved under conservation easement. Additional mitigation actions will need to be implemented in order to construct Phase 2 of the cemetery. These actions include 31.45 acres of wetland creation and the removal of exotic vegetation from 58.82 acres of preservation areas as defined by the approved mitigation plans within ERP-115730-003 and SAJ-2006-02208 (SP-BAL). The proposed expansion area will impact 3.88 acres of jurisdictional wetlands. Subsequent to the implementation of the wetland creation and wetland enhancement components of the mitigation plan, monitoring will be required to demonstrate permit compliance. The mitigation requirements are shown on Figure 3.

### 1.3 Proposed Project: Expansion of the Jacksonville National Cemetery

The Jacksonville National Cemetery covers approximately 526 acres and is designed to serve Veterans’ and their families in northeast Florida. A Master Plan was completed in 2007; it identified where phased development and environmental protection areas would be located within the property boundary over the next 100 years. In 2009, the first phase (Phase 1 cemetery) of the Master Plan was constructed in the western portion of the property, and the first burials occurred the same year. The Master Plan identified an approximately 200-acre area for a future Phase 2 cemetery; the area is located adjacent to and east of the Phase 1 cemetery. To date, no development has occurred within the Phase 2 cemetery boundary.

Under the current proposed expansion, an approximately 45-acre area would be developed within the boundary of the future Phase 2 cemetery. The expansion would provide new burial sections, roadways, and stormwater management ponds, while maintaining existing designated preservation areas located within the Phase 2 cemetery boundary (Figure 2).
2 METHODOLOGY

2.1 Data Collection

The potential presence of state- and federally-listed species within the Proposed Expansion Area was assessed by review of the following:

- Species accounts;
- U.S. Fish and Wildlife Service (FWS) and Florida Fish and Wildlife Conservation Commission (FWC) listings of species known to occur or potentially occurring in Duval County;
- Online database sources from the FWS, FWC, and Florida Natural Areas Inventory (FNAI); and
- Field observations of habitats and wildlife species.

Documented occurrences of rare species likely to occur within Duval County were obtained from FNAI’s Searchable Tracking List website (FNAI, 2017), FWS Information for Planning and Conservation (IPAC), and observations recorded during the June 21, 2017 field review by AECOM. Prior to the field review, the following documents were reviewed to identify general habitats and land use features in the vicinity of the cemetery:

- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service, Soil Survey of Duval County, Florida (NRCS, 2012);
- Hydric Soils of Florida Handbook (Hurt, 2007);
- Florida Land Use, Cover and Forms Classification System (FLUCFCS), 3rd edition (FDOT, 1999);
- St. Johns River Water Management District FLUCFCS GIS Database (SJRWMD, 2011); and
- U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979).

Land use refers to the predominant use of a piece of land (e.g., agriculture, transportation, or residential). Land may be developed for use or remain undeveloped (e.g. a national park or conservation area) but still retain a land use classification. Vegetative cover refers to the predominant vegetative form of a developed or undeveloped piece of land (e.g. upland hardwood forest, bottomland swamp, or citrus grove). Together, land use and vegetative cover classifications describe landscapes within a particular area. In Florida, land use and vegetative cover types are commonly classified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999). FLUCFCS is a uniform land classification system developed by the FDOT and is widely used by local, state, and federal agencies within Florida.

2.2 Field Survey

A field survey was conducted by AECOM on June 21, 2017, within the 45-acres of the 60-acre Proposed Expansion Area that would require conversion of natural habitat; the 15 acres already preserved in perpetuity were not surveyed as they cannot be developed. Land use and vegetative cover within the Proposed Expansion Area were assessed. All areas within the Proposed Expansion Area were assigned a FLUCFCS code reflecting their land use or vegetative cover. The location and acreage of FLUCFCS polygons in the Proposed Expansion Area were determined by: 1) marking field-observed FLUCFCS boundaries on an aerial photograph; 2) digitizing the field FLUCFCS map into a Geographic Information System (GIS) database; and 3) overlaying the Proposed Expansion Area boundaries on the digitized FLUCFCS map. The resulting information was used to describe existing land use, vegetative cover, and land forms in the Proposed Expansion Area. Qualified biologists assessed the potential presence of state- and federally-listed species within the Proposed Expansion Area. Qualitative surveys of each habitat type present within the Proposed Expansion Area were made by visual inspection during the field survey.
3 LAND USE/VEGETATIVE COVER

All vegetative habitats and land uses within the Proposed Expansion Area were classified using the FLUCFCS. The vegetative communities are summarized in Table 1 and depicted in Figure 4.

Table 1. Land Use/Vegetative Cover within the Proposed Expansion Area

<table>
<thead>
<tr>
<th>FLUCFCS Code</th>
<th>FLUCFCS Description</th>
<th>Acres within Proposed Expansion Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Improved Pasture</td>
<td>39.65</td>
</tr>
<tr>
<td>211w</td>
<td>Improved Pasture – Wet</td>
<td>3.18</td>
</tr>
<tr>
<td>510</td>
<td>Ditch</td>
<td>0.16</td>
</tr>
<tr>
<td>630</td>
<td>Mixed Forested Wetland</td>
<td>12.48</td>
</tr>
<tr>
<td>--</td>
<td>Phase 1 Stormwater Management Pond (previously evaluated for the Phase 1 development)</td>
<td>4.91</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>60.38</td>
</tr>
</tbody>
</table>

1FDOT, 1999

Improved Pastures (FLUCFCS 211)

The majority of the Proposed Expansion Area is comprised of pastureland that has been primarily used by ranchers to graze cattle. This area is dominated by bahia grass (*Paspalum notatum*), with some patches of dog fennel (*Eupatorium capillifolium*), and blackberry (*Rubus* sp.)

Improved Pastures (FLUCFCS 211w)

Some of the pasture land within the Proposed Expansion Area is wetland, vegetated with bahia grass, smartweed (*Persicaria* spp.), soft rush (*Juncus effusus*), dwarf umbrella sedge (*Fuirena pumila*), horned beaksedge (*Rhynchospora corniculata*), millet beaksedge (*R. miliacea*) switchgrass (*Panicum virgatum*), spadeleaf (*Centella asiatica*), hairy umbrella sedge (*F. squarroso*), and mermaid-weed (*Proserpinaca palustris*).

Mixed Forested Wetland (FLUCFCS 630)

Within this community, the dominant canopy species include sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), slash pine (*Pinus elliottii*), pond pine (*P. serotina*), bald cypress (*Taxodium distichum*), blackgum (*Nyssa biflora*), water oak (*Quercus nigra*) and Chinese tallow. The understory species includes fetterbush (*Lyonia lucida*), wax myrtle (*Morella cerifera*), saw palmetto (*Serena repens*), and gallberry (*Ilex glabra*). The groundcover is dominated by Virginia chain fern (*Woodwardia virginica*), netted chain fern (*W. areolata*), and cinnamon fern (*Osmunda cinnamomea*).

4 LISTED SPECIES POTENTIALLY AFFECTED

The Endangered Species Act (ESA) requires that all federal agencies undertake programs for the conservation of endangered and threatened species and prohibits federal agencies from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its critical habitat as designated in 50 CFR 17 and 226. Projects that would otherwise jeopardize a federally-listed species or impact its critical habitat must contain conservation measures or habitat mitigation that removes the jeopardy. State-listed species are those animal and plant species protected by the State of Florida pursuant to Chapter 68A-27 F.A.C. and Chapter 5B-40, F.A.C., respectively.

Animal species may be classified as “endangered” when it is in danger of extinction within the foreseeable future throughout all or a significant portion of its range. A “threatened” classification is provided to those species likely to become endangered within the foreseeable future throughout all or a significant part of their ranges. The State of Florida also maintains a state list of endangered and threatened species and “species of special concern.” A species of special concern is a species that, although possibly relatively abundant and widespread in the state, is
especially vulnerable to certain types of exploitation or environmental changes and have experienced long-term population declines.

Plant species are listed by the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened, and commercially exploited. As defined by Chapter 581.185(2), Florida Statutes, "endangered plants" refers to species of plants native to the state that are in imminent danger of extinction within the state, and the survival of which is unlikely if the causes of a decline in the number of plants continue. "Threatened plants" refers to 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. "Commercially exploited plants" refers to species native to the state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

Based on a review of available literature, online data sources, and field review, a total of ten (10) state-listed plant species and six (6) state and/or federally-listed animal species have the potential to occur within the Proposed Expansion Area. Another species of concern that has the potential to occur that is protected by state and federal law is the bald eagle (Haliaeetus leucocephalus). Table 2 provides a summary of the listed and protected species with potential to occur within the Proposed Expansion Area. Each of these species is discussed in the following sections.

**Table 2. Listed Species Potentially Occurring within Proposed Expansion Area**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Federal Status</th>
<th>State Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asclepias viridula</td>
<td>Southern Milkweed</td>
<td>NL</td>
<td>T</td>
</tr>
<tr>
<td>Balduina atropurpurea</td>
<td>Purple Honeycomb-head</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Calopogon multiflorus</td>
<td>Many-flowered Grass-pink</td>
<td>NL</td>
<td>T</td>
</tr>
<tr>
<td>Coreopsis integrifolia</td>
<td>Ciliate-leaf Tickseed</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Ctenium floridanum</td>
<td>Florida Toothache Grass</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Matelea floridana</td>
<td>Florida Spiny-pod</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Pycnanthemum floridanum</td>
<td>Florida Mountain Mint</td>
<td>NL</td>
<td>T</td>
</tr>
<tr>
<td>Rudbeckia nitida</td>
<td>St. John’s Blackeyed Susan</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Sideroxylon alachuense</td>
<td>Silver Buckthorn</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td>Verbesina heterophylla</td>
<td>Variable-leaf Crownbeard</td>
<td>NL</td>
<td>E</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gopherus polyphemus</td>
<td>Gopher Tortoise</td>
<td>C</td>
<td>T</td>
</tr>
<tr>
<td>Drymarchon corais couperi</td>
<td>Eastern Indigo Snake</td>
<td>T</td>
<td>NL</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cistothorus palustris griseus</td>
<td>Worthington’s Marsh Wren</td>
<td>NL</td>
<td>SSC</td>
</tr>
<tr>
<td>Egretta caerulata</td>
<td>Little Blue Heron</td>
<td>NL</td>
<td>T</td>
</tr>
<tr>
<td>Mycteria americana</td>
<td>Wood Stork</td>
<td>T</td>
<td>NL</td>
</tr>
<tr>
<td>Picoides borealis</td>
<td>Red-Cockaded Woodpecker</td>
<td>E</td>
<td>T</td>
</tr>
<tr>
<td><strong>Other Species of Concern</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haliaeetus leucocephalus</td>
<td>American Bald Eagle</td>
<td>NL</td>
<td>NL</td>
</tr>
</tbody>
</table>

Note: F = Federal; T = Threatened; SSC = Species of Special Concern; E = Endangered; NL = Not Listed; C = Candidate

### 4.1 Flora

Ten state-listed plant species have the potential to occur within the Proposed Expansion Area and are listed in Table 2. However, none of these plant species have been reported by FNAl databases as occurring within one mile of the Proposed Expansion Area and none were observed within the Proposed Expansion Area during the field survey. Therefore, it has been determined that the proposed project would not adversely affect any of these listed plant species.
4.2 Fauna

4.2.1 Federally-Listed Species

**Eastern Indigo Snake**

The federally threatened eastern indigo snake can be found in a variety of habitats including mesic flatwoods, swamps, wet prairies, xeric pine land, and scrub areas. Suitable habitat is available for this species in the Proposed Expansion Area. Based on review of FNAI data, the eastern indigo snake has been documented within Duval County, but not within one mile of the Proposed Expansion Area. No eastern indigo snakes were observed during the field survey. In an effort to reduce correspondence in effect determinations and responses, the FWS has provided the USACE an *Eastern Indigo Snake Effect Determination Key* (updated in 2010). Using this key, the following steps were presumably followed by the USACE to determine the effect of the proposed expansion project on the indigo snake:

A. The project is not solely located in open water or salt marsh.
B. The permit authorizing the proposed expansion will be conditioned for use of the FWS Standard Protection Measures for the Eastern Indigo Snake during site preparation and project construction.
C. There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried, or trapped and injured during project activities.

During the federal permitting process for the buildout of the Jacksonville National Cemetery based on the 2007 Master Plan, the USACE determined that the project would not affect the eastern indigo snake and did not include the special protection measures for the species as a requirement to the permits issued.

**Gopher Tortoise**

The gopher tortoise is listed as threatened by the FWC and is a candidate for listing by the FWS. The gopher tortoise requires well-drained, loose sandy soils for burrowing, and low-growing herbs and grasses for food. These conditions can be found in a number of habitats including dry prairies, pine flatwoods and disturbed or maintained sites such as roadsides.

During the field survey on June 21, 2017, 100% of the suitable habitat within the Proposed Expansion Area was surveyed for gopher tortoise burrows. There were no potentially occupied gopher tortoise burrows observed within the Proposed Expansion Area during the field survey.

However, gopher tortoises are a highly mobile species and gopher tortoise burrow surveys are not valid for more than 90 days per FWC requirements. Therefore, prior to construction, it is recommended that suitable habitat within the entire Proposed Expansion Area be surveyed to ensure that gopher tortoises have not moved into the site. Any gopher tortoises or burrows found in or within 25 feet of the proposed area to be disturbed will require coordination with the FWC to secure permits needed to relocate the gopher tortoises and associated listed species prior to construction. Assuming the VA will adhere to this coordination commitment, a determination based on the current 100% survey was made that the currently proposed expansion project would not adversely affect the gopher tortoise.

**Red Cockaded Woodpecker**

The red cockaded woodpecker is largely black and white, with a large, bright-white cheek patch and a bold black malar stripe forming the lower border of the cheek. Males have a tiny, nearly invisible red streak (“cockade”) at the upper border of the cheek. The back has strong horizontal black-and-white bars. The red-cockaded woodpecker was federally listed as endangered in 1970, and currently is classified as threatened by the State of Florida. The primary threat to the species continues to be destruction or degradation of its habitat as a result of timbering and other land-clearing activities. The red cockaded woodpecker requires old-growth pine with little to no understory vegetation.
The Proposed Expansion Area is within the FWS consultation area for the red cockaded woodpecker (Figure 5). Based on the field survey conducted on June 21, 2017, there is no habitat present within the Proposed Expansion Area suitable for the red cockaded woodpecker. The impact area is entirely comprised of improved pasture and no pine trees are present within the site. It is anticipated that the proposed project will result in a “no effect” ESA determination by the FWS.

**Wood Stork**

The Proposed Expansion Area is within the core forage area of one active wood stork nesting colony, which is located 10.5 miles to the southeast at the Jacksonville Zoo (Figure 5). In an effort to reduce correspondence in effect determinations and responses, the FWS has provided the USACE with a Wood Stork Effect Determination Key (updated in 2010). Using this key, the following steps were followed to determine the effect of the proposed expansion project on the wood stork.

A. The proposed project impacts suitable foraging habitat (SFH) at a location greater than 0.76 km (0.47 mile) from a colony site.

B. Project impacts to SFH is greater in scope than 0.20 hectare (one-half acre).

C. Project impacts to SFH within the Core Foraging Area (CFA) of a colony site.

D. Project provides SFH compensation in accordance with the Clean Water Act (CWA) section 404(b)(1) guidelines and is not contrary to the Habitat Management Guidelines for the Wood Stork in the Southeast Region (USFWS 1990); habitat compensation is within the appropriate CFA or within the service area of a USFWS-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands.

In accordance with the existing SJRWMD and USACE permits authorizing construction for Phase 2 of the Cemetery, 31.45 acres of wetland creation will take place on the VA-owned property on the south side of Lannie Road. This wetland creation satisfies the requirements of CWA section 404(b)(1) and provides habitat compensation sufficiently replacing the foraging value of impacted wetlands. Based upon this assessment, the proposed expansion has been determined by FWS to result in a “may affect, not likely to adversely affect” (MANLAA) ESA determination.

### 4.2.2 State Listed Species

**Little Blue Heron**

The little blue heron is listed by the FWC as threatened. The little blue heron depends on wetlands for suitable resting and breeding habitat, as well as foraging habitat. During the field survey on June 21, 2017, several little blue heron were observed within the Proposed Expansion Area foraging within the areas of standing water. Conversion of the improved pasture to construct the Phase 2 expansion would impact foraging habitat for this species. However, in accordance with the existing SJRWMD and USACE permits authorizing construction for Phase 2 of the Cemetery, as mitigation for Phase 2 impacts, VA will be constructing 31.45 acres of wetlands on the VA-owned property on the south side of Lannie Road, which will create more foraging opportunities for the little blue heron, in addition to other wading birds that utilize the area. For these reasons, it was determined that the proposed expansion would not adversely affect the little blue heron.

**Worthington’s Marsh Wren**

Worthington’s marsh wren is listed as threatened by the FWC. This species prefers tidal marshes dominated by cordgrass (*Spartina alterniflora*). Within these habitats, marsh wrens nest and forage within tall grasses of meandering tidal creeks. There are no areas within the Proposed Expansion Area that are suitable for this species, as the wetlands onsite are freshwater and not tidally influenced. During the field survey on June 21, 2017, no marsh wrens were observed within the Proposed Expansion Area. If a marsh wren is observed within the
proposed project area prior to or during construction, coordination with FWC would occur to implement the proper conservation measures. For these reasons, it was determined that the proposed expansion would not adversely affect the Worthington’s marsh wren.

4.2.3 Other Species of Concern

*Bald Eagle*

Though the bald eagle is no longer state or federally listed, it is still federally protected by the Bald and Golden Eagle Protection Act in accordance with 16 United States Code 668. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks. The nests are generally located near bodies of water that provide a dependable food source. According to the FWC’s online bald eagle nest locator, no nests are located within one mile of the Proposed Expansion Area and none were observed during the field survey on June 21, 2017. For these reasons, it was determined that the proposed expansion project would not affect the bald eagle.

5 CRITICAL HABITAT

The Proposed Expansion Area was assessed for the occurrence of Critical Habitat as defined by 17 CFR 35.1532. No federally-designated Critical Habitat occurs within the Proposed Expansion Area for any federally-listed species.

6 COMMITMENTS

Based on field and literature reviews, federally- and/or state-listed species have the potential to occur within the Proposed Expansion Area. In order to minimize adverse impacts to these species, the following commitments would be implemented:

Prior to construction, survey appropriate habitats within the project area to determine the presence of gopher tortoises and gopher tortoise commensal species. If burrows are observed within 25 feet of the proposed footprint of development, coordination with the FWC will occur to obtain the appropriate relocation/excavation authorization.

Prior to or concurrent with construction, VA will perform 31.45 acres of wetland creation and engage in the removal of exotic vegetation from 58.82 acres of preservation areas as defined by the approved mitigation plans within ERP-115730-003 (or any subsequent modifications) and SAJ-2006-02208 (SP-BAL).

7 SUMMARY

In summary, state- and federally-listed species were identified as having the potential to occur within the Proposed Expansion Area. The build out for the Jacksonville National Cemetery based on the 2007 Mater Plan has been approved by the USACE and formal consultation with the FWS was obtained during that permitting effort. Adverse effects to state- and or federally-listed species were not identified in previous permits. However, the VA is required to construct suitable foraging habitat for the federally listed wood stork and state listed little blue heron, thereby minimizing any potential affects to these species as a result of development of the Proposed Expansion.
8 REFERENCES


FIGURES
Figure 1: Location Map
Endangered Species Report
U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
Figure 2: Aerial Photograph with Proposed Expansion Area
Endangered Species Report
U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)

Legend
- Proposed Expansion Area 60.38 acres

Sections 41 & 38 - Township 2 North - Range 26 East

Source: Esri Aerial Photograph Base Map

1 inch = 400 feet
Mitigation Plan
Jacksonville National VA Cemetery
Phase 2 & 3
Duval County, Florida

Project: EJ06111.02
Date: Aug. 2010
Drwn/Chkd: PG/JRN
Figure: 3

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.

* Acreage shown provided by England-Thims & Miller, Inc.
**Figure 4: Vegetative Communities**

Endangered Species Report

U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion

4083 Lannie Road Jacksonville, FL 32218 (Duval County)

**Legend**
- **Proposed Expansion Area**: 60.38 acres
- **Wetland**: 15.66 acres
- **Surface Water**: 0.16 acres
- **Existing Ph 1 Stormwater Management**

<table>
<thead>
<tr>
<th>Code</th>
<th>FLUCFCS Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Improved Pasture</td>
<td>39.65</td>
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<td>211w</td>
<td>Improved Pasture - Wetland</td>
<td>3.18</td>
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<td>510</td>
<td>Ditch</td>
<td>0.16</td>
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<tr>
<td>630</td>
<td>Mixed Wetland Hardwood</td>
<td>12.48</td>
</tr>
<tr>
<td></td>
<td>Previously Evaluated Phase 1</td>
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</tr>
<tr>
<td></td>
<td><strong>Totals</strong></td>
<td>60.38</td>
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</table>

**Sources:**
- Aerial Photograph - Esri Base Map
- FLUCFCS - derived from the District Regulatory Wetland file

1 inch = 400 feet
Figure 5: Listed Species
Endangered Species Report
U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
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APPENDIX A

2007 EXPANSION SITE MASTER PLAN
Jacksonville V.A. Cemetery
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Figure 6: Vegetative Communities

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Appendix A: SJRWMD Formal Wetland Determination
Appendix B: USACE Permit SAJ-2006-02208 (SP-BAL)
1.0 Introduction

This Wetland Delineation Report (WDR) has been prepared for the U.S. Department of Veterans Affairs (VA) as part of the VA’s proposed expansion of the Jacksonville National Cemetery, located at 4083 Lannie Road, Jacksonville, Duval County, Florida (Figure 1). This location is in Sections 38, 40, and 41 of Township 2 North, Range 26 East and Sections 39, 40, and 41 of Township 1 North, Range 26 East. The purpose of the proposed expansion project is to create new burial capacity and other physical infrastructure within a portion of the Phase 2 development area, as identified in the VA’s Master Plan for the Jacksonville National Cemetery. Doing so would extend the longevity of the Jacksonville National Cemetery for Veterans and their eligible family members in northeast Florida.

The purpose of this WDR is to describe the methodology and results of the field investigation performed to identify and delineate aquatic resources that may be subject to regulation under federal and/or state jurisdiction within the proposed expansion area. A secondary purpose of this report is to characterize those aquatic resources found and documented within the proposed expansion area. The need for this wetland review arose because wetlands were identified in other areas of the Jacksonville National Cemetery during prior planning and development phases of the cemetery.

1.1 Proposed Expansion of the Jacksonville National Cemetery

The Jacksonville National Cemetery is located in a rural area north of the city of Jacksonville, in the northern portion of Duval County. The cemetery property covers approximately 526 acres; Lannie Road bisects the northern and southern portions of the property. In 2007, the VA completed a Master Plan for the northern portion of the property. This Master Plan identified where phased development and environmental protection areas would be located over the next 100 years. In 2009, the first phase (Phase 1 cemetery) of the Master Plan was constructed in the western portion of the northern area, and the first burials occurred that same year.

The Phase 1 cemetery is currently anticipated to reach capacity within the next several years. As a result, the VA has begun planning for the next phased cemetery expansion in accordance with the Master Plan, which identified an approximately 200-acre area (to the east of the Phase 1 cemetery) for a future Phase 2 cemetery. To date, no development has occurred within the Phase 2 cemetery boundary. However, as described in the following sections, the VA has already applied for and received state and federal permits issued for the conceptual development of the Phase 2 cemetery based on the Master Plan. These permits also define regulated resources and preservation areas within the Phase 2 boundary and the mitigation that would be required once construction and operation occur.

As part of the current expansion planning process, the VA identified an approximately 60-acre area for the proposed expansion within the southwestern portion of the Phase 2 boundary (Figure 2). This 60-acre area is identified in the RAR as the proposed expansion area, however, only approximately 45 acres within the 60-acre area would be developed, because an approximately 15-acre preservation area (where development is prohibited) is present within the eastern portion of the 60-acre area (Figure 3). In summary, the proposed 45-acre expansion would be designed according to the Master Plan and would provide new burial sections, roadways, and a stormwater management pond. Although the proposed expansion would impact selected wetlands, it would entirely avoid impacting existing preservation areas present within the Phase 2 boundary.

1.2 Jacksonville National Cemetery Regulatory Planning and Permitting History

An Environmental Assessment (EA) was completed by the VA in May 2006 to evaluate the physical,
biological, and cultural resources effects of developing a new National Cemetery at one of two sites (“City Site” or the “Wright Site”) along Lannie Road in Jacksonville, Florida. Following completion of the 2006 Final EA, the VA selected and purchased the City Site, developed the phased Master Plan, and secured the following permits from the St. Johns River Water Management District (SJRWMD) and the U.S. Army Corps of Engineers (USACE) to construct Phases 1A, 1B, and 2 based on the conceptual design presented in the Master Plan.

**SJRWMD Permits**

SJRWMD Permit ERP-115730-1 was issued on June 2, 2008, to construct Phase 1A of the Jacksonville National Cemetery. This permit authorized the construction of a stormwater management system within the 18.06-acre Phase 1A area. There were no wetlands within this phase of construction.

The SJRWMD issued a formal jurisdictional determination on February 9, 2009 ([Appendix A](#)). The VA’s contractor Environmental Services, Inc. (ESI) delineated boundaries of onsite wetlands pursuant to the methodology provided within Chapter 62-340, Florida Administrative Code, “Delineation of the Landward Extent of Wetlands and Surface Waters” during field evaluations for the future proposed development of the Phase 2 cemetery as designed in the Master Plan. These wetland boundaries were verified in the field by the SJRWMD and used in the formal determination and subsequent permitting efforts described below.

SJRWMD Permit ERP-115730-2 was issued July 13, 2009, to modify and expand the stormwater management system serving the cemetery to authorize construction of the Phase 1B cemetery. Improvements included site filling and grading, curb and gutter roadways, parking, administrative and maintenance buildings, inlets and storm sewers, and four wet detention ponds. This permit authorized 5.18 acres of wetland impacts; 4.86 acres of forested wetlands and 0.32 acres of herbaceous wetlands within the Phase 1B project area. The mitigation proposed consisted of 58.83 acres of wetlands to be preserved, along with an adjacent upland buffer preservation area of 4.95 acres. The wetland preservation areas are located adjacent to the model airplane field access road and also throughout the VA property located immediately south of Lannie Road. These areas were required to be placed under conservation easement, which was recorded October 1, 2009, within Duval County Official Records (OR) Book 15023 and Page 1214.

SJRWMD Permit ERP-115730-3 was issued on May 30, 2012, to construct a stormwater management system for the future proposed Phase 2 cemetery. This permit authorized the impact to 17.02 acres of wetlands and 4.81 acres of upland cut ditches. This permit required compensatory mitigation through the creation of 30.35 acres of wetlands adjacent to 6.16 acres of upland preservation. These creation and preservation areas are located within the VA property south of Lannie Road, adjacent to the wetland preservation parcels identified for mitigation within ERP-115730-2. These creation areas were also placed under conservation easement, which was recorded June 22, 2012 within the Duval County OR Book 15976, Page 2098.

Application Number 115730-5 was submitted to the SJRWMD on June 27, 2016, to modify ERP-115730-3 to allow for the construction of the Jacksonville National Cemetery Access Road (SJRWMD Permit ERP-140622-3. This modification request includes only changes to the mitigation plan; with no changes being proposed to the engineering or permitted impacts. The proposed modification is comprised of the release of 0.83 acres of the upland buffer conservation easement recorded in Duval County OR Book 15976, Page 2098. Along with this release request, an in-kind replacement of 0.83 acres of upland buffer was proposed to be added elsewhere within the project site. SJRWMD submitted a request for additional information on July 25, 2016. A partial RAI response was submitted on November 4, 2016. This modification request
remains open and has neither been granted nor denied.

**USACE Permits**

USACE Nationwide Permit SAJ-2006-02208 (NW-BAL) was issued on June 19, 2008, to construct Phase 1A of the Jacksonville National Cemetery (Appendix B). This permit authorized the construction of access roads, ponds, and additional cemetery features within the 18.06-acre Phase 1A area, and authorized 0.06 acres of impact to upland cut ditches that did not require compensatory mitigation.

USACE Standard Permit SAJ-2006-02208 (SP-BAL) was issued on August 18, 2009, to authorize unavoidable impacts to 27.38 acres of wetlands (including 6.76 acres of ditch impacts) to construct the Phase 1B cemetery, as well as for future proposed development of the Phase 2 cemetery as designed in the Master Plan. This permit required compensatory mitigation in the form of 58.52 acres of wetlands located adjacent to the Model Airplane Field access road and within the VA property south of Lannie Road. Within these preservation areas, USACE requires wetland enhancement achieved by removing Chinese tallow (*Sapium sebiferum*) and additional hydrologic improvements through the plugging of several on-site ditches. Once these improvements are performed, USACE requires a time-zero report and semi-annual compliance reports for the first three years, and annual monitoring for no less than five years thereafter. These 58.52 acres of wetlands were also required to be placed under conservation easement. The conservation easement was recorded on October 1, 2009 within the Duval County OR Book 15023 and Page 1214.

SAJ-2006-02208 was modified on March 21, 2011, to authorize an additional 1.62 acres of wetland impacts in the northwestern portion of the future Phase 2 cemetery boundary, along the Model Airplane Field Access Road that were inadvertently labeled as “wetland preservation” on the permit drawings. In addition, a 0.05-acre impact located along the Model Airplane Field access road was not included on the permit drawings. As a result of these required modifications, additional wetland impacts (totaling 1.62 acres) were added to the permit. The addition of these impacts required mitigation through the creation of 1.1 acres of wetlands, which are located at the southeast corner to the cemetery property, directly adjacent to the previously identified wetland creation area. This permit remains valid through August 18, 2024.

**Summary of Remaining Permitting Needs:**

Based upon a review of permits previously issued by the SJRWMD and the USACE, prior to engaging in construction of Phase 2 and/or the proposed expansion area, VA will be required to finalize their request for ERP-115730-05. If the application for ERP-115730-05 is either denied or abandoned, then VA must obtain reauthorization of the recently expired ERP-115730-003 or obtain a new authorization; whichever is deemed appropriate by the SJRWMD. Phase 2 construction details would need to incorporate the previously authorized impacts and mitigation authorized under USACE Permit SAJ-2006-02208 (SP-BAL); deviations would require a permit modification.

**Summary of Remaining Mitigation Requirements:**

To date, none of the proposed Phase 2 cemetery has been constructed. However, unavoidable wetland impacts anticipated by this construction and the requisite compensatory mitigation requirements were reviewed and approved by regulatory agencies. A total of 64.69 acres of preservation (58.53 acres of wetlands and 6.16 acres of uplands) have been preserved under conservation easement. Additional mitigation actions will need to be implemented in order to construct Phase 2 of the cemetery. These actions include 31.45 acres of wetland creation and the removal of exotic vegetation from 58.82 acres of preservation areas as defined by the approved mitigation plans within ERP-115730-003 and SAJ-2006-
02208 (SP-BAL). The proposed expansion area will impact 3.88 acres of jurisdictional wetlands. Subsequent to the implementation of the wetland creation and wetland enhancement components of the mitigation plan, monitoring will be required to demonstrate permit compliance. The mitigation requirements are shown on Figure 3.

1.3 Applicable Wetland Regulations

USACE
The USACE has regulatory jurisdiction over Waters of the United States, including wetlands pursuant to Section 404 of the Clean Water Act and Navigable Waters of the United States pursuant to Section 10 of the 1899 Rivers and Harbors Act. Jurisdictional wetlands are delineated based upon the presence of hydric soils, hydrologic indicators, and hydrophytic vegetation in accordance with the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual for the Atlantic and Gulf Coastal Plain (USACE 2010) and Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

SJRWMD
The SJRWMD exercises regulatory jurisdiction over activities in wetlands in accordance with Chapter 62-330 of the Florida Administrative Code (FAC). The State of Florida defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils (§373.019 Florida Statutes). Wetland delineation methodology is defined in Chapter 62-340.300(2) of the FAC.
2.0 Background Information Review

In June 2017, a review of background information was conducted for the proposed expansion area and vicinity using readily available existing information from state and federal agency databases and published literature. The analysis was conducted to determine the presence and extent of biological and natural resources potentially occurring in the vicinity of the proposed expansion area. The findings are presented in the following sections.

2.1 Physiography

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 cemetery site is 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).

2.2 Hydrology

The proposed expansion area is located within the Nassau River drainage basin (Hydrologic Unit Code (HUC) 03070205), which is comprised of several smaller sub-basins. The northern portion of the proposed expansion area is located within the Lower Thomas Creek drainage basin (HUC 030702050203) and the southern portion is located within the Middle Thomas Creek drainage basin (HUC 030702050202) (Figure 4) as defined by the Florida Department of Environmental Protection (FDEP) (FDEP 2017).

2.3 Land Use

The Jacksonville National Cemetery is located in a rural area; bounded on the north and south by pine plantations, to the west by the Montgomery Correctional Center, and to the east by rural private and residential properties. Within the cemetery property there is a model airplane field and a playground with a softball field. Undeveloped land within the cemetery property is primarily open pasture land with active cattle grazing; 64.69 acres of the cemetery property is currently managed as preservation area, in accordance with the SJRWMD and USACE permits previously discussed in Section 1.2. Other land uses in the area include rural residential, silviculture, farming, ranching, and several managed natural areas.

2.4 Wetland Ecosystems

Wetland ecosystems within the region occur along the floodplains of the Thomas Creek River, its tributaries, and within depressions in the landscape that have formed over time due to the dissolution of the limestone subsurface, typical of the karstic geology of the region (Figure 1).
2.5 Vegetation

The presence and distribution of local vegetative communities is attributable to the socioeconomic development within the rural residential and agricultural landscape of northwestern Duval County. The dispersion and density of land cover within this area is indicative of adjacent land use, development, and existing natural resources. The vegetation in the region of Duval County where the Jacksonville National Cemetery is located is dominated by farmland, silviculture, and an upland-forest/wetland-forest mosaic with some residential and commercial areas. The majority of undeveloped area within the cemetery property is improved pasture, consisting of predominantly bahiagrass and other sparse instances of ruderal plant species, which is consistent with adjacent land uses within the region.

2.6 Soils

Based on the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS 2012) and the Hydric Soils of Florida Handbook (Hurt 2007), Mascotte Fine Sand, Surrency Loamy Fine Sand, depressional, and Pelham Fine Sand, depressional, are classified as hydric soils. Pelham Fine Sand, while poorly drained, is not considered a hydric soil. The following table summarizes the soils within the proposed expansion area. A description of each mapped soil unit is provided in the following list.

- **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 below ground surface (bgs). Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete. Severe wetness is anticipated for shallow excavations, roads, lawns, and landscaping.

- **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. Severe wetness is anticipated for shallow excavations, roads, lawns, and landscaping.

- **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. Severe ponding is anticipated for shallow excavations, roads, lawns, and landscaping.

- **Pelham fine sand, depressional (82)**: Similar to the Pelham fine sand, but found in depressions and very poorly drained. Shape of areas is concave. Severe ponding is anticipated for shallow excavations, roads, lawns, and landscaping.
Table 1. USDA-NRCS Soils within the Proposed Expansion Area

<table>
<thead>
<tr>
<th>Soil Map Unit</th>
<th>Soil Map Unit Name</th>
<th>Drainage Class</th>
<th>Hydric (Y/N)</th>
<th>Acres within Project Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Mascotte Fine Sand</td>
<td>Poorly drained</td>
<td>Y</td>
<td>19.94</td>
</tr>
<tr>
<td>51</td>
<td>Pelham Fine Sand, 0 to 2% slopes</td>
<td>Poorly drained</td>
<td>N</td>
<td>22.89</td>
</tr>
<tr>
<td>66</td>
<td>Surrency Loamy Fine Sand, depressional</td>
<td>Very poorly drained</td>
<td>Y</td>
<td>13.69</td>
</tr>
<tr>
<td>88</td>
<td>Pelham Fine Sand, depressional</td>
<td>Poorly drained</td>
<td>Y</td>
<td>3.86</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>60.38</strong></td>
</tr>
</tbody>
</table>
3.0 Field Surveys

In 2008, field surveys were conducted on behalf of the VA by ESI to verify the presence and extent of biological and natural resources occurring within the future Phase 2 cemetery area.

ESI delineated boundaries of onsite wetlands pursuant to the methodology provided within Chapter 62-340, Florida Administrative Code, “Delineation of the Landward Extent of Wetlands and Surface Waters” and the USACE Wetland Delineation Manual (USACE 1987). These wetland boundaries were verified in the field by the SJRWMD as part of the formal jurisdictional determination.

As previously described, the results of these field surveys were utilized to obtain a Section 404 permit from the USACE and SJRWMD Environmental Resource Permits, along with formal jurisdictional determination from the SJRWMD.

Supplemental field evaluations were performed by AECOM on June 21, 2017, to verify field conditions previously reported in the aforementioned permits, and to identify any potential utilization by listed species within the Proposed expansion area. An evaluation of listed species will be prepared under a separate Resource Avoidance Report. All vegetative habitats and land uses within the proposed expansion area were classified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT 1999). The findings of the field surveys are presented in the following sections.

3.1 Wetland Survey

AECOM confirmed that within the 60.38-acre proposed expansion area, wetlands comprise 15.66 acres (Figure 4). Herbaceous wetlands (FLUCFCS 211w, Improved Pasture, wet) comprise 3.18 acres of this area and forested wetlands (FLUCFCS 630, Mixed Wetland Hardwoods) comprise 12.48 acres of this area. These wetlands are subject to the regulatory jurisdiction of the USACE and the SJRWMD. No streams were identified within the proposed expansion area.

It is noted that 11.78 acres of forested wetland within the proposed expansion area is already protected under a conservation easement prohibiting development. Additionally, this wetland is surrounded by a 4.95 acre protected upland buffer; a barbed wire fence has been installed along the boundary of the buffer to prevent cattle from grazing within its borders.

3.3 Ecological Communities and Vegetation

The proposed expansion area was characterized using the methodology described using FLUCFCS (FDOT, 1999).

**Improved Pastures (FLUCFCS 211)**

The majority of the proposed expansion area is comprised of pastureland that has been primarily used by ranchers to graze cattle. This area is dominated by bahiagrass (*Paspalum notatum*), with some patches of dog fennel (*Eupatorium capillifolium*), and blackberry (*Rubus* sp.).

**Improved Pastures (FLUCFCS 211w)**

Some of the pasture land within the proposed expansion area is wetland, vegetated with bahiagrass, smartweed (*Persicaria* spp.), soft rush (*Juncus effusus*), dwarf umbrella sedge (*Fuirena pumila*), horned beaksedge (*Rhynchospora corniculata*), millet beaksedge (*R. miliacea*) switchgrass (*Panicum virgatum*), spadeleaf (*Centella asiatica*), hairy umbrella sedge (*F. squarrosa*), and mermaid-weed (*Proserpinaca palustris*).
**Mixed Forested Wetland (FLUCFC 630)**

Within this community, the dominant canopy species include sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), slash pine (*Pinus elliottii*), pond pine (*P. serotina*), bald cypress (*Taxodium distichum*), blackgum (*Nyssa biflora*), water oak (*Quercus nigra*) and Chinese tallow. The understory species includes fetterbush (*Lyonia lucida*), wax myrtle (*Morella cerifera*), saw palmetto (*Serenoa repens*), and gallberry (*Ilex glabra*). The groundcover is dominated by Virginia chain fern (*Woodwardia virginica*), netted chain fern (*W. areolata*), and cinnamon fern (*Osmunda cinnamomea*).

**Wildlife**

The wetlands within the (211w) improved pastures provide foraging habitat for wading birds. The state-listed, threatened, little blue heron (*Egretta caerulea*) was observed onsite during supplemental site evaluations performed by AECOM on June 21, 2017. No additional state- or federally-listed species were observed on site. Table 2 below denotes the fauna observed within the proposed expansion area during field evaluations.

<table>
<thead>
<tr>
<th>Species Common Name</th>
<th>Species Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little Blue Heron</td>
<td><em>Egretta caerulata</em></td>
</tr>
<tr>
<td>Red-tailed Hawk</td>
<td><em>Buteo jamaicensis</em></td>
</tr>
<tr>
<td>White Egret</td>
<td><em>Ardea alba</em></td>
</tr>
<tr>
<td>Vulture</td>
<td><em>Coragyps atratus</em></td>
</tr>
<tr>
<td>Cardinal</td>
<td><em>Cardinalis cardinalis</em></td>
</tr>
</tbody>
</table>

**3.5 Hydrology**

Local hydrology within the proposed expansion area is influenced by the seasonal pooling of stormwater runoff and perched groundwater. The most prevalent indicators of wetland hydrology observed within the delineated wetlands were saturation, inundation above ground level, and crayfish chimneys.
4.0 Conclusions

This Wetland Delineation Survey confirmed the findings of the field surveys for wetland delineations previously conducted in 2008 by ESI. A total of 15.66 acres of wetlands occur within the proposed expansion area; 3.18 acres of herbaceous wetlands and 12.48 acres of forested wetlands. The forested wetlands in the eastern portion of the proposed expansion area are preserved under an existing conservation easement as part of the mitigation strategy outlined in previously obtained regulatory permits that authorized the future development of the Phase 2 cemetery. Either prior to or concurrent with execution of ERP-115730-3 (or ERP-115730-5 if issued), VA will be required to perform exotic vegetation removal within the 58.82 acres of forested wetland preservation area and create 31.45 acres of wetlands in the southeastern portion of the cemetery property located on the south side of Lannie Road (refer to Figure 3), as defined by the approved mitigation plans within ERP-115730-3 and SAJ-2006-02208 (SP-BAL).
5.0 References


FIGURES
Figure 1: Location Map

Wetland Delineation Report

U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion

4083 Lannie Road Jacksonville, FL 32218 (Duval County)
Figure 2: Aerial Photograph with Proposed Expansion Area

Wetland Delineation Report

U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
Mitigation Plan
Jacksonville National VA Cemetery
Phase 2 & 3
Duval County, Florida

Previously Permitted Phase 1a
(40-031-115730-1)

Previously Permitted Phase 1b
(40-031-115730-2)

Proposed Phase 2 Ditch Impacts (4.81 ac. ±)
Proposed Phase 3 Ditch Impacts (5.04 ac. ±)
Existing Upland Preservation (5.56 ac. ±)
Proposed Upland Buffer (3.32 ac. ±)
Proposed Wetland Preservation (0.25 ac. ±)
Proposed Wetland Creation (77.05 ac. ±)
Existing Wetland Preservation (58.52 ac. ±)*

* Acreage shown provided by England-Thims & Miller, Inc.

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.

Figure 4: Drainage Basins

Key Map

- Jacksonville National Cemetery
- Proposed Expansion Area 60.38 acres
- Middle Thomas Creek Basin
- Lower Thomas Creek Basin
- Thomas Creek Basin
- Nassau River Basin

1 inch = 4,167 feet

10,000
20,000
30,000
40,000

0
2,000
4,000

N

U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Description</th>
<th>Drainage Class</th>
<th>Acres</th>
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<tr>
<td>38</td>
<td>Mascotte Fine Sand, 0 To 2 Percent Slopes</td>
<td>Poorly Drained</td>
<td>19.94</td>
</tr>
<tr>
<td>51</td>
<td>Pelham Fine Sand, 0 To 2 Percent Slopes</td>
<td>Poorly Drained</td>
<td>22.89</td>
</tr>
<tr>
<td>66</td>
<td>Surrency Loamy Fine Sand, Depressional, 0 To 2 Percent Slopes</td>
<td>Very Poorly Drained</td>
<td>13.69</td>
</tr>
<tr>
<td>82</td>
<td>Pelham Fine Sand, Depressional, 0 To 2 Percent Slopes</td>
<td>Poorly Drained</td>
<td>3.86</td>
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<tr>
<td></td>
<td>Totals</td>
<td></td>
<td>60.38</td>
</tr>
</tbody>
</table>

Source: Esri Aerial Photograph Base Map

Figure 5: USDA-NRCS Soils
Wetland Delineation Report
U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
Table:

<table>
<thead>
<tr>
<th>Code</th>
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<td>211</td>
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<tr>
<td>211w</td>
<td>Improved Pasture - Wetland</td>
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<tr>
<td>510</td>
<td>Ditch</td>
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<td>630</td>
<td>Mixed Wetland Hardwood</td>
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<td>Previously Evaluated Phase 1</td>
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<td><strong>Totals</strong></td>
<td><strong>60.38</strong></td>
</tr>
</tbody>
</table>

Sources:
- Aerial Photograph - Esri Base Map
- FLUCFCS - derived from the District Regulatory Wetland file

Legend:
- Proposed Expansion Area 60.38 acres
- FLUCFCS
- Wetland 15.66 acres
- Surface Water 0.16 acres
- Existing Ph 1 Stormwater Management

**Figure 6: Vegetative Communities**
Wetland Delineation Report
U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
APPENDIX A

SJRWMD Formal Wetland Determination
February 9, 2009

Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

SUBJECT: Formal Wetland Determination
Petition Number 16-031-112145-1, Duval County

Dear Sir/Madam:

Enclosed is your Formal Wetland Determination as authorized by the staff of the St. Johns River Water Management District on February 9, 2009. This determination will expire on February 09, 2014.

Issuance of this wetland determination does not relieve you from the responsibility of obtaining permits from any federal, state and/or local agencies or the District for construction on the property.

In the event you sell your property, the determination can be transferred to the new owner, if we are notified by you within thirty days of the sale. Please assist us in this matter so as to maintain a valid determination for the new property owner.

Thank you for your cooperation and if this office can be of any further assistance to you, please do not hesitate to contact us.

Sincerely,

Quenteria Johnson, Regulatory Information Management
Division of Regulatory Information Management

cc: District Permit File

Agent: Environmental Services
7220 Financial Way, Suite 100
Jacksonville, FL 32256
FORMAL WETLAND DETERMINATION

CHAPTER 40C-4.042, F.A.C.

PETITION NO. 16-031-112145-1
PROJECT NAME: VA Cemetery

DATE ISSUED: February 9, 2009

DETERMINATION STATEMENT:

The formal determination of the landward boundary of wetlands and other surface waters as defined by the District and as depicted on the certified survey (s) stamped approved by the District 17 December 2008. The 546.29-acre project site is located along the north and south sides of Lannie Road approximately three miles northeast of the intersection of Lem Turner Boulevard and Lannie Road on the north side of Jacksonville, Duval County. More specifically the site is located in a portion of section 38 of the Charles Seton grant, section 40 of the William Gibson and others grant, and section 41 of the William Gibson and others or Charles Seton grant, township 2-north, and range 26-east, Duval County, together with a portion of section 39 of the Charles Seton grant, section 40 of the William Gibson and others or Charles Seton grant, and section 41 of the William Gibson and others grant, township 1-north, and range 26-east, Duval County.

LOCATION:

Section(s): 40, 41 Township(s): 1N Range(s): 26E
38, 40, 41 2N 26E

Duval County
Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

This document and the enclosed survey serve as the Chapter 40C-4.042, F.A.C., Formal Wetland Determination issued by the St. Johns River Water Management District. This determination is a legal document and should be kept with your other important records. The District may transfer this determination after the receipt of written notification of transfer of ownership or control of the real property.

This formal wetland determination is binding for a period of five (5) years from the date of this determination provided physical conditions on the property do not change so as to alter the wetland boundaries during that period. The District's Governing Board may revoke the Formal Wetland Determination upon finding that the petitioner has submitted inaccurate information to the District. This determination is not a permit and does not authorize any construction.

AUTHORIZED BY: St. Johns River Water Management District

By: [Signature]
Kenneth A. John, Assistant Director

By: [Signature]
Kirby B. Green, III, Executive Director
Notice Of Rights

1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@srwmd.com, within twenty-six (26) days of the District depositing notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing notice of District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 5 below. Mediation pursuant to Section 120.573, Florida Statutes, is not available.

2. If the Governing Board takes action that substantially differs from the notice of District decision, a person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the District, but this request for administrative hearing shall only address the substantial deviation. Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) at the office of the District Clerk at the mail/street address or email address described in paragraph no. 1 above, within twenty-six (26) days of the District depositing notice of final District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing the notice of final District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of final District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. Mediation pursuant to Section 120.573, Florida Statutes, is not available.

3. A person whose substantial interests are or may be affected has the right to a formal administrative hearing pursuant to Sections 120.569 and 120.57(1), Florida Statutes, where there is a dispute between the District and the party regarding an issue of material fact. A petition for formal hearing must also comply with the requirements set forth in Rule 28-106.201, Florida Administrative Code.

4. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.
Notice Of Rights

5. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida. Petitions received by the District Clerk after 5:00 p.m., or on a Saturday, Sunday, or legal holiday, shall be deemed filed as of 8:00 a.m. on the next regular District business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sirwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.

6. Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).

7. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District's final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.

8. A person with a legal or equitable interest in real property who believes that a District permitting action is unreasonable or will unfairly burden the use of their property, has the right, within 30 days of receipt of the notice of District decision regarding a permit application, apply for a special magistrate proceeding under Section 70.51, Florida Statutes, by filing a written request for relief at the Office of the District Clerk located at District Headquarters, P. O. Box 1429, Palatka, FL 32178-1429 (4049 Reid St., Palatka, FL 32177). A request for relief must contain the information listed in Subsection 70.51(6), Florida Statutes. Requests for relief received by the District Clerk after 5:00 p.m., or on a Saturday, Sunday, or legal holiday, shall be deemed filed as of 8:00 a.m. on the next regular District business day.

9. A timely filed request for relief under Section 70.51, Florida Statutes, tolls the time to request an administrative hearing under paragraph nos. 1 or 2 above. (Paragraph 70.51(10)(b), Florida Statutes). However, the filing of a request for an administrative hearing under paragraph nos. 1 or 2 above waives the right to a special magistrate proceeding. (Subsection 70.51(10)(b), Florida Statutes).

10. Failure to file a request for relief within the requisite time frame shall constitute a waiver of the right to a special magistrate proceeding. (Subsection 70.51(3), Florida Statutes).
Notice Of Rights

11. Any person whose substantial interests are or may be affected who claims that final action of the District constitutes an unconstitutional taking of property without just compensation may seek review of the action in circuit court pursuant to Section 373.617, Florida Statutes, and the Florida Rules of Civil Procedures, by filing an action in circuit court within 90 days of rendering of the final District action, (Section 373.617, Florida Statutes).

12. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

13. A party to the proceeding before the District who claims that a District order is inconsistent with the provisions and purposes of Chapter 373, Florida Statutes, may seek review of the order pursuant to Section 373.114, Florida Statutes, by the Florida Land and Water Adjudicatory Commission, by filing a request for review with the Commission and serving a copy on the Florida Department of Environmental Protection and any person named in the order within 20 days of the rendering of the District order.

14. A District action is considered rendered, as referred to in paragraph nos. 11, 12, and 13 above, after it is signed on behalf of the District, and is filed by the District Clerk.

15. Failure to observe the relevant time frames for filing a petition for judicial review as described in paragraph nos. 11 and 12 above, or for Commission review as described in paragraph no. 13 above, will result in waiver of that right to review.
Notice Of Rights
Certificate of Service

I HEREBY CERTIFY that a copy of the foregoing Notice of Rights has been sent by U.S. Mail to:

Veterans Affairs, National Cemetery Administration
810 Vermont Ave NW
Washington, DC 20420

At 4:00 p.m. this 11th day of February, 2009.

Gloria Lewis, Director
Division of Regulatory Information Management
St. Johns River Water Management District
Post Office Box 1429
Palatka, FL 32178-1429
(386) 329-4152
VA Cemetery
112145-1
Duval County
Wetland Determination
2009 Digital Ortho Quadrangle

Created: January 4, 2010

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. This information is provided as is. Further documentation of this data can be obtained by contacting St. Johns River Water Management District, Geographic Information Systems Program Management, P.O. Box 1428, 4049 Reid Street, Palatka, Florida 32178-1429, Tel: (386) 329-4178.
APPENDIX B

USACE PERMIT SAJ-2006-02208 (SP-BAL)
APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION
A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville, Westside Business Park, SAJ 2006-2208

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
- State: Florida
- County/parish/borough: Duval
- City: Jacksonville
- Center coordinates of site (lat/long in degree decimal format): Lat. 30.5463° N, Long. 81.7154° W
- Universal Transverse Mercator:
- Name of nearest waterbody: Thomas Creek
- Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thomas Creek
- Name of watershed or Hydrologic Unit Code (HUC): 3
- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
- Check if other sites (e.g., off site mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
- Office (Desk) Determination. Date: 28 May 2008
- Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS
A. RHA SECTION 10 DETERMINATION OF JURISDICTION.
There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]
- Waters subject to the ebb and flow of the tide.
- Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.
   a. Indicate presence of waters of U.S. in review area (check all that apply): 1
   - TNWs, including territorial seas
   - Wetlands adjacent to TNWs
   - Relatively permanent waters (RPWs) that flow directly or indirectly into TNWs
   - Non-RPWs that flow directly or indirectly into TNWs
   - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - Impoundments of jurisdictional waters
   - Isolated (interstate or intrastate) waters, including isolated wetlands
   
   b. Identify (estimate) size of waters of the U.S. in the review area:
   - Non-wetland waters: 300 linear feet: ten-foot width (ft) and/or 0.18 acres.
   - Wetlands: 0.00 acres.
   
   c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual
   - Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable): 3
   - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

---
1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.
2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
3 Supporting documentation is presented in Section III.F.
SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1 only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
   Identify TNW: Thomas Creek.
   Summarize rationale supporting determination: Thomas Creek is a permanently flowing stream with OHWM.

2. Wetland adjacent to TNW
   Summarize rationale supporting conclusion that wetland is “adjacent”;

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW
   (i) General Area Conditions:
      Watershed size: Pick List
      Drainage area: Pick List
      Average annual rainfall: i inches
      Average annual snowfall: inches
   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         [ ] Tributary flows directly into TNW.
         [ ] Tributary flows through Pick List tributaries before entering TNW.
         Project waters are Pick List river miles from TNW.
         Project waters are Pick List river miles from RPW.
         Project waters are Pick List aerial (straight) miles from TNW.
         Project waters are Pick List aerial (straight) miles from RPW.
         Project waters cross or serve as state boundaries. Explain:
         Identify flow route to TNW:
         Tributary stream order, if known:

---

1 Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
2 Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
(b) General Tributary Characteristics (check all that apply):

Tributary is: □ Natural  □ Artificial (man-made). Explain:
□ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: Pick List.

Primary tributary substrate composition (check all that apply):
□ Silts  □ Sands
□ Cobbles  □ Gravel
□ Bedrock  □ Vegetation. Type/cover:
□ Other. Explain:
□ Concrete
□ Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: Pick List
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: Pick List
Estimate average number of flow events in review area/year: Pick List
Describe flow regime:
Other information on duration and volume:
Surface flow is: Pick List. Characteristics:
Subsurface flow: Pick List. Explain findings:
□ Dye (or other) test performed:

Tributary has (check all that apply):
□ Bed and banks
□ OHWM (check all indicators that apply):
□ clear, natural line impressed on the bank
□ changes in the character of soil
□ shelving
□ vegetation matted down, bent, or absent
□ leaf litter disturbed or washed away
□ sediment deposition
□ water staining
□ other (list):
□ Discontinuous OHWM. Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
□ High Tide Line indicated by:
□ Mean High Water Mark indicated by:
□ oil or scum line along shore objects
□ fine shell or debris deposits (foreshore)
□ physical markings
□ tidal gauges
□ other (list):
□ survey to available datum;
□ physical markings;
□ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:
Identify specific pollutants, if known:

*A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

†bid.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:
(a) General Wetland Characteristics:
  Properties:
  - Wetland size: acres
  - Wetland type. Explain:
  - Wetland quality. Explain:
  Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:
  Flow is: Pick List. Explain:
  Surface flow is: Pick List
  Characteristics:
  Subsurface flow: Pick List. Explain findings:
  - Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:
  - Directly abutting:
  - Not directly abutting
  - Discrete wetland hydrologic connection. Explain:
  - Ecological connection. Explain:
  - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW
  Project wetlands are Pick List river miles from TNW.
  Project waters are Pick List aerial (straight) miles from TNW.
  Flow is from: Pick List.
  Estimate approximate location of wetland as within the Pick List floodplain.

(ii) Chemical Characteristics:
  Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics, etc.). Explain:
  Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):
- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)
   All wetland(s) being considered in the cumulative analysis: Pick List
   Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

- Directly abuts? (Y/N)
- Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW.

Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g., between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
   - TNWs
   - Wetlands adjacent to TNWs:

2. RPWs that flow directly or indirectly into TNWs.
   - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
   - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: It was determined that at least portions of the upland-cut ditches on-site have standing water at least three months of the year.
Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 300 linear feet ±10 width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet ± width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut an RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW.

- Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain:
- Other factors. Explain:

5See Footnote # 3.
6To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
7Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.
Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:

Provide acreage estimates for non-jurisdictional waters in the review area (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:

- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

- Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated solely on the "Migratory Bird Rule" (MBR).

- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:

- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:

- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant.
- Office concurs with data sheets/delineation report.
- Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps.
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Duval County, FL (USDA, NRCS 1998)
- National wetlands inventory map(s). Cite name:
- State/local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): 2007.
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:
Technical Memorandum

TO: Mr. Andrew Gluckman
Mabbett & Associates, Inc.
10 Dorrance Street, Suite 700
Providence, RI 02903

FROM: Thomas D. Hallahan
Terracon Consultants, Inc.
Jacksonville, Florida

DATE: October 27, 2017

RE: Percolation Testing Results
Jacksonville National Cemetery
4083 Lannie Road, Jacksonville, FL
Terracon Project No. EQ177111

The purpose of this memorandum is to provide a summary of estimated seasonal high water levels at the proposed expansion area of the National Cemetery in Jacksonville, Florida, and to perform a series of ten double ring infiltration (DRI) tests across the site to determine the percolation rate of the surficial soils.

Site Geology
Florida is the emergent part of a large platform, called the Floridian Plateau, which projects southward from the continental mass and separates the deep water of the Atlantic Ocean from that of the Gulf of Mexico.

The geology of the Northeastern Florida area is characterized by sedimentary strata formed during three distinct geologic periods. The surficial stratum is composed of undifferentiated Pleistocene and recent age beds of fine to coarse sand and silty clay deposits resulting from fluctuations of sea levels during Pleistocene interglacial periods. Recent age deposits consist of alluvial sand and clay in stream valleys and organic material in low-lying features. The thickness of this surficial stratum in the project area is about 50 to 100 feet. This upper, mostly sandy zone contains the surficial (water table) aquifer.

A Miocene age deposit, the Hawthorn Group, frequently underlies the surficial sand and is typically composed of calcareous clay interbedded with lenses of sand, shell and limestone with appreciable amounts of phosphate. Lenses of dolomite may also be present. This relatively
impermeable stratum extends to 200 feet beneath the ground surface in the project vicinity and serves as the confining layer for the underlying Floridan aquifer.

The Floridan Aquifer is composed of many limestone and dolomite formations of Eocene Age. This aquifer is one of the most productive in the world. The limestone and dolomite formations are made up of carbonate materials that range from very hard and continuous to very soft and discontinuous. The very soft materials contain many solution cavities, which hold and transmit large quantities of water. Most of the freshwater supplies for agricultural use and for large domestic users are from the Floridan Aquifer.

**USDA – NCRS Soil Survey**

The Soil Survey for Duval County, Florida, as prepared by the United States Department of Agriculture (USDA), Soil Conservation Service (now renamed the Natural Resource Conservation Service - NRCS), identifies 4 soil types at the subject site as shown in the table below.

The Web Soil Survey (WSS) map of the project area was reviewed and a map encompassing the project area is included as Exhibit A-2 in the attachments. The WSS presents shallow (typically upper 80 inches) soil stratification information produced and compiled by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Exhibit A-2 identifies the soil map units documented by the NRCS in the project area as well as typical stratification, typical values/ranges of saturated hydraulic conductivity, and estimated seasonal high groundwater levels for the map units, which is repeated in the following table.

<table>
<thead>
<tr>
<th>Map Unit No. And Name</th>
<th>Stratification</th>
<th>Unified Soil Classification</th>
<th>Permeability (In/Hour)</th>
<th>Estimated Seasonal High Groundwater Level (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 Mascotte Fine Sand 0 to 2 Percent Slopes</td>
<td>Depth Range (Inches)</td>
<td>Unified Soil Classification</td>
<td>Permeability (In/Hour)</td>
<td>Estimated Seasonal High Groundwater Level (Feet)</td>
</tr>
<tr>
<td>0 – 5</td>
<td>SP-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>5 – 15</td>
<td>SP-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>15 – 25</td>
<td>SP-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.2 – 0.6</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>25 – 28</td>
<td>SP-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>28 – 58</td>
<td>SC, SC-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.2 – 0.6</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>58 – 80</td>
<td>SP-SM, SM</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.5 – 1.5 Apparent January - October</td>
</tr>
<tr>
<td>51 Pelham Fine Sand 0 to 2 Percent Slopes</td>
<td>Depth Range (Inches)</td>
<td>Unified Soil Classification</td>
<td>Permeability (In/Hour)</td>
<td>Estimated Seasonal High Groundwater Level (Feet)</td>
</tr>
<tr>
<td>0 – 21</td>
<td>SM, SP-SM</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.0 – 1.0 Apparent January - October</td>
</tr>
<tr>
<td>21 – 60</td>
<td>SM, SC, SC-SM</td>
<td>6.0 – 20.0</td>
<td>0.2 – 0.6</td>
<td>0.0 – 1.0 Apparent January - October</td>
</tr>
<tr>
<td>60 - 80</td>
<td>SC, SM, CL, ML</td>
<td>6.0 – 20.0</td>
<td>0.6 – 2.0</td>
<td>0.0 – 1.0 Apparent January - October</td>
</tr>
</tbody>
</table>
SUMMARY OF SOILS IN PROJECT VICINITY - FROM NRCS WEB SOIL SURVEY

<table>
<thead>
<tr>
<th>Map Unit No. And Name</th>
<th>Stratification</th>
<th>Depth Range (Inches)</th>
<th>Unified Soil Classification</th>
<th>Permeability (In/Hour)</th>
<th>Estimated Seasonal High Groundwater Level (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 Surrency Loamy Fine Sand Depressional, 0 to 2 Percent Slopes</td>
<td>SP-SM, SM, SM-SC</td>
<td>0 – 14</td>
<td>6.0 – 20.0</td>
<td>+ 2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14 – 26</td>
<td>2.0 – 20.0</td>
<td>January - December</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>26 – 70</td>
<td>0.2 – 2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70 - 80</td>
<td>0.2 – 2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82 Pelham Fine Sand Ponded, 0 to 2 Percent Slopes</td>
<td>SM, SP-SM</td>
<td>0 – 21</td>
<td>6.0 – 20.0</td>
<td>+ 1.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>21 – 60</td>
<td>0.6 – 2.0</td>
<td>January - December</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60 – 80</td>
<td>0.2 – 2.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It should be noted that the NRCS Soil Survey is not intended as a substitute for site-specific geotechnical exploration; rather it is a useful tool in planning a project scope in that it provides information relative to the soil types likely to be encountered. Boundaries between adjacent soil types on the NRSC Soil Survey maps are approximate. In general, the shallow subsurface conditions identified in the borings conducted for this project agree with the NRCS Soil Survey.

The subsurface conditions encountered at the test locations typically included a surficial layer of fine sand with silt (SP-SM) for the first 6-12 inches below the existing ground surface, underlain by layers of clayey fine sand (SC), silty sand with clay (SM-SC) and sandy clay (CL) to depths of five feet or more. The higher fines content SC, SM and CL soils are generally considered to be hydraulically restrictive soils/layers.

Infiltration Test Results
As stated earlier in this report, ten locations were initially chosen to perform DRI testing. These locations are indicated on Exhibit A-3 in the attachments. The DRI testing was performed in general accordance with ASTM D3385, Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrimeter. The DRI tests were performed using a double ring system with an inner ring diameter of 12 inches and an outer ring diameter of 24 inches. The test was conducted following a 15-minute saturation period and water volumes added to the inner ring were recorded every 10 to 30 minutes for a period of 180 minutes.

Terracon mobilized on July 22, 2017 to begin the testing. Three DRIs were performed on that day, however testing was halted by a significant rainfall event that evening. The data indicated that the
infiltration rates of the near surface soil at the site varied from about 1.6 to 13.0 feet per day. The results of the DRI tests are presented in the attachments.

Testing was resumed the following day; however, much of the site was found to be under water and the groundwater level was found to be very shallow (less than approximately 6 inches) at higher site elevations. These conditions made it unfeasible to continue infiltration testing, as the infiltration rate is effectively zero under these conditions.

Repeated attempts to continue the testing program over the next six weeks proved futile, as the surface and groundwater conditions did not improve. In Duval County, the summer months are typically the wettest, with afternoon thunderstorms occurring most days. Due to the frequency and volume of rain, the site did not recover to an extent that the testing could resume.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors. Therefore, groundwater levels during construction or at other times may be higher or lower than the levels encountered during the testing. In particular, groundwater will tend to perch over the near surface clayey soils during and following periods of prolonged or intense rainfall. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. A series of temporary open standpipe piezometers across the site would allow for longer term monitoring of site groundwater levels.

In summary, the soils have an infiltration rate similar to the rates indicated in the NRCS Soil Survey; however, for much of the year the site is prone to flooding in combination with shallow groundwater levels and these conditions do not improve until seasonally drier times of the year.

Terracon appreciates the opportunity to provide this information and appreciates being of service to you on this project. If you have any questions or comments regarding this letter, please contact our Jacksonville office at (904) 900-6494.

Attachments:  Topographic Vicinity Map (1 page)
                U.S.D.A. Soils Map (1 page)
                Field Exploration Plan (1 page)
                Double-Ring Infiltrometer Test Results (3 pages)
ITALIA, FLORIDA
1992
7.5 MINUTE SERIES (QUADRANGLE)
U.S.D.A. SOIL SURVEY FOR DUVAL COUNTY, FLORIDA

SOIL LEGEND

38  MASCOTTE FINE SAND: 0 TO 2 PERCENT SLOPES
51  PELHAM FINE SAND: 0 TO 2 PERCENT SLOPES
66  SURENTRY LOAMY FINE SAND: DEPRESSIONAL: 0 TO 2 PERCENT SLOPES
82  PELHAM FINE SAND: PONDED: 0 TO 2 PERCENT SLOPES

SCALE 1" = 2000'
# DOUBLE-RING INFILTROMETER TEST RESULTS

**ASTM D3385**

<table>
<thead>
<tr>
<th>Elapsed Time, Minutes</th>
<th>Inner Ring Infiltration Rate, Inches/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>8.58</td>
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<tr>
<td>20</td>
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<td>40</td>
<td>6.99</td>
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<td>6.99</td>
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<td>5.27</td>
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<td>75</td>
<td>6.54</td>
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<td>90</td>
<td>6.21</td>
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<td>6.70</td>
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<td>120</td>
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<tr>
<td>150</td>
<td>6.58</td>
</tr>
<tr>
<td>180</td>
<td>6.46</td>
</tr>
</tbody>
</table>

**TEST INFORMATION**

- **TEST DESIGNATION:** PERC-7
- **TEST DEPTH:** 0.5 FEET
- **INNER RING DIA.:** 12 INCHES
- **OUTER RING DIA.:** 24 INCHES
- **DATE PERFORMED:** 7/22/2017
- **PERFORMED BY:** H. PEACH
- **INFILTRATION RATE (INCHES/HOUR):** 6.5

**PROJECT INFORMATION**

- **Project Name:** National Cemetery Percolation Testing
- **Location:** 4083 Lannie Road
- **Jacksonville, Florida**
- **Project Number:** EQ177111

9655 Florida Mining Boulevard West, Suite 509 • Jacksonville, Florida 32257 • Telephone (904) 900-6494
DOUBLE-RING INFILTROMETER TEST RESULTS
ASTM D3385

<table>
<thead>
<tr>
<th>Elapsed Time, Minutes</th>
<th>Inner Ring Infiltration Rate, Inches/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>1.35</td>
</tr>
<tr>
<td>20</td>
<td>0.98</td>
</tr>
<tr>
<td>30</td>
<td>1.10</td>
</tr>
<tr>
<td>40</td>
<td>0.86</td>
</tr>
<tr>
<td>50</td>
<td>0.98</td>
</tr>
<tr>
<td>60</td>
<td>0.74</td>
</tr>
<tr>
<td>75</td>
<td>0.98</td>
</tr>
<tr>
<td>90</td>
<td>0.98</td>
</tr>
<tr>
<td>105</td>
<td>0.82</td>
</tr>
<tr>
<td>120</td>
<td>0.90</td>
</tr>
<tr>
<td>150</td>
<td>0.98</td>
</tr>
<tr>
<td>180</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Inner Ring

INFILTRATION RATE, INCHES/HOUR
ELAPSED TIME (MINUTES)

TEST INFORMATION
TEST DESIGNATION: PERC-8
TEST DEPTH: 0.5 FEET
INNER RING DIA.: 12 INCHES
OUTER RING DIA.: 24 INCHES
DATE PERFORMED: 7/22/2017
PERFORMED BY: H. PEACH
INFILTRATION RATE (INCHES/HOUR): 0.9

PROJECT INFORMATION
Project Name: National Cemetery Percolation Testing
Location: 4083 Lannie Road
Jacksonville, Florida
Project Number: EQ177111
DOUBLE-RING INFILTROMETER TEST RESULTS
ASTM D3385

<table>
<thead>
<tr>
<th>Elapsed Time, Minutes</th>
<th>Inner Ring Infiltration Rate, Inches/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>1.10</td>
</tr>
<tr>
<td>20</td>
<td>0.86</td>
</tr>
<tr>
<td>30</td>
<td>0.98</td>
</tr>
<tr>
<td>40</td>
<td>0.98</td>
</tr>
<tr>
<td>50</td>
<td>0.74</td>
</tr>
<tr>
<td>60</td>
<td>0.61</td>
</tr>
<tr>
<td>75</td>
<td>1.06</td>
</tr>
<tr>
<td>90</td>
<td>0.90</td>
</tr>
<tr>
<td>105</td>
<td>0.82</td>
</tr>
<tr>
<td>120</td>
<td>0.98</td>
</tr>
<tr>
<td>150</td>
<td>0.90</td>
</tr>
<tr>
<td>180</td>
<td>0.82</td>
</tr>
</tbody>
</table>

TEST INFORMATION
TEST DESIGNATION: PERC-10
TEST DEPTH: 0.5 FEET
INNER RING DIA.: 12 INCHES
OUTER RING DIA.: 24 INCHES
DATE PERFORMED: 7/22/2017
PERFORMED BY: H. PEACH
INfiltration Rate (INCHES/HOUR): 0.8

PROJECT INFORMATION
Project Name: National Cemetery Percolation Testing
Location: 4083 Lannie Road
Jacksonville, Florida
Project Number: EQ177111
Agricultural Soil Report for the Site-Specific Environmental Assessment for the Jacksonville National Cemetery Expansion
Jacksonville, Duval County, Florida

VA OCFM Prime Contract Number: VA101F-12-D-0056
GSA Contract Number: GS-10F-0120T
VA Task Order Number: VA101F-17-F-2920

Prepared for:
US Department of Veterans Affairs
Office of Construction and Facilities Management (003C4B)
425 I Street, NW
Washington, DC 20001

Prepared by:
Mabbett & Associates, Inc.
5 Alfred Circle
Bedford, MA 01730

July 17, 2017
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6  Conclusions ......................................................................................................................................... 5

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Figure 2: Aerial Photograph with Proposed Expansion Area
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Appendix A: 2007 Master Plan
Appendix B Laboratory Analytical Results and Recommendations
1 Introduction

This Agricultural Soil Report has been prepared by Mabbert & Associates, Inc. (Mabbert) for the U.S. Department of Veterans Affairs (VA) proposed expansion project at the Jacksonville National Cemetery, located at 4083 Lannie Road, Jacksonville, Duval County, Florida (Figure 1). The purpose of the expansion project is to create new burial capacity and other physical infrastructure within the Project Study Area. Doing so would extend the longevity of the Jacksonville National Cemetery for Veterans and their eligible family members in northeast Florida.

The purpose of the agricultural soil investigation was to assess soil conditions and quality within the proposed expansion area, allowing the VA to determine the type and quantity of potential soil amendments needed to support the health of future plantings within the expansion area. This report describes the methodology and results of the agricultural soil investigation conducted at the Project Study Area. This report includes recommended soil amendments for proposed planted vegetation in areas to be developed within the Project Study Area.

2 Description of the Project Study Area

The Jacksonville National Cemetery covers approximately 526 acres and is designed to serve Veterans in northeast Florida (Figure 1). A Master Plan was completed in 2007 (see Appendix A); it identified where phased development and environmental protection areas would be located within the property boundary over the next 100 years. In 2009, the first phase (Phase 1 cemetery) of the Master Plan was completed in the western portion of the property, and the first burials occurred the same year. The Phase 1 cemetery is anticipated to reach full capacity in the next several years. According, the VA has begun planning for a proposed expansion within a portion of the larger approximately 200-acre Phase 2 development area identified in the Master Plan (Figure 2).

The currently proposed expansion would cover approximately 45-acres within the Phase 2 boundary and provide new burial sections, roadways, and a stormwater management pond, while avoiding previously designated preservation areas within the central portion of the Phase 2 boundary (Figure 3).

The proposed expansion area is located to the east of the Phase 1 cemetery. The expansion area is within the larger Phase 2 area that is leased by the VA to a private rancher for cattle grazing. The topography is effectively flat, with a wetland/low area running north-south across the central portion of the expansion area. The vegetation throughout the expansion area is primarily composed of herbaceous grasses. A stand of coniferous trees lines the southern border of the expansion area along Lannie Road. A preservation area (where no development is permitted) dominated by a mixed deciduous/coniferous upland is located to the east of the expansion area. A barbed wire fence with a 25-foot buffer is located around the perimeter of the preservation area. A manmade stormwater retention pond, constructed by the VA as part of the Phase 1 cemetery development, is located adjacent to the northwest portion of the expansion area. A drainage pipe located on eastern side of this stormwater retention pond allows excess stormwater to discharge to a drainage ditch, which extends to the east and connects to the preservation area. A nearly rectangular portion of the proposed expansion area extends into the eastern side of the Phase 1 cemetery and is comprised of a forested wetland and an herbaceous meadow; the meadow is mowed by the VA.
3  Current Soil Conditions

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 of the Jacksonville National Cemetery 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. Within the proposed expansion area, the NRCS identified four detailed soil map units (Figure 4); a description of each unit is provided in the following list.

- **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 below ground surface (bgs). Slopes are linear and range from 0 to 2 percent. Risk of corrosion is high for uncoated steel and concrete. Severe wetness is anticipated for shallow excavations, roads, lawns, and landscaping.

- **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. Severe wetness is anticipated for shallow excavations, roads, lawns, and landscaping.

- **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. Severe ponding is anticipated for shallow excavations, roads, lawns, and landscaping.

- **Pelham fine sand, depressional (82):** Similar to the Pelham fine sand, but found in depressions and very poorly drained. Shape of areas is concave. Severe ponding is anticipated for shallow excavations, roads, lawns, and landscaping.

Table 1 presents a summary of the area of each soil unit within the Project Study Area. Soils mapped by the USDA-NRCS within the Project Study Area are presented in Figure 4.

<table>
<thead>
<tr>
<th>Soil Map Unit(1)</th>
<th>Soil Map Unit Name(1)</th>
<th>Drainage Class(1)</th>
<th>Hydric (Y/N)(1)</th>
<th>Approximate Acres within Expansion Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Mascotte fine sand, 0-2% slope</td>
<td>Poorly drained</td>
<td>Yes</td>
<td>13</td>
</tr>
<tr>
<td>51</td>
<td>Pelham fine sand, 0-2% slope</td>
<td>Poorly drained</td>
<td>No</td>
<td>12.3</td>
</tr>
<tr>
<td>66</td>
<td>Surrency loamy fine sand, depressional, 0-2% slope</td>
<td>Very poorly drained</td>
<td>Yes</td>
<td>5</td>
</tr>
<tr>
<td>82</td>
<td>Pelham fine sand, depressional, 0-2% slope</td>
<td>Poorly drained</td>
<td>Yes</td>
<td>4</td>
</tr>
</tbody>
</table>

4 Field Sampling Methodology

On June 23-24, 2017, Mabbett conducted the agricultural soil sampling event at the Project Study Area. For each distinct soil unit to be developed within the expansion area, approximately four subsamples per acre were collected. Separate soil samples were collected from the shallow zone (0-6 inches bgs; “Shallow”) and the deeper zone (6-18 inches bgs; “Deep”). These depth intervals were selected to represent the general rooting zone for anticipated plantings: grasses in shallow soil, and shrubs/trees in deep soil.

Soil samples were collected using a clean, stainless steel micro-pushprobe equipped with a 12-inch long, 1-inch diameter open barrel. Soil subsamples collected from a given soil unit and depth were homogenized using a clean stainless-steel spoon in a clean, plastic 5-gallon bucket. Table 2 summarizes the number of subsamples that were collected and homogenized per soil unit. Additionally, separate shallow and deep site-wide soil samples were prepared by collecting a subsample from each homogenized soil unit sample, then compositing those subsamples together. Figure 4 depicts the soil units within with approximate proposed expansion boundary where soil samples were collected.

Table 2. Project Study Area Field Sampling Summary

<table>
<thead>
<tr>
<th>Soil Series (map ID number)</th>
<th>Sample ID on Lab Report</th>
<th>Approximate acres to be developed</th>
<th>Number of composites per sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mascotte fine sand, 0-2% slope (38)</td>
<td>38 East Shallow 38 East Deep</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>38 West Shallow 38 West</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Pelham fine sand, 0-2% slope (51)</td>
<td>51 South Shallow 51 South</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>51 East Shallow 51 East</td>
<td>0.3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>51 West Shallow 51 West</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Surrency loamy fine sand, depressional, 0-2% slope (66)</td>
<td>66 East Shallow 66 East Deep</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Pelham fine sand, depressional, 0-2% slope (82)</td>
<td>82 Central Shallow 82 Central</td>
<td>4</td>
<td>16</td>
</tr>
</tbody>
</table>

Collected soil samples were placed in double-lined plastic bags, labeled, and shipped under chain-of-custody procedures to Waters Agricultural Laboratories, Inc., in Camilla, Georgia, for the following physical and chemical analyses and recommendations for amendments based on proposed plantings (trees and shrubs, and turf):

- **Physical properties**: Organic matter; gradation of sand, silt, and clay content; deleterious material;
- **Chemical and nutrient properties**: Cation exchange capacity; sodium absorption ratio; pH; mineral and plant-nutrient content, phosphorus, potassium, magnesium, calcium, and percent base saturation of cation elements.
- **Heavy metals**: Boron, zinc, aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, selenium, and vanadium.

July 17, 2017
5 Results and Recommendations

The laboratory reported chemical and physical analysis results are provided in Appendix B. The results are organized by soil unit, sample depth, and proposed plantings. Based on these results, Waters’ agronomist developed recommendations for soil treatments and amendments (lbs/acre) and lime (tons/acre) to be incorporated into each soil unit for the purposes of growing ornamental shrubs (ex. Loropetalums cultivars, Viburnum sp., Palmetto sp.) and trees (ex. Crepe Myrtle, Southern Live Oak, Elm), or grasses (ex. zoysia grass), which is anticipated to be sodded in landscaped portions of the expansion area. It should be noted that if zoysia grass is installed as sod rather than planted from seed, then the fertilizer recommendations presented in this report should be superseded by recommendations provided by the sod supplier. Otherwise, the fertilizer recommendations presented in this report for the shallow soil would generally be most applicable for grasses and shallow-rooted shrubs, while the recommendations for the deep soil would be applicable for planted trees and shrubs with deeper rooting depths.

It is also noted that development of the expansion area is anticipated to require clearing of existing vegetation and grading to establish elevations suitable for new burial areas, roadways, and a stormwater retention pond. Grading may significantly disturb native soils, resulting in mixing of shallow and deep interval soils described in this report. If the sampled soil depth intervals are mixed, then either the lower of the fertilizer recommendations presented for the shallow or deep intervals may be used; or the data may be averaged. Additionally, if soils from different units are mixed, then fertilizer recommendations for the “Jax Shallow” and “Jax Deep” samples may be considered; however, new samples of the final soil(s) used for plantings is recommended to obtain accurate and soil-specific fertilizer requirements.

**Mascotte fine sand, 0-2% slope (38)**

Based on the laboratory analytical results, the fertilizer requirements for grasses are generally similar for the shallow (0-6 inches bgs) Mascotte fine sand collected in the western or eastern portions of the expansion area. The fertilizer recommendations for shrubs and trees in the deep soil samples (6-18 inches bgs) are generally lower for nitrogen, but higher for phosphate, potash, and magnesium. Lime application rates range from 1.0-1.5 tons/acre for shallow and deep soils, for grasses or shrubs/trees. This is recommended to raise the slightly acidic pH of these soils.

The Mascotte fine sand soils did not contain salts, minerals, or heavy metals at concentrations requiring corrective actions.

**Pelham fine sand, 0-2% slope (51)**

Based on the laboratory analytical results, the fertilizer requirements for grasses are generally similar for the shallow (0-6 inches bgs) Pelham fine sand collected in the south, west, or east portions of the expansion area. The fertilizer recommendations for shrubs and trees in the deep soil samples (6-18 inches bgs) are generally lower for nitrogen, but higher for phosphate and potash. Lime application rates range from 1.0-1.5 tons/acre for shallow and deep soils, for grasses or shrubs/trees, in the east and south soils. However, the Pelham soil in the west area has a higher pH and therefore lime applications are not necessarily required in this area.

The Pelham fine sand soils did not contain salts, minerals, or heavy metals at concentrations requiring other corrective actions.
Surrency loamy fine sand, depressional, 0-2% slope (66)

Based on the laboratory analytical results, the fertilizer requirements for grasses in shallow soil (0.6-inches bgs) are generally lower compared with recommendations for shrubs/trees in deep (6-18 inches bgs) Surrency loamy fine sand. Lime application rates range from 1.5-2.0 tons/acre for shallow and deep soils, for grasses or shrubs/trees, to raise the slightly acidic pH of these soils.

The Surrency loamy fine sand soils did not contain salts, minerals, or heavy metals at concentrations requiring other corrective actions.

Pelham fine sand, depressional, 0-2% slope (82)

Based on the laboratory analytical results, the fertilizer requirements for grasses in shallow soil (0.6-inches bgs) are generally lower compared with recommendations for shrubs/trees in deep (6-18 inches bgs) Pelham fine sand. However, less nitrogen is required in the deep soil. Fertilizer requirements in the depressional Pelham fine sand (82) are also similar to the non-depressional Pelham fine sand (51), particularly southern Pelham fine sand area, which is located west of and adjacent to the depressional Pelham fine sand area. Lime application rates range from 1.5-2.0 tons/acre for shallow and deep soils, for grasses or shrubs/trees, to raise the slightly acidic pH of these soils.

The Pelham fine sand, depressional, did not contain salts, minerals, or heavy metals at concentrations requiring other corrective actions.

6 Conclusions

An agricultural soil investigation was conducted for each of the four different soil units identified by USDA-NRCS within the proposed expansion areas on June 23-24, 2017. Representative soil samples were separately collected from shallow (0-6-inches bgs) and deep (6-18-inches bgs) depths, and analyzed by an agricultural analytical laboratory to assess soil quality and agronomic fertilizer recommendations for shallow and deep planting zones for grasses and for ornamental shrubs and trees. All four soil types require generally similar lime and fertilizer application rates, relative to plant type and planting depth. Lime applications are generally recommended to raise the slightly acid pH in most of the sampled soils. If the soils sampled during this investigation are physically mixed or combined during development of the expansion area, average fertilizer recommendations for the “Jax Shallow” and “Jax Deep” samples may be considered for each type of planting. Otherwise, new samples would be warranted to obtain soil-specific fertilizer recommendations.
FIGURES
Figure 1: Location Map

U.S. Department of Veterans Affairs
Jacksonville National Cemetery Expansion
4083 Lannie Road Jacksonville, FL 32218 (Duval County)
Existing Mitigation Plan
Jacksonville National VA Cemetery
Phase 2 & 3
Duval County, Florida

Project: EJ06111.02
Date: Aug. 2010
Drwn/Chkd: PG/RR
Figure: 3

Approximate Expansion Area Boundary (within blue dashed line) where development would potentially occur


Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.
APPENDIX A
MASTER PLAN
APPENDIX B
LABORATORY ANALYTICAL RESULTS AND
SOIL AMENDMENT RECOMMENDATIONS
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

GROWER: VA OCFM JACKSONVILLE
FARM ID: EXPANSION AREA
SAMPLE ID: 38 EAST SHALLOW

RECEIVED 06/27/2017
PROCESSED 06/29/2017

Lab Results

lbs. per Acre

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
<tr>
<td>5</td>
<td>26</td>
<td>48</td>
<td>506</td>
<td>5.1</td>
<td>7.55</td>
<td>0.20</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aluminum: 287
Sodium: 0.04
Nitrate N: 2.13 %
Soluble Salts: 42.6
Organic Matter: %

Target pH: 6.5
Test Method: Mehlich I

Lab Number: 799047FC

Crop: ZOYSIA

Fertility Recommendations

lbs. per Acre

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td>200</td>
<td>100</td>
<td>125</td>
<td>35</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SOD

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

Cation Exchange Capacity: 5.1 meq/100g

Base Saturation:

K: 0.7 %
Mg: 3.9 %
Ca: 24.8 %
H: 70.6 %

Base Saturation

ENR
42.6
meq/l
BiCarbs

Maintenance Recommendation

* = Maintenance Recommendation
Since 1976
Waters Agricultural Laboratories, Inc.
P.O. Box 382  257 Newton Hwy  Camilla, GA  31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI  02903

Lab Number: 799048FC

Lab Results

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<thead>
<tr>
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<th>lbs. per Acre</th>
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</tr>
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<td>Buffer pH</td>
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</tr>
<tr>
<td>S</td>
<td>0.20</td>
<td>L</td>
</tr>
<tr>
<td>B</td>
<td>1.4</td>
<td>L</td>
</tr>
<tr>
<td>Zn</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Al</td>
<td>656</td>
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<td>Na</td>
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</tr>
<tr>
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<td>Cu</td>
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<thead>
<tr>
<th>Test Method</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Mehlich I</td>
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</table>

| Target pH | 6.5 |

<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>4.1 meq/100g</th>
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</thead>
<tbody>
<tr>
<td>K</td>
<td>0.4 %</td>
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<tr>
<td>Mg</td>
<td>2.5 %</td>
</tr>
<tr>
<td>Ca</td>
<td>18.4 %</td>
</tr>
<tr>
<td>H</td>
<td>78.7 %</td>
</tr>
<tr>
<td>Na</td>
<td>%</td>
</tr>
</tbody>
</table>

Base Saturation

Crop: ZOYSIA
Yield: SOD

<table>
<thead>
<tr>
<th>Fertility Recommendations</th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime Tons/Acre</td>
<td>N</td>
</tr>
<tr>
<td>1.5</td>
<td>200</td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

* = Maintenance Recommendation
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Lab Number: 799057FC

<table>
<thead>
<tr>
<th>P</th>
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<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<td>16</td>
<td>66</td>
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<td>VS</td>
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Lab Results

Target pH: 6.5
Test Method: Mehlich I

Crop: ZOYSIA
Yield: SOD

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
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<td>1.0</td>
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<td>85</td>
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Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.
Lab Number: 799058FC

**Lab Results**

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<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
<tr>
<td>11 L</td>
<td>24 L</td>
<td>62 L</td>
<td>540 M</td>
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<td>7.70</td>
<td>0.20 L</td>
<td>1.9 L</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>Sodium</td>
<td>Nitrate N</td>
<td>Soluble Salts</td>
<td>Organic Matter</td>
<td>ENR</td>
<td>Molybdenum</td>
<td>NH4</td>
<td>Nickel</td>
<td>BiCarbs</td>
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</tr>
<tr>
<td>577</td>
<td>0.04 mhos/cm</td>
<td>1.03 %</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cation Exchange Capacity**: 4.0 meq/100g

| Base Saturation |
|-----------------|---------------|---------------|---------------|---------------|---------------|
| %K | 0.8 % |
| %Mg | 6.4 % |
| %Ca | 33.4 % |
| %H | 59.4 % |
| %Na | % |

**Soil Analysis**

**Crop**: ZOYSIA

**Fertility Recommendations**

<table>
<thead>
<tr>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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</thead>
<tbody>
<tr>
<td>200</td>
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<td>1.0</td>
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</table>

**Yield**: SOD

**Target pH**: 6.5

**Test Method**: Mehlich I

**Comments**: SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

**Fertilizer Recommendations**: * = Maintenance Recommendation

**Lime**: 1.0 Tons/Acre

**Gypsum**: 0.0 Tons/Acre
Since 1976
Waters Agricultural Laboratories, Inc.
P.O. Box 382 257 Newton Hwy  Camilla, GA  31730
(229) 336-7216  FAX (229) 336-7967

Waters Agricultural Laboratories, Inc. "Improving Growth... With Science"

Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: 38 EAST SHALLOW
Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799047FC

<table>
<thead>
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<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>Potassium</td>
<td>Magnesium</td>
<td>Calcium</td>
<td>Soil pH</td>
<td>Buffer pH</td>
<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
</tr>
<tr>
<td>5 L</td>
<td>26 L</td>
<td>48 L</td>
<td>506 M</td>
<td>5.1</td>
<td>7.55</td>
<td>0.20 L</td>
<td>3.0 L</td>
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<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td>2.13 %</td>
<td>42.6 ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
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Target pH: 6.5
Test Method: Mehlich I

<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>5.1 meq/100g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Saturation</td>
<td></td>
</tr>
<tr>
<td>K: 0.7 %</td>
<td></td>
</tr>
<tr>
<td>Mg: 3.9 %</td>
<td></td>
</tr>
<tr>
<td>Ca: 24.8 %</td>
<td></td>
</tr>
<tr>
<td>H: 70.6 %</td>
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</tr>
<tr>
<td>Na: %</td>
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</table>

Crop: ORNAMENTAL

<table>
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<tr>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
<tr>
<td>Nitrogen</td>
<td>Phosphate</td>
<td>Potash</td>
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<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
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<tr>
<td>120</td>
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<td>35</td>
<td>0.8</td>
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</tbody>
</table>

Yield: SHRUBS & TREES

Fertility Recommendations

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
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<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons/Acre</td>
<td>Tons/Acre</td>
<td>Tons/Acre</td>
<td>Tons/Acre</td>
<td>Pounds/Acre</td>
<td>Tons/Acre</td>
<td>Pounds/Acre</td>
<td>Tons/Acre</td>
<td>Pounds/Acre</td>
<td>Tons/Acre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
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</tbody>
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Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

* = Maintenance Recommendation
Since 1976
Waters Agricultural Laboratories, Inc.
P.O. Box 382  257 Newton Hwy  Camilla, GA  31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI  02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: 38 EAST DEEP

Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799048FC

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<tr>
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</thead>
<tbody>
<tr>
<td>lbs. per Acre</td>
<td>Test Method: Mehlich I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phosphorus</th>
<th>Potassium</th>
<th>Magnesium</th>
<th>Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>Sulfur</th>
<th>Boron</th>
<th>Zinc</th>
<th>Manganese</th>
<th>Iron</th>
<th>Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 L</td>
<td>13 L</td>
<td>24 L</td>
<td>300 L</td>
<td>5.2</td>
<td>7.60</td>
<td>0.20 L</td>
<td>1.4 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.03 mmhos/cm</td>
<td>1.07 %</td>
<td>21.4</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Cation Exchange Capacity: 4.1 meq/100g

Base Saturation:
- %K: 0.4%
- %Mg: 2.5%
- %Ca: 18.4%
- %H: 78.7%
- %Na: %

Base Saturation Table

Crop: ORNAMENTAL

| Lime N P2O5 K2O Mg S B Zn Mn Fe Cu |
|-------------------------------|-----------------|-----------------|-----------------|
| Tons/Acre                     | Nitrogen         | Phosphate       | Potash          | Magnesium       | Sulfur | Boron | Zinc | Manganese | Iron | Copper |
| 1.5                           | 120             | 170             | 260             | 60              | 0.8    | 2.0   |      |          |      |        |

Fertility Recommendations

Yield: SHRUBS & TREES

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

Lab Number: 799057FC

<table>
<thead>
<tr>
<th>Lab Results</th>
<th>Target pH: 6.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Method: Mehlich I</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 L</td>
<td>66 L</td>
<td>132 A</td>
<td>1365 VH</td>
<td>5.9</td>
<td>7.65</td>
<td>0.32 L</td>
<td>4.7 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td></td>
<td></td>
<td>2.27 %</td>
<td></td>
<td>45.4</td>
<td></td>
<td></td>
<td></td>
<td>meq/l</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>6.8 meq/100g</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Base Saturation</th>
</tr>
</thead>
<tbody>
<tr>
<td>K: 1.2 %</td>
</tr>
<tr>
<td>Mg: 8.0 %</td>
</tr>
<tr>
<td>Ca: 49.8 %</td>
</tr>
<tr>
<td>H: 40.9 %</td>
</tr>
<tr>
<td>Na: %</td>
</tr>
</tbody>
</table>

Crop: ORNAMENTAL

Yield: SHRUBS & TREES

<table>
<thead>
<tr>
<th>Fertility Recommendations</th>
<th>1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>P2O5</td>
</tr>
<tr>
<td>120</td>
<td>165</td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI  02903

Soil Analysis

Lab Number: 799058FC

Lab Results

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>L</td>
<td>L</td>
<td>M</td>
<td>5.6</td>
<td>7.70</td>
<td></td>
<td>L</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04</td>
<td></td>
<td></td>
<td>1.03 %</td>
<td></td>
<td>20.6</td>
<td></td>
<td></td>
<td></td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Test Method: Mehlich 1

Target pH: 6.5

Crop: ORNAMENTAL

Fertility Recommendations

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>120</td>
<td>170</td>
<td>250</td>
<td>20</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SHRUBS & TREES

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

* = Maintenance Recommendation
PELHAM FINE SAND (51)
LABORATORY ANALYTICAL RESULTS AND
SOIL AMENDMENT RECOMMENDATIONS

July 17, 2017
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI  02903

Lab Number: 799045FC

Lab Results

<table>
<thead>
<tr>
<th></th>
<th>Phosphorus</th>
<th>K Potassium</th>
<th>Mg Magnesium</th>
<th>Ca Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>3 L</td>
<td>25 L</td>
<td>45 L</td>
<td>320 L</td>
<td>5.0</td>
<td>7.50</td>
<td>0.20 L</td>
<td>1.9 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sodium</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrate N</td>
<td>0.05 mhos/cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soluble Salts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic Matter</td>
<td>2.18 %</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ENR</td>
<td>43.6</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NH4</td>
<td>ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BiCarbs</td>
<td>meq/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

Crop: ZOYSIA

<table>
<thead>
<tr>
<th></th>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime Tons/Acre</td>
<td>2.0</td>
<td>200</td>
<td>100</td>
<td>130</td>
<td>40</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum Tons/Acre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SOD

Fertility Recommendations

<table>
<thead>
<tr>
<th></th>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield: SOD</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Lab Number: 799046FC

<table>
<thead>
<tr>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phosphorus</strong></td>
</tr>
<tr>
<td>Phosphorus</td>
</tr>
<tr>
<td>Aluminum</td>
</tr>
<tr>
<td>Sodium</td>
</tr>
<tr>
<td>Nitrate N</td>
</tr>
<tr>
<td>Soluble Salts</td>
</tr>
<tr>
<td>Organic Matter</td>
</tr>
<tr>
<td>Soil Analyses</td>
</tr>
<tr>
<td><strong>Target pH:</strong> 6.5</td>
</tr>
<tr>
<td><strong>Test Method:</strong> Mehlich I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>4.3 meq/100g</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Saturation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>K:</strong> 0.3 %</td>
<td></td>
</tr>
<tr>
<td><strong>Mg:</strong> 2.5 %</td>
<td></td>
</tr>
<tr>
<td><strong>Ca:</strong> 13.7 %</td>
<td></td>
</tr>
<tr>
<td><strong>H:</strong> 83.4 %</td>
<td></td>
</tr>
<tr>
<td><strong>Na:</strong> %</td>
<td></td>
</tr>
</tbody>
</table>

**Crop:** ZOYSIA

<table>
<thead>
<tr>
<th>Fertility Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crop:</strong> ZOYSIA</td>
</tr>
<tr>
<td><strong>Lime</strong></td>
</tr>
<tr>
<td>Tons/Acre</td>
</tr>
<tr>
<td>1.5</td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: 51 SOUTH SHALLOW

Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799049FC

Lab Results
lbs. per Acre

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 L</td>
<td>44 L</td>
<td>73 L</td>
<td>1000 H</td>
<td>5.4</td>
<td>7.55</td>
<td>0.20 L</td>
<td>3.7 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Phosphorus Potassium Magnesium Calcium Soil pH Buffer pH Sulfur Boron Zinc Manganese Iron Copper

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>348</td>
<td></td>
<td></td>
<td>0.05 mmhos/cm</td>
<td>2.54 %</td>
<td>50.8</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

Lab Results

Fertility Recommendations
lbs. per Acre

Crop: ZOYSIA
Yield: SOD

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td>200</td>
<td>95</td>
<td>110</td>
<td>10</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>%K</th>
<th>%Mg</th>
<th>%Ca</th>
<th>%H</th>
<th>%Na</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cation Exchange Capacity 6.5 meq/100g

Base Saturation

- K: 0.9 %
- Mg: 4.7 %
- Ca: 38.7 %
- H: 55.7 %
- Na: %

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

Lab Number: 799050FC

Lab Results

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 L</td>
<td>19 L</td>
<td>57 L</td>
<td>559 M</td>
<td>5.6</td>
<td>7.70</td>
<td>0.20 L</td>
<td>1.9 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>449</td>
<td></td>
<td></td>
<td>0.04 mmhos/cdm</td>
<td>1.14 %</td>
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<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

Crop: ZOYSIA

Fertility Recommendations

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td></td>
<td>200</td>
<td>95</td>
<td>135</td>
<td>25</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SOD

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

Comments:

* = Maintenance Recommendation
### Soil Analysis

**Lab Number:** 799055FC

<table>
<thead>
<tr>
<th>P Phosphorus</th>
<th>K Potassium</th>
<th>Mg Magnesium</th>
<th>Ca Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>98 A</td>
<td>62 L</td>
<td>213 VH</td>
<td>1912 VH</td>
<td>6.3</td>
<td>7.80</td>
<td>0.46 L</td>
<td>9.4 H</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Phosphorus:** 184

**Aluminum:** 2.41 %

**Buffer pH:** 7.80

**Sulphur:** 0.07

**ENR:** 48.2

**NH4:** 0.46

**Molybdenum:** 1.1

**BiCarbs:** 1.2

**Cation Exchange Capacity:** 7.3 meq/100g

**Base Saturation**

- K: 1.1%
- Mg: 12.1%
- Ca: 65.1%
- H: 21.8%
- Na: %

### Fertility Recommendations

**Crop:** ZOYSIA

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td></td>
<td>200</td>
<td>50 *</td>
<td>100</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Waters Agricultural Laboratories, Inc.
P.O. Box 382 257 Newton Hwy Camilla, GA 31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

Lab Number: 799056FC

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>93</td>
<td>A</td>
<td>43</td>
<td>L</td>
<td>155</td>
<td>A</td>
<td>1677</td>
<td>VH</td>
<td>6.8</td>
<td>7.85</td>
<td>0.37</td>
<td>L</td>
</tr>
</tbody>
</table>

Aluminum: 187
Potassium: 93
Magnesium: 43
Calcium: 155
Soil pH: 6.8
Buffer pH: 7.85
Sulfur: 0.37
Boron: L
Zinc: 7.3
Manganese: A
Iron: 6.1
Copper: meq/100g

Cation Exchange Capacity: 6.1

Base Saturation:
K: 0.9 %
Mg: 10.6 %
Ca: 68.8 %
H: 19.7 %
Na: %

Soil Analysis Ratings

Very High
High
Adequate
Medium
Low

Crop: ZOYSIA
Yield: SOD

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>50</td>
<td>110</td>
<td>Mg</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.

Lab Results

lbs. per Acre

Target pH: 6.5
Test Method: Mehlich I
## Soil Analysis

**MABBETT & ASSOCIATES INC**  
ANDREW GLUCKSMAN  
10 Dorrance ST STE 700  
PROVIDENCE, RI 02903  

**Grower:** VA OCFM JACKSONVILL  
**Farm ID:** EXPANSION AREA  
**Sample ID:** 51 EAST SHALLOW  
**Received:** 06/27/2017  
**Processed:** 06/29/2017  
**Account #:** 29031

### Lab Results

**Lab Number:** 799045FC  
**Test Method:** Mehlich I

<table>
<thead>
<tr>
<th>Element</th>
<th>lbs. per Acre</th>
<th>Target pH: 6.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>3 L</td>
<td>6.5</td>
</tr>
<tr>
<td>Potassium</td>
<td>25 L</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>45 L</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>320 L</td>
<td></td>
</tr>
<tr>
<td>Soil pH</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Buffer pH</td>
<td>7.50</td>
<td></td>
</tr>
<tr>
<td>Sulfur</td>
<td>0.20 L</td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td>1.9 L</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manganese</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>0.05 mmhos/cm</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrate N</td>
<td>2.18 %</td>
<td></td>
</tr>
<tr>
<td>Soluble Salts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic Matter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENR</td>
<td>43.6 ppm</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NH4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BiCarbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cation Exchange Capacity</td>
<td>5.0 meq/100g</td>
<td></td>
</tr>
</tbody>
</table>

### Base Saturation

- **K:** 0.6 %
- **Mg:** 3.7 %
- **Ca:** 15.9 %
- **H:** 79.7 %
- **Na:** %

### Fertility Recommendations

**Crop:** ORNAMENTAL  
**Yield:** SHRUBS & TREES

<table>
<thead>
<tr>
<th>Element</th>
<th>N P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime</td>
<td>2.0 Tons/Acre</td>
<td>120</td>
<td>180</td>
<td>250</td>
<td>40</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
### Soil Analysis

**MABBETT & ASSOCIATES INC**  
ANDREW GLUCKSMAN  
10 DORRANCE ST STE 700  
PROVIDENCE, RI 02903

**Grower:** VA OCFM JACKSONVILLE  
**Farm ID:** EXPANSION AREA  
**Sample ID:** 51 EAST DEEP  
**Received:** 06/27/2017  
**Processed:** 06/29/2017  
**Account #:** 29031

**Lab Number:** 799046FC  
**Test Method:** Mehlich I  
**Target pH:** 6.5

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 L</td>
<td>11 L</td>
<td>26 L</td>
<td>237 L</td>
<td>5.0</td>
<td>7.55</td>
<td>0.20 L</td>
<td>2.3 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td>1.36 %</td>
<td></td>
<td></td>
<td></td>
<td>27.2 ppm</td>
<td></td>
<td>ppm</td>
<td>meq/l</td>
<td></td>
</tr>
</tbody>
</table>

| Cation Exchange Capacity | 4.3 meq/100g |

<table>
<thead>
<tr>
<th>Base Saturation</th>
</tr>
</thead>
<tbody>
<tr>
<td>K:</td>
</tr>
<tr>
<td>Mg:</td>
</tr>
<tr>
<td>Ca:</td>
</tr>
<tr>
<td>H:</td>
</tr>
<tr>
<td>Na:</td>
</tr>
</tbody>
</table>

---

**Crop:** ORNAMENTAL  
**Yield:** SHRUBS & TREES

### Fertility Recommendations

<table>
<thead>
<tr>
<th>Crop</th>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>120</td>
<td>180</td>
<td>260</td>
<td>55</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Comments:**

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
**MABBETT & ASSOCIATES INC**

ANDREW GLUCKSMAN  
10 DORRANCE ST STE 700  
PROVIDENCE, RI  02903

**Lab Number:** 799049FC  
**Target pH:** 6.5  
**Test Method:** Mehlich I

### Lab Results

<table>
<thead>
<tr>
<th>P</th>
<th>Phosphorus</th>
<th>K</th>
<th>Potassium</th>
<th>Mg</th>
<th>Magnesium</th>
<th>Ca</th>
<th>Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>Sulfur</th>
<th>B</th>
<th>Boron</th>
<th>Zn</th>
<th>Zinc</th>
<th>Mn</th>
<th>Manganese</th>
<th>Fe</th>
<th>Iron</th>
<th>Cu</th>
<th>Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs. per Acre</td>
<td></td>
<td>lbs. per Acre</td>
<td></td>
<td>lbs. per Acre</td>
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<td>lbs. per Acre</td>
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<td>lbs. per Acre</td>
<td></td>
<td>lbs. per Acre</td>
<td></td>
<td>lbs. per Acre</td>
</tr>
<tr>
<td>9</td>
<td>100</td>
<td>73</td>
<td>1000</td>
<td>5.4</td>
<td>7.55</td>
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<td>3.7</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>120</td>
<td>175</td>
<td>230</td>
<td>10</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Soil Analysis

- **Grower:** VA OCFM JACKSONVILLE  
- **Farm ID:** EXPANSION AREA  
- **Sample ID:** 51 SOUTH SHALLOW  
- **Received:** 06/27/2017  
- **Processed:** 06/29/2017  
- **Account #:** 29031

### Fertility Recommendations

**Crop:** ORNAMENTAL  
**Yield:** SHRUBS & TREES

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N</th>
<th>Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg</th>
<th>Magnesium</th>
<th>S</th>
<th>Sulfur</th>
<th>B</th>
<th>Boron</th>
<th>Zn</th>
<th>Zinc</th>
<th>Mn</th>
<th>Manganese</th>
<th>Fe</th>
<th>Iron</th>
<th>Cu</th>
<th>Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td>120</td>
<td>175</td>
<td>230</td>
<td>10</td>
<td>0.8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**  
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.  
If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

MABBETT & ASSOCIATES INC  Grower: VA OFM JACKSONVILL  Received 06/27/2017
ANDREW GLUCKSMAN  Farm ID: EXPANSION AREA  Processed 06/29/2017
10 DORRANCE ST STE 700 Sample ID: 51 SOUTH DEEP  Account #: 29031
PROVIDENCE, RI 02903

Lab Number: 799050FC  Target pH: 6.5
Test Method: Mehlich I

Lab Results  lbs. per Acre

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 L</td>
<td>19 L</td>
<td>57 L</td>
<td>559 M</td>
<td>5.6</td>
<td>7.70</td>
<td>0.20 L</td>
<td>1.9 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>Enrichment</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td>1.14 %</td>
<td>22.8 ppm</td>
<td>ppm</td>
<td>meq/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cation Exchange Capacity 4.1 meq/100g

Base Saturation
- K: 0.6 %
- Mg: 5.9 %
- Ca: 34.4 %
- H: 59.1 %
- Na: %

Crop: ORNAMENTAL  Yield: SHRUBS & TREES

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>P2O5</td>
</tr>
<tr>
<td>1.0</td>
<td>120</td>
</tr>
</tbody>
</table>

Fertility Recommendations  lbs. per Acre

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Since 1976
Waters Agricultural Laboratories, Inc.
P.O. Box 382 257 Newton Hwy Camilla, GA 31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: 51 WEST SHALLOW
Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799055FC

Lab Results
lbs. per Acre

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>Potassium</td>
<td>Magnesium</td>
<td>Calcium</td>
<td></td>
<td></td>
<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
</tr>
<tr>
<td>98</td>
<td>A</td>
<td>213 VH</td>
<td>1912 VH</td>
<td>6.3</td>
<td>7.80</td>
<td>0.46 L</td>
<td>9.4 H</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.07 mmhos/cm</td>
<td></td>
<td>2.41 %</td>
<td></td>
<td></td>
<td>48.2 ppm</td>
<td></td>
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</tr>
</tbody>
</table>

Lab Results

Target pH: 6.5
Test Method: Mehlich I

<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>7.3 meq/100g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Saturation</td>
<td></td>
</tr>
<tr>
<td>K: 1.1 %</td>
<td></td>
</tr>
<tr>
<td>Mg: 12.1 %</td>
<td></td>
</tr>
<tr>
<td>Ca: 65.1 %</td>
<td></td>
</tr>
<tr>
<td>H: 21.8 %</td>
<td></td>
</tr>
<tr>
<td>Na: %</td>
<td></td>
</tr>
</tbody>
</table>

Crop: ORNAMENTAL

Fertility Recommendations
lbs. per Acre

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Phosphorus</th>
<th>Mg Magnesium</th>
<th>S</th>
<th>B Boron</th>
<th>Zn</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td></td>
<td>120</td>
<td>85</td>
<td>210</td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SHRUBS & TREES

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.
Soil Analysis

Lab Number: 799056FC

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>93</td>
<td>43</td>
<td>A</td>
<td>155</td>
<td>A</td>
<td>1677</td>
<td>VH</td>
<td>6.8</td>
<td>7.85</td>
<td>0.37</td>
<td>L</td>
</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

Crop: ORNAMENTAL

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons/Acre</td>
<td>Tons/Acre</td>
<td>Nitrogen</td>
<td>Phosphate</td>
<td>Potash</td>
<td>Magnesium</td>
<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
</tr>
<tr>
<td>120</td>
<td>90</td>
<td>230</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SHRUBS & TREES

Comments:

* SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED.
SURRENCY LOAMY FINE SAND (66)
LABORATORY ANALYTICAL RESULTS AND
SOIL AMENDMENT RECOMMENDATIONS
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Grower: VA OCFM JACKSONVILLE
Farm ID: EXPANSION AREA
Sample ID: 66 EAST SHALLOW

Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799053FC
Target pH: 6.5
Test Method: Mehlich I

Lab Results
lbs. per Acre

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>Potassium</td>
<td>Magnesium</td>
<td>Calcium</td>
<td>Soil pH</td>
<td>Buffer pH</td>
<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
</tr>
<tr>
<td>2 L</td>
<td>16 L</td>
<td>46 L</td>
<td>552</td>
<td>5.2</td>
<td>7.45</td>
<td>0.20 L</td>
<td>2.1 L</td>
<td>0.05 mmhos/cm</td>
<td>2.68 %</td>
<td>ENR 53.6</td>
<td>ppm</td>
</tr>
</tbody>
</table>

Cation Exchange Capacity: 6.0 meq/100 g

Base Saturation:
- K: 0.3 %
- Mg: 3.2 %
- Ca: 23.0 %
- H: 73.4 %
- Na: %

Crop: ZOYSIA
Yield: SOD

Fertility Recommendations
lbs. per Acre

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons/Acre</td>
<td>Tons/Acre</td>
<td>Nitrogen</td>
<td>Phosphate</td>
<td>Potash</td>
<td>Magnesium</td>
<td>Sulfur</td>
<td>Boron</td>
<td>Zinc</td>
<td>Manganese</td>
<td>Iron</td>
<td>Copper</td>
</tr>
<tr>
<td>2.0</td>
<td>200</td>
<td>100</td>
<td>135</td>
<td>35</td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

Lab Number: 799054FC

Lab Results

<table>
<thead>
<tr>
<th></th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P</strong></td>
<td>6 L</td>
</tr>
<tr>
<td><strong>K</strong></td>
<td>12 L</td>
</tr>
<tr>
<td><strong>Mg</strong></td>
<td>42 L</td>
</tr>
<tr>
<td><strong>Ca</strong></td>
<td>456 M</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>5.3</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>7.60</td>
</tr>
<tr>
<td><strong>Zn</strong></td>
<td>0.20 L</td>
</tr>
<tr>
<td><strong>Mn</strong></td>
<td>1.6 L</td>
</tr>
<tr>
<td><strong>Cu</strong></td>
<td>4.5 meq/100g</td>
</tr>
</tbody>
</table>

Fertility Recommendations

Crop: ZOYSIA

<table>
<thead>
<tr>
<th></th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>200</td>
</tr>
<tr>
<td><strong>P2O5</strong></td>
<td>95</td>
</tr>
<tr>
<td><strong>K2O</strong></td>
<td>140</td>
</tr>
<tr>
<td><strong>Mg</strong></td>
<td>40</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>0.8</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Zn</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Mn</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Fe</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Cu</strong></td>
<td>1.0</td>
</tr>
</tbody>
</table>

Yield: SOD

**Target pH:** 6.5
**Test Method:** Mehlich I

**Lab Results**

<table>
<thead>
<tr>
<th></th>
<th>lbs. per Acre</th>
</tr>
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<tbody>
<tr>
<td><strong>P</strong></td>
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</tr>
<tr>
<td><strong>Ca</strong></td>
<td>456 M</td>
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<td><strong>S</strong></td>
<td>5.3</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>7.60</td>
</tr>
<tr>
<td><strong>Zn</strong></td>
<td>0.20 L</td>
</tr>
<tr>
<td><strong>Mn</strong></td>
<td>1.6 L</td>
</tr>
<tr>
<td><strong>Cu</strong></td>
<td>4.5 meq/100g</td>
</tr>
</tbody>
</table>

Fertility Recommendations

Crop: ZOYSIA

<table>
<thead>
<tr>
<th></th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>200</td>
</tr>
<tr>
<td><strong>P2O5</strong></td>
<td>95</td>
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<tr>
<td><strong>Mg</strong></td>
<td>40</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>0.8</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Zn</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Mn</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Fe</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Cu</strong></td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Comments:**

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Soil Analysis

Lab Number: 799053FC

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>L</td>
<td>L</td>
<td>M</td>
<td>5.2</td>
<td>7.45</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
</tbody>
</table>

Lab Results

Lbs. per Acre

<table>
<thead>
<tr>
<th>Phosphorus</th>
<th>Potassium</th>
<th>Magnesium</th>
<th>Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>Sulfur</th>
<th>Boron</th>
<th>Zinc</th>
<th>Manganese</th>
<th>Iron</th>
<th>Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>16</td>
<td>46</td>
<td>552</td>
<td>5.2</td>
<td>7.45</td>
<td>0.20</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.05 mEq/l</td>
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<td>53.6</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

Cation Exchange Capacity: 6.0 meq/100g

Base Saturation:
- K: 0.3 %
- Mg: 3.2 %
- Ca: 23.0 %
- H: 73.4 %
- Na: %

Crop: ORNAMENTAL

Fertility Recommendations
Lbs. per Acre

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td></td>
<td>120</td>
<td>180</td>
<td>255</td>
<td>35</td>
<td></td>
<td>0.8</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

Yield: SHRUBS & TREES
Since 1976

Waters Agricultural Laboratories, Inc.
P.O. Box 382  257 Newton Hwy  Camilla, GA  31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: 66 EAST DEEP

Received 06/27/2017
Processed 06/29/2017
Account #: 29031

Lab Number: 799054FC

<table>
<thead>
<tr>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs. per Acre</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P Phosphorus</th>
<th>K Potassium</th>
<th>Mg Magnesium</th>
<th>Ca Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 L</td>
<td>12 L</td>
<td>42 L</td>
<td>456 M</td>
<td>5.3</td>
<td>7.60</td>
<td>0.20 L</td>
<td>1.6 L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td></td>
<td></td>
<td></td>
<td>1.32 %</td>
<td></td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Cation Exchange Capacity</th>
<th>4.5 meq/100g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Saturation</td>
<td></td>
</tr>
<tr>
<td>K:</td>
<td>0.3 %</td>
</tr>
<tr>
<td>Mg:</td>
<td>3.9 %</td>
</tr>
<tr>
<td>Ca:</td>
<td>25.2 %</td>
</tr>
<tr>
<td>H:</td>
<td>70.6 %</td>
</tr>
<tr>
<td>Na:</td>
<td>%</td>
</tr>
</tbody>
</table>

Crop: ORNAMENTAL

<table>
<thead>
<tr>
<th>Fertility Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs. per Acre</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td>120</td>
<td>175</td>
<td>260</td>
<td>40</td>
<td>0.8</td>
<td>1.0</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SHRUBS & TREES

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
PELHAM FINE SAND, DEPRESSIONAL (82)
LABORATORY ANALYTICAL RESULTS AND
SOIL AMENDMENT RECOMMENDATIONS

July 17, 2017
Soil Analysis

Lab Number: 799051FC

<table>
<thead>
<tr>
<th>P</th>
<th>K Potassium</th>
<th>Mg Magnesium</th>
<th>Ca Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S Sulfur</th>
<th>B Boron</th>
<th>Zn Zinc</th>
<th>Mn Manganese</th>
<th>Fe Iron</th>
<th>Cu Copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>L</td>
<td>24 L</td>
<td>42 L</td>
<td>579 M</td>
<td>5.2</td>
<td>7.60</td>
<td>0.20 L</td>
<td>2.9 L</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aluminum: 277
Sodium: 0.04 meq/l
Nitrate N: 2.64 %
Soluble Salts: Organic Matter
Molybdenum: 52.8 ppm
NH4: 0.8 ppm
Nickel: BiCarbs

Cation Exchange Capacity: 4.9 meq/100g

Base Saturation:
- %K: 0.6 %
- %Mg: 3.6 %
- %Ca: 29.8 %
- %H: 65.9 %
- %Na: %

Base Saturation:

Crop: ZOYSIA

<table>
<thead>
<tr>
<th>Lime Tons/Acre</th>
<th>Gypsum Tons/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N Nitrogen</th>
<th>P2O5 Phosphate</th>
<th>K2O Potash</th>
<th>Mg Magnesium</th>
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<th>B Boron</th>
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<tr>
<td>200</td>
<td>100</td>
<td>130</td>
<td>40</td>
<td></td>
<td>0.8</td>
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<td></td>
</tr>
</tbody>
</table>

Crop: SOD

Fertility Recommendations:

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

Yield: SOD

Target pH: 6.5
Test Method: Mehlich I
MABBETT & ASSOCIATES INC  
ANDREW GLUCKSMAN  
10 DORRANCE ST STE 700  
PROVIDENCE, RI  02903

Lab Number: 799052FC  
Target pH: 6.5  
Test Method: Mehlich I

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 L</td>
<td>10 L</td>
<td>28 L</td>
<td>372 L</td>
<td>5.5</td>
<td>7.70</td>
<td>0.20 L</td>
<td>1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>340</td>
<td></td>
<td>0.04 mmhos/cm</td>
<td>1.07 %</td>
<td></td>
<td></td>
<td>21.4</td>
<td></td>
<td></td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Cation Exchange Capacity | 3.5 meq/100g

Base Saturation
- K: 0.4 %
- Mg: 3.4 %
- Ca: 26.9 %
- H: 69.4 %
- Na: %

Crop: ZOYSIA

<table>
<thead>
<tr>
<th>Lime</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>200</td>
<td>100</td>
<td>140</td>
<td>55</td>
<td>0.8</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SOD

Comments:
SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Lab Number: 799051FC

Lab Results

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>24</td>
<td>42</td>
<td>579</td>
<td>5.2</td>
<td>7.60</td>
<td>0.20</td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aluminum | Sodium | Nitrate N | Soluble Salts | Organic Matter | ENR | Molybdenum | NH4 | Nickel | BiCarbs |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td></td>
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<td>2.64 %</td>
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<td></td>
<td>ppm</td>
<td>ppm</td>
<td></td>
<td>meq/1</td>
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</table>

Cation Exchange Capacity: 4.9 meq/100g

Base Saturation

- K: 0.6 %
- Mg: 3.6 %
- Ca: 29.8 %
- H: 65.9 %
- Na: %

Crop: ORNAMENTAL

Fertility Recommendations

<table>
<thead>
<tr>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
<tr>
<td>1.5</td>
<td>120</td>
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<td>250</td>
<td>40</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Yield: SHRUBS & TREES

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

* = Maintenance Recommendation
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Waters Agricultural Laboratories, Inc.
P.O. Box 382  257 Newton Hwy  Camilla, GA  31730
(229) 336-7216  FAX (229) 336-7967

Soil Analysis

Lab Number: 799052FC
Target pH: 6.5
Test Method: Mehlich I

<table>
<thead>
<tr>
<th>Lab Results</th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Phosphorus</td>
</tr>
<tr>
<td>K</td>
<td>Potassium</td>
</tr>
<tr>
<td>Mg</td>
<td>Magnesium</td>
</tr>
<tr>
<td>Ca</td>
<td>Calcium</td>
</tr>
<tr>
<td>Soil pH</td>
<td>5.5</td>
</tr>
<tr>
<td>Buffer pH</td>
<td>7.70</td>
</tr>
<tr>
<td>S</td>
<td>Sulfur</td>
</tr>
<tr>
<td>Zn</td>
<td>Zinc</td>
</tr>
<tr>
<td>Mn</td>
<td>Manganese</td>
</tr>
<tr>
<td>Fe</td>
<td>Iron</td>
</tr>
<tr>
<td>Cu</td>
<td>Copper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
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<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Lab Results</th>
<th>ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cation Exchange Capacity</td>
<td>3.5</td>
</tr>
<tr>
<td>Base Saturation</td>
<td></td>
</tr>
<tr>
<td>K:</td>
<td>0.4 %</td>
</tr>
<tr>
<td>Mg:</td>
<td>3.4 %</td>
</tr>
<tr>
<td>Ca:</td>
<td>26.9 %</td>
</tr>
<tr>
<td>H:</td>
<td>69.4 %</td>
</tr>
<tr>
<td>Na:</td>
<td>%</td>
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</table>

Base Saturation

Crop: ORNAMENTAL
Yield: SHRUBS & TREES

<table>
<thead>
<tr>
<th>Fertility Recommendations</th>
<th>lbs. per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>P2O5</td>
<td>Phosphate</td>
</tr>
<tr>
<td>K2O</td>
<td>Potash</td>
</tr>
<tr>
<td>Mg</td>
<td>Magnesium</td>
</tr>
<tr>
<td>S</td>
<td>Sulfur</td>
</tr>
<tr>
<td>B</td>
<td>Boron</td>
</tr>
<tr>
<td>Zn</td>
<td>Zinc</td>
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<tr>
<td>Mn</td>
<td>Manganese</td>
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<tr>
<td>Fe</td>
<td>Iron</td>
</tr>
<tr>
<td>Cu</td>
<td>Copper</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td></td>
<td>120</td>
<td>180</td>
<td>260</td>
<td>55</td>
<td>0.8</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

* = Maintenance Recommendation

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

Comments:

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COMBINED SOIL UNITS
LABORATORY ANALYTICAL RESULTS
### Soil Analysis

**MABBETT & ASSOCIATES INC**

**ANDREW GLUCKSMAN**

10 DORRANCE ST STE 700

PROVIDENCE, RI 02903

---

**Grower:** VA OCFM JACKSONVILL  
**Farm ID:** EXPANSION AREA  
**Sample ID:** JAX SHALLOW  
**Received:** 06/27/2017  
**Processed:** 06/29/2017  
**Account #:** 29031

---

**Lab Number:** 799059FC  
**Target pH:** 6.5  
**Test Method:** Mehlich I

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>31</td>
<td>84</td>
<td>830</td>
<td>5.4</td>
<td>7.55</td>
<td>0.20</td>
<td>L</td>
<td>3.9</td>
<td>M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Phosphorus:** 15 L  
- **Potassium:** 31 L  
- **Magnesium:** 84 M  
- **Calcium:** 830 A  
- **Soil pH:** 5.4  
- **Buffer pH:** 7.55  
- **Sulfur:** 0.20 L  
- **Boron:** 3.9 M  

---

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Sodium</th>
<th>Nitrate N</th>
<th>Soluble Salts</th>
<th>Organic Matter</th>
<th>ENR</th>
<th>Moylebdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>373</td>
<td></td>
<td></td>
<td>0.04</td>
<td>2.51 %</td>
<td>50.2</td>
<td></td>
<td>ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Aluminum:** 373  
- **Sodium:**  
- **Nitrate N:** 0.04 ppm  
- **Soluble Salts:** 2.51 %  
- **Organic Matter:** 50.2 ppm  

---

**Cation Exchange Capacity:** 6.1 meq/100g

**Base Saturation**

- **K:** 0.7 %  
- **Mg:** 5.8 %  
- **Ca:** 34.2 %  
- **H:** 59.4 %  
- **Na:** %  

---

**Crop:** ZOYSIA  
**Yield:** SOD

<table>
<thead>
<tr>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td>200</td>
<td>90</td>
<td>120</td>
<td>10</td>
<td>0.8</td>
<td>ten</td>
<td>50</td>
<td>70</td>
<td>0.8</td>
<td></td>
</tr>
</tbody>
</table>

- **Nitrogen:** 200 lbs. per Acre  
- **Phosphate:** 90 lbs. per Acre  
- **Potash:** 120 lbs. per Acre  
- **Magnesium:** 10 lbs. per Acre  
- **Sulfur:** 0.8 lbs. per Acre  

---

**Comments:**

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.

* = Maintenance Recommendation
MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Received 06/27/2017
Processed 06/29/2017

Lab Number: 799060FC

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>24</td>
<td>60</td>
<td>M</td>
<td>5.6</td>
<td>7.65</td>
<td>0.20</td>
<td>L</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Aluminum | Sodium | Nitrate N | Soluble Salts | Organic Matter | ENR | Molybdenum | NH4 | Nickel | BiCarbs |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>392</td>
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<td>1.19 %</td>
<td>23.8</td>
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<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
</tr>
</tbody>
</table>

Target pH: 6.5
Test Method: Mehlich I

**Lab Results**

<table>
<thead>
<tr>
<th>Crop: ZOYSIA</th>
<th>Yield: SOD</th>
<th>Lime</th>
<th>Gypsum</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>Mg</th>
<th>S</th>
<th>B</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.0</td>
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<td>200</td>
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<td>0.8</td>
<td>1.0</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = Maintenance Recommendation

Comments:

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Since 1976
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Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI  02903

Grower: VA OCFM JACKSONVILL
Farm ID: EXPANSION AREA
Sample ID: JAX SHALLOW

Received 06/27/2017
Processed 06/29/2017

Lab Number: 799059FC

<table>
<thead>
<tr>
<th>P</th>
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<th>Mg</th>
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<th>Soil pH</th>
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<td>L</td>
<td>3.9</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

Lab Results
lbs. per Acre

Target pH: 6.5
Test Method: Mehlich I

<table>
<thead>
<tr>
<th>Aluminum</th>
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<tbody>
<tr>
<td>0.04 mmhos/cm</td>
<td>2.51 %</td>
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<td>ppm</td>
<td>ppm</td>
<td>meq/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cation Exchange Capacity 6.1 meq/100g

Base Saturation

- K: 0.7 %
- Mg: 5.8 %
- Ca: 34.2 %
- H: 59.4 %
- Na: %

Base Saturation

Crop: ORNAMENTAL
Yield: SHRUBS & TREES

<table>
<thead>
<tr>
<th>Lime</th>
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<th>N</th>
<th>P2O5</th>
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<td>240</td>
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<td>0.8</td>
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</tr>
</tbody>
</table>

Fertility Recommendations
lbs. per Acre

* = Maintenance Recommendation

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Comments:
Soil Analysis

MABBETT & ASSOCIATES INC
ANDREW GLUCKSMAN
10 DORRANCE ST STE 700
PROVIDENCE, RI 02903

Lab Number: 799060FC

Lab Results

<table>
<thead>
<tr>
<th>P</th>
<th>K</th>
<th>Mg</th>
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<th>Phosphorus</th>
<th>Potassium</th>
<th>Magnesium</th>
<th>Calcium</th>
<th>Soil pH</th>
<th>Buffer pH</th>
<th>S</th>
<th>Boron</th>
<th>Zn</th>
<th>Mn</th>
<th>Fe</th>
<th>Cu</th>
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<tbody>
<tr>
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<td>L</td>
<td>M</td>
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<td>L</td>
<td>2.3</td>
<td>L</td>
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<table>
<thead>
<tr>
<th>Aluminum</th>
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<th>Molybdenum</th>
<th>NH4</th>
<th>Nickel</th>
<th>BiCarbs</th>
</tr>
</thead>
<tbody>
<tr>
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<td>meq/l</td>
<td>1.19</td>
<td>%</td>
<td></td>
<td>ppm</td>
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<td>ppm</td>
<td>meq/l</td>
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</table>

Cation Exchange Capacity: 4.7 meq/100g

Base Saturation

- K: 0.7 %
- Mg: 5.3 %
- Ca: 34.1 %
- H: 59.9 %
- Na: %

Fertility Recommendations

Crop: ORNAMENTAL

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Yield: SHRUBS & TREES

Comments:

SPLIT APPLICATIONS OF NITROGEN AND POTASSIUM RECOMMENDED. PLANT SAMPLES SHOULD BE TAKEN DURING THE GROWING SEASON. ADDITIONAL OR SUPPLEMENTAL NUTRIENTS MAY BE NEEDED. If Dolomite Lime has been applied recently, Magnesium recommendation can be cut in half.
ALL SOIL UNITS
LABORATORY ANALYTICAL RESULTS
FOR SOIL TEXTURE AND HEAVY METALS

July 17, 2017
### Soil Texture Determination Report

**Ship To:** MABBETT & ASSOCIATES INC  
5 ALFRED CIRCLE  
BEDFORD, MA 01730

**Grower:** VA OCFM JACKSONVIL  
P.O. Box 382 - 257 Newton Hwy  
Bedford, MA 01730

**Field ID:** EXPANSION AREA  
Camilla, GA 31730

**Date Received:** 06/27/2017  
**Date Processed:** 07/03/2017

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This document may be reproduced only in its entirety. As we have no control over the manner in which the sample was taken, the analysis is based solely on the sample as received. Accordingly, our liability is limited to the sample received and the fee assessed on same.
Heavy Metal Analysis

Soil Samples

Charge To:  Mabbett & Associates
10 dorrance St STE 700
Providence, RI  02903

Date Processed:  07/15/2017

Grower:  VA OCFM Jacksonville Nat'l Expansion Area

*All Results are in Parts Per Million unless otherwise stated

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Analysis are based off a Melhich I extraction.
Appendix D – Public Involvement
NOTICE OF AVAILABILITY
DRAFT SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT
FOR THE U.S. DEPARTMENT OF VETERANS AFFAIRS
PROPOSED CONSTRUCTION AND OPERATION OF THE PHASE 2
EXPANSION AT THE
JACKSONVILLE NATIONAL CEMETERY
JACKSONVILLE, DUVAL COUNTY, FLORIDA

The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) has prepared a Draft Site-Specific Environmental Assessment (SEA) under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Proposed Action to construct and operate an approximately 50-acre cemetery expansion ("Phase 2 expansion") within the existing 526-acre Jacksonville National Cemetery, located at 4083 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would extend the longevity of the Jacksonville National Cemetery by providing new approximately 18,000 new interment sites within the central portion of the existing property boundary. Construction of the Phase 2 expansion would last approximately 18 months and require land grading, extension of roadways, and expansion of the stormwater retention pond system used for irrigation water. Construction would not disrupt or interfere with ongoing memorial services.

The VA prepared the Draft SEA in accordance with the National Environmental Policy Act (NEPA), (Public Law 91-190, 42 USC 4321-4347 January 1, 1970), amendments, and VA's Implementing Regulations (38 CFR Part 26). The VA invites the public to review the Draft SEA and provide comments within 30 days of the publication of this notice. A printed copy of the Draft SEA is available for review at the Jacksonville National Cemetery and the Jacksonville Public Main Library at 303 North Laura Street, Jacksonville, Florida, 32202, and can be electronically downloaded from the VA website at http://www.cem.va.gov/cem/EA.aspx.

Comments received during the 30-day review period will be addressed and documented in the Final SEA. Please address all comments to: Mr. Glenn Elliott, U.S. Department of Veterans Affairs, Construction & Facilities Management Office, 425 I (eye) Street, NW, Room 6W170, Washington, D.C., 20001; by email to glenn.elliott@va.gov; or by telephone at (302) 632-5879. Please reference "Jacksonville National Cemetery Expansion" in all correspondence.

Name: Sharon Walker Title: Legal Advertising Representative

In testimony whereof, I have hereunto set my hand and affixed my official Seal the day and year aforesaid.

NOTARY: Christine Baker
Florida Times-Union

MABBETT & ASSOCIATES, INC
10 DORRANCE ST. STE 700
PROVIDENCE, RI 02903

ACCT: 39083
AD# 0003123643-01

State of Florida
County of Duval

Before the undersigned authority personally appeared Sharon Walker who on oath says he/she is a Legal Advertising Representative of The Florida Times-Union, a daily newspaper published in Jacksonville in Duval County, Florida; that the attached copy of advertisement is a legal ad published in The Florida Times-Union. Affiant further says that The Florida Times-Union is a newspaper published in Jacksonville, in Duval County, Florida, and that the newspaper has heretofore been continuously published in Duval County, Florida each day, has been entered as second class mail matter at the post office in Jacksonville, in Duval County, Florida for a period of one year preceding the first publication of the attached copy of advertisement; and affiant further says the he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission, or refund for the purpose of securing this advertisement for publication in said newspaper.

PUBLISHED ON: 12/14/2018, 12/16/2018

FILED ON: 12/14/2018

Name: Sharon Walker Title: Legal Advertising Representative

In testimony whereof, I have hereunto set my hand and affixed my official Seal the day and year aforesaid.

NOTARY:

[Signature]

[Seal]
The U.S. Department of Veterans Affairs (VA) National Cemetery Administration (NCA) announces the availability of the Final Site-Specific Environmental Assessment (SEA) and Finding of No Significant Impact (FONSI) for the Proposed Action to construct and operate an approximately 50-acre cemetery expansion (‘Phase 2 expansion’) within the existing 526-acre Jacksonville National Cemetery, located at 4083 Lannie Road, Jacksonville, Duval County, Florida. The proposed Phase 2 expansion would be within the boundary specified in VA’s 2007 Master Plan and outside of habitat enhancement and preservation areas identified in existing federal and state permits. The Phase 2 expansion would extend the longevity of the Jacksonville National Cemetery by providing approximately 18,000 new interment sites. Construction of the Phase 2 expansion would last approximately 18 months and require land grading, extension of roadways, and expansion of the stormwater retention pond system to supply irrigation water. Construction would not disrupt or interfere with on-going memorial services.

Prior to completing the Final SEA, VA prepared a Draft SEA to document the potential environmental impacts associated with implementing the Proposed Action. The Draft SEA identified avoidance and management measures incorporated into the Proposed Action to ensure potential minor adverse impacts would not increase to a significant adverse level during construction and operation. A Notice of Availability (NOA) announcing the release of the Draft SEA for a 30-day public review and comment period was published in the Florida Times-Union on December 4, 9, 14, and 16, 2018. No comments from the public were received. Comments from regulatory agencies and Native American Tribes were not opposed to the Proposed Action and have been incorporated into the Final SEA.

The Final SEA and Draft SEA were prepared in accordance with the National Environmental Policy Act (NEPA), (Public Law 91-190, 42 USC 4321-4347 January 1, 1970), amendments, and VA’s Implementing Regulations (38 CFR Part 26).

Upon review of the Final SEA, VA concludes that implementing the Proposed Action would not constitute a major federal action that would have a significant adverse impact on the quality of the human environment within the meaning of Section 102(2)(C) of NEPA of 1969. Accordingly, VA has finalized a FONSI, which incorporates the Final SEA in its entirety by reference, and concludes that the preparation of an Environmental Impact Statement is not required. The FONSI completes the NEPA review process for this Proposed Action. The Final SEA and FONSI are available for review at the Jacksonville National Cemetery Public Information Complex; the Jacksonville Public Main Library at 303 North Laura Street, Jacksonville, Florida, 32202; and electronically from VA’s website at http://www.cem.va.gov/cem/EA.asp. For additional information, contact: Mr. Fernando Fernández, U.S. Department of Veterans Affairs, Construction & Facilities Management Office, 425 I (eye) Street, NW, Room 6W417b, Washington, D.C., 20001; by email at fernando.fernandez@va.gov; or by telephone at (202) 632-5529. Please reference “Jacksonville National Cemetery” in all correspondence.