GROWTH AND RESOURCE MANAGEMENT DEPARTMENT
PLANNING AND DEVELOPMENT SERVICES DIVISION
CURRENT PLANNING ACTIVITY
123 W. Indiana Avenue, DeLand, FL 32720
(386) 736-5959

PUBLIC HEARING:	August 11, 2015 − Planning and Land Development Regulation Commission (PLDRC)
CASE NO:	S-15-040
SUBJECT:	Special exception for a nonexempt excavation on Rural Agriculture (A-2) zoned property.
LOCATION:	630-680 Richfern Road, DeLand
APPLICANT:	HSA Golden, agent
OWNER:	DeLand Landfill, Inc., dba Waste Management of Florida, Inc.
STAFF:	William Gardner, Project Activity Manager

I. SUMMARY OF REQUEST

The applicant is requesting a special exception for a nonexempt excavation contingent on approval of the rezoning (Z-15-055) of 20.15 acres from Transitional Agriculture (A-3) to the Rural Agriculture (A-2) zoning classification. The proposed excavation pit will encompass approximately 12 acres with the remaining acreage allocated to the required 150-foot landscape buffers fronting Richfern Road and along the southerly and westerly project boundaries that adjoin the neighboring single-family dwellings. The excavation pit will provide fill and cover material for the ongoing operations at the adjacent Waste Management, Inc. of Florida DeLand Class III landfill. The total estimated soil volume proposed for removal is approximately 400,000 cubic yards based on an operational period of 20 years for the excavation and reclamation project.

Staff recommendation: Forward to county council for final action with a recommendation of approval subject to staff recommended conditions.

II. SITE INFORMATION

1. Location: The property is located on Richfern Road, approximately 820 feet south of its intersection with West Plymouth Avenue, west of the City of DeLand
2. Parcel No(s): 7939-01-00-0350, 7939-03-00-0080, 7939-03-00-0070, 7939-03-00-0060 and 7939-01-00-380
3. Property Size: 20.15 acres, with a proposed excavation area of ± 12 acres
4. Council District: 1
5. Zoning: A-2
6. Future Land Use: Rural
7. ECO Overlay: No
8. NRMA Overlay: No
9. Adjacent Zoning and Land Use:

DIRECTION	ZONING	FUTURE LAND USE	CURRENT USE
North:	A-2	Rural	Class III landfill
East:	A-2 & A-3	Rural	Fernery and pasture
South:	A-3	Rural	Single-Family Dwellings
West:	A-2 & A-3	Rural	Single-Family Dwellings and Class III landfill

10. Location Maps:

AERIAL MAP

ZONING MAP

III. BACKGROUND AND PREVIOUS ACTIONS

The proposed non-exempt excavation, or borrow pit, lies southeast of the existing Waste Management, Inc. of Florida (WMIF) DeLand Class III landfill that covers approximately 59.67 acres. The original borrow pit (12.56 acres) at the DeLand landfill was expanded by 17.89 acres and approved by county council for a Special Exception (S-86-105) on February 12, 1987. The original borrow pit parcel (7939-01-00-0260) was combined with the current active parcel (7931-01-00-0250) for a total of 30.45 acres. On June 19, 1997, county council approved a rezoning request (Z-97-040) from A-3 Transitional Agriculture to Rural Agriculture (A-2) that included the operating DeLand landfill property (30.54 Acres) with an additional 29.13 acres for an expansion to the landfill for a total area of 59.67 acres. At their meeting of July 8, 1997, the Volusia County Planning and Land Development Regulation Commission approved Special Exception (S-97-033) for the existing Waste Management, Inc. of Florida DeLand Class III excavation and sanitary landfill. Final Site Plan Development Orders were approved (97-F-FSP-0162 and 98-F-FSP-0183) by the Development Review Committee per conditions of the Special Exception S-97-033.

The 21-acre property planned for the excavation pit was a former fernery that was acquired by DeLand Landfill, Inc. in 2006. Abandoned facilities on the property include a one-story house with swimming pool, a maintenance building, various wood and metal sheds, irrigation wells and pumps, and fernery shade structures.

According to the Soil Survey of Volusia County, Florida, one soil type occurs within the subject property – Apopka fine sand, 0 to 5 percent slopes. This soil type is well drained sandy soil with a water table depth of more than 84 inches, and a rapid permeability. Topographic elevations of the site range from 57 feet National Geodetic Vertical Datum (NGVD) on the east, to 42 feet NGVD on the west side. A depressional area exists in the northwest corner that dips to 36 feet NGVD.

An environmental assessment report (Attachment A) on the property was completed by Bio-Tech Consulting, Inc. in December 2014. The assessment included a site inspection and field review for land types, vegetative communities, protected flora and fauna, and development constraints. The report found no wetland or swamp habitats onsite. No listed protected plant species were identified onsite. Of the wildlife species identified during the site inspections, no species were on the Florida Fish and Wildlife Conservation Commission's list of endangered, threatened, or of special concern. The FEMA maps indicate the subject property is not within any 100-year flood plain mapped areas.

The proposed project consists of 20.15 acres with 8 acres of vegetative landscaped buffers and a proposed 12-acre borrow pit to provide fill and cover material for the ongoing operations at the adjacent WMIF DeLand Class III Landfill. Excavated fill materials will not be sold to the public.

All borrow materials will be excavated above the normal water table and therefore, no

operational dewatering or subsequent lake development is expected. The excavation process will proceed in accordance with the fill requirements for the adjacent landfill over several years.

With the identified operating 59-acre DeLand Class III landfill abutting the proposed borrow pit, two landfills are located to the north and south of the subject property. To the north (860 feet) is the closed Plymouth Landfill (130 acres) owned by the County of Volusia and to the south (330 feet) is the 67 acre HTS Environmental Services, Inc. operating landfill. See Attachment D for map of landfills.

IV. REVIEW CRITERIA AND ANALYSIS

Nonexempt Excavation Use and Code Requirements:

Section 72-293(15) b of the zoning code contains a list of technical requirements and conditions that an applicant must meet to find this special exception in compliance with the ordinance. This code section has been attached to this report as Attachment C for reference. These requirements address such items as setbacks, landscape buffers, slopes, hours of operation, fencing, as well as technical requirements of the excavation.

The total estimated soil volume proposed for removal from the 12-acre borrow pit is approximately 400,000 cubic yards. Soil excavated from the pit will only be used for weekly, intermediate (6 months) or final cover at the adjacent DeLand Class III landfill to comply with Volusia County and Florida Department of Environmental Protection (FDEP) permits. Based on the projected Class III waste intake rates, approximately 20,000 cubic yards of soil will be excavated annually from the borrow pit to be used for soil cover. This translates to a total operational period of 20 years for the proposed excavation project. However, the fill material obtained from this property is strictly for an adjacent landfill whose approval shall expire on July 8, 2017.

The excavation is to be operated by Waste Management, Inc. of Florida (WMIF), dba DeLand Class III Landfill, to provide soil cover for the adjacent landfill operation. The proposed operational hours are from 6:00 a.m. to 6:00 p.m. Monday through Friday, from 6:00 a.m. to 2:00 p.m. on Saturday, and closed on Sunday.

The method of excavation will be by track hoe, loader, and off-road hauling truck. Depth of the pit is proposed to go to 25-35 feet below grade, to the approximate depth of the normal water table, so no dewatering is proposed. Base grade of the pit will be sloped to the south at an approximate three percent grade to allow water drainage to 15 feet by 15 feet sump areas to prevent water accumulation. Side slopes of the pit are proposed to be three feet horizontal to one foot vertical, based on the stable soils identified by the geotechnical report. This proposed slope exceeds a special exception code requirement, and can only be allowed with a waiver by the county council. A six-foot security fence will be installed around the entire project site to ensure public access to the pit area is prohibited.

The excavation is planned in four cells or Phases One, Two, Three, and Four. Each

phase, starting with Phase One on the north end of the borrow pit, will supply approximately 100,000 cubic yards of soil, and last for a period of five years at a 20,000 cubic yards per year excavation rate. Once each phase is exhausted, it will be reclaimed, per reclamation plan, and the next phase area cleared and operated. The existing/abandoned residence, fernery and accessory buildings onsite will be demolished as needed to accommodate the excavation operation plan. See Attachment B for the excavation and reclamation plans.

A stabilized haul road will be constructed between the borrow pit project area and the adjacent landfill property. All haul trucks will operate within the property boundaries of the landfill and borrow pit which eliminates the need to disturb and stabilize additional land. Since no new access is required from the project, the need for offsite or public thoroughfare utilization for the haul route is also eliminated.

Excavation for borrow materials will be performed by tracked excavator. Continuous succession of the work will proceed generally from north to south within the borrow pit footprint. Starting prior to and continuing as the excavation proceeds, a rim ditch will be formed behind the top of slope of the open face to intercept storm water sheet flows in order to continue the natural predevelopment conditions and prevent erosion of the finished excavated pit slope.

In areas where excavation working face advances, the finished slopes will be dressed to a slope of three horizontal to one vertical and hydro seeded to stabilize the slopes for erosion and sediment control. Upon completion of the entire borrow pit, a verdant stand of grass will be established to prevent erosion. Mowing will not be performed in order for re-vegetation by second-stage native plant species to grow and provide enhanced habitat for native wildlife.

According to the applicant's documents, reclamation and closure activities shall commence immediately following completion of each approved phase of the borrow pit. Reclamation shall be completed within six months of commencement, and be in accordance with Volusia County Code 72-293(15) b, and the Florida Department of Environmental Protection. In completed areas of the borrow pit, concurrent reclamation will occur no more than six months after a slope is exposed and the excavation has passed further into the next phase of the borrow pit. The finished slopes will be dressed to a slope of 3H:1V and sodded to stabilize the slopes for erosion and sediment control.

<u>Requested Waivers:</u>

The following waivers are requested from Section 72-293(15):

72-293(15)b.1.iv.C.: *one hundred and fifty feet from any other abutting property*.

A reduction of this setback to 0 feet is requested along the western and northern property lines of the subject 21-acre site that are adjacent to the DeLand Class III landfill property. Both properties are owned by DeLand Landfill, Inc. The landfill site to the west has existing

150-foot setbacks from the subject 21-acre property, which meet the intent of the subject code section. A Letter of Support for this waiver from the DeLand Landfill owner is attached to this application.

72-293(15)b.1.ii.: *Proposed side slopes and depths which meet these minimums: All sides of the excavation area shall, at a minimum, comply with the following:*

A. *One foot vertical for each six feet horizontal to a depth of ten foot below the dry season water table elevation, unless waived by the County Council.*

B. *Notwithstanding section 72-282 of this article, any excavation in excess of the aforementioned slope shall be enclosed by a six-foot-high chain link fence approved by the development engineering division which shall include a gate that shall be closed and locked at all times during which the excavation pit is not in use. Said fencing shall be completely installed prior to initiation of the excavation activity and shall remain in place, unless determined otherwise by the development engineering division, until the excavation is satisfactorily reclaimed.*

A side slope waiver to 3H:1V is requested. The applicant and operation shall install a six-foot chain link fence surrounding the property to prevent public access as required by the above code.

The adjacent excavation/landfill special exception (S-97-033) expires on July 8, 2017. Staff had recommended prior to the submittal of this special exception request to include the Waste Management, Inc. of Florida DeLand Class III landfill property such that the proposed twenty-year excavation/reclamation project could be consistent with the closing of the DeLand landfill and to preclude the need to apply for another special exception within two years. The applicant has decided not to pursue our recommendation. Therefore, staff proposes that the requested Special Exception (S-15-040) be approved for an excavation/reclamation project to expire on July 8, 2017 whereas the amount of excavated material shall not exceed the current estimation at 20,000 cubic yards per year. The excavation pit would be confined to the Phase I area with the accompanying security fencing and conditions as outlined in the staff recommendations for approval. At a future submittal date for a new special exception for the existing DeLand Class III excavation/landfill, staff will reconsider the expansion of the current request for the borrow pit through a new special exception application.

Special Exception Criteria:

Under subsection 72-415(8) *Reasons for denial*, the commission may recommend denial of any application for a special exception, and the county council may deny the application for one or more of the following reasons:

(a) It is inconsistent with the purpose or intent of this article.

A nonexempt excavation is allowed in the A-2 zoning classification as a permitted special exception, subject to meeting the specific requirements of section 72-293(15) b. Excavation, reclamation and landscape plans have been submitted and the project proposes to meet all of the technical requirements and conditions. The proposed borrow pit is located adjacent to the existing DeLand Class III landfill for which will benefit from the excavated material and the excavation activity will not require off-site transportation routes.

The property provides the minimal required separation from abutting properties to the east, south and west. All code requirements are proposed to be met. Substantial compliance shall be met during site plan review and if there are discrepancies to the article requirements, a variance application will be required for PLDRC consideration prior to site plan approval.

This application has included plans, drawings, project information, data, and the required reports for staff review/analysis and is consistent with the purpose and intent of this article.

(b) It is inconsistent with any element of the comprehensive plan.

The future land use designation of the property is Rural. Per Future Land Use Element, rural areas should be developed in a manner consistent with the retention of agriculture and the protection of environmentally sensitive areas. Based on the existing uses adjacent to the property and within one mile of the project site, there is low density residential development and agricultural uses (ferneries) that serve as transitional uses which are consistent with the Rural designation. The proposed excavation use of the property is compatible with the existing land use of the abutting DeLand Class III landfill; located within an area of west Volusia identified for mineral extraction and the proposed excavation activity will not impact environmentally sensitive lands or critical habitats. This is a provisional use of the land, that when reclaimed, will remain as a vegetative buffer to the surrounding neighborhoods and offer potential wildlife habitat. The comprehensive plan contains the following policies relating to the requested special exception:

1.2.2.3 Land reclamation measures and sound conservation practices shall be required on lands used for the excavation of natural resources and used as disposal sites. A reclamation plan shall be submitted as part of the required application for an excavation or disposal permit. The plan shall also indicate how the site will be used after completion of the excavation/disposal, including a time line for such reuse.

1.2.2.4 Extraction of natural resources and disposal activities shall be permitted only where compatible with existing and proposed land uses, as determined in the Land Development Regulations.

12.4.1.1 Prior to 1999, the County shall identify those areas with the highest suitability for mineral extraction, based on the quality of mineral deposits, and the patterns of land use and natural systems, and shall prevent the premature encroachment of incompatible land uses into these areas.

12.4.1.3 Proposed mineral extraction activities shall continue to minimize impacts to environmentally sensitive lands and critical habitats. In cases where adverse alteration of such lands are unavoidable, appropriate mitigation shall be required.

12.4.1.4 The County shall continue to implement standards for reclamation of excavation sites so as to resemble a natural system to the greatest extent feasible, including, at minimum:

a. creation of sinuous shorelines;

b. bank gradients properly sloped to establish planted littoral shelves with appropriate submerged and emergent vegetation;

c. fish stocking, if warranted;

d. ambient water quality testing;

e. completion of the reclamation plans;

f. compliance with standards established for artificial lakes by the SJRWMD and other appropriate agencies.

Comprehensive Plan, Figure 1-5 Mineral Resources and Extraction Sites, identifies the soil types suitable for mineral extraction activities. The proposed excavation property is located within the area identified as having sand and clay resources. See Attachment D.

This application is consistent with the comprehensive plan.

(c) It will adversely affect the public interest.

The borrow pit could have a negative impact on the surrounding neighborhoods and environment with the heavy equipment activity through the digging process and transportation of soil to the adjacent landfill that will initiate increased noise and dust during the excavation operation. Mitigation measures for dust control can be achieved through spraying of water around the excavated pit areas and the interconnecting haul road as the phasing proceeds and to have the haulage trucks use tarping/blankets or spray the material before transporting to the landfill. The operation plan calls for a Monday through Friday work schedule to begin at 6:00 a.m. and end at 6:00 p.m. with a Saturday work schedule beginning at 6:00 a.m. and ending at 2:00 p.m. Under the approved special exception (S-97-033) for the adjacent landfill, operating hours were to be enforced from 7:00 a.m. to 5:00 p.m., Monday through Friday, and 8:00 a.m. to 12:00 p.m. on Saturday.

With the proposed 150-foot landscape buffers to be established along the east, south and west project boundaries, the existing heavily massed oak, hickory and other tree species that will be preserved can provide a barrier to the dust and noise emitting from the excavation activity. A positive consideration to the borrow pit operation is that the material will be transported to the adjoining property owned by Waste Management Inc. of Florida and that the local road network of Richfern Road and Plymouth Avenue will not be impacted by the haulage trucks. A haul road from the borrow pit property to the landfill will be utilized.

The application can meet the requirements for the special exception with recommended conditions.

(d) It does not meet the expressed requirements of the applicable special exception.

Section 72-293(15)b governs the requirements for a special exception for a nonexempt excavation. The special exception requirements include detailed plans, drawings and information that focuses on specific issues typically evaluated during the engineering review of the site plan for permitting purposes. For purposes of this special exception, the PERMITTING PLANS FOR DELAND BORROW PIT prepared by HSA Golden, Inc., dated May 28, 2015 and date stamped received on May 29, 2015, as well as the project description, operation and reclamation plans, environmental, hydrological and geotechnical reports submitted by the applicant, meet these requirements, except for the waivers referenced in this report.

This application meets the requirements of the applicable special exception.

(e) The applicant will not be able to meet all requirements imposed by federal, state or local governments, or by the county council.

The applicant is obligated to meet the requirements of the special exception as well as the permitting requirements by any applicable federal, state, and local agencies.

(f) Notwithstanding the provisions of division 14 of the Land Development Code [article III], it will generate undue traffic congestion.

Taking into consideration the proposed special exception for the borrow pit will allow for the transportation of fill materials to the existing landfill site, between the two properties, no external traffic impacts will occur. Therefore, the proposed special exception will not create traffic capacity or safety issues on the roadway system.

(g) It will create a hazard or a public nuisance, or be dangerous to individuals or to the public.

Expected public nuisances that will be generated by the excavation operation include dust and noise impacts if not properly mitigated.

Dust - The excavation site will be contained within the 12 acres of the 20 acre property with approximately eight acres providing a 150-foot buffer against the adjoining residential subdivisions to the south and west. No stockpiling of dirt on-site is proposed so this nuisance should be minimized. To further prevent any potential public health issue, the excavation pit and haul road will need to use a water sprinkler truck during operational hours to prevent sediment and debris from leaving the site. Haulage trucks are to be covered with a tarp/blanket to reduce sediment discharge.

Noise - The noise generated from this site will be from heavy equipment used in the digging operation and trucks being loaded with fill dirt. Staff is recommending that these activities will be limited to the business hours of, Monday through Friday from 7:00 a.m. to 5:00 p.m. and Saturday from 8:00 a.m. to 12:00 p.m.

The 21-acre project site will be fenced along the property boundaries prior to the commencement of the excavation plan and all heavy equipment and trucking activities will be confined to this site and the existing landfill. This safety measure of fencing and construction work that will be confined as an internal operation should not create a hazard or be dangerous to individuals or the public as long as the public does not trespass onto the property.

(h) It will materially alter the character of surrounding neighborhoods or adversely affect the value of surrounding land, structures or buildings.

The existing character of the abutting neighborhood to the proposed excavation site is comprised of zoning classifications of A-2, A-3, RPUD and P. The majority of the developed neighborhood (A-3, with lots ranging from one to three acres, McKeels subdivision) is adjoined to the project's south and west boundaries with 11 lots that include nine dwellings. Six of these lots abut the proposed borrow pit property and two lots share the property boundary with the existing landfill. The neighborhood to the north (A-2/P zoning) includes the operating DeLand landfill and closed Plymouth landfill; to the east (A-3) is an 18-acre fernery and a 24-acre vacant parcel; to the south of the established neighborhood is the operating HTS Environmental landfill (A-3); and to the west is an undeveloped 200-acre RPUD. With the existing two landfills and the current operating DeLand landfill having their presence already established within the neighborhood, the proposed excavation pit addition should not substantially change the setting of the surrounding neighborhood. With the required 150-foot landscaped buffers to be established along Richfern Road and the McKeels subdivision, the physical appearance of the borrow pit will not be noticeable during the excavation and after the reclamation has been completed. The proposed 20-year operation and reclamation plans have been identified as a likely public nuisance with the expected dust and noise pollution. The borrow pit operation can be mitigated with a required condition that spray watering of excavated material and covering of haulage trucks can reduce the airborne dust. Noise abatement can be accomplished with the requirement that the 150-foot buffers be maintained throughout the ownership of the property.

The adverse impact by the proposed borrow pit on surrounding values for the developed residential properties, vacant properties and fernery is not attainable for this report unless a real estate market analysis/appraisal is preformed on the affected properties. It can be reasonably assumed that the existing landfills and the proposed borrow pit will have a negative impact on adjoining properties and such adjustment would be considered as to the current market value of the surrounding neighborhoods.

Staff did review all adjoining property just values from 1984 through 2014 and noticed that all property values had increased from 1984 to a high peak in 2007 and then values decreased due the national/local economies until an increase occurred within approximately the past two years. The values of the two closed landfills and the operating DeLand landfill also experienced a value adjustment through the same time period.

(i) It will adversely affect the natural environment, natural resources or scenic beauty, or cause excessive pollution.

The borrow pit area of 12 acres will require the removal of approximately 311 various types of hardwood trees and excavation of soil with an estimated volume to be 400,000 cubic yards. To compensate for tree removal, the site plan will have to comply with the Volusia County Tree Preservation Ordinance. Although the excavation process will affect the existing natural environment for the specific 12 acres, the soil as a natural resource will be utilized/recycled as fill and cover material for the operating DeLand landfill within the proposed 20-year time frame. Through code requirements, the remaining eight acres will be preserved to function as a buffer to the surrounding neighborhood; abate the expected noise/air pollution; maintain open space and habitat for the listed plant and wildlife species that can continue to exist within the undisturbed project boundaries.

V. STAFF RECOMMENDATION

Staff recommends that the PLDRC forward this special exception for a nonexempt excavation on Rural Agriculture (A-2) zoned property, to the county council for final action with a recommendation of approval, subject to the following staff recommended conditions:

1. Approval of rezoning case Z-15-055 from Transitional Agriculture (A-3) to Rural Agriculture (A-2).

2. The special exception shall be granted with an expiration date of July 8, 2017. Revised PERMITTING PLANS FOR DELAND BORROW PIT for Phase 1 shall be submitted for final site plan review. The special exception approval is limited to the site improvements as permitted including reclamation activities, subject to compliance with the approved DRC Development Order/Excavation Permit. Excavation within Phase 1 will allow the removal of up to 20,000 cubic yards per year. The excavation shall operate from 8:00 a.m. to 5:00 p.m., Monday through Friday and 8:00 a.m. to 12:00 p.m. on Saturday only.

3. The applicant shall not begin the excavation until after final site plan review

and approval by the County Development Review Committee (DRC) and issuance of a Development Order/Excavation Permit issued by the Growth and Resource Management Department. Development and use of the subject site shall be in substantial compliance with the submitted revised PERMITTING PLANS FOR DELAND BORROW PIT and written documents as may be modified by the DRC. The applicant shall comply with the requirements of Section 72-293(15) of the zoning code.

4. All appropriate permits from local, state and federal regulatory agencies shall be obtained by the applicant as required prior to issuance of a Development Order/Excavation Permit by the Growth and Resource Management Department. Copies of required State and Federal Permits or statements from appropriate agencies to indicate that permits are not required shall be provided during the DRC review process. The applicant shall comply with any applicable local, state or federal rules and regulations of other concerned governmental agencies.

5. The applicant shall post an irrevocable letter of credit for reclamation payable to the County of Volusia in an amount approved by Volusia County Environmental Management Services, in a format approved by the County Legal Department prior to permit issuance. The irrevocable letter of credit shall run with the life of the excavation and reclamation activities. If the applicant has not completed the excavation on the twenty years granted by the special exception, the county may redeem the letter of credit and utilize the funds to perform any remedial work necessary to complete the terms and conditions of the reclamation, as required by the county in the special exception, and to be required by the county in the final site plan approval process.

6. The applicant shall submit an engineer's certification and progress report to the Planning and Development Services Division on an annual basis outlining that the excavation is proceeding in accordance with the terms of the excavation permit and/or DRC requirements and/or conditions.

7. A water tank truck shall be utilized (four times a day) for dust suppression in the borrow pit area and on the haul road. Haulage trucks shall utilize a tarp or net blanket over the material to be transported.

The following conditions are regarding to the waivers requested for this special exception:

8. Waiver to section 72-293(15)b.1.iv.C.**:** *one hundred and fifty feet from any other abutting property*.

   A reduction of this setback to 0 feet is requested along the western and northern property lines of Phase 1 that is adjacent to the DeLand Class III

Landfill property. Both properties are owned by DeLand Landfill, Inc. The landfill site to the west has existing 150 foot setbacks from the Phase 1 subject property, which meet the intent of the subject code section. A letter of support for this waiver from the DeLand Landfill owner is attached to this application.

9. Waiver to section 72-293(15)b.1.ii.: Proposed side slopes and depths which meet these minimums: All sides of the excavation area shall, at a minimum, comply with the following:

   A. One-foot vertical for each six-feet horizontal to a depth of ten foot below the dry season water table elevation, unless waived by the county council.

   B. Notwithstanding section 72-282 of this article, any excavation in excess of the aforementioned slope shall be enclosed by a six-foot-high chain link fence approved by the development engineering division which shall include a gate that shall be closed and locked at all times during which the excavation pit is not in use. Said fencing shall be completely installed prior to initiation of the excavation activity and shall remain in place, unless determined otherwise by the development engineering division, until the excavation is satisfactorily reclaimed.

   A side slope waiver to 3H:1V is requested. The applicant and shall install a six-foot chain link fence surrounding the property to prevent public access as required by the above code.

10. Perimeter landscapes shall be established prior to initiation of the excavating activity and shall meet the requirements of subsection 72-284(2)a., “Landscape Buffer Table.” Western perimeter will require a waiver from the 150-foot requirement.

VI. ATTACHMENTS

- Written Explanation
- Attachment A – Survey
- Attachment B – Special Exception Plan
- Attachment C – Section 72-293(15)b Excavations
- Attachment D – Area Landfills Map
- Attachment E – Mineral Resources Map
- Attachment F – Reviewer Comments
- Attachment G – Support Letter
- Attachment H – Environmental Assessment Report
- Attachment I – Hydrogeological Report
- Attachment J – Reclamation Report
- Attachment K – Site Photographs
- Attachment L – Map Exhibits

VII. AUTHORITY AND PROCEDURE

Pursuant to Section 72-415, the county council shall hold a public hearing after due public notice on all recommendations from the commission. It may accept, reject, modify, return, or seek additional information on those recommendations. No approval of a special exception application shall be made unless, upon motion, four members of the county council concur. The county council will thereafter forward its decision to the applicant.

Any new information to be presented at the planning and land development regulation commission for any application will be grounds to continue an application to the next planning and land development regulation commission. Applicants shall inform and provide staff with the new information prior to the planning and land development regulation commission.

Any new information to be presented at the county council meeting that was not previously presented to the planning and land development regulation commission for any application will be grounds to return an application to the planning and land development regulation commission for further review. Applicants shall inform and provide staff with the new information.

Explanation of Special Exception
Deland Borrow Pit

1.0 Project Location

The proposed non-exempt excavation, or borrow pit, lies within Volusia County, Florida south of and contiguous to the existing Waste Management, Inc. of Florida (WMIF) Deland Class III Landfill (#98-F-CPN-0183). The project is located in Section 35, Township 17 South, Range 29 East along Richfern Road north of CR 4053 (Minnesota Ave West) (see Figure 1). Approximate borrow pit centroid location is Latitude 29.0382 N, Longitude -81.3480 W.

The proposed borrow pit property is a combination of five platted parcels.

1.1 Existing Conditions

The 21 acre subject property was a former fernery that was acquired by Deland Landfill, Inc. in 2006. Abandoned facilities on the property include a 1 story house, maintenance building, irrigation wells and pumps, and fernery shade structures (nursery), see Figure 2.

According to the Soil Survey of Volusia County, Florida, one soil type occurs within the subject property – Apopka fine sand, 0 to 5 percent slopes (see Figure 4). This soil type is well drained sandy soil with a water table depth of more than 84 inches, and a rapid permeability.

Topographic elevations of the site range from 57 feet National Geodetic Vertical Datum (NGVD) on the east, to 42 feet NGVD on the west side. A depressional area exists in the northwest corner that dips to 36 feet NGVD, see Figure 3.

An Environmental Assessment Report was completed by Bio-Tech Consulting, Inc. on December 15, 2014 of the subject property (see Attachment G). The assessment conducted a site inspection and field review for land types, vegetative communities, protected flora and fauna, and resultant development constraints. The report found no wetland or swamp habitats onsite. No listed protected plant species were identified onsite. Of the wildlife species identified during the site inspections, no species were on the Florida Fish and Wildlife Conservation Commission's list of endangered, threatened, or of special concern.

The FEMA 100-year flood plain maps were reviewed and the subject site is not within any mapped areas (see Figure 5).

2.0 Project Description

The proposed project consists of a 21 acre parcel with 9 acres of setback and a proposed excavation of a 12-acre borrow pit to provide fill and cover material for the ongoing operations at the adjacent WMIF Deland Class III Landfill. Excavated fill materials will not be sold to the public.

This application is being submitted as a new permit application. All borrow materials will be excavated above the normal water table and therefore, no operational dewatering or subsequent

lake development is expected. The excavation process will proceed in accordance with the fill requirements for the adjacent landfill over several years. Post excavation closure will be fencing of finished borrow pit and grassing of the interior side slopes.

3.0 Project Approach

A stabilized haul road will be constructed between the borrow pit properties and the adjacent landfill property. All haul trucks will operate within boundaries of the landfill and borrow pit parcels which eliminate the need to disturb and stabilize additional land. Since no new access is required, the need for offsite or public thoroughfare utilization for the haul route is also eliminated.

Excavation for borrow materials will be performed by tracked excavator. Continuous succession of the work will proceed generally from north to south within the borrow pit footprint.

Starting prior to and continuing as the excavation proceeds, a rim ditch will be formed behind the top of slope of the open face to intercept stormwater sheet flows in order to continue the natural predevelopment drawings and prevent erosion of the finished excavated pit slope.

In areas where excavation working face advances, the finished slopes will be dressed to a slope of 3 horizontal to 1 vertical and hydroseeded to stabilize the slopes for erosion and sediment control. Upon completion of the entire borrow pit, a verdant stand of grass will be established to prevent erosion. Mowing will not be performed in order for re-vegetation by second-stage native plant species to grow and provide enhanced habitat for native wildlife.

3.1 Project Size and Schedule

The total estimated soil volume of the proposed 12 acre borrow pit is approximately 400,000 cubic yards. Soil excavated from the pit will only be used for weekly, intermediate (6 months) or final cover at the adjacent Deland Class III Landfill to comply with their Volusia County and Florida Department of Environmental Protection (FDEP) permits. Based on the projected Class III waste intake rates, approximately 20,000 cubic yards of soil will be excavated on annually from the borrow pit to be used for soil cover. This translates to a total operational period of 20 years for the project.

3.2 Excavation Operation Plan

The proposed excavation is to be operated by WMIF, dba Deland Class III Landfill, to provide soil cover for the adjacent landfilling operation. The 12 acre borrow pit will be operated by WMIF from 6:00 a.m. to 6:00 p.m. Monday through Friday, from 6:00 a.m. to 2:00 p.m. on Saturday, and closed on Sunday. This schedule coincides with the permitted Class III Landfill operational hours.

The method of excavation will be by trackhoe, loader, and off-road hauling truck. Depth of the pit is proposed to go to 25-35 feet below grade, to the approximate depth of the normal water table, so no dewatering is proposed. Base grade of the pit will be sloped to the south at an approximate 3% grade to allow water drainage to 15 feet x 15 feet sump areas to prevent water accumulation. Side slopes of the pit are proposed to be 3 feet horizontal to 1 feet vertical, based

on the stable soils identified by the Geotechnical Report. WMIF will maintain a security fence around the entire project site to ensure public access to the pit area is prevented.

The excavation is planned in four Phases 1, 2, 3, and 4. Each Phase, starting with Phase 1 on the north end of the pit, will supply approximately 100,000 cubic yards of soil, and last for a term of 5 years at a 20,000 cubic yards per year excavation rate. Once each Phase is exhausted, it will be reclaimed, per the Reclamation Plan, and the next Phase area cleared and operated. The existing/abandoned residence and fernery buildings onsite will be demolished as needed to accommodate excavation progress.

3.3 Required Permits

Anticipated agency permits to operate the proposed Deland Borrow Pit include: Florida Department of Environmental Protection Environmental Resources Permit; Volusia County Special Exception – Excavation; Site Plan; and Tree Removal Permit. No federal permits will be required.

4.0 Requested Waivers

The following waivers are requested from Volusia County Code Section 72-293(15):

72-293(15)b.1.iv.C.: *one hundred and fifty feet from any other abutting property*.

A reduction of this setback to 0 feet is requested along the western and northern property line of the subject 21 acre site that is adjacent to the Deland Class III Landfill property. Both properties are owned by Deland Landfill, Inc. The landfill site to the west has existing 150 foot setbacks from the subject 21 acre property, which meet the intent of the subject Code Section. A Letter of Support for this waiver from the Deland Landfill owner is attached to this application.

72-293(15)b.1.ii.: *Proposed side slopes and depths which meet these minimums: All sides of the excavation area shall, at a minimum, comply with the following:*

A. *One foot vertical for each six feet horizontal to a depth of ten foot below the dry season water table elevation, unless waived by the County Council.*

B. *Notwithstanding section 72-282 of this article, any excavation in excess of the aforementioned slope shall be enclosed by a six-foot-high chain link fence approved by the development engineering division which shall include a gate that shall be closed and locked at all times during which the excavation pit is not in use. Said fencing shall be completely installed prior to initiation of the excavation activity and shall remain in place, unless determined otherwise by the development engineering division, until the excavation is satisfactorily reclaimed.*

A side slope waiver to 3H:1V is requested. The applicant and operation shall install a six-foot chain link fence surrounding the property to prevent public access as required by the above code.

5.0 Reasons for Approval of Special Exception

The proposed Deland Borrow Pit Excavation Special Exception should be recommended for approval by the Planning Commission and approved by the County Council for the following reasons:

a) It is inconsistent with the purpose of intent of this article.

The project is consistent with the purpose of this article and County Code 72-293.

b) It is inconsistent with any element of the comprehensive plan.

The project is consistent with the applicable elements of the Comprehensive Plan. Current land use zoning is A-3 Transitional Agriculture, and an excavation is a permitted use with a Special Exception. Future land use is R Rural, in addition to all adjacent properties.

c) It will adversely affect the public interest.

The project will not adversely affect the public interest. Excavated materials will only be used to cover the adjacent landfill, and will not be transported off-site on local roadways. A 150-foot, mature treed landscape buffer will separate adjacent rural residential uses from the excavation providing an adequate visual and noise buffer. Project will comply with County Code 72-293(15) operational and reclamation requirements.

d) It does not meet the expressed requirements of the applicable special exception.

The subject project meets the expressed requirements of the applicable Special Exception, Code 72-293. Except, waivers are requested for setbacks adjacent to the landfill special exception to the west, and a waiver of the code specified side slope of 6:1 to a 3:1 slope. These waivers will not affect the surrounding neighbors.

e) The applicant will not be able to meet all requirements imposed by federal, state or local governments, or by the county council.

The applicant will be able to meet all requirements imposed by federal, state or local government, and by the County Council. An FDEP Environmental Resource Permit has been filed concurrently with this application. The cover soils provided by this excavation for the Deland Landfill will assure compliance with FDEP Solid Waste Management permits.

f) Notwithstanding the provision of division 14 of the Land Development Code [article III], it will generate undue traffic congestion.

The proposed excavation project will not utilize county roads, and thus will not generate any traffic.

g) It will create a hazard or a public nuisance, or be dangerous to individuals or to the public.

The project will not create a hazard, public nuisance, or be dangerous to the public. Excavation operations and reclamation will comply with County Code 72-293(15) to mitigate any hazards, nuisances, or dangerous conditions. A security fence will surround the property to prevent public access.

h) It will materially alter the character of surrounding neighborhoods or adversely affect the value of surrounding land, structures or buildings.

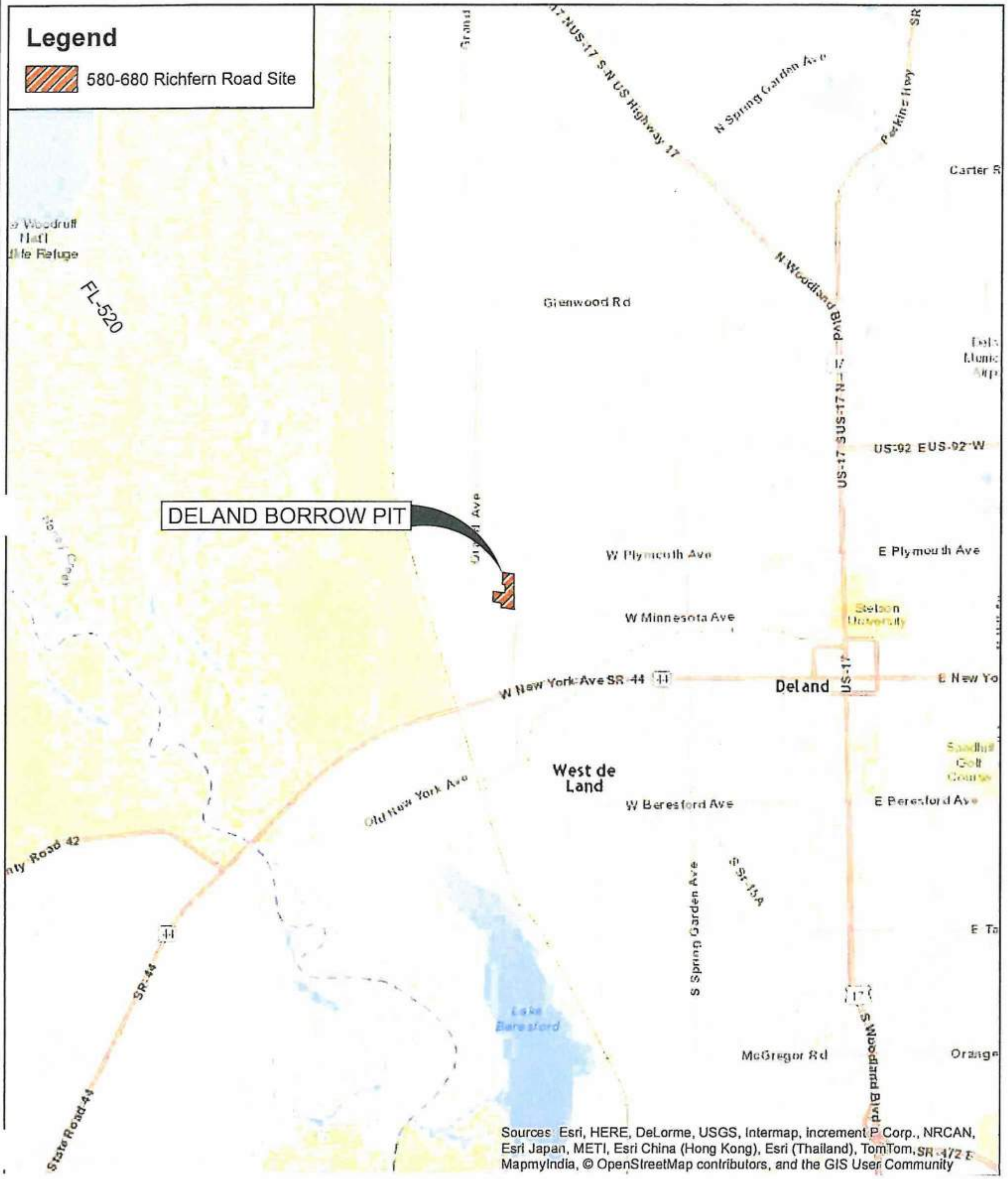
The proposed excavation will not materially alter the character of the surrounding agricultural, or rural residential use, or adversely affect the value of surrounding land or buildings. Adequate landscape buffers, no local roadway use, operational, controls, BMP's, and reclamation concurrent with operation will preserve the character and value of the area properties.

i) It will adversely affect the natural environment, natural resources or scenic beauty, or cause excessive pollution.

The project design and operational conditions will minimize the effects on the natural environment, resources and scenic beauty, and cause no pollution, through compliance with County Code 72-293(15), tree preservation within the 150 setbacks, mitigation permits, and reclamation.

01-FIG-SITE VICINITY MAP.dwg

MAY 2015



SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL ASSESSMENT REPORT

hsagolden engineering environmental solutions
11 LAKE GATLIN ROAD
ORLANDO, FL 32806
P: 407.649.5475 F: 407.649.6582
HSAGOLDEN.COM

DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

SITE VICINITY MAP

PROJECT #
09-574.046

FIGURE
1

P:\Project Files\09-574.046 W.M. Deland Class III Borrow Pit Permit\CAD\Figures\2015\05-May\01-FIG-SITE VICINITY MAP.dwg, SHEET SIZE: LETTER (8.5" X 11"), PEN STYLE: HSAG - MONO - HALF CTB, LAYOUT NAME: SITE VICINITY MAP, LAST SAVE BY: TSINGH 5/14/2015 2:32:09 PM

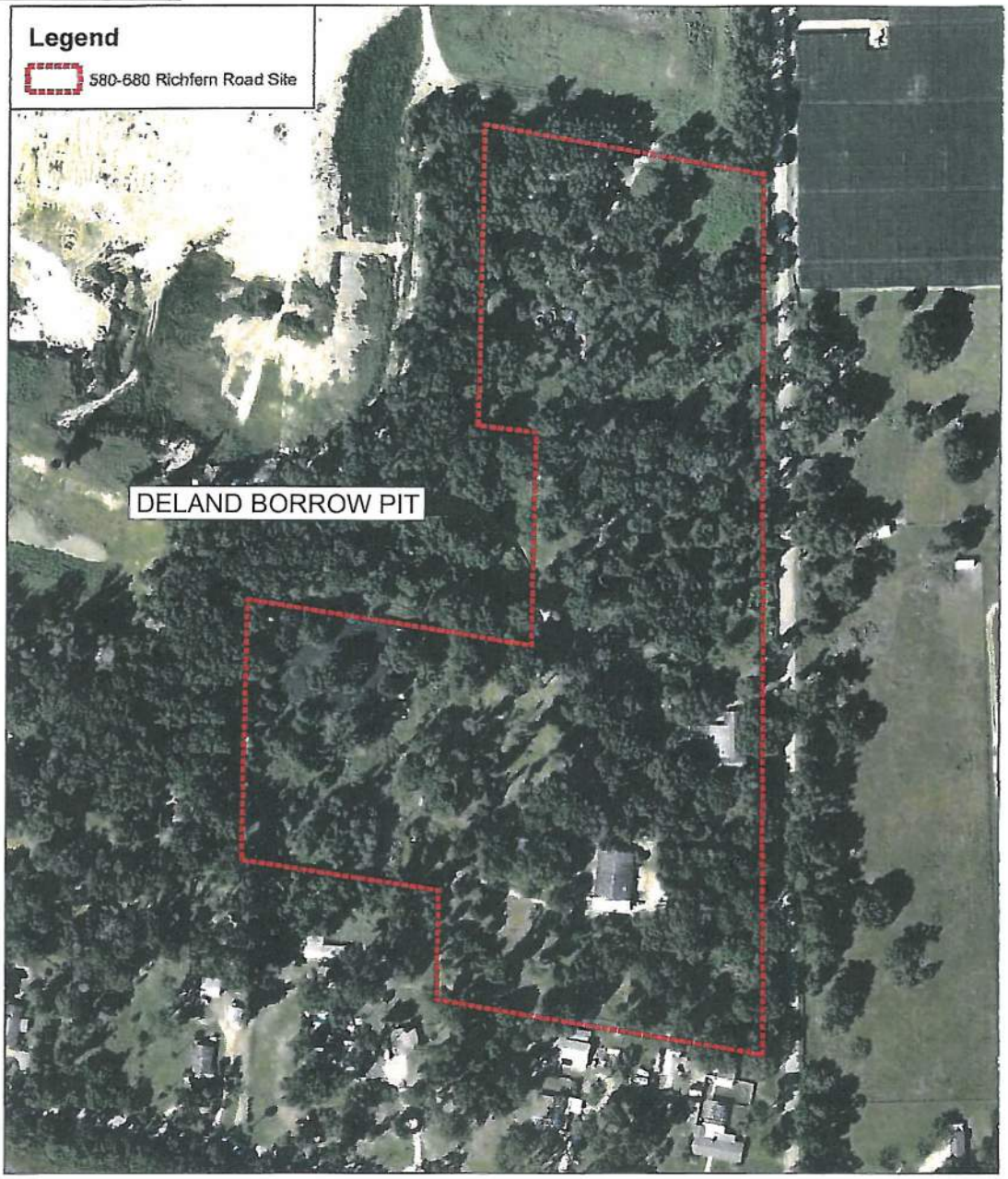
02-FIG-AERIAL PHOTOGRAPH.dwg

MAY 2015

N

0 150 300

DISTANCE IN FEET



SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL ASSESSMENT REPORT

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ORLANDO, FL 32806
P: 407.649.5475 F: 407.649.6582
HSAGOLDEN.COM

DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

AERIAL PHOTOGRAPH

PROJECT #
09-574.046
FIGURE
2

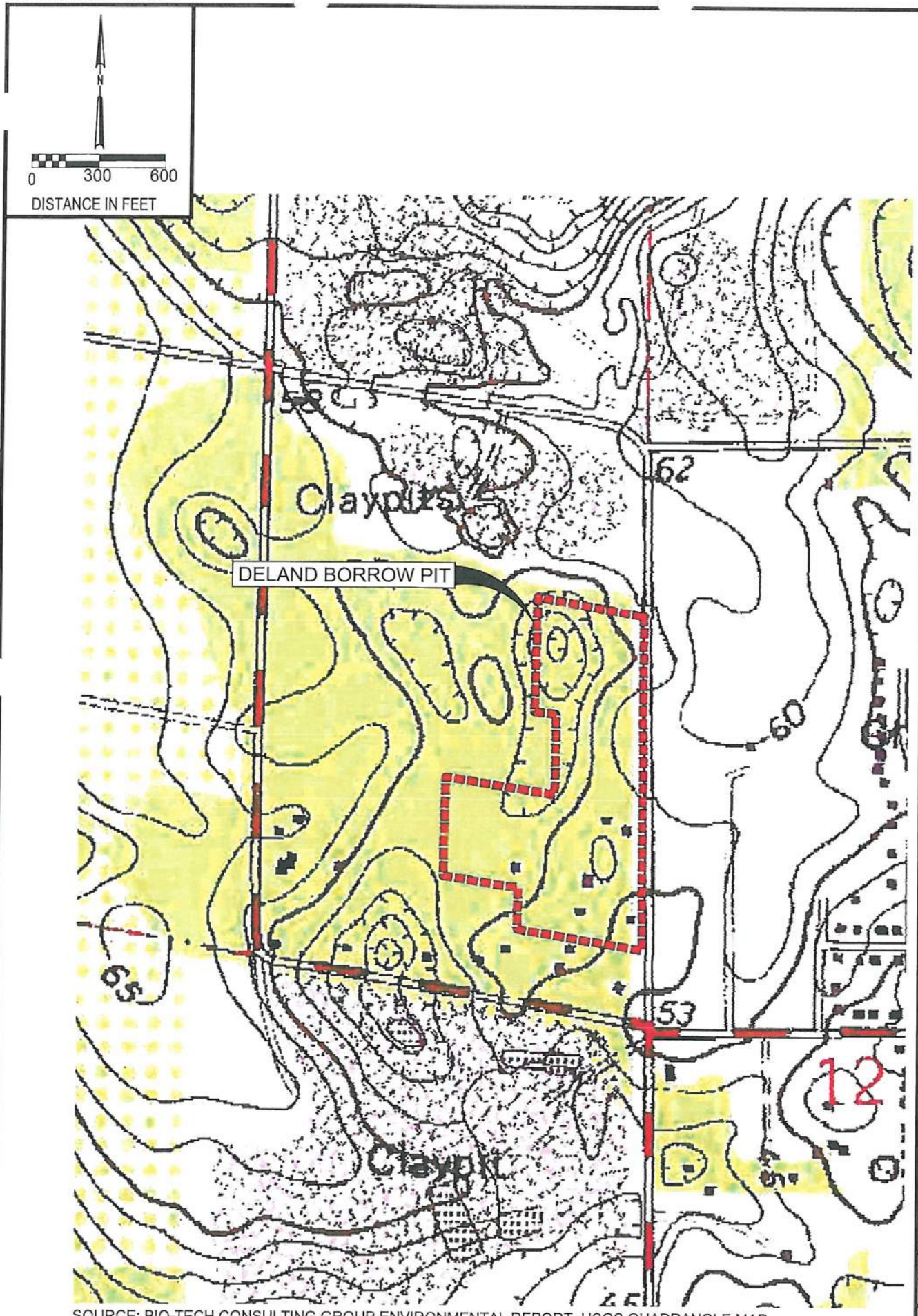
N:CTB, LAYOUT NAME: AERIAL PHOTOGRAPH, LAST SAVE BY: TSIN 5/14/2015 2:31:55 PM

d Class III Borrow Pit Permit\CAD\Figures\2015\05-May\02-FIG-AERIAL PHOTOGRAPH.dwg, SHEET SIZE: LETTER (8.5" X 11"), PEN STYLE: HSAG - MONO

P:\Project Files\09-574.046 V

03-FIG-USGS TOPOGRAPHIC MAP.dwg

MAY 2015



SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL REPORT, USGS QUADRANGLE MAP

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DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

USGS TOPOGRAPHIC MAP

PROJECT #
09-574.046
FIGURE
3

P:\Projects Files\09-074.046 V

nd Class III Borrow Pit Permit\CAD\Figures\2015\05-May\03-FIG-USGS TOPOGRAPHIC MAP.dwg, SHEET SIZE: LETTER (8.5" X 11"), PEN STYLE: HSAG - MC

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04-FIG-SOIL SURVEY MAP.dwg

MAY 2015

N

0 200 400

DISTANCE IN FEET

Legend

580-680 Richfern Road Site

NRCS Volusia County Soils

1 - APOPKA FINE SAND, 0 TO 5 PERCENT SLOPES

SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL REPORT

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DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

SOIL SURVEY MAP

PROJECT #
09-574.046

FIGURE
4

P:\Project Files\09-574.046\...\04-FIG-SOIL SURVEY MAP.dwg, SHEET SIZE: LETTER (8.5" X 11"), PEN STYLE: HSAG - MONO - H...

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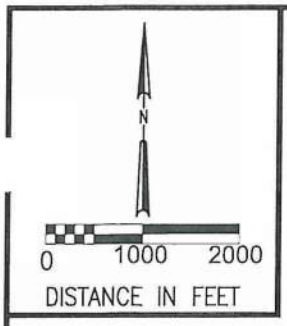
05-FIG-FEMA MAP.dwg

MAY 2015



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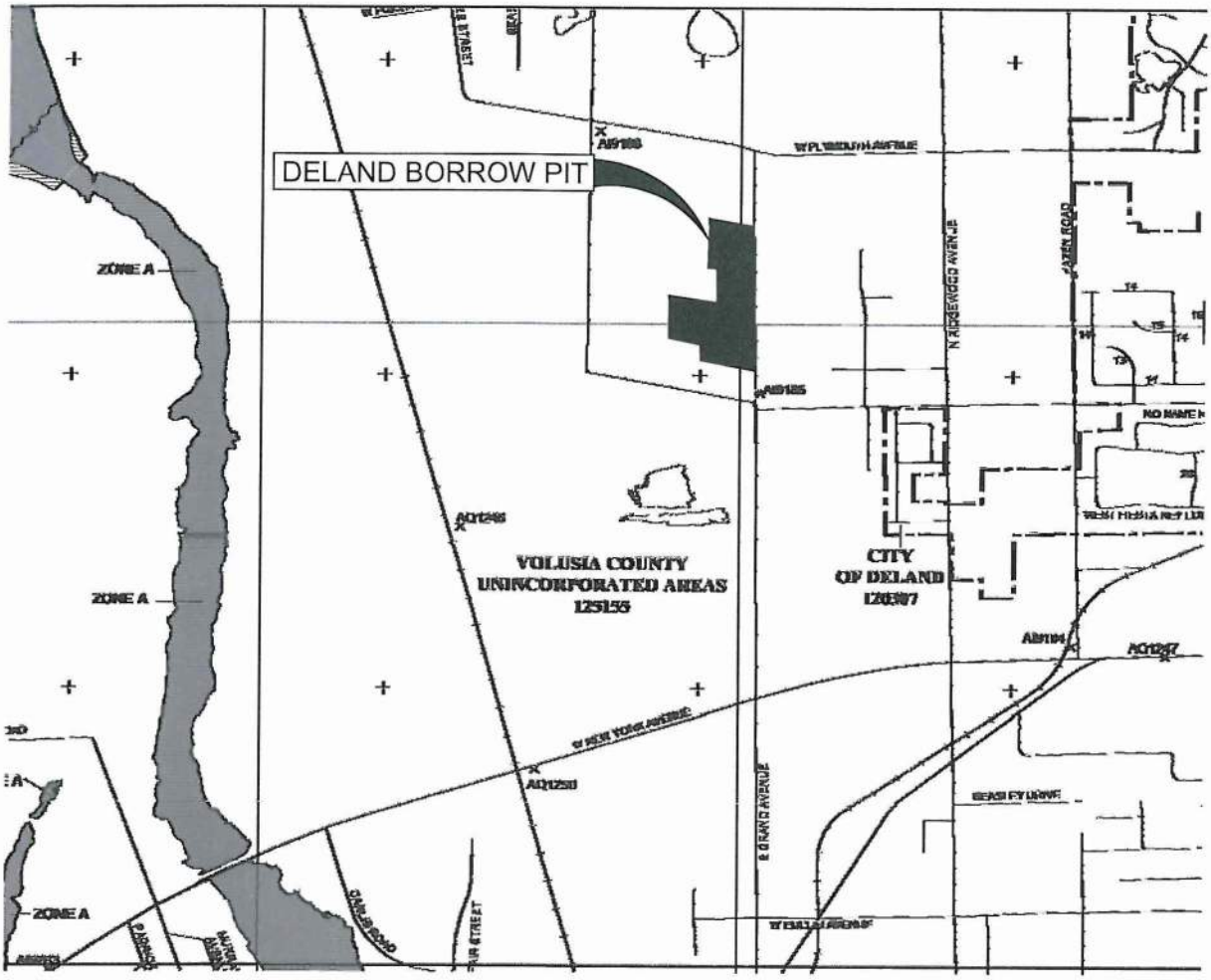

SOURCE: FEMA MAP NUMBER 12127C0465H, REVISED FEBRUARY 19, 2014, VOLUSIA COUNTY, FLORIDA

DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

FEMA MAP

PROJECT #
09-574.046
FIGURE
5

YOUT NAME: FEMA MAP, LAST SAVE BY: TSINGH 5/1/2015 4:52:50 PM

nd Class III Borrow Pit Permit\CADD\Figure\2015\05-May\05-FIG-FEMA MAP.dwg, SHEET SIZE: LETTER (8.5" X 11"), PEN STYLE: HSAG - MONO - HALF PEN

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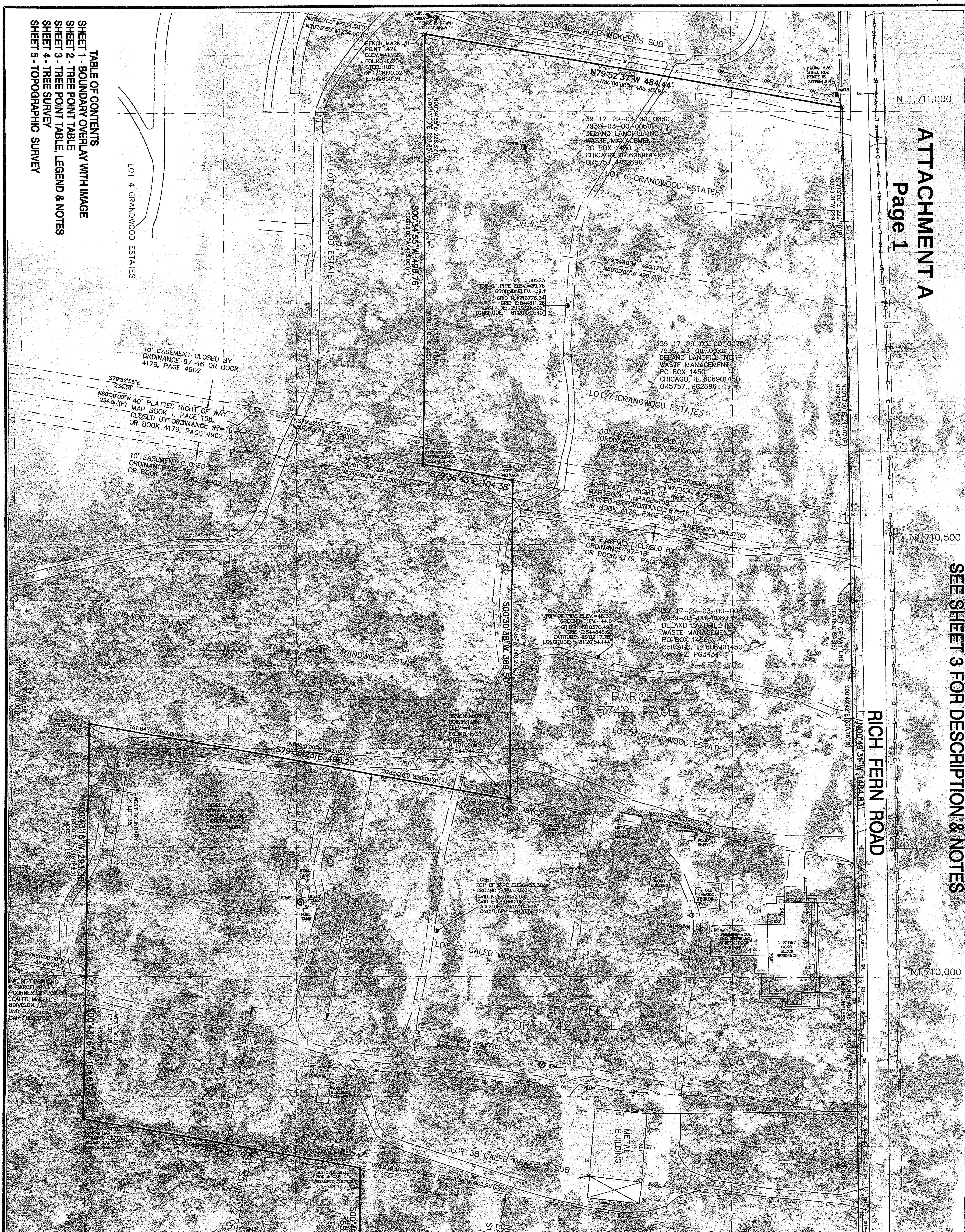


BOUDNARY SURVEY - TREE SURVEY PORTION OF GRANDWOOD ESTATES & CALEB MCKEEL'S SUBD. SECTIONS1&12-T17S-R29E DELAND, FL	CLIENT: WASTE MANAGEMENT 6501 GREENLAND ROAD JACKSONVILLE, FL	Peavey & Associates SURVEYING & MAPPING PA 9399 N LAKE BUFFUM RD FORT MEADE, FL 33841 PHONE: 863-738-4960 FLORIDA BUSINESS NO.7779	Drawn By: DLP Party Chief: SP Field Book: 32	THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 308 deland bndy trees-use.dwg

NO.	DATE	REVISION

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 5828
FIRM BUSINESS NUMBER 7779

SURVEY DATE	DRAWING NO.
1/20/2015	282

SCALE	PROJECT NO.	SHEET
1"=50'	305	1

ATTACHMENT A
Page 2

SEE SHEET 3 FOR DESCRIPTION & NOTES

RICHFERN ROAD

BENCH MARK #1
POINT 1471
ELEV.=41.72
FOUND 1/2"
STEEL ROD
N 1711090.02
E 544650.39

MW5A
MW5B
FENCE IS DOWN IN THIS AREA

CW1B

FOUND .5/8" STEEL ROD FENCE IS 2.0'W&4.8'N

MW1B

N79°52'37"W 484.44'

S00°34'55"W 496.76'

S79°36'43"E 104.38'

S00°30'38"W 369.50'

BENCH MARK#2
(POINT 1464)
ELEV.=41.48
FOUND 1/2"
STEEL ROD
N 1710204.98
E 544744.72

N80°00'00"W 492.00'(P)

S79°36'23"E 490.29'

S00°43'16"W 293.38'

S00°43'16"W 164.63'

S79°48'36"E 321.97'

S00°49'42"E 155.36'

S79°48'36"E 582.01'

N00°49'37"W 1484.83'

TARPED NURSERY AREA (FALLING DOWN, RIPPED AND IN POOR CONDITION)

WOOD SHED COLLAPSED

METAL POLE BARN

WOOD SHED

OLD WOOD BUILDING

OLD WOOD BUILDING

ANTENNA

SWIMMING POOL ENCLOSURE NO SCREEN—POOR CONDITION

1-STORY CONC. BLOCK RESIDENCE

8'DIA TANK

6"WELL

8'x10' TANK

FUEL TANK

6"WELL

WOOD BUILDING COLLAPSED

METAL BUILDING

FENCE 10.5'S

FENCE 10.5'S

N 1,711,000

N1,710,500

N1,710,000

N1,709,500

E 544,500

E 545,000

GRAPHIC SCALE
1 inch = 50' ft.

RECEIVED
MAY 29 2015
CURRENT PLANNING ACTIVITY

TOPOGRAPHIC SURVEY
PORTION OF GRANDWOOD ESTATES & CALEB MCKEEL'S SUBD.
SECTIONS1&12-T17S-R29E DELAND, FL

CLIENT:
WASTE MANAGEMENT
6501 GREENLAND ROAD
JACKSONVILLE, FL

Peavey & Associates
SURVEYING & MAPPING PA
9399 N LAKE BUFFUM RD
FORT MEADE, FL 33841
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7779
3/13/2015

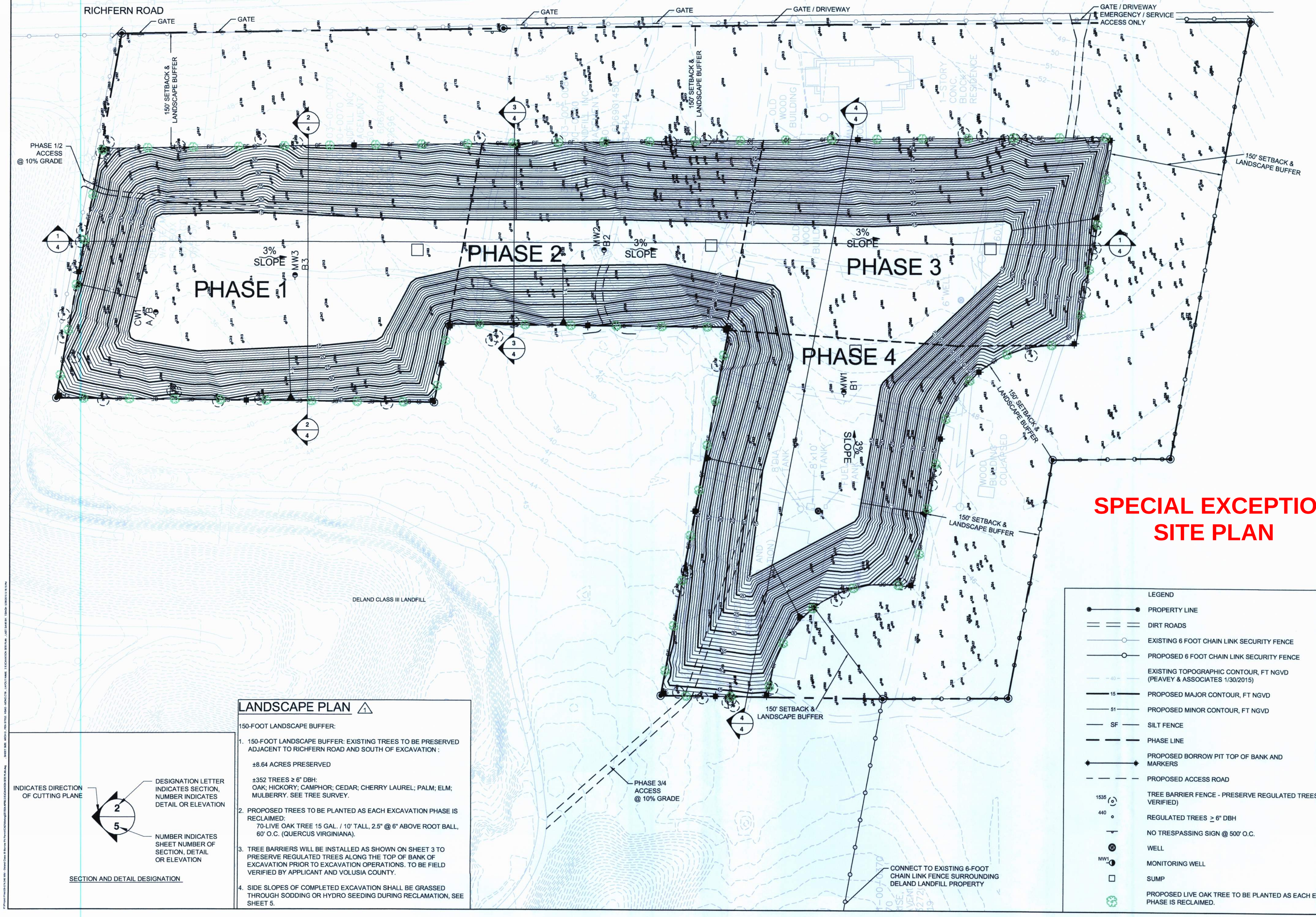
PROJECT NO.	305
SCALE	1"=50'
SURVEY DATE	
DRAWING NO.	282
SHEET	5

Drawn By: DLP
Party Chief: SP
Field Book: 32

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 308 deland bndy trees-use.dwg

NO.	DATE	REVISION



ATTACHMENT B

3 EXCAVATION SITE PLAN.DWG

CURRENT PLANNING ACTIVITY
MAY 29 2015
RECEIVED

MAY 2015

SPECIAL EXCEPTION
SITE PLAN

LANDSCAPE PLAN ⚠

150-FOOT LANDSCAPE BUFFER:

1. 150-FOOT LANDSCAPE BUFFER: EXISTING TREES TO BE PRESERVED ADJACENT TO RICHFERN ROAD AND SOUTH OF EXCAVATION :

   ±8.64 ACRES PRESERVED

   ±352 TREES ≥ 6" DBH:
   OAK; HICKORY; CAMPHOR; CEDAR; CHERRY LAUREL; PALM; ELM; MULBERRY. SEE TREE SURVEY.
2. PROPOSED TREES TO BE PLANTED AS EACH EXCAVATION PHASE IS RECLAIMED:
   70-LIVE OAK TREE 15 GAL. / 10' TALL, 2.5" @ 6" ABOVE ROOT BALL, 60' O.C. (QUERCUS VIRGINIANA).
3. TREE BARRIERS WILL BE INSTALLED AS SHOWN ON SHEET 3 TO PRESERVE REGULATED TREES ALONG THE TOP OF BANK OF EXCAVATION PRIOR TO EXCAVATION OPERATIONS. TO BE FIELD VERIFIED BY APPLICANT AND VOLUSIA COUNTY.
4. SIDE SLOPES OF COMPLETED EXCAVATION SHALL BE GRASSED THROUGH SODDING OR HYDRO SEEDING DURING RECLAMATION, SEE SHEET 5.

INDICATES DIRECTION OF CUTTING PLANE
DESIGNATION LETTER INDICATES SECTION, NUMBER INDICATES DETAIL OR ELEVATION
2
5
NUMBER INDICATES SHEET NUMBER OF SECTION, DETAIL OR ELEVATION

SECTION AND DETAIL DESIGNATION

LEGEND

- PROPERTY LINE
- DIRT ROADS
- EXISTING 6 FOOT CHAIN LINK SECURITY FENCE
- PROPOSED 6 FOOT CHAIN LINK SECURITY FENCE
- 40 EXISTING TOPOGRAPHIC CONTOUR, FT NGVD (PEAVEY & ASSOCIATES 1/30/2015)
- 15 PROPOSED MAJOR CONTOUR, FT NGVD
- 51 PROPOSED MINOR CONTOUR, FT NGVD
- SF SILT FENCE
- PHASE LINE
- PROPOSED BORROW PIT TOP OF BANK AND MARKERS
- PROPOSED ACCESS ROAD
- 1535 TREE BARRIER FENCE - PRESERVE REGULATED TREES (TO BE FIELD VERIFIED)
- 440 REGULATED TREES ≥ 6" DBH
- NO TRESPASSING SIGN @ 500' O.C.
- W WELL
- MW1 MONITORING WELL
- ☐ SUMP
- PROPOSED LIVE OAK TREE TO BE PLANTED AS EACH EXCAVATION PHASE IS RECLAIMED.

#	DATE	REVISIONS	REVISED	CHECKED
1	05/15	PER VOLUSIA COUNTY COMMENTS		
2				
3				
4				
5				

	BY	DATE
DESIGNED	JG	5/2015
DRAWN	TS	5/2015
CHECKED	BH	5/2015

DATE: 5/28/15
WILLIAM F. HUFFMAN, P.E.
P.E. NO.: 49869
HSA GOLDEN CERT. NO. 9915

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EXCAVATION SITE PLAN
DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

PROJECT #
09-574.046
SHEET
3

814940

ATTACHMENT C

Section 72-293(15) *Excavations.*

...

b. The following requirements and conditions must be met for any nonexempt excavation. A nonexempt excavation requires a special exception to this article and issuance of a permit in accordance with the final site plan procedures of division 3 of the Land Development Code [article III].

1. Each application for a special exception shall be accompanied by plans, drawings, and information prepared by a Florida registered engineer depicting, at a minimum:

i. Existing and proposed topography at one-foot contour interval. Such topography shall extend a minimum of 150 feet beyond the top of the bank of excavation.

ii. Proposed side slopes and depths which meet these minimums: All sides of the excavated area shall, at a minimum, comply with the following:

A. One foot vertical for each six feet horizontal to a depth of ten feet below the dry season water table elevation, unless waived by the county council.

B. For depths greater than ten feet below the dry season water table elevation, the slope may be one foot vertical for each one foot horizontal.

Notwithstanding section 72-282 of this article, any excavation in excess of the aforementioned slope shall be enclosed by a six-foot-high chain link fence approved by the development engineering division which shall include a gate that shall be closed and locked at all times during which the excavation pit is not in use. Said fencing shall be completely installed prior to initiation of the excavating activity and shall remain in place, unless determined otherwise by the development engineering division, until the excavation is satisfactorily reclaimed.

iii. Wet and dry season water elevations and the existing surface drainage pattern.

iv. Notwithstanding any other minimum yard sizes required by this article, the top of the bank of an excavation shall be set back the following minimum distance:

A. One hundred fifty feet from the right-of-way of any public street, road or highway.

B. One hundred fifty feet from abutting residential or mobile home classified property.

C. One hundred fifty feet from any other abutting property.

D. One hundred fifty feet from any natural or manmade surface water body, watercourse or wetland.

v. Perimeter landscape buffers shall be established prior to initiation of the excavating activity and shall meet the requirements of subsection 72-284(2)a., "Landscape Buffer Table".

vi. The area and amount of material to be excavated in cubic yards. A discussion of the proposed method of excavation shall be provided.

vii. The proposed method of dewatering.

viii. The time, duration, phasing and proposed work schedule of the total project.

ix. A detailed reclamation plan, drawn to an acceptable scale, and program to be performed upon completion of the project. As a minimum, the plan of reclamation shall include:

A. Time, duration, phasing and proposed work schedule of the reclamation.

B. Depiction of finished, stabilized, side slopes, including methods and plant materials proposed for use. For a wet excavation, a littoral zone is required to be established around the resultant water body. The specifications of said zone shall be determined in conjunction with the county's environmental management department. The establishment, to the fullest extent practical, of sinuous shorelines is required.

C. Landscape plan for the portion of the property disturbed by excavation and associated activities, including an inventory of plant/tree species to be used.
The reclamation plan must be approved by the development review committee.

D. The resultant artificial water body shall comply with the standards established by the St. Johns River Water Management District and other appropriate agencies. Said water bodies may be required to be stocked with fish. Ambient water quality testing may also be required.

x. A hydrogeologic report, prepared by a qualified engineer of hydrologist, of the proposed excavation site. Such a report shall, at a minimum, provide:

A. A detailed description of subsurface conditions.

B. A groundwater contour map.

C. A map depicting the thickness and depths of material to be excavated.

D. A discussion of the environmental impacts of the proposed excavation, including but not limited to the impact of the proposed excavation upon existing area wells.

E. A recommendation of the necessity to install monitoring wells.

xi. The proposed location of access points to the site and proposed haul routes for disposal of excavated material. Vehicular access to and from excavations shall be designated by the council at the time of approval of the special exception.

xii. Proposed plans for fencing and signs.

xiii. A statement from the applicant identifying all other federal, state and local permits required, if any.

2. The bottom of any reclaimed excavation should be graded to allow all water to drain to a sump area not less than 15 feet by 15 feet (225 square feet). The bottom of the excavation shall be graded in a fashion

which will not cause water to accumulate in stagnant pools. The bottom of excavations shall be uniformly graded to prevent anoxic sinks.

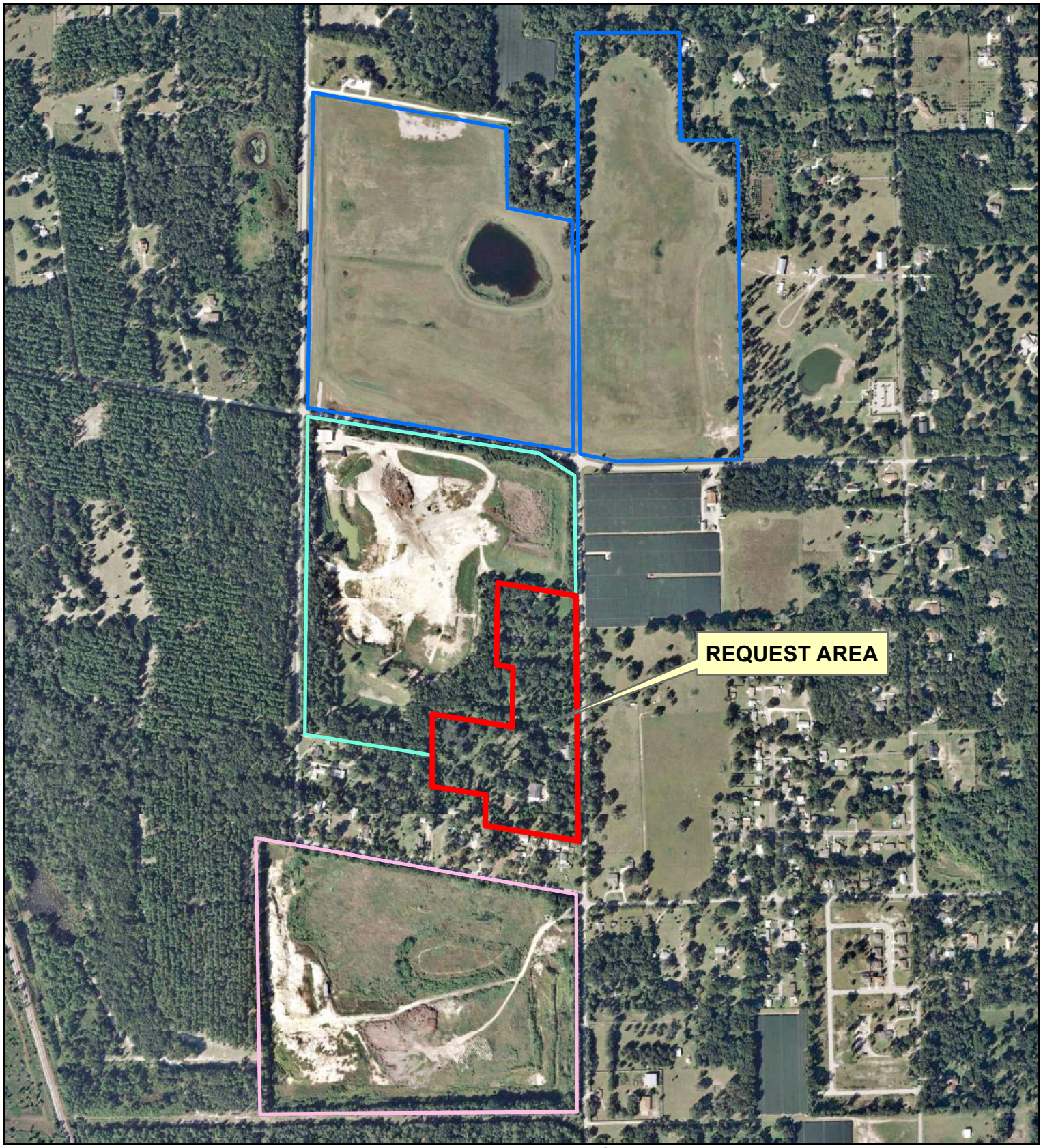
3. Whenever the Volusia County Public Works Department determines that the use of any county right-of-way designated by the applicant for ingress and egress to and from the excavation site will be subject to excessive deterioration resulting in the breakdown of the subsurface and base of such right-of-way, the applicant may be required to agree to provide the county with funds in the amount necessary to mitigate the adverse impact upon the right-of-way which is caused by the excavation operation and to ensure that said roadway is maintained in a satisfactory condition. In furtherance of this agreement, the excavator may be required by the county council to post an acceptable performance bond, irrevocable letter of credit, or funds in escrow in the amount up to 100 percent of the estimated reconditioning costs, as estimated by the Public Works Department.
4. All excavations, as applicable, shall be reclaimed in accordance with the rules of the Florida Department of Environmental Protection, Division of Resource Management, found in the Florida Administrative Code. The requirements of this article shall not relieve a person from complying with the above said state rules, as applicable. Should the requirements of this article conflict with said state rules, the stricter reclamation and restoration requirements shall govern.
5. All reclamation activities shall be initiated at the earliest possible date. Reclamation of the site concurrent with excavation activities is encouraged provided that the reclamation activities will not interfere with the excavating activity or if the excavating activity will damage the reclaimed areas.
6. All temporary structures shall be removed from the premises upon completion of the excavation activity unless said structures are of sound construction [and] are compatible with the reclamation goals. Said structures shall be accurately depicted upon the approved reclamation plan.
7. Whenever it is determined that reclamation of the excavation pit is required at the termination of the project in order to prevent soil erosion, adverse effects on county-maintained rights-of-way or natural drainage pattern, to protect the natural environment surrounding the excavation pit or to protect the character and value of surrounding property, the county council may require an acceptable performance bond, funds in escrow, or irrevocable letter of credit in the amount of 100 percent of the estimated cost of reclamation. Said cost shall be derived using the proposed plan of reclamation. Said bond or letter of credit shall be conditioned that the excavation and reclamation shall be in accordance with the approved plan.
8. No person may engage in the business of being an excavator until such person has secured an occupational license in accordance with the county occupational license requirements.
9. No excavator may excavate a parcel of land until he obtains an excavation permit issued by the growth management department in

accordance with the terms of this article prior to any excavation being made on the property to be excavated.

10. The excavation shall not be used for the disposal of material generated off-site without prior approval from the county environmental management department and the Florida Department of Environmental Protection and without obtaining all appropriate federal, state and local permits.
11. The excavation shall comply with the tree protection requirements specified by division 10 of the Land Development Code [article III], and with the requirements of the county noise ordinance [Code section 50-491 et seq.].
12. If upon the conclusion of public hearings the special exception is approved, final site plan approval, as specified by division 3 of the Land Development Code [article III], is required.
13. Off-site discharge is prohibited.

c. Any excavator shall be responsible for notifying Volusia County and the Florida Department of State, Bureau of Historical Resources when human remains and/or artifactual materials are discovered. The county reserves the right to monitor the excavation activity and to prohibit such activity if artifactual materials and/or human remains are encountered.

d. All excavations shall use the most current best management practices (BMP) so as to control erosion and limit the amount of sediment reaching surface waters. The county reserves the right to monitor the excavation activity and prohibit said activity if it is determined that said activity is responsible for off-premises erosion.



AERIAL 2012

1 inch = 800 feet

SPECIAL EXCEPTION
CASE NUMBER
S-15-040

HTS ENVIRONMENTAL SERVICES LANDFILL 67 Acres

PLYMOUTH LANDFILL 130 Acres

DELAND LANDFILL 59 Acres

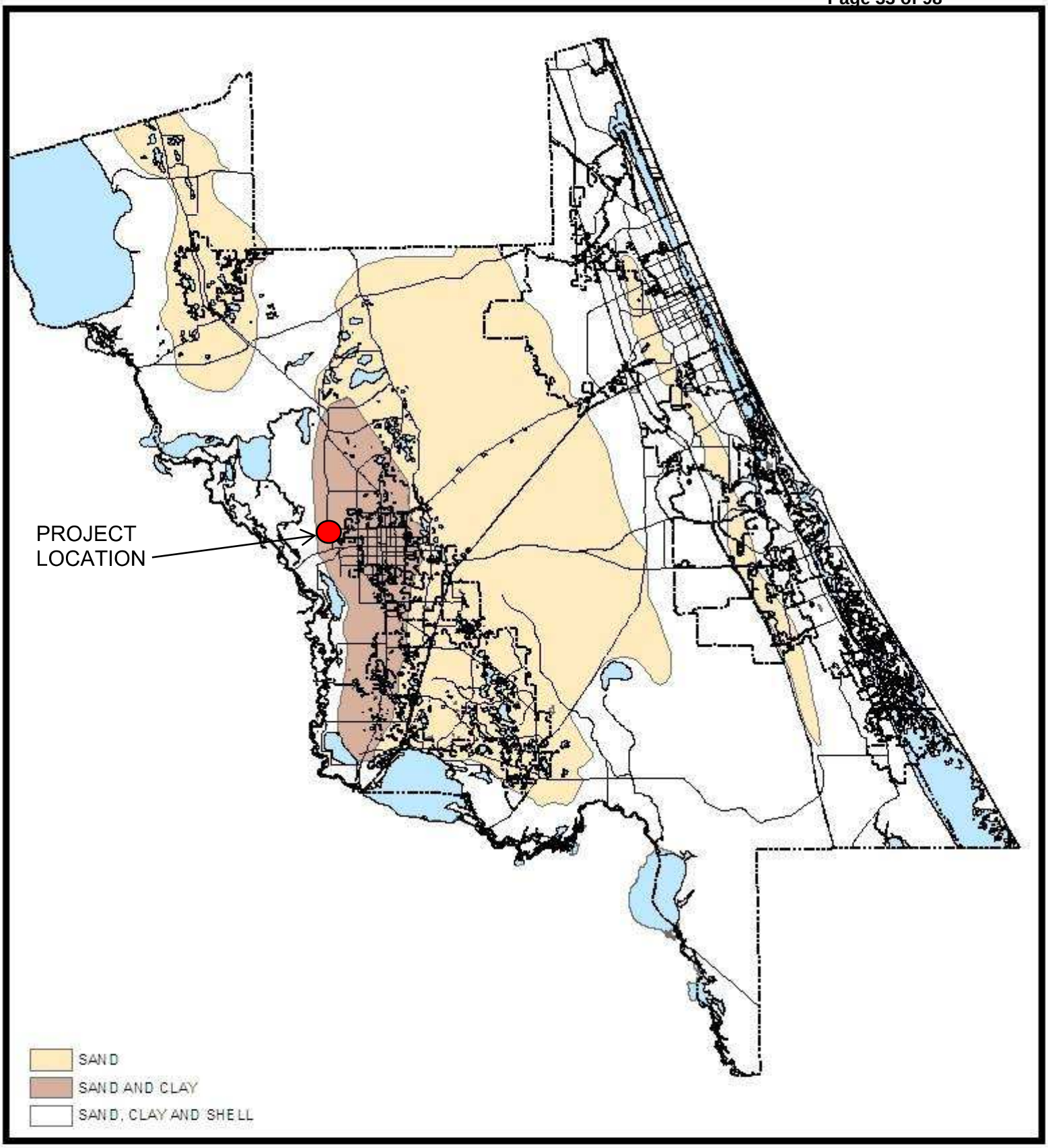


FIGURE 1-5

MINERAL RESOURCES

N

PREPARED BY: VOLUSIA COUNTY GROWTH & RESOURCE MANAGEMENT DEPARTMENT

ATTACHMENT F
Page 1

Inter-Office
Memorandum

Volusia County
FLORIDA

TO: William Gardner, Activity Manager **DATE**: June 12, 2015

FROM: Danielle Dangleman, Environmental Specialist III

SUBJECT: Planning & Land Development Regulation Commission meeting for
Date: July 14, 2015
Parcel #: 7939-01-00-0350, 7939-01-00-0380, 7939-03-00-0060, 7939-03-00-0070, and 7939-03-00-0080
Case #: S-15-040, DeLand Landfill, Owner

Environmental Permitting has reviewed the application and conducted a site inspection for this project. The property is wooded with several specimen sized oak trees.

The proposed landfill will remove several of these trees and will require a tree removal permit. The applicant will have to meet all of the environmental requirements of the Land Development code, not just the sections regarding tree removal.

STAFF REVIEW COMMENTS

PLDRC Hearing Date: August 11, 2015
Golden/DeLand Landfill, Inc.
S-15-040

LAND DEVELOPMENT

John Thomson, AICP, Land Development Manager

Comments:

The subject proposal consists of Lots 6,7 and 8 and adjacent vacated non-exclusive perpetual easements for ingress and egress and public utilities, Grandwood Estates, MB 33, Page 78; and parcels 7939-01-00-0350 and 7939-01-00-0380. According to the Sub Card for Grandwood Estates the entire subdivision is not exempt due to lack of improvements or sales. However, Lots 6, 7 and 8 front on Richfern Road, a publicly maintained roadway. The above-noted easements were vacated per Resolution 97-16 recorded in OR 4179, Page 4902. Parcels 7938-01-00-0350 and 0380 were created prior to 1976 per the 1976 tax rolls. Therefore, all the parcels have legal standing status and will need to be combined into one (1) unified development parcel.

* * * * * *

SOILS

David Griffis, County Extension Director

Comments:

As requested I visited the site on June 10, 2015. Soils were found to be #1 Apopka fine sand, 0 to 5 percent slopes. This nearly level to gently sloping well drained soil is on intermediate to high sand hills. The water table is usually below a depth of 72 inches. This soil has a high potential for community development.

* * * * * *

TRAFFIC ENGINEERING

Melissa Winsett, Transportation Planner

Comments:

Since the proposed special exception will allow for the transportation of fill materials to occur on site, between the two properties, no external traffic impacts will occur. Therefore, the proposed special exception will not create traffic capacity or safety issues on the roadway system.

ATTACHMENT G

Waste Management Inc. of Florida
2700 Wiles Road
Pompano Beach, FL 3307

Timothy B. Hawkins
President
954-984-2035 - Phone
954-984-2058 - Fax

May 15, 2015

Volusia County Council

123 West Indiana Avenue

Deland, Florida 32720

Re: Letter of Support

Excavation Setback Waiver

Deland Borrow Pit

580-680 RichFern Road

Deland, Florida

To whom it may concern:

As the owner of the adjacent property to the west of the subject excavation project, we support the requested waiver to the 150 foot setback from our property to a 0 foot setback. There is an existing 150-foot setback from the Deland Class III Landfill parcel to the subject project to the east, which meets the intent of the excavation setbacks in County Code 72-293(15).

Thank you for your consideration.

Sincerely,

Timothy B. Hawkins, President

Deland Landfill, Inc.

Waste Management Inc. of Florida

ATTACHMENT H

Bio-Tech Consulting Inc.
Environmental and Permitting Services

info@bio-techconsulting.com
www.bio-techconsulting.com

December 15, 2014

Jim Golden
HSA Golden
11 Lake Gatlin Road
Orlando, Florida 32806

Proj: 580-680 Richfern Road Site – Volusia County, Florida
Section 39, Township 17 South, Range 29 East
(BTC File #187-30.05)
Re: Environmental Assessment Report

Dear Mr. Golden,

During December of 2014, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 20.11-acre 580-680 Richfern Road Site. This site is located west of Richfern Road, north of the West Minnesota Avenue & Richfern Road intersection, within Section 39, Township 17 South, Range 29 East, Volusia County, Florida (Figures 1, 2 & 3). This environmental assessment includes the following elements:

- review of soil types mapped within the site boundaries;
- evaluation of land use types/vegetative communities present;
- field review for occurrence of protected flora and fauna, and
- a review for potential development constraints.

SOILS

According to the Soil Survey of Volusia County, Florida, prepared by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), one (1) soil type occurs within the subject property boundaries (Figure 4). This soil is as follows:

Orlando Office
2002 East Robinson St.
Orlando, FL 32803

Vero Beach Office
4445 N. A1A
Suite 221
Vero Beach, FL 32963

Jacksonville Office
2036 Forbes St.
Jacksonville, FL 32204

Tampa Office
6011 Benjamin Rd.
Suite 101 B
Tampa, FL 33634

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Aquatic & Land
Management Operations
3825 Rouse Rd.
Orlando, FL 32817

Native Plant Nursery
Farms
8380 Bunkhouse Rd.
Orlando, FL 32832

407.894.5969
877.894.5969
407.894.5970 fax

- **Apopka fine sand, 0 to 5 percent slopes (#1)**

Apopka fine sand, 0 to 5 percent slopes (#1) is a nearly level to gently sloping, well drained sandy soil that has a sandy clay loam subsoil at a depth of about 55 inches. Typically the surface layer of this soil type is dark gray sand about 6 inches thick. The water table for this soil type is at a depth of more than 84 inches. Permeability of this soil type is rapid in the sandy surface and subsurface layers and moderate or moderately rapid in the subsoil.

The Florida Association of Environmental Soil Scientists (FAESS) does not consider this soil to be hydric. Furthermore, this Association considers no inclusions present to be hydric. This information can be found in the Hydric Soils of Florida Handbook, Third Edition (March, 2000).

LAND USE TYPES/VEGETATIVE COMMUNITIES

The 580-680 Richfern Road site currently supports three (3) land use types/vegetative communities (Figure 5). These land use types were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 1999). The on-site upland land use types/vegetative communities are classified as Residential, Low Density (110), Nurseries and Vineyards (240) and Upland Hardwood Forests (420). There are no wetland/surface water land use types/vegetative communities on the project site. The following provides a brief description of the on-site land use types/vegetative communities:

Uplands:

110 – Residential, Low Density

The centralized area of the subject property along Richfern Road is most consistent with the Residential, Low Density (110) FLUCFCS classification. This area contains a single family home with several other smaller residential structures associated with the adjoining fernery operations. Vegetation observed within this community type includes cabbage palm (*Sabal palmetto*), American beautyberry (*Callicarpa americana*), black cherry (*Prunus serotina*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), saw palmetto (*Serenoa repens*), blackberry (*Rubus cuneifolius*), dog fennel (*Eupatorium capillifolium*), broomsedge (*Andropogon* spp.), greenbriar (*Smilax* spp.), pokeweed (*Phytolacca americana*), lantana (*Lantana camara*), muscadine vine (*Vitis rotundifolia*), caesarweed (*Urena lobata*), guineagrass (*Panicum maximum*), lacy bracken fern (*Pteridium aquilinum* var. *caudatum*), coontie (*Zamia pumila*), elderberry (*Sambucus nigra*), bamboo (*Bambusa vulgaris*), camphortree (*Cinnamomum camphora*), pignut hickory (*Carya glabra*), southern red cedar (*Juniperus virginiana*), air potato (*Dioscorea bulbifera*), citrus (*citrus* spp.), rattlebox (*Sesbania punicea*), balsam pear (*Momordica charantia*), cogongrass (*Imperata cylindrica*), elephant ear (*Colocasia gigantea*), banana tree (*Musa acuminata*), and chinaberry tree (*Melia azerarach*).

240 – Nurseries and Vineyards

The southern and western areas of the subject property are most consistent with the Nurseries and Vineyards (240) FLUCFCS classification. There are multiple types of abandoned plant cultivation operations that exist in this area. Abandoned ferneries, floriculture and tree nursery operations were observed. Vegetation observed within this community type includes lantana (*Lantana camara*), muscadine vine (*Vitis rotundifolia*), caesarweed (*Urena lobata*), cabbage palm (*Sabal palmetto*), American beautyberry (*Callicarpa americana*), black cherry (*Prunus serotina*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), coontie (*Zamia pumila*), bamboo (*Bambusa vulgaris*), and camphortree (*Cinnamomum camphora*).

420 – Upland Hardwood Forests

The northern area of the subject property is most consistent with the Upland Hardwood Forests (420) FLUCFCS classification. Historical photographs show this area was anthropologically disturbed in the past, likely used for tree nursery operations, but has since been reclaimed by multiple types of hardwoods as well as exotics. Vegetation observed within this community type includes cabbage palm (*Sabal palmetto*), pignut hickory (*Carya glabra*), southern red cedar (*Juniperus virginiana*), air potato (*Dioscorea bulbifera*), citrus (*citrus* spp.), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), saw palmetto (*Serenoa repens*), blackberry (*Rubus cuneifolius*), dog fennel (*Eupatorium capillifolium*), broomsedge (*Andropogon* spp.), greenbriar (*Smilax* spp.), pokeweed (*Phytolacca americana*), lantana (*Lantana camara*), muscadine vine (*Vitis rotundifolia*), caesarweed (*Urena lobata*), and guineagrass (*Panicum maximum*).

PROTECTED SPECIES

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); Wildlife Methodology Guidelines (1988); and Florida Fish and Wildlife Conservation Commission's (FFWCC) Gopher Tortoise Permitting Guidelines (revised April 2013): a cursory assessment for "listed" floral and faunal species was conducted at the site on December 12th, 2014. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings and birdcalls that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (January 2013) that have the potential to occur in Volusia County (See attached Table 1).

No plant species "listed" by either the state or federal agencies were identified on the subject site during the assessments conducted. However, one (1) species was identified that is listed as "commercially exploited" by the Florida Department of Agriculture and Consumer Services (FDACS). The harvesting of this species, coontie (*Zamia pumila*), for commercial gain, is not

permitted. However, the listing of these species poses no restrictions towards the development of the subject property. The following is a list of those wildlife species identified during the evaluation of the site:

Reptiles and Amphibians
black racer (*Coluber constrictor*)
brown anole (*Anolis sagrei*)
green anole (*Anolis caroliniana*)
six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*)

Birds
American Crow (*Corvus brachyrhynchos*)
Black Vulture (*Coragyps atratus*)
Mourning Dove (*Zenaida macroura*)
Northern Mockingbird (*Mimus polyglottos*)
Northern Cardinal (*Cardinalis cardinalis*)
Red-shouldered Hawk (*Buteo lineatus*)
Turkey Vulture (*Cathartes aura*)

Mammals
eastern gray squirrel (*Sciurus carolinensis*)
nine-banded armadillo (*Dasypus novemcinctus*)
Virginia opossum (*Didelphis virginiana*)

None of the above wildlife species are identified in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (January 2013). The following provides a brief description of other wildlife species as they relate to the development of the 580-680 Richfern Road site.

Bald Eagle (Haliaeetus leucocephalus)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus leuchocephalus*).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. Under FFWCC's new management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. A FFWCC Eagle permit is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest during the nesting season, October 1 through May 15 or when eagles are present at the nest.

In addition to the on-site evaluation for "listed" species, BTC conducted a review for any FFWCC recorded Bald Eagle nests on or in the vicinity of the subject property. This review revealed no Bald Eagle nests located within one (1) of the project boundaries. Therefore, no issue with regards to the Bald Eagle is expected to arise.

USFWS CONSULTATION AREAS

The U.S. Fish and Wildlife Service has established "consultation areas" for certain listed species. Generally, these consultation areas only become an issue if USFWS consultation is required, which is usually associated with permitting through the U.S. Army Corps of Engineers. The reader should be aware that species presence and need for additional review are often determined to be unnecessary early in the permit review process due to lack of appropriate habitat or other conditions. However, the USFWS makes the final determination.

Consultation areas are typically very regional in size, often spanning multiple counties where the species in question is known to exist. Consultation areas by themselves do not indicate the presence of a listed species. They only indicate an area where there is a potential for a listed species to occur and that additional review might be necessary to confirm or rule-out the presence of the species. The additional review typically includes the application of species-specific criteria to rule-out or confirm the presence of the species in question. Such criteria might consist of a simple review for critical habitat types. In other cases, the review might include the need for species-specific surveys using established methodologies that have been approved by the USFWS.

The following paragraphs include a list of the USFWS Consultations Areas associated with the subject site. Also included, is a brief description of the respective species habitat and potential for additional review:

Everglade Snail Kite (Rostrhamus sociabilis)
Federally Listed as "Endangered" by USFWS

The subject site falls within the USFWS Consultation Area for the Everglade Snail Kite. Currently the Everglade Snail Kite is listed as "Endangered" by the USFWS. Everglade Snail

Kites are similar in size to Red-shouldered Hawks. All Everglade Snail Kites have deep red eyes and a white rump patch. Males are slate gray, and females and juveniles vary in amounts of white, light brown, and dark brown, but the females always have white on their chin. Everglade Snail Kites vocalize mainly during courtship and nesting. They may occur in nearly all of the wetlands of central and southern Florida. They regularly occur in lake shallows along the shores and islands of many major lakes, including Lakes Okeechobee, Kissimmee, Tohopekaliga (Toho) and East Toho. They also regularly occur in the expansive marshes of southern Florida such as Water Conservation Areas 1, 2, and 3, Everglades National Park, the upper St. John's River marshes and Grassy Waters Preserve.

No Everglade Snail Kites were observed within the subject site during the wildlife survey conducted by BTC. As no habitat exists on the project site, it is unlikely a formal survey will be required with respect to the Everglade Snail Kite.

Florida Scrub-Jay (Aphelocoma coerulescens)
Federally Listed as "Threatened" by USFWS

Currently the Florida Scrub-Jay is listed as threatened by the USFWS. Florida Scrub Jays are largely restricted to scattered, often small and isolated patches of sand pine scrub, xeric oak, scrubby flatwoods, and scrubby coastal stands in peninsular Florida (Woolfenden 1978a, Fitzpatrick et al. 1991). They avoid wetlands and forests, including canopied sand pine stands. Optimal Scrub-Jay habitat is dominated by shrubby scrub, live oaks, myrtle oaks, or scrub oaks from 1 to 3 m (3 to 10 ft.) tall, covering 50% to 90 % of the area; bare ground or sparse vegetation less than 15 cm (6 in) tall covering 10% to 50% of the area; and scattered trees with no more than 20% canopy cover (Fitzpatrick et al. 1991).

No Florida Scrub-Jays were observed on the project site during the cursory survey conducted by BTC and little to no habitat exists on the site. No further action should be required pertaining to Florida Scrub-Jays.

Red Cockaded Woodpecker (Picoides boreali)
Federally Listed as "Endangered" by USFWS

The Red Cockaded Woodpecker (*Picoides boreali*) is a federally endangered species by the USFWS. The basis for the listing is loss and degradation of suitable habitat. This species is commonly found in open park-like pine forests maintained by periodic fire, such as mature long-leaf pine ecosystem. The Red Cockaded Woodpecker is a federally and state protected endangered species that is protected and should not be injured, harmed, molested or killed.

Although the site falls within the USFWS Consultation Area for the Red Cockaded Woodpecker, the habitat this species requires does not exist on the project site. As such, no further action with respect to the Red Cockaded Woodpecker should be required.

The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Joshua Bartel
Field Biologist

John Miklos
President

attachments

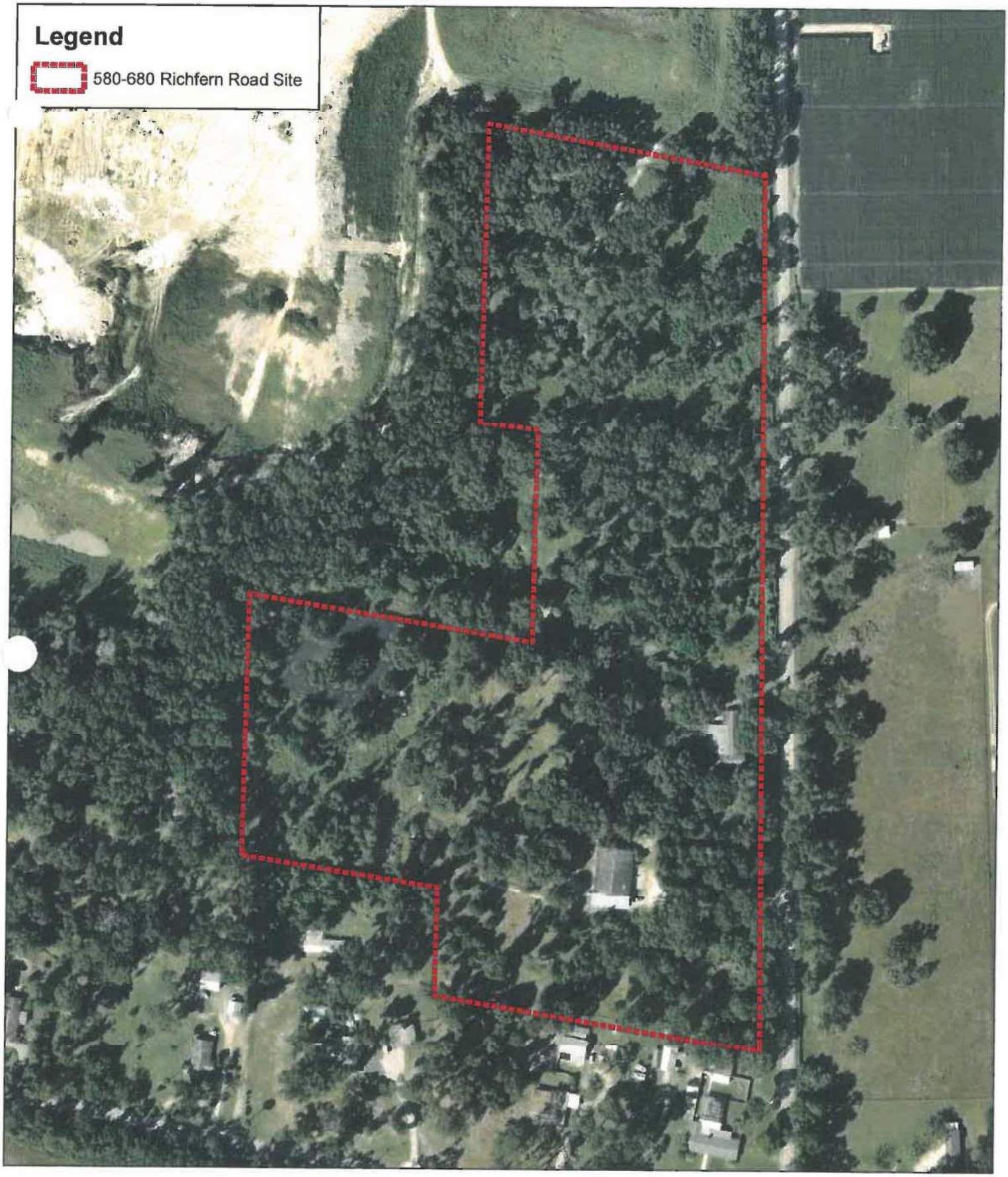
Bio-Tech Consulting Inc.
Environmental and Permitting Services
2002 E. Robinson St. Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

580-680 Richfern Road Site
Volusia County, Florida
Figure 1
Location Map

N
W E
S

1 Miles

Project #: 187-30
Produced By: JMB
Date: 12/18/2014



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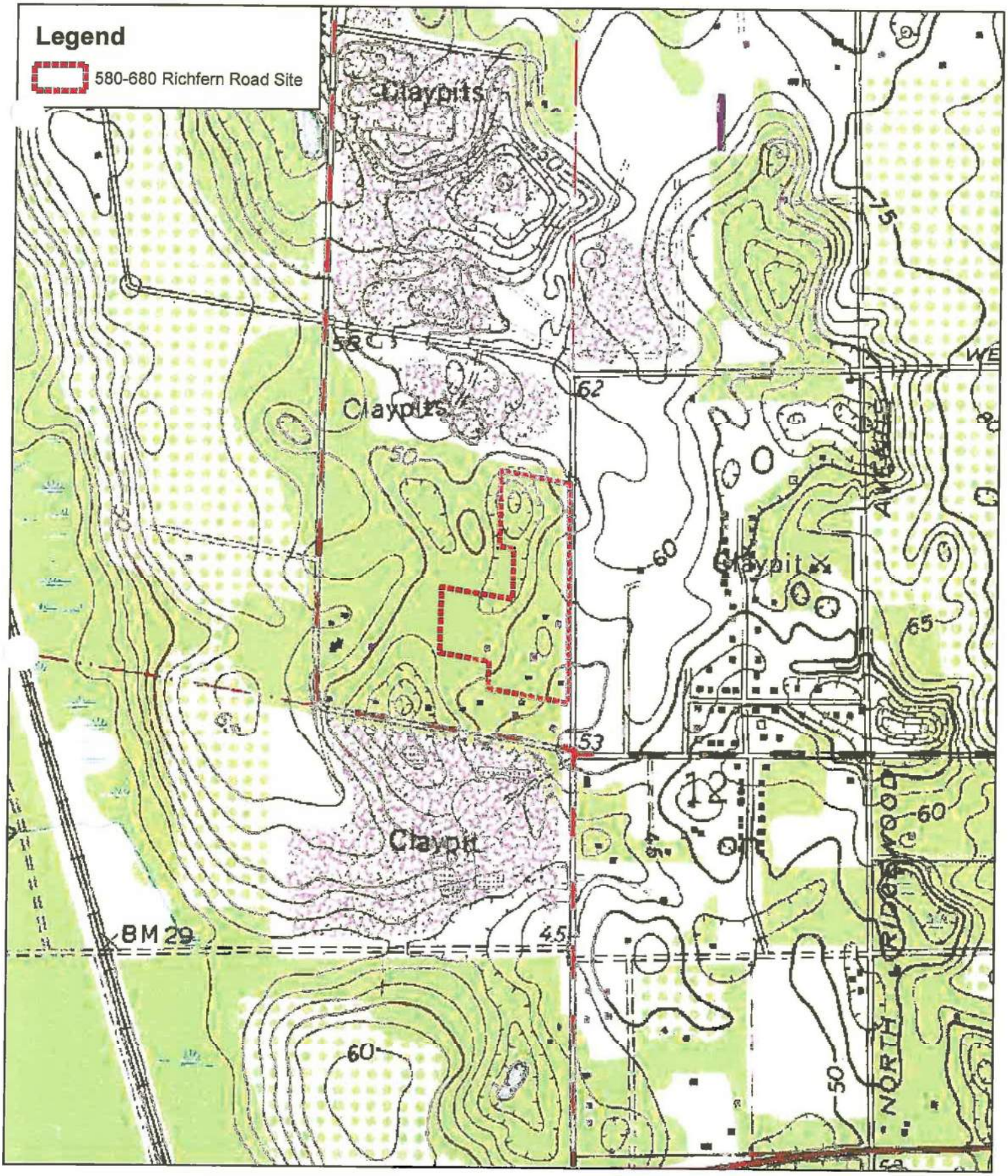
580-680 Richfern Road Site
Volusia County, Florida
Figure 2
2012 Aerial Photograph

N
W E
S

200 Feet

Project #: 187-30
Produced By: JMB
Date: 12/18/2014



580-680 Richfern Road Site
Volusia County, Florida
Figure 3
USGS Topographic Map

N
W E
S

800 Feet

Project #: 187-30
Produced By: JMB
Date: 12/18/2014

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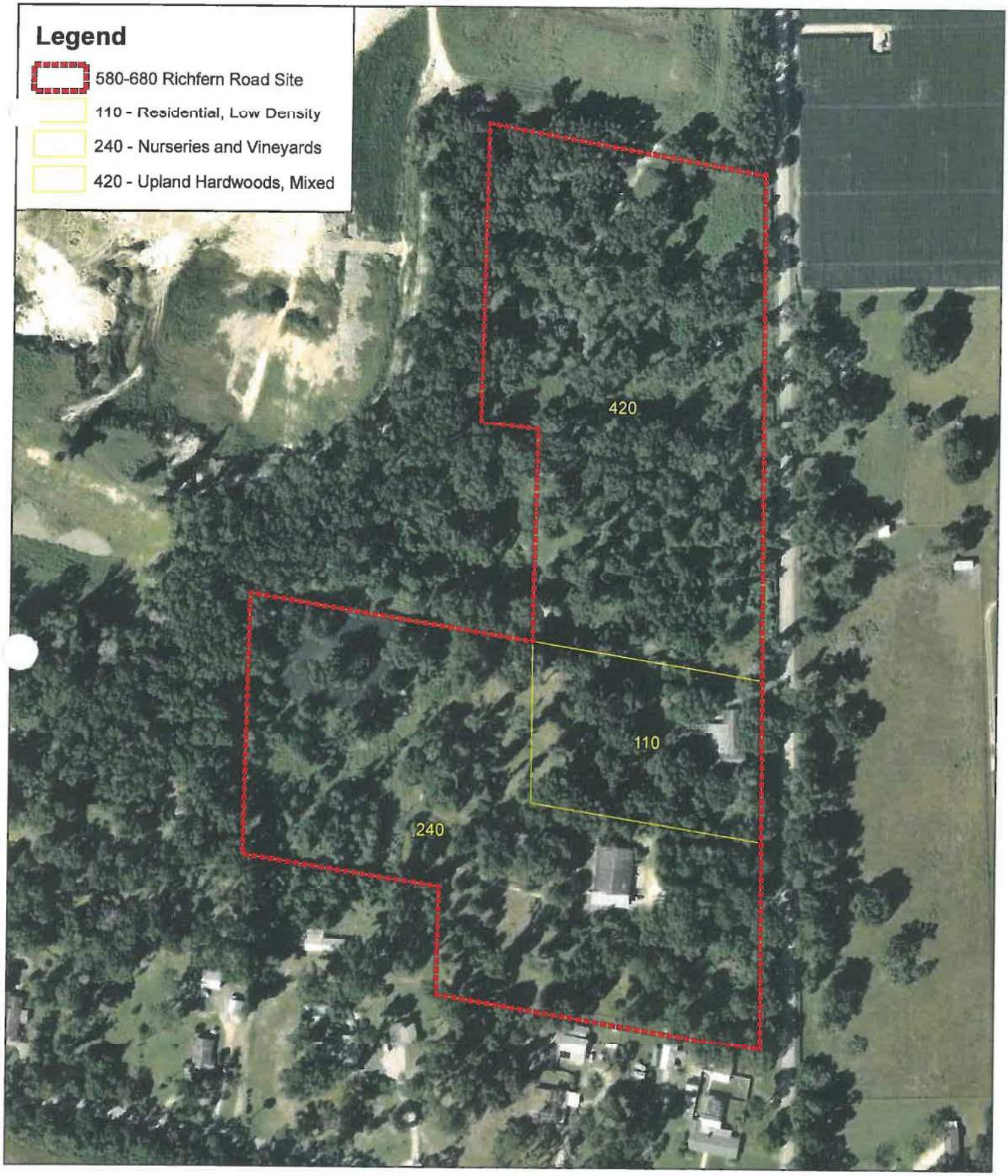
580-680 Richfern Road Site
Volusia County, Florida
Figure 4
USDA-NRCS Soils Map

N
W E
S

200 Feet

Project #: 187-30
Produced By: JMB
Date: 12/19/2014



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580-680 Richfern Road Site
Volusia County, Florida
Figure 5
FLUCFCS Map

N
W E
S

200 Feet

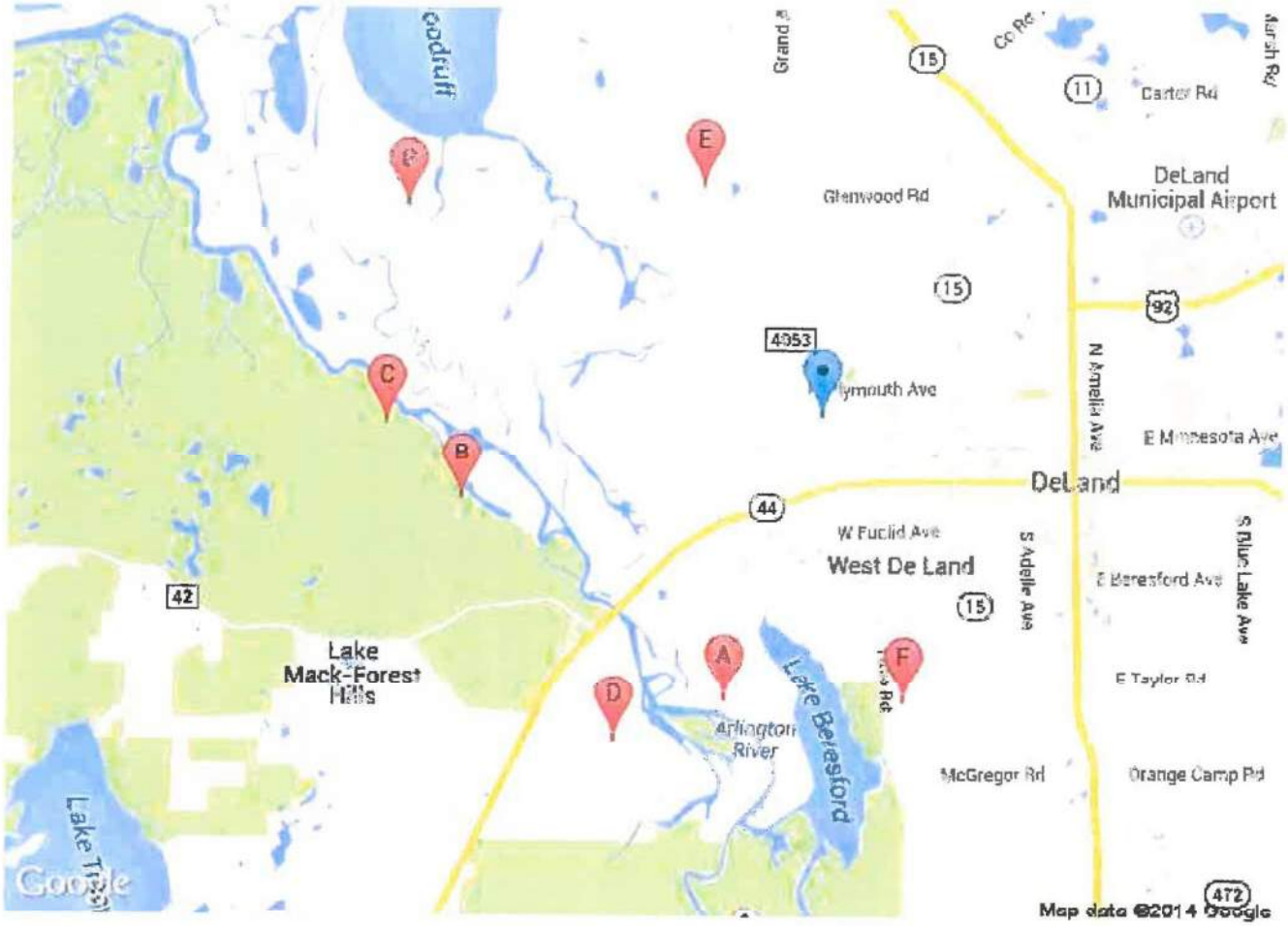
Project #: 187-30
Produced By: JMB
Date: 12/18/2014

This report was generated using the bald eagle nest locator at https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx on 12/15/2014 2:25:36 PM.

Search Entered: Within 5 miles of 580-680 Rich Fern Rd, DeLand, FL 32720 (latitude 29.0380615 and longitude -81.3473973); All Search Results

7 record(s) were found; 7 record(s) are shown

Bald Eagle Nest Map:



Bald Eagle Nest Data Search Results:

Results per page: All

Letter	Nest ID	County	Latitude	Longitude	Township	Range	Section	Gaz Page	Last Known Active	Last Surveyed	Act 9	Act 10	Act 11	Act 12	Act 13	Dist. (Mi)
A	LA136	Lake	28 59.71	81 21.83	17S	29E	26	80	2007	2008	*	*	*	*	*	3.12
B	LA150	Lake	29 01.51	81 24.56	17S	29E	38	74	2012	2012	Y	Y	Y	Y	*	3.84
C	LA190	Lake	29 02.20	81 25.35	17S	29E	37	74	2010	2012	Y	Y	-	-	*	4.53
D	LA194	Lake	28 59.33	81 22.96	17S	29E	23	80	2011	2011	*	*	Y	*	*	4.01
E	VO023	Volusia	29 04.35	81 22.08	16S	29E	44	74	2012	2012	Y	*	*	Y	*	2.68
F	VO105	Volusia	28 59.69	81 19.97	17S	30E	30	80	2012	2012	Y	*	*	Y	*	3.11
G	VO110	Volusia	29 04.18	81 25.15	17S	29E	39	74	2012	2012	Y	*	*	Y	*	4.85

"Y" denotes an active nest
"N" denotes an inactive nest
"U" denotes a nest that was visited but status was undetermined
"*" denotes a nest that was not surveyed

"-" denotes an unobserved nest

Table 1:

Potentially Occuring Listed Wildlife and Plant Species in Volusia County, Florida

Scientific Name	Common Name	Federal Status	State Status	Occurrence Status
FISH				
Acipenser brevirostrum	shortnose sturgeon	LE	LE	C
Pteronotropis welaka	bluenose shiner	N	LS	C
AMPHIBIANS				
Lithobates capito	gopher frog	N	LS	P
REPTILES				
Alligator mississippiensis	American alligator	T(S/A)	LS	C
Caretta caretta	loggerhead sea turtle	LT	LT	C
Chelonia mydas	green sea turtle	LE	LE	C
Dermochelys coriacea	leatherback sea turtle	LE	LE	C
Drymarchon corais couperi	eastern indigo snake	LT	LT	C
Gopherus polyphemus	gopher tortoise	N	LT	C
Lepidochelys kempii	Kemp's ridley sea turtle	LE	LE	P
Nerodia clarkii taeniata	Atlantic salt marsh snake	LT	LT	C
Pituophis melanoleucus mugitus	Florida pine snake	N	LS	C
BIRDS				
Aphelocoma coerulescens	Florida scrub-jay	LT	LT	C
Aramus guarauna	limpkin	N	LS	C
Charadrius melodus	piping plover	LT	LT	C
Egretta caerulea	little blue heron	N	LS	C
Egretta rufescens	reddish egret	N	LS	C
Egretta thula	snowy egret	N	LS	C
Egretta tricolor	tricolored heron	N	LS	C
Eudocimus albus	white ibis	N	LS	C
Falco sparverius paulus	southeastern American kestrel	N	LT	C
Grus canadensis pratensis	Florida sandhill crane	N	LT	C
Haematopus palliatus	American oystercatcher	N	LS	P
Haliaeetus leucocephalus	bald eagle	MC	*	C
Mycteria americana	wood stork	LE	LE	C

Pandion haliaetus	osprey	N	LS**	C
Pelecanus occidentalis	brown pelican	N	LS	C
Picoides borealis	red-cockaded woodpecker	LE	LE	C
Platalea ajaja	roseate spoonbill	N	LS	P
Polyborus plancus audubonii	Audubon's crested caracara	LT	LT	P
Rynchops niger	black skimmer	N	LS	P
Sterna antillarum	least tern	N	LT	C
MAMMALS				
Eubalaena glacialis	North Atlantic right whale	LE	LE	C
Peromyscus polionotus niveiventris	southeastern beach mouse	LT	LT	P
Podomys floridanus	Florida mouse	N	LS	P
Sciurus niger shermani	Sherman's fox squirrel	N	LS	P
Trichechus manatus (Trichechus manatus latirostris)	West Indian manatee (Florida manatee)	LE	LE	C
VASCULAR PLANTS				
Acrostichum aureum	golden leather fern	N	LE	C
Adiantum tenerum	brittle maidenhair fern	N	LE	R
Asclepias curtissii	Curtiss' milkweed	N	LE	C
Asplenium auritum	auricled spleenwort	N	LE	C
Asplenium serratum	bird's nest spleenwort	N	LE	C
Calamintha ashei	Ashe's savory	N	LT	C
Chamaesyce cumulicola	sand-dune spurge	N	LE	C
Cheiroglossa palmata	hand fern	N	LE	C
Conradina grandiflora	large-flowered rosemary	N	LE	C
Cucurbita okeechobeensis ssp *okeechobeensis*	Okeechobee gourd	LE	LE	C
Deeringothamnus rugelii	Rugel's pawpaw	LE	LE	C
Glandularia maritima	coastal vervain	N	LE	C
Glandularia tampensis	Tampa vervain	N	LE	C
Harrisia simpsonii	Simpson's prickly apple	N	LE	C
Hartwrightia floridana	hartwrightia	N	LT	C

Helianthus carnosus	lake-side sunflower	N	LE	C
Illicium parviflorum	star anise	N	LE	C
Lantana depressa var *floridana*	Atlantic Coast Florida lantana	N	LE	C
Lechea cernua	nodding pinweed	N	LT	C
Lechea divaricata	pine pinweed	N	LE	C
Matelea floridana	Florida spiny-pod	N	LE	R
Monotropsis reynoldsiae	pigmy pipes	N	LE	C
Nemastylis floridana	fall-flowering ixia	N	LE	C
Nolina atopocarpa	Florida beargrass	N	LT	C
Peperomia humilis	terrestrial peperomia	N	LE	C
Schwalbea americana	chaffseed	LE	LE	C
Zephyranthes simpsonii	rain lily	N	LT	C

FEDERAL LEGAL STATUS

LE-Endangered: species in danger of extinction throughout all or a significant portion of its range.

LT-Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion

E(S/A)-Endangered due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

T(S/A)-Threatened due to similarity of appearance (see above).

PE-Proposed for listing as Endangered species.

PT-Proposed for listing as Threatened species.

C-Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

XN-Non-essential experimental population.

MC-Not currently listed, but of management concern to USFWS.

N-Not currently listed, nor currently being considered for listing as Endangered or Threatened.

STATE LEGAL STATUS - ANIMALS

LE-Endangered: species, subspecies, or isolated population so few or depleted in number or so restricted in range that it

LT-Threatened: species, subspecies, or isolated population facing a very high risk of extinction in the future.

LS-Species of Special Concern is a species, subspecies, or isolated population which is facing a moderate risk of

PE-Proposed for listing as Endangered.

PT-Proposed for listing as Threatened.

PS-Proposed for listing as Species of Special Concern.

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

STATE LEGAL STATUS - PLANTS

LE-Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be

LT-Threatened: 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 number as to cause them to be Endangered.

PE-Proposed for listing as Endangered.

PT-Proposed for listing as Threatened.

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

COUNTY OCCURRENCE STATUS

Vertebrates and Invertebrates:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base.

P = (Potential) Occurrence status derived from a reported occurrence for the county or the occurrence lies within the

N = (Nesting) For sea turtles only; occurrence status derived from documented nesting occurrences.

Plants, Natural Communities, and Other:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base or from a herbarium

R = (Reported) Occurrence status derived from published reports.

* State protected by F.A.C. 68A-16.002 and Federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

** See Rank and Status Explanations and Definitions, Special Animal Listings - Federal and State Status

ATTACHMENT I

HYDROGEOLOGICAL REPORT
FOR
DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

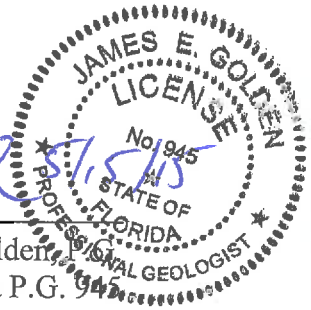
Prepared for:

WASTE MANAGEMENT INC. OF FLORIDA
242 West Keene Road
Apopka, Florida 32703

Prepared by:

HSA Golden
11 Lake Gatlin Road
Orlando, Florida 32806

May 2015



James E. Golden, P.G.
Florida P.G. 945
HSA Golden FBPE 9915
HSA Golden
11 Lake Gatlin Road
Orlando, Florida 32806

HYDROGEOLOGICAL REPORT

1.0 Purpose

The purpose of this Hydrogeological Report is to describe the subject 21-acre site, a 12-acre borrow pit being proposed by Deland Landfill Inc., and operated by Waste Management Inc. of Florida (WMIF). The proposed borrow pit is designed to meet the requirements of Volusia County Regulation (Chapter 72-293(15), Excavations).

2.0 Site Location and Description

The proposed borrow pit is located within Volusia County, Florida, south and east of WMIF's adjacent existing Deland Landfill. Specifically, the proposed borrow pit is located in Section 35, Township 17 South, Range 29 East, along Richfern Road and north of County Road (CR) 4053 (Minnesota Ave West) (see Figure 1). The approximate center of the borrow pit is located at Latitude 29.0382 North and Longitude -81.3480 West.

3.0 Topography

According to the United States Geological Survey (USGS) Deland Topographic Quadrangle Map, Revised 1993, the land surface at the subject site has elevations ranging from 35 to 55 feet National Geodetic Vertical Datum (NGVD), see Figure 2. Generally speaking, topography at the subject site slopes down towards the north and the west, although, at the southeastern part of the site, land surface slopes downward towards the south and east. Surface water drainage will follow the topography of the site. A copy of the current topographic survey for the site is provided in Section 7 of this submittal.

3.0 Site Geology

3.1 Soil

According to the Soil Survey of Volusia County, Florida, prepared by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), shallow soil beneath the subject site is classified as Apopka fine sand, 0 to 5 percent slopes (Figure 3). This soil is nearly level to gently sloping, well drained sandy soil that has a sandy clay loam subsoil at a depth of about 55 inches. Typically the surface layer of this soil type consists of dark gray sand, about six inches thick. The water table for this soil type is at a depth of more than 84 inches. Permeability of this soil type is rapid in the sandy surface and subsurface layers and moderate or moderately rapid in the subsoil.

On January 8, 2015, three soil borings were installed at the site by Universal Engineering Sciences (UES) of South Daytona, Florida. The borings were installed to evaluate the general subsurface conditions at the site and to provide general design recommendations for borrow pit suitability. A copy of UES's Geotechnical Evaluation is provided in Appendix A. Each boring was advanced to a depth of approximately 45 feet below land surface (bls), and subsurface soils

were logged for each boring. The location of the borings is shown on Figure A-1 in UES's report and on Sheet 3 of the drawings. Soil logs for each boring are shown on Figure A-2 of UES's report. In general, subsurface soil consisted of loose to very dense fine sand, fine sand with silt, fine sand with clay, and clayey fine sand. The water table was encountered at approximately 30 feet bls in borings B-1 and B-2 and at 23 feet bls in boring B-3. This corresponds to 14 to 18 feet NGVD. These measurements occurred within 24-hours of drilling and followed significant rainfall activity.

4.0 Site Hydrogeology

4.1 Piezometer Installation

Once each soil boring was completed and subsurface geology logged, a piezometer was installed in each borehole (MW-1, MW-2, and MW-3, Figure 4). The piezometers were constructed using 10 feet of 1.5 inch diameter PVC well screen, coupled to solid PVC riser, and were installed between 34 and 45 feet bls

On March 6, 2015, UES field personnel measured the depth to water in each of the newly installed piezometers, noted by UES as B-1, B-2, and B-3. HSA Golden then subtracted the depth to water from each of the surveyed piezometer top of casings to calculate a water table elevation for evaluation of groundwater flow direction. As shown in Figure 4, groundwater flows towards the south beneath the site. Water table elevations were between 15.66 feet NGVD and 13.40 feet NGVD. These water table elevations and associated groundwater contour lines are similar to those recorded in monitoring wells on March 11, 2014 at the adjoining Deland Landfill.

4.2 Seasonal High and Low Water Table

Based on water level measurements recorded at MW-1, MW-2, and MW-3 on March 6, 2015, water table elevations were between 15.66 feet NGVD (north) and 13.40 feet NGVD (south). During a seasonal high, we would expect the water table elevations to be two feet higher, or 17.66 feet NGVD to 15.40 feet NGVD. Water table elevations were reviewed for the adjoining Deland Landfill to estimate a seasonal low water table. Based on the data reviewed, it appears that water table elevations generally drop by approximately two feet during drier years. Due to the amount of rainfall in March of this year, we do not consider our calculated water table elevations to be representative of a dry year. Since drier years at the adjoining Deland Landfill have water table elevations approximately two feet lower than during wet years, we calculate a seasonal low water table of 13.66 feet NGVD (north) to 11.40 feet NGVD (south).

5.0 Proposed Borrow Pit

As shown on Sheet 4 (attached to this submittal), the proposed base of the borrow pit will be approximately 14 to 16 feet NGVD, just above the water table. WMIF plans to use the excavated soil at their adjacent Deland Landfill. As shown in the cross-sections, approximately 30 to 38 feet of soil will be excavated at the site. Because excavation of soil will not occur below the water table, no dewatering will be required for this project. Since dewatering will not occur, no fluctuations in the water table are expected to occur as a result of excavation. While no

permanent piezometers or monitoring wells will be installed as part of this project, the adjoining Deland Landfill has its own monitoring well network and water levels at the landfill are measured on a semiannual basis as part of their routine groundwater quality monitoring.

6.0 Well Survey

As part of this application, HSA Golden conducted survey of known potable and irrigation wells with a 1,000-foot radius of the subject site. Sources used to gather this data included the St. Johns River Water Management District and the Florida Department of Health. As shown on Figure 5, two irrigation wells permitted with a consumptive use permit are located at the subject site. These wells have been used by the previous fernery at the site and will be properly abandoned, and the appropriate paperwork filed with the St. Johns River Water Management District, prior to excavation occurring in these two areas. Potable and irrigation wells were identified on surrounding properties to the south, southwest, southeast, and northeast. Because the borrow pit will extend to just above the shallow water table, no impact to groundwater levels or quality is anticipated in these surrounding wells.

hsa golden engineering environmental solutions

Figures

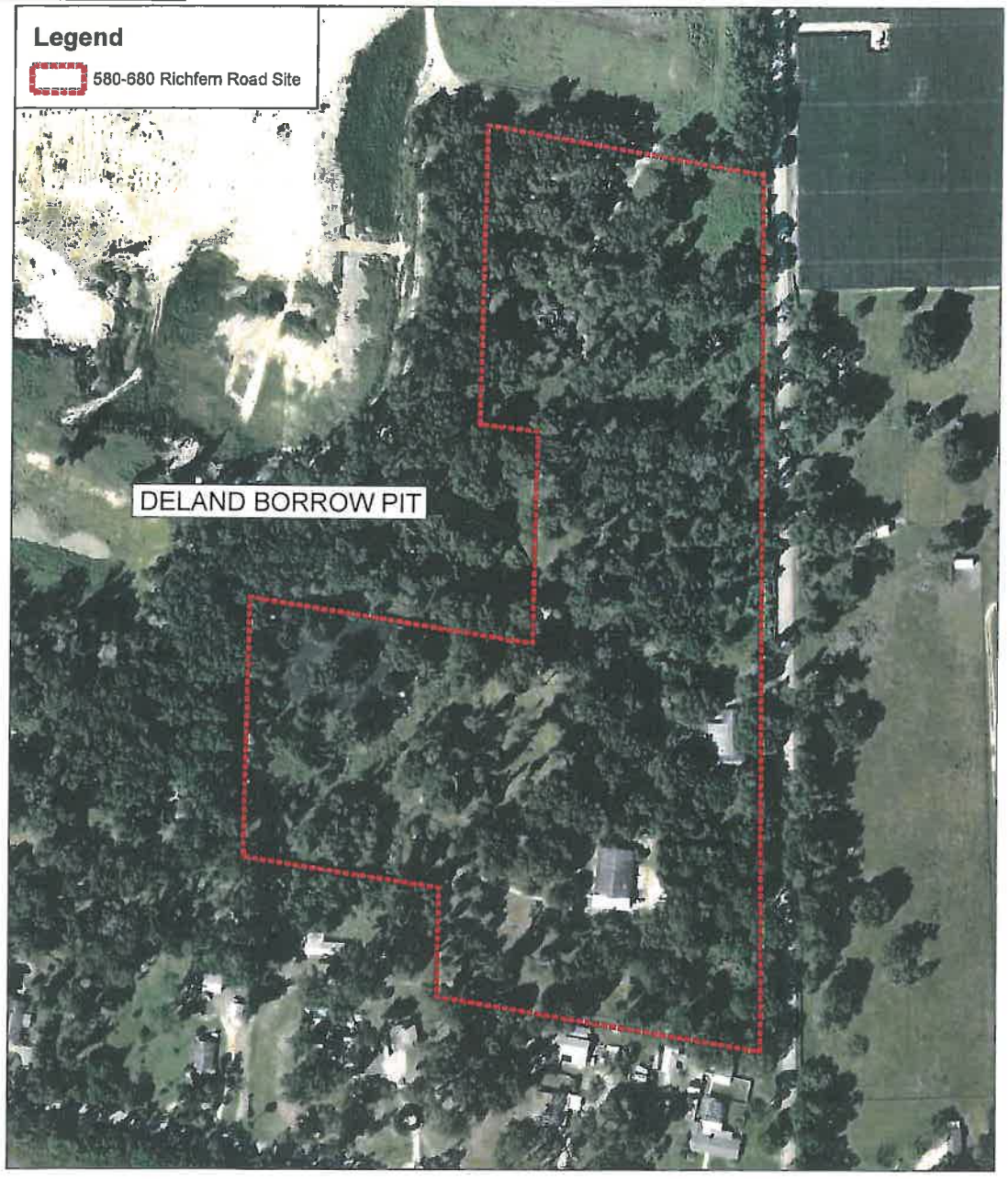
01-FIG-AERIAL PHOTOGRAPH.dwg

MAY 2015

N

0 150 300

DISTANCE IN FEET



SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL ASSESSMENT REPORT

hsagolden
engineering & environmental solutions
11 LAKE GATLIN ROAD
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P: 407.649.5475 F: 407.649.6582
HSAGOLDEN.COM

DELAND BORROW PIT
580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

AERIAL PHOTOGRAPH

PROJECT #
09-574.046

FIGURE
1

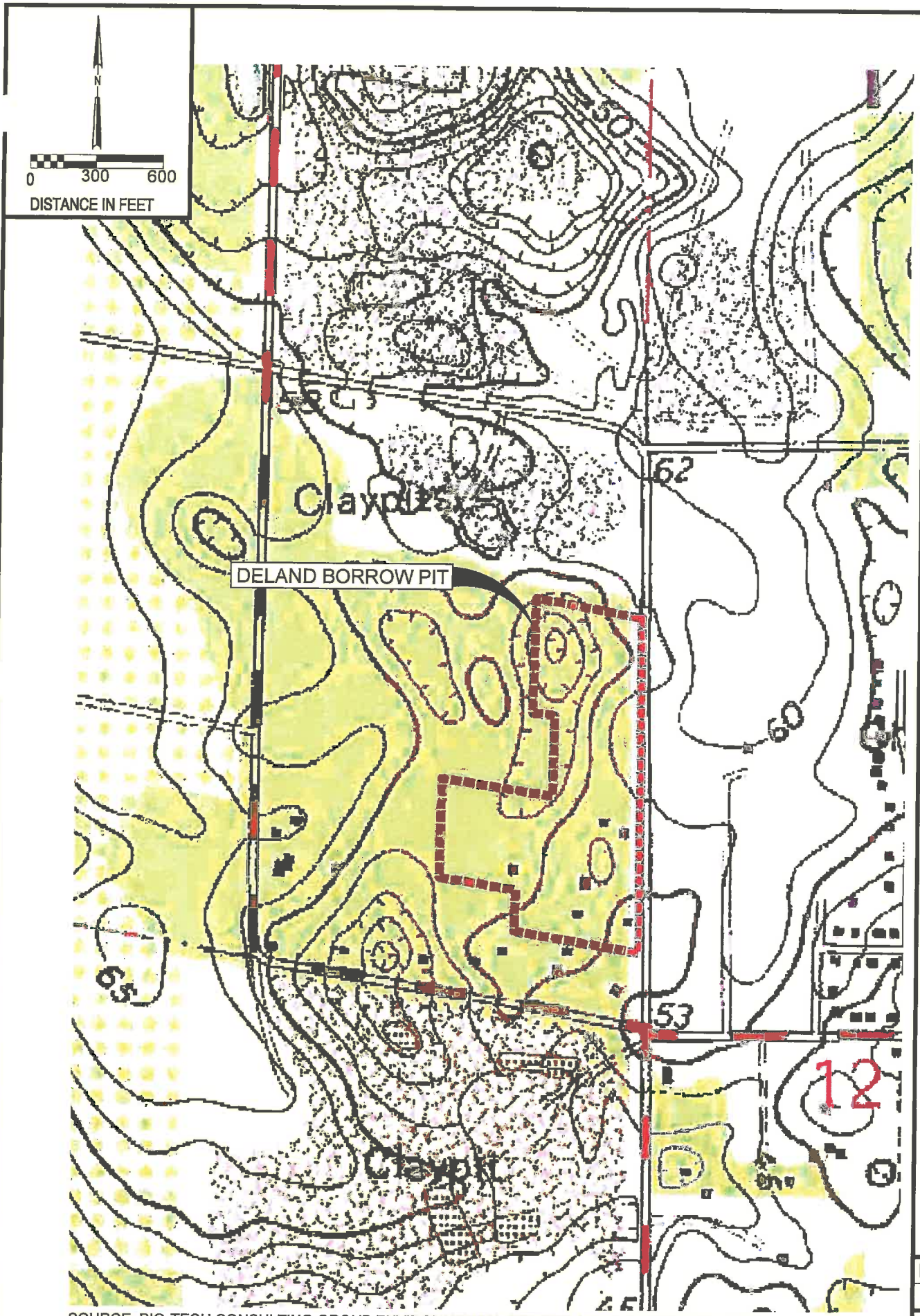
HSAG - MONO - HALF PEN.CTB , LAYOUT NAME: AERIAL PHOTOGRAPH , LAST SAVE BY: TSINGH 5/14/2015 2:50:29 PM

nd Class III Borrow Pit Permit\CAD\Figures\2015\05-May - Hydrogeological Report\01-FIG-AERIAL PHOTOGRAPH.dwg , SHEET SIZE: LETTER (8.5" X 11"), PE

P:\Project Files\09-574.046

02-FIG-USGS TOPOGRAPHIC MAP.dwg

MAY 2015



SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL REPORT, USGS QUADRANGLE MAP

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580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

USGS TOPOGRAPHIC MAP

PROJECT #
09-574.046

FIGURE
2

YLE: HSAG - MONO - HALF PEN.CTB , LAYOUT NAME: USGS TOPOGRAPHIC MAP , LAST SAVE BY: TSINGH 5/1/2015 2:50:18 PM

nd Class III Borrow Pit Permit\CAD\Figures\2015\05-May - Hydrogeological Report\02-FIG-USGS TOPOGRAPHIC MAP.dwg , SHEET SIZE: LETTER (8.5" X 11")

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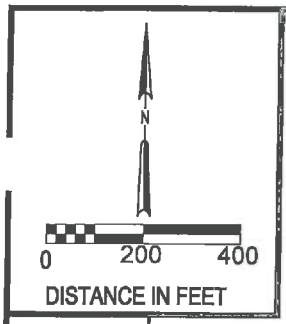
03-FIG-SOIL SURVEY MAP.dwg

MAY 2015



Legend

580-680 Richfern Road Site

NRCS Volusia County Soils

1 - APOPKA FINE SAND, 0 TO 5 PERCENT SLOPES

SOURCE: BIO-TECH CONSULTING GROUP ENVIRONMENTAL REPORT

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DELAND, VOLUSIA COUNTY, FLORIDA

SOIL SURVEY MAP

PROJECT #
09-574.046
FIGURE
3

4G - MONO - HALF PEN.CTB , LAYOUT NAME: SOIL SURVEY MAP , LAST SAVE BY: TSINGH 5/14/2015 2:51:13 PM

nd Class III Borrow Pit Permit\CAD\Figures\2015\05-May - Hydrogeological Report\03-FIG-SOIL SURVEY MAP.dwg , SHEET SIZE: LETTER (8.5" X 11"), PEN ST

P:\Project Files\09-574.046\

04-FIG-GROUNDWATER CONTOUR MAP.dwg

SOURCE: PEAVEY SURVEY BASE, 2015

DISTANCE IN FEET
0 75 150

N

CLOSED VOLUSIA COUNTY PLYMOUTH AVENUE LANDFILL

PANELS

SITE LOCATION

39-17-29-03-00-0060
7939-03-00-0060
DELAND LANDFILL INC -
WASTE MANAGEMENT
PO BOX 1450
CHICAGO, IL 606901450
OR5757, PG2695

39-17-29-03-00-0070
7939-03-00-0070
DELAND LANDFILL INC -
WASTE MANAGEMENT
PO BOX 1450
CHICAGO, IL 606901450
OR5757, PG2695

39-17-29-03-00-0080
7939-03-00-0080
DELAND LANDFILL INC -
WASTE MANAGEMENT
PO BOX 1450
CHICAGO, IL 606901450
OR5757, PG2695

MW-3
16.66

15.5

15.0

14.5

MW-2
14.37

14.0

MW-1
13.40

13.5

TARPED NURSERY AREA (FALLING DOWN, RIPPED AND IN POOR CONDITION)

8'DIA TANK

6'x10' TANK

FUEL TANK

8"WELL

WOOD SHED COLLAPSED

METAL POLE BARN

WOOD SHED

OLD WOOD BUILDING

OLD WOOD BUILDING

ANTENNA

SWIMMING POOL

1-STORY CONC. BLOCK RESIDENCE

6"WELL

WOOD BUILDING COLLAPSED

METAL BUILDING

LEGEND

MW-1
13.40
PIEZOMETER LOCATION WITH WATER TABLE ELEVATION, FT. NGVD

PROPERTY LINE

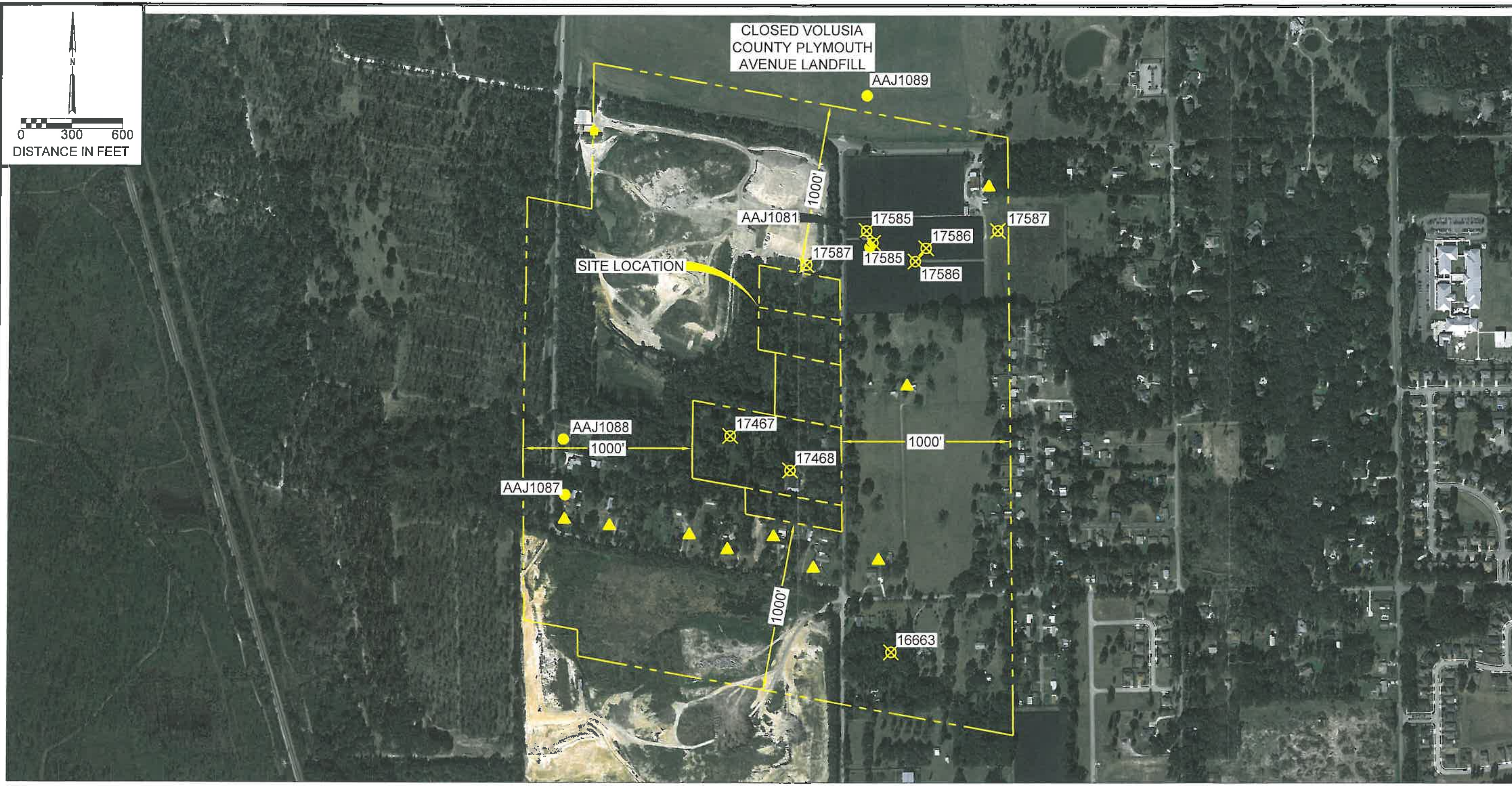
14.0
WATER TABLE ELEVATION CONTOUR, FT. NGVD

INFERRED GROUNDWATER FLOW DIRECTION

WATER TABLE ELEVATION CONTOUR MAP: MARCH 6, 2015	DELAND BORROW PIT 580-680 RICHFERN ROAD DELAND, VOLUSIA COUNTY, FLORIDA	hsagolden engineering environmental solutions 11 LAKE GATLIN ROAD ORLANDO, FL 32806 P: 407 649-5475 F: 407 649-6932 HSAGOLDEN.COM	PROJECT # 09-574.046 FIGURE 4 MAY 2015

05-FIG-WELL INVENTORY MAP.dwg

MAY 2015



AERIAL SOURCE: GOOGLE EARTH, 2014

LEGEND

AAJ1081 ● POTABLE WELL LOCATION (SOURCE: EHWATER, 2015)

▲ POTABLE WELL LOCATION (ESTIMATE BASED ON RESIDENCE LOCATION)

16663 ⊗ CUP WELL LOCATION (SOURCE: SJRWMD, 2015)

✦ IRRIGATION WELL

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580-680 RICHFERN ROAD
DELAND, VOLUSIA COUNTY, FLORIDA

WELL INVENTORY MAP

PROJECT #
09-574.046
FIGURE
5

Appendix A

UNIVERSAL
ENGINEERING SCIENCES

GEOTECHNICAL EVALUATION

Deland Borrow Pits
Deland, Florida

UES Project No. 0430.1400181.0000
UES Report No. 129742

January 22, 2015

Prepared for:

Mr. James Golden
HSA Golden
11 Lake Gatlin Road
Orlando, FL 32806

Prepared by:

UNIVERSAL ENGINEERING SCIENCES
911 Beville Road, Suite 3
South Daytona, Florida 32119

CONSULTANTS:
Geotechnical Engineering • Environmental Engineering • Construction Materials Testing Threshold Inspection • Private Provider Inspection • Geophysical Studies

UNIVERSAL
ENGINEERING SCIENCES
Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:
- Atlanta
- Daytona Beach
- Fort Myers
- Fort Pierce
- Gainesville
- Jacksonville
- Miami
- Ocala
- Orlando (Headquarters)
- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- Tampa
- Tifton, GA
- West Palm Beach

January 22, 2015

Mr. James Golden
HSA Golden
11 Lake Gatlin Road
Orlando, FL 32806

Reference: **GEOTECHNICAL EVALUATION**
Deland Borrow Pits
Deland, Florida
UES Project No. 0430.1400181.0000 AND UES Report No. 129742

Dear Mr. Golden:

Universal Engineering Sciences (UES) has completed the subsurface evaluation for the subject project located in Ormond Beach, Florida. We understand the subsurface conditions at the locations requested by you need to be evaluated for borrow pit suitability considerations. This letter presents the results of our field exploration, our estimate of the normal seasonal high groundwater level and recommendations for borrow suitability.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES

Jake Cochran E.I.
Project Engineer

1/22/15
Brian C. Pohl, P.E.
Branch Manager
P.E. Number 60216

Attachments

JC/BCP/cme

1.0 INTRODUCTION

1.1 GENERAL

In this report we present the results of the subsurface evaluation for the proposed Deland Borrow Pits in Deland, Florida. We have divided this report into the following sections:

- SECTION 2.0 - SCOPE OF SERVICES
- SECTION 3.0 - FINDINGS
- SECTION 4.0 - BORROW PIT SUITABILITY RECCOMENDATIONS
- SECTION 5.0 - LIMITATIONS

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

Project information has been provided to us in discussion with you. We have been provided with a copy of a site plan which shows the property boundary limits, adjacent roadways, and proposed boring locations.

It is our understanding the proposed project will consist of the construction of a large borrow pit that will be constructed to provide fill soils and future landfill space.

Our recommendations are based upon the above considerations. If any of this information is incorrect, or if you anticipate any changes, inform Universal Engineering Sciences so that we may review our recommendations.

2.2 PURPOSE

The purposes of this investigation were:

- to investigate the general subsurface conditions at the site;
- to provide general design recommendations for borrow suitability purposes.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, at your request.

Our investigation was confined to the zone of soil likely to be influenced by the proposed construction. Our work did not address the potential for surface expression of deep geological conditions, such as sinkhole development related to karst activity. A deep geological evaluation requires a more extensive range of field services than performed in this study.

2.3 FIELD INVESTIGATION

2.3.1 Borings

Three (3) SPT Borings (designated as B-1 through B-3) were performed at the locations shown on the attached Boring Location Plan. The soil borings were advanced to a depth of approximately 45 feet below existing grade and performed in accordance with the procedures of ASTM D-1686. The soil samples recovered from the soil test borings were returned to our laboratory and a UES Engineer visually examined and reviewed the field descriptions. The samples were visually classified in accordance with the Unified Soil Classification System (USCS).

The borings were located by our field personnel using taped measurements from existing site features, and should be considered accurate only to the degree implied by the method used. The location of the borings is presented on the attached Boring Location Plan in Appendix A.

Samples obtained from the borings were transported to our laboratory for further evaluation. Samples of the soils encountered will be held in our laboratory for your inspection for 60 days unless we are notified otherwise.

2.3.2 Piezometers

A total of three (3), 1.5-inch depths diameter piezometers were installed in the completed boreholes. The piezometers varied between 34 and 45 feet below the ground surface with the bottom 10 feet of piezometer being screened. Please see the attached well completion logs in appendix A for detailed well descriptions.

2.4 LABORATORY INVESTIGATION

2.4.1 Index Testing

The soil samples recovered from the soil borings were returned to our laboratory and then a UES Engineer visually examined and reviewed the field descriptions. Tests consisting of Wash 200 Gradations were performed to aid in classifying the samples. The results of the tests are presented on the Subsurface Profiles located in Appendix A. The soils were classified in accordance with the Unified Soil Classification System (USCS). Please see Appendix B for a description of the Laboratory Testing Procedures.

3.0 FINDINGS

3.1 SUBSURFACE CONDITIONS

The boring location and detailed subsurface conditions are illustrated in Appendix A: Boring Location Plan and Subsurface Profiles. The classifications and descriptions shown on the profiles are based upon visual characterizations of the recovered soil samples. The boring elevations were interpolated from the provided survey. Also, see Appendix A: Key to Boring Log, for further explanation of the symbols and placement of data on the Subsurface Profiles. The following discussion summarizes the soil conditions encountered.

The results of the borings generally indicated the presence of loose to very dense fine sand (SP), fine sand with silt (SP-SM), fine sand with clay (SP-SC) and clayey fine sand (SC) to the boring termination depths. As an exception at boring location B-1 from approximately 31 to 45 feet below grade medium dense shell with fine sand and clay was encountered.

3.2 GROUNDWATER

We recorded groundwater 24(+) hours subsequent to drilling, at depths varying between approximately 23.0 and 30.6 feet below the ground surface. It should be noted that the borings were performed subsequent to significant rainfall activity. The depth of the groundwater level encountered at the boring location is presented on the Subsurface Profiles.

The groundwater table will fluctuate seasonally depending upon local rainfall, and other interrelated factors. The rainy season in Central Florida is normally between June and September. Based on available published literature and the results of our borings, we estimate the seasonal high water level to be the approximately 3 feet above the measured levels.

The estimated seasonal high water levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should impediments to surface water drainage be present, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels might once again exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

4.0 BORROW PIT SUITABILITY RECOMMENDATIONS

4.1 GENERAL

Based on our experience clayey fine sands (SC) typically have poor permeability characteristics and are generally considered confining soil layers. The other soil types encountered are considered to be somewhat to very permeable.

4.2 BORROW SUITABILITY

The borings were performed, to provide an indication of the suitability of excavated soils from the proposed borrow areas for use as structural fill soil. Based on the boring results and classification of the soil samples, the fine sand (SP), fine sand with clay (SP-SC), the fine sand with silt (SP-SM) and the shell with sand and silt as encountered at the boring locations, is suitable for use as structural fill soil. Because the fine sand with silt (SP-SM) and fine sand with clay (SP-SC) significantly retains moisture, strict moisture control may be required during placement and compaction operations to avoid moisture related instability. The clayey fine sands and silty fine sands (SC, SM) as encountered in the boring locations are not considered suitable for use as fill soils due to their plasticity and inherent nature to retain moisture, which make them difficult to place and compact. These soils however can be used for roadway subgrade stabilization material. However, this is not recommended in areas where the roadway base elevation is within close proximity to the groundwater.

It should be anticipated the soils in the proposed pond area that are below the groundwater level will have moisture contents in excess of the Modified Proctor optimum moisture content and will require stockpiling or spreading to bring the moisture content within 2 percent of the soil's optimum moisture content corresponding to the required degree of compaction. The contractor should anticipate excavation of debris and take the necessary precautions.

5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An Association of Engineering Firms Practicing in the Geosciences (ASFE) publication, "Important Information about Your Geotechnical Engineering Report" appears in Appendix C, and will help explain the nature of geotechnical issues. Further, we present documents in Appendix C: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

APPENDIX A

BORING LOCATION PLAN
SUBSURFACE PROFILES
WELL COMPLETION LOGS
SOILS CLASSIFICATION CHART

LEGEND

APPROXIMATE LOCATION OF
STANDARD PENETRATION TEST (SPT) BORING

GRAPHIC SCALE
0 125 250
(IN FEET)
1 INCH ≈ 250 ft.

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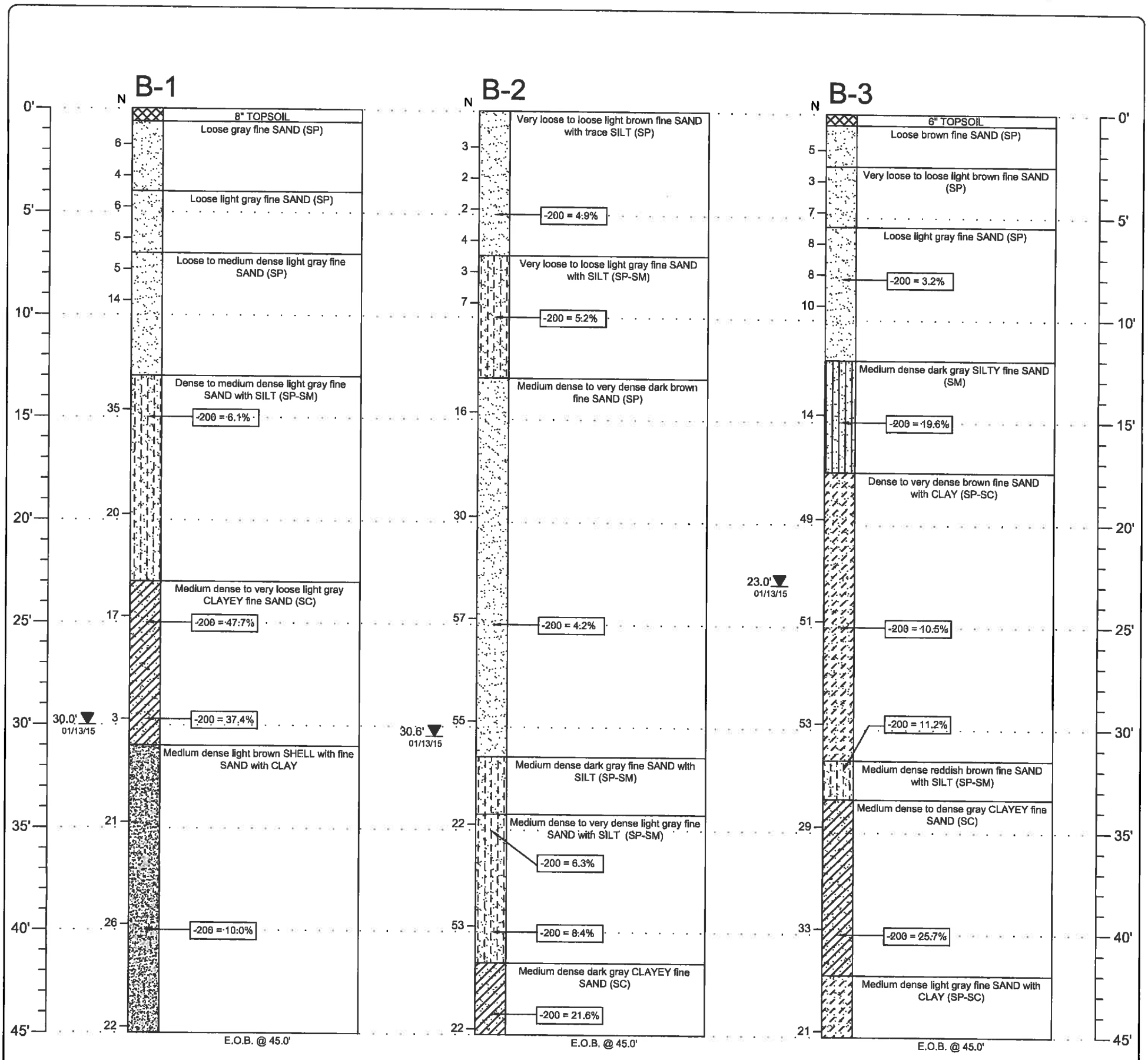
ENGINEERING SCIENCES

PROJECT: GEOTECHNICAL EVALUATION DELAND BORROW PITS DELAND, FLORIDA				TITLE: BORING LOCATION PLAN	
DRAWN BY: MKL	DATE: 01/09/15	PROJECT NO.: 0430.1400181.0000		SCALE: 1" ≈ 250'	PAGE/FIG. NO.: A-1
CHECKED BY: BP	DATE: 01/09/15	REPORT NO.: 129742			



Fine SAND (SP)

SHELL

Fine SAND with SILT (SP-SM)

Fine SAND with CLAY (SP-SC)

SILTY fine SAND (SM)

CLAYEY fine SAND (SC)

TOPSOIL

NOTES:

▼	Measured Groundwater Level 24 (+) Hours Subsequent to Time of Drilling
(SP)	Unified Soil Classification System
EOB	End of Boring
N	Penetr. Resistance, Blows/ft.
-200	% Passing No. 200 Sieve

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PROJECT: GEOTECHNICAL EVALUATION DELAND BORROW PITS DELAND, FLORIDA				TITLE: SUBSURFACE PROFILES	
DRAWN BY: MKL	DATE: 01/20/15	PROJECT NO.: 0430.1400181.0000		SCALE: NA (in feet)	PAGE/FIG. NO.: A-2
CHECKED BY: BP	DATE: 01/20/15	REPORT NO.: 129742			

UNIVERSAL ENGINEERING SCIENCES WELL COMPLETION LOG	PROJECT NO. 0430.1400181.0000
	REPORT NO.: 129742
	PAGE: 1 OF 3

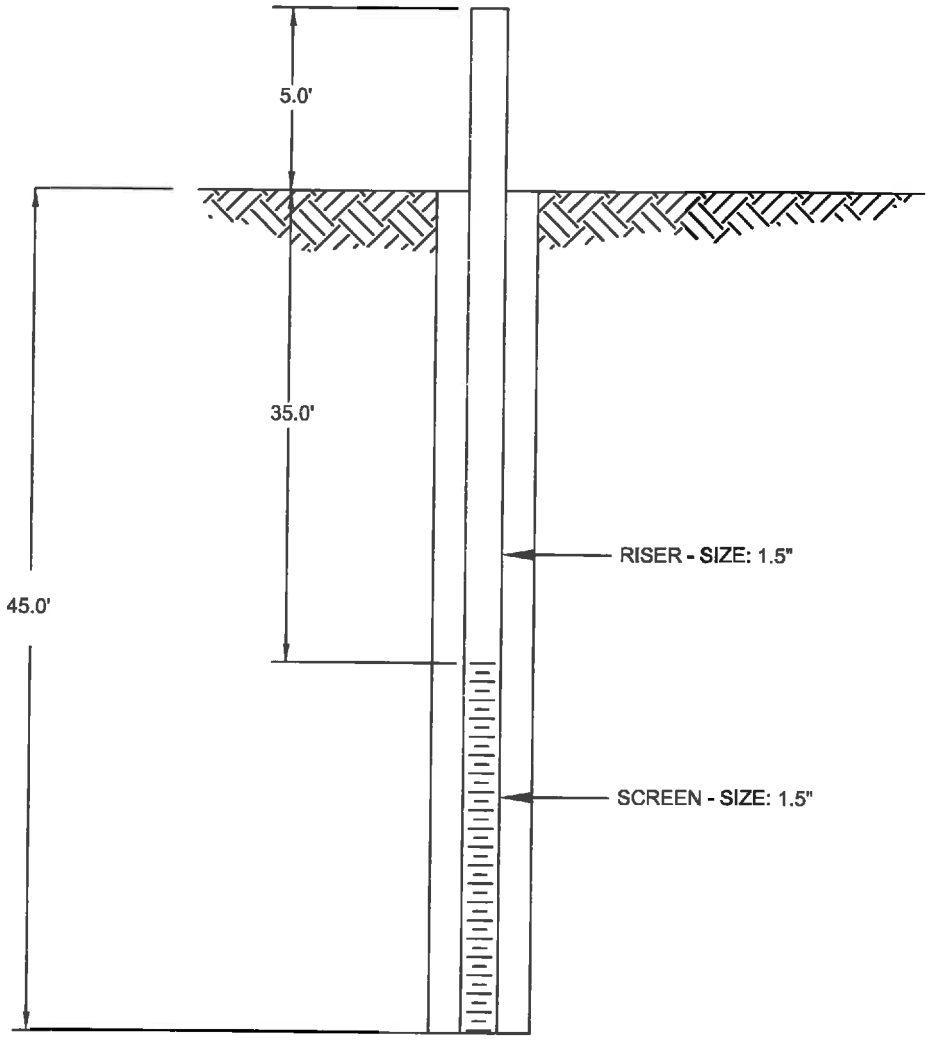
PROJECT: DELAND BORROW PITS

CLIENT: HSA GOLDEN DATE: 01/08/15

WELL NUMBER: B-1

INSTALLED BY: UNIVERSAL ENGINEERING SCIENCES, INC.

WELL DIAGRAM - NOT TO SCALE



UNIVERSAL ENGINEERING SCIENCES
WELL COMPLETION LOG

PROJECT NO.	0430.1400181.0000
REPORT NO.:	129742
PAGE:	2 OF 3

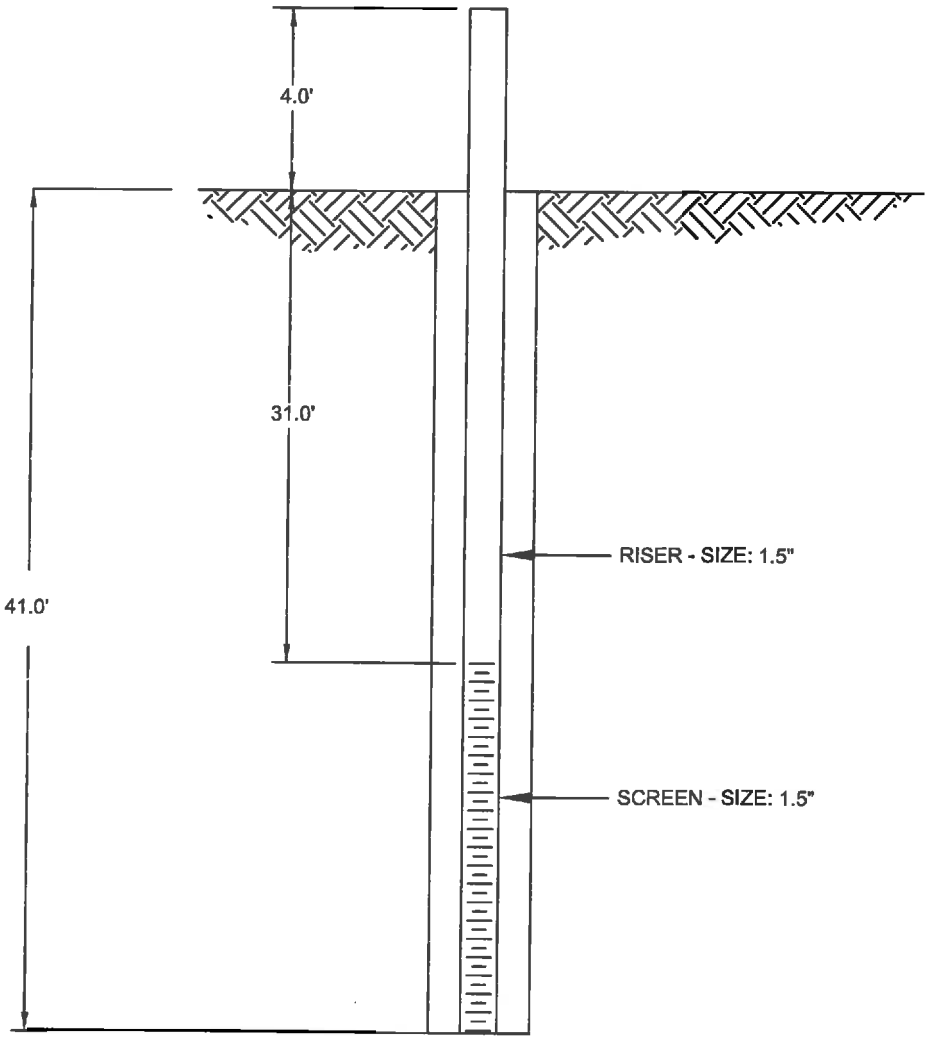
PROJECT: DELAND BORROW PITS

CLIENT: HSA GOLDEN DATE: 01/08/15

WELL NUMBER: B-2

INSTALLED BY: UNIVERSAL ENGINEERING SCIENCES, INC.

WELL DIAGRAM - NOT TO SCALE



UNIVERSAL ENGINEERING SCIENCES
WELL COMPLETION LOG

PROJECT NO.	0430.1400181.0000
REPORT NO.:	129742
PAGE:	3 OF 3

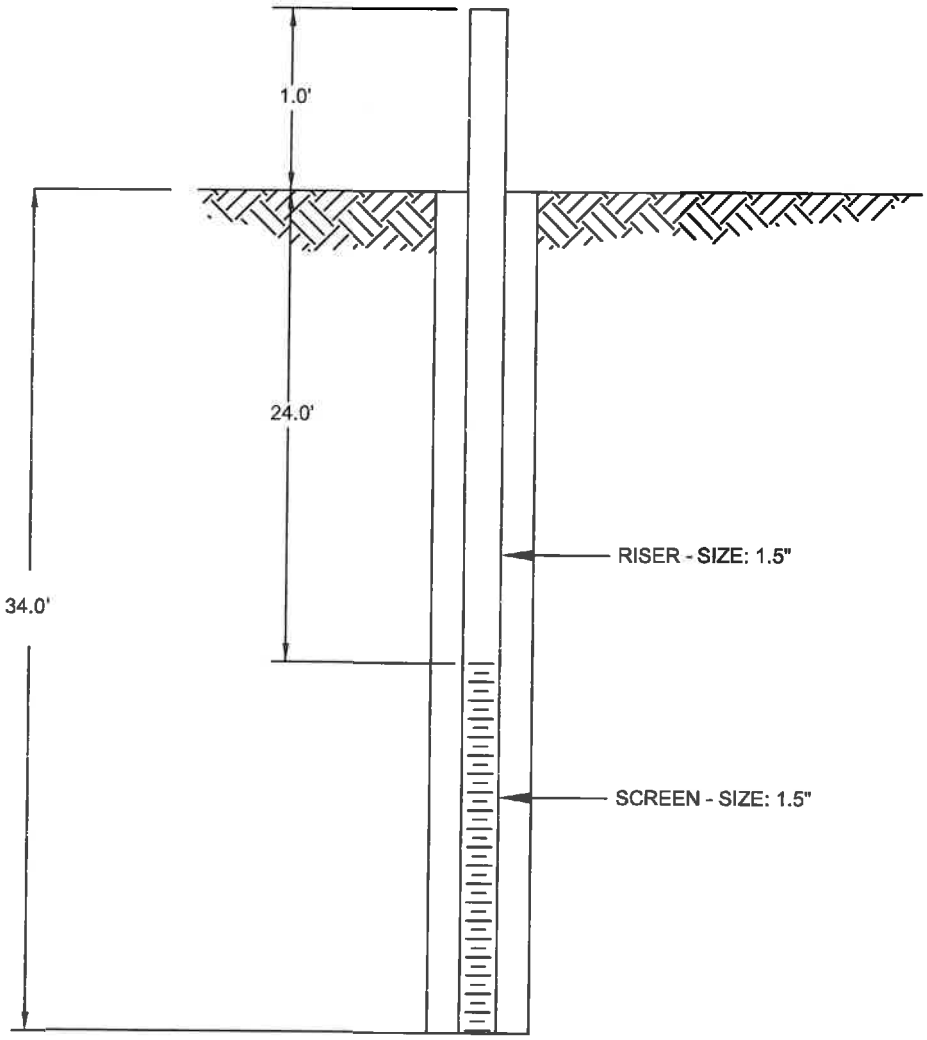
PROJECT: DELAND BORROW PITS

CLIENT: HSA GOLDEN DATE: 01/08/15

WELL NUMBER: B-3

INSTALLED BY: UNIVERSAL ENGINEERING SCIENCES, INC.

WELL DIAGRAM - NOT TO SCALE



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KEY TO BORING LOGS

SYMBOLS

SYMBOL	DESCRIPTION
N	No. of blows of a 140-lb weight falling 30 inches required to drive standard spoon 1 foot.
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
EOB	End Of Boring
BT	Boring Terminated
-200	Fines Content or % Passing N0. 200 Sieve
MC	Moisture Content
LL	Liquid Limit
PI	Plasticity Index
K	Coefficient of Permeability
O.C.	Organic Content
▽	Estimated seasonal high groundwater level
▼	Measured groundwater level at time of drilling

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Well-graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Well-graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
			CH	Organic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3-in. (75 mm) sieve.
** Use dual symbol (such as, SP-SM and SP-SC) for soil with more than 5% but less than 12% passing through No. 200 sieve.

RELATIVE DENSITY
(sand-silt)

Very Loose - Less Than 4 Blows/Ft.
Loose - 4 to 10 Blows/Ft.
Medium - 11 to 30 Blows/Ft.
Dense - 31 to 50 Blows/Ft.
Very Dense - More Than 50 Blows/Ft.

CONSISTENCY
(clay)

Very Soft - Less than 2 Blows/Ft.
Soft - 2 to 4 Blows/Ft.
Medium - 5 to 8 Blows/Ft.
Stiff - 9 to 15 Blows/Ft.
Very Stiff - 16 to 30 Blows/Ft.
Hard - More Than 30 Blows/Ft.

RELATIVE HARDNESS
(Limestone)

Soft - 100 Blows for more than 2"
Hard - 100 Blows for less than 2"

MODIFIERS

These modifiers provide our estimate of the amount of minor constituents (SILT or CLAY sized particles) in the soil sample.
Trace - 5% or less
With SILT or with CLAY - 6% to 11%
SILTY or CLAYEY - 12% to 30%
Very SILTY or Very CLAYEY - 31% to 50%

These modifiers provide our estimate of the amount of organic components in the soil sample.
Trace - 1% to 2%
Few - 3% to 4%
Some - 5% to 8%
Many - Greater than 8%

These modifiers provide our estimate of the amount of other components (Shell, Gravel, Etc.) in the soil sample
Trace - 5% or less
Few - 6% to 12%
Some - 13% to 30%
Many - 31% to 50%

APPENDIX B

LABORATORY TESTING PROCEDURES

DESCRIPTION OF LABORATORY TESTING PROCEDURES

LABORATORY PERMEABILITY TEST

The laboratory permeability test is a Falling Head Test that is performed on soil samples recovered from this site. The data recovered from this test are used to calculate Darcy's Coefficient of Permeability (k) of the soil.

WASH 200 TEST

The Wash 200 test is performed by passing a representative soil sample over a No. 200 sieve and rinsing with water. The percentage of the soil grains passing this sieve is then calculated.

ORGANIC CONTENT TESTS

The organic content test is performed by weighing a sample before and after placing in a high temperature oven which burns the organic material in the sample. The percent of organic material by weight is then calculated.

MOISTURE CONTENT DETERMINATION ASTM D-2216

Moisture content is the ratio of the weight of water to the dry weight of soil. Moisture content is measured by drying a sample at 105 degrees Celsius. The moisture content is expressed as a percent of the oven dried soil mass.

ATTERBERG LIMITS

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D-4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by as the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D-2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

CONSOLIDATION TESTING

A single selected portion of the undisturbed sample was extruded from the 3-inch diameter sample tube for consolidation testing. The selected sample was trimmed and confined into a stainless steel disc having a diameter of 2.5 inches and a height of 1 inch. The disc was then "sandwiched" between 2 porous stones, saturated and subjected to incrementally increasing loads. The resulting deformation of the sample within the steel disc was measured using a micrometer gauge.

APPENDIX C

GENERAL CONDITIONS
CONSTRAINTS AND RESTRICTIONS AND
IMPORTANT INFORMATION ABOUT YOUR
GEOTECHNICAL ENGINEERING REPORT

Universal Engineering Sciences, Inc.
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES

1.1 *Universal Engineering Sciences, Inc.*, ("UES"), has the responsibility for providing the services described under the Scope of Services section. The work is to be performed according to accepted standards of care and is to be completed in a timely manner. The term "UES" as used herein includes all of *Universal Engineering Sciences, Inc's* agents, employees, professional staff, and subcontractors.

1.2 The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product.

1.3 The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties.

1.4 **PURSUANT TO FLORIDA STATUTES §558.0035, ANY INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

SECTION 2: STANDARD OF CARE

2.1 Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made.

2.2 The Client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

2.3 Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the services are to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.

2.4 Should UES be retained to provide threshold inspection services under Florida Statutes §553.79, Client acknowledges that UES's services thereunder do not constitute a guarantee that the construction in question has been properly designed or constructed, and UES's services do not replace any of the obligations or liabilities associated with any architect, contractor, or structural engineer. Therefore it is explicitly agreed that the Client will not hold UES responsible for the proper performance of service by any architect, contractor, structural engineer or any other entity associated with the project.

SECTION 3: SITE ACCESS AND SITE CONDITIONS

Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any and all possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Proposal.

3.2 The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: SAMPLE OWNERSHIP AND DISPOSAL

4.1 Soil or water samples obtained from the project during performance of the work shall remain the property of the Client.

4.2 UES will dispose of or return to Client all remaining soils and rock samples 60 days after submission of report covering those samples. Further storage or transfer of samples can be made at Client's expense upon Client's prior written request.

4.3 Samples which are contaminated by petroleum products or other chemical waste will be returned to Client for treatment or disposal, consistent with all appropriate federal, state, or local regulations.

SECTION 5: BILLING AND PAYMENT

5.1 UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications.

5.2 Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts.

5.3 If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 6: OWNERSHIP AND USE OF DOCUMENTS

6.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES.

6.2 Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose.

6.3 UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report, during which period the records will be made available to the Client at all reasonable times.

6.4 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other party or used or relied upon by any such party without the express written consent of UES.

SECTION 7: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

7.1 Client warrants that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site.

7.2 Under this agreement, the term hazardous materials include hazardous materials (40 CFR 172.01), hazardous wastes (40 CFR 261.2), hazardous substances (40 CFR 300.6), petroleum products, polychlorinated biphenyls, and asbestos.

7.3 Hazardous materials may exist at a site where there is no reason to believe they could or should be present. UES and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. UES and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous waste.

UES agrees to notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client agrees to make any disclosures required by law to the appropriate governing agencies. Client also agrees to hold UES harmless for any and all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client recognizes that it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.

7.5 Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 8: RISK ALLOCATION

8.1 Client agrees that UES's liability for any damage on account of any breach of contract, error, omission or other professional negligence will be limited to a sum not to exceed $50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of $1,000,000.00 upon Client's written request at the time of accepting our proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $400.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance.

SECTION 9: INSURANCE

9.1 UES represents and warrants that it and its agents, staff and consultants employed by it, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 8, whichever is less. The Client agrees to defend, indemnify and save UES harmless for loss, damage or liability arising from acts by Client, Client's agent, staff, and other UESs employed by Client.

SECTION 10: DISPUTE RESOLUTION

10.1 All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to alternative dispute resolution (ADR) such as mediation or arbitration, before and as a condition precedent to other remedies provided by law, including the commencement of litigation.

10.2 If a dispute arises related to the services provided under this Agreement and that dispute requires litigation instead of ADR as provided above, then:

(a) the claim will be brought and tried in judicial jurisdiction of the court of the county where UES's principal place of business is located and Client waives the right to remove the action to any other county or judicial jurisdiction, and

(b) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, and other claim related expenses.

SECTION 11: TERMINATION

11.1 This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses.

11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records and reports.

SECTION 12: ASSIGNS

12.1 Neither the Client nor UES may delegate, assign, sublet or transfer their duties or interest in this Agreement without the written consent of the other party.

SECTION 13. GOVERNING LAW AND SURVIVAL

13.1 The laws of the State of Florida will govern the validity of these Terms, their interpretation and performance.

13.2 If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of this Agreement for any cause.

SECTION 14. INTEGRATION CLAUSE

14.1 This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein.

14.2 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.

CONSTRAINTS AND RESTRICTIONS

WARRANTY
'niversal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS
The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS
We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT
Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION
This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS
Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES
Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING
Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS
Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS
All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME
This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechncial Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

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- Rockledge
- Sarasota
- Tampa
- Tifton, GA
- West Palm Beach

March 9, 2015

Mr. James Golden
HSA Golden
11 Lake Gatlin Road
Orlando, FL 32806

Reference: **ADDITIONAL GROUNDWATER READINGS**
Deland Borrow Pits
Deland, Florida
UES Project No. 0430.1400181.0000 AND UES Report No. 129742A

Dear Mr. Golden:

Universal Engineering Sciences (UES) has obtained additional groundwater table readings for the borings performed at the Deland Borrow Pit. All groundwater readings are measured from the top of the existing installed piezometers.

The groundwater tables were measured at 39.9, 34.0 and 24.1 feet at Boring locations B-1, B-2 and B-3, respectively on Friday, March 6. 2015.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES

Jake Cochran E.I.
Project Engineer

Brian C. Pohl, P.E.
Branch Manager
P.E. Number 60216

BRIAN C. POHL LICENSE 60216 STATE OF FLORIDA PROFESSIONAL ENGINEER

Attachments

JC/BCP/cme

Universal Engineering Sciences, Inc.

GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES

1.1 *Universal Engineering Sciences, Inc.*, ("UES"), has the responsibility for providing the services described under the Scope of Services section. The work is to be performed according to accepted standards of care and is to be completed in a timely manner. The term "UES" as used herein includes all of *Universal Engineering Sciences, Inc's* agents, employees, professional staff, and subcontractors.

1.2 The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product.

1.3 The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties.

1.4 **PURSUANT TO FLORIDA STATUTES §558.0035, ANY INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

SECTION 2: STANDARD OF CARE

2.1 Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made.

2.2 The Client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

2.3 Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the services are to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.

2.4 Should UES be retained to provide threshold inspection services under Florida Statutes §553.79, Client acknowledges that UES's services thereunder do not constitute a guarantee that the construction in question has been properly designed or constructed, and UES's services do not replace any of the obligations or liabilities associated with any architect, contractor, or structural engineer. Therefore it is explicitly agreed that the Client will not hold UES responsible for the proper performance of service by any architect, contractor, structural engineer or any other entity associated with the project.

SECTION 3: SITE ACCESS AND SITE CONDITIONS

3.1 Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any and all possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Proposal.

3.2 The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: SAMPLE OWNERSHIP AND DISPOSAL

4.1 Soil or water samples obtained from the project during performance of the work shall remain the property of the Client.

4.2 UES will dispose of or return to Client all remaining soils and rock samples 60 days after submission of report covering those samples. Further storage or transfer of samples can be made at Client's expense upon Client's prior written request.

4.3 Samples which are contaminated by petroleum products or other chemical waste will be returned to Client for treatment or disposal, consistent with all appropriate federal, state, or local regulations.

SECTION 5: BILLING AND PAYMENT

5.1 UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications.

5.2 Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts.

5.3 If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 6: OWNERSHIP AND USE OF DOCUMENTS

6.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES

6.2 Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose.

6.3 UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report, during which period the records will be made available to the Client at all reasonable times.

6.4 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other party or used or relied upon by any such party without the express written consent of UES.

SECTION 7: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

7.1 Client warrants that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site.

7.2 Under this agreement, the term hazardous materials include hazardous materials (40 CFR 172.01), hazardous wastes (40 CFR 261.2), hazardous substances (40 CFR 300.6), petroleum products, polychlorinated biphenyls, and asbestos.

7.3 Hazardous materials may exist at a site where there is no reason to believe they could or should be present. UES and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. UES and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous waste.

7.4 UES agrees to notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client agrees to make any disclosures required by law to the appropriate governing agencies. Client also agrees to hold UES harmless for any and all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client recognizes that it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.

7.5 Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 8: RISK ALLOCATION

8.1 Client agrees that UES's liability for any damage on account of any breach of contract, error, omission or other professional negligence will be limited to a sum not to exceed $50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of $1,000,000.00 upon Client's written request at the time of accepting our proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $400.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance.

SECTION 9: INSURANCE

9.1 UES represents and warrants that it and its agents, staff and consultants employed by it, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 8, whichever is less. The Client agrees to defend, indemnify and save UES harmless for loss, damage or liability arising from acts by Client, Client's agent, staff, and other UESs employed by Client.

SECTION 10: DISPUTE RESOLUTION

10.1 All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to alternative dispute resolution (ADR) such as mediation or arbitration, before and as a condition precedent to other remedies provided by law, including the commencement of litigation.

If a dispute arises related to the services provided under this Agreement and that dispute requires litigation instead of ADR as provided above, then:

(a) the claim will be brought and tried in judicial jurisdiction of the court of the county where UES's principal place of business is located and Client waives the right to remove the action to any other county or judicial jurisdiction, and

(b) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, and other claim related expenses.

SECTION 11: TERMINATION

11.1 This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses.

11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records and reports.

SECTION 12: ASSIGNS

12.1 Neither the Client nor UES may delegate, assign, sublet or transfer their duties or interest in this Agreement without the written consent of the other party.

SECTION 13. GOVERNING LAW AND SURVIVAL

13.1 The laws of the State of Florida will govern the validity of these Terms, their interpretation and performance.

13.2 If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of this Agreement for any cause.

SECTION 14. INTEGRATION CLAUSE

14.1 This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein.

14.2 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.

ATTACHMENT J

Reclamation Plan
Deland Borrow Pit

1.0 Timing

Reclamation and closure of the excavation shall commence immediately following completion of each approved phase of the activities. Reclamation shall be completed within six months of commencement, and be in accordance with Volusia County Code 72-293(15), and the Florida Department of Environmental Protection.

2.0 Phasing

The operation phasing of excavation of Deland Borrow pit shall proceed in four phases from north to south. At no time shall the side slope of the working face exceed 3H: 1V. The pit will be excavated approximately 30 feet below existing grade.

In completed areas of the borrow pit, concurrent reclamation will occur no more than six months after a slope is exposed and the excavation has passed further into the next Phase of the pit. The finished slopes will be dressed to a slope of 3H:1V and sodded to stabilize the slopes for erosion and sediment control.

3.0 Reclamation Specifications

3.1 Reclamation

Reclamation work shall be performed as shown and specified on the construction plans.

Waste Management or their designee will perform all grading within the borrow pit limits. All irregularities and low areas shall be fine graded with onsite soil material. The owner shall maintain grades, profiles, and contours as indicated on the approved final grading plan. The owner shall protect and maintain finish graded areas from traffic and erosion. In the event that the site grading is eroded and/or damaged prior to final acceptance, the owner shall repair and reestablish the grades in accordance with the construction plans.

3.2 Seeding and Mulching

Seeding and mulching shall consist of establishing a dense strand of grass throughout each closed phase by seeding and mulching. Included with this task are fertilizing, watering, and periodic maintenance mowing as required to produce a healthy strand of grass. Seeding work shall be performed only after planting and other work affecting ground surface has been completed unless the owner is specifically requested to do otherwise for purposes of stabilization, etc., prior to project completion.

3.3 Materials

Seeds and mulch materials shall conform to the following:

1. **Seed.** Fresh, clean, new crop mixture composed of the following variety and proportions:

Blend	Parts	Purity	Misc. Germination
Argentine, Bahia, or equivalent	100 Parts	75 percent	85 percent

Rate shall be 120 pounds per acre (Refer to Index No. 104, *Roadway and Traffic Design Standards*, Florida Department of Transportation, 2006).

2. **Mulch.** Dry mulch, free from mature seeds, stalks, or roots of noxious weeds. Dry mulch shall be straw or hay consisting of oat, rye, or wheat straw. Approximately two inches of the mulch material shall be applied uniformly over the seeded area.

3. **Fertilizer.** Granular, non-burning product containing six percent nitrogen, six percent phosphoric acid, and six percent potash by weight, and spread uniformly at a rate of 220 pounds per acre. Fertilizer shall be mixed with the soil to a depth of +/- four inches.

4. **Watering.** The seeded area shall be watered so as to provide optimum growth conditions for the establishment of grass. The water used in the grassing operations may be obtained from any approved springs, pond, lake, stream, or municipal water stream. The primary source of irrigation water will be the onsite well. The water shall be free of excess harmful chemicals, acids, alkalis, or any substance which might be harmful to plant growth or obnoxious odors to traffic. Salt water shall not be used.

The owner shall provide a uniform dense stand of grass by watering and maintaining seeded areas after closure or until final acceptance by the County, whichever is greater.

3.4 Security

A six-foot security fence will be maintained surrounding the entire property to prevent public access to the closed facility.

4.0 Tree Preservation

All existing trees within the borrow pit setback areas are to remain and be preserved. Type B buffer shall be planted along the Richfern Road side, where the existing treed buffer is not visually opaque.

5.0 Final Survey

A final topographic survey shall be performed by a Florida Registered Land Surveyor to verify that the final contours and elevations of the facility are in accordance with the plans as approved in the permit and be submitted to the County within 180 days after closure.

6.0 Final Use and Long Term Care

The borrow pit will be seeded with permanent grass cover after completion of excavation activities, and used for open space or agricultural purposes by the property owner. Long term care for the site will include maintaining the landscaping, security facilities, and erosion control.

6.1 Maintenance

Regular maintenance of all reclaimed areas shall be performed by the operator or designated agent in order to assure that the reclamation standards are achieved and the approved reclamation plan is accomplished. The maintenance shall include monitoring for a minimum of five years after planting, replacement of any planted areas that fail to survive in accordance with the established standards, the removal of non-native species that have not been approved by the county, and the maintenance of all required slopes, embankments, ponds, fences, gates, signs, and access roads.

6.2 Revegetation

a. Revegetation of all disturbed areas shall be conducted in a manner so as to achieve permanent revegetation which shall minimize soil erosion and surface water runoff, conceal the effects of surface mining, and recognize the requirements for appropriate habitat for wildlife. Should washes, rills, gullies, or the like, develop after revegetation and before a five year maintenance period, such eroded areas shall be repaired, the slopes stabilized, and revegetated.

b. Revegetation efforts for sequential phases shall commence within 30 days after completion of the subject phase regrading and shall be completed for that phase within 120 days.

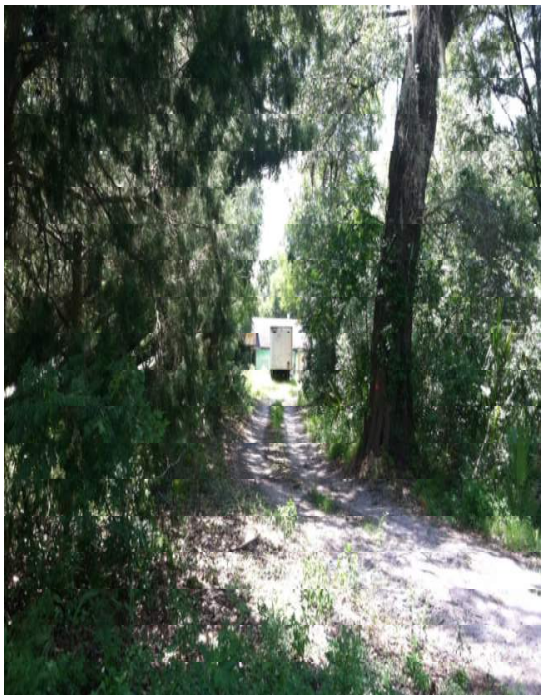
6.3 Reclamation Bond

The applicant will provide a performance bond for the full amount of the estimated cost of reclamation, upon Volusia County request.

ATTACHMENT K

LOOKING NORTH ON RICHFERN ROAD
PROPERTY ON THE LEFT

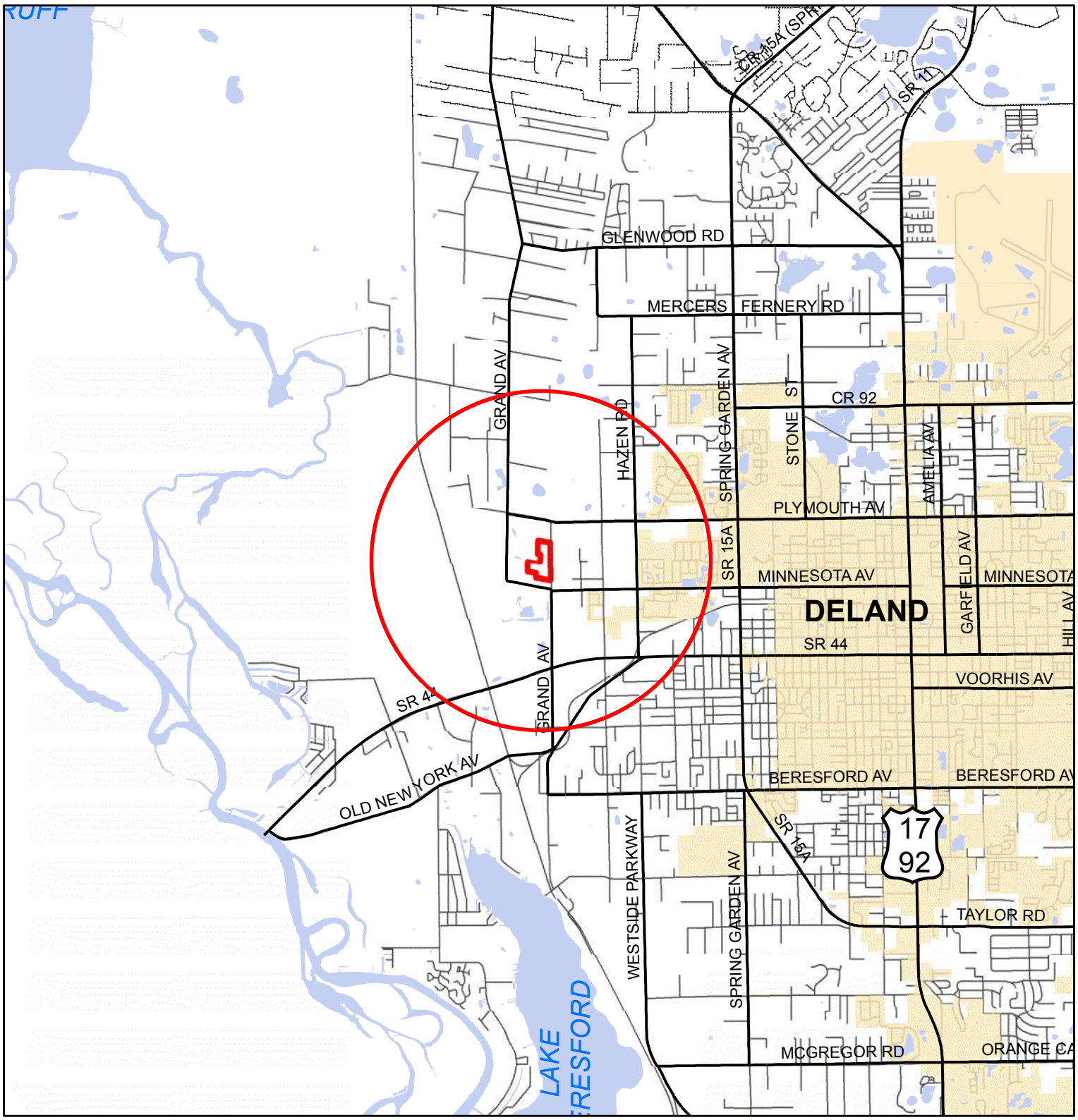
LOOKING SOUTH ON RICHFERN ROAD
PROPERTY ON THE RIGHT



INTERIOR VIEW

INTERIOR VIEW

ATTACHMENT L



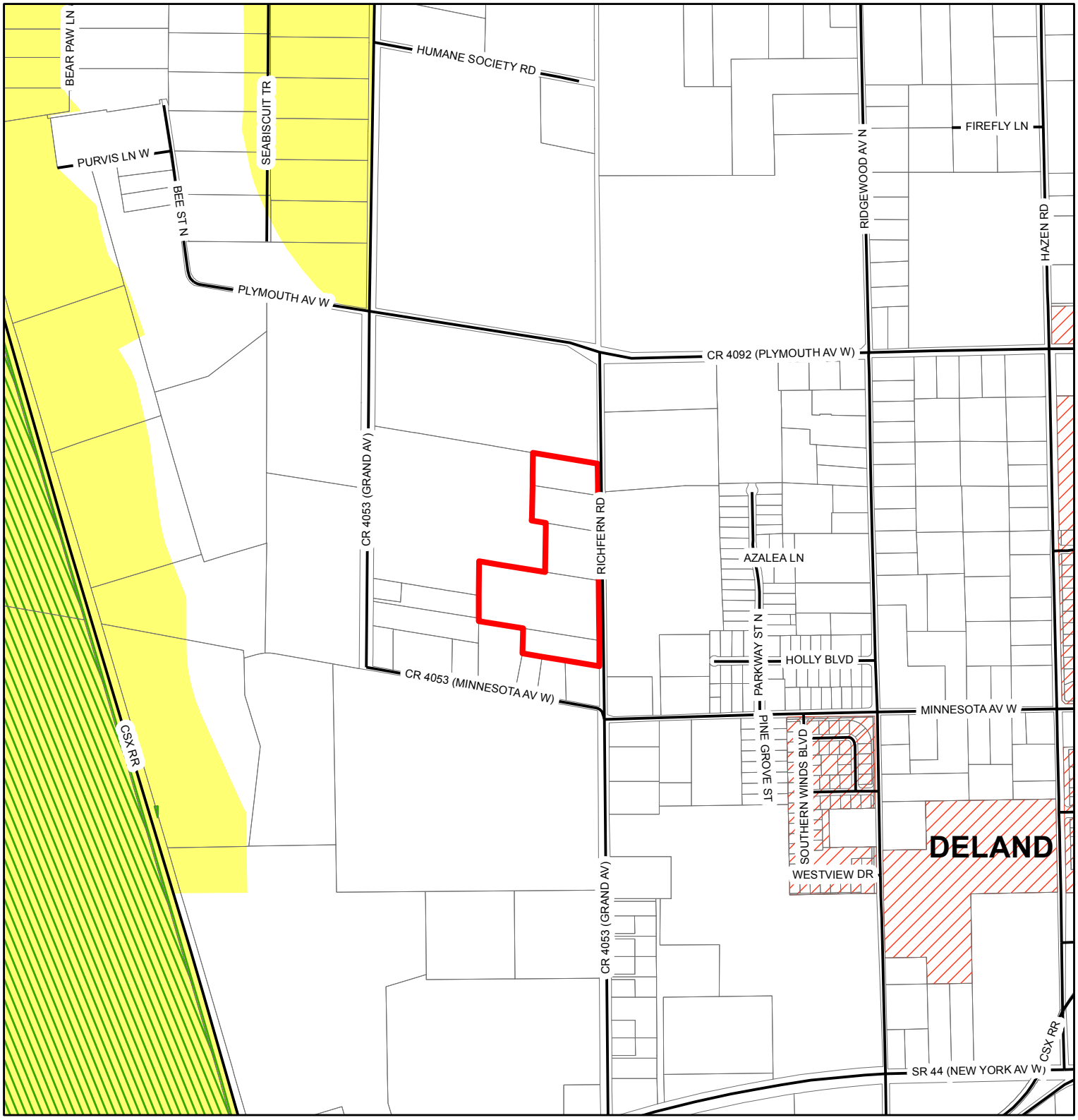
REQUEST AREA LOCATION

REQUEST AREA

1 " = 1 MILE

SPECIAL EXCEPTION

CASE NUMBER S-15-040



ECO/NRMA

1 inch = 1,000 feet

SPECIAL EXCEPTION

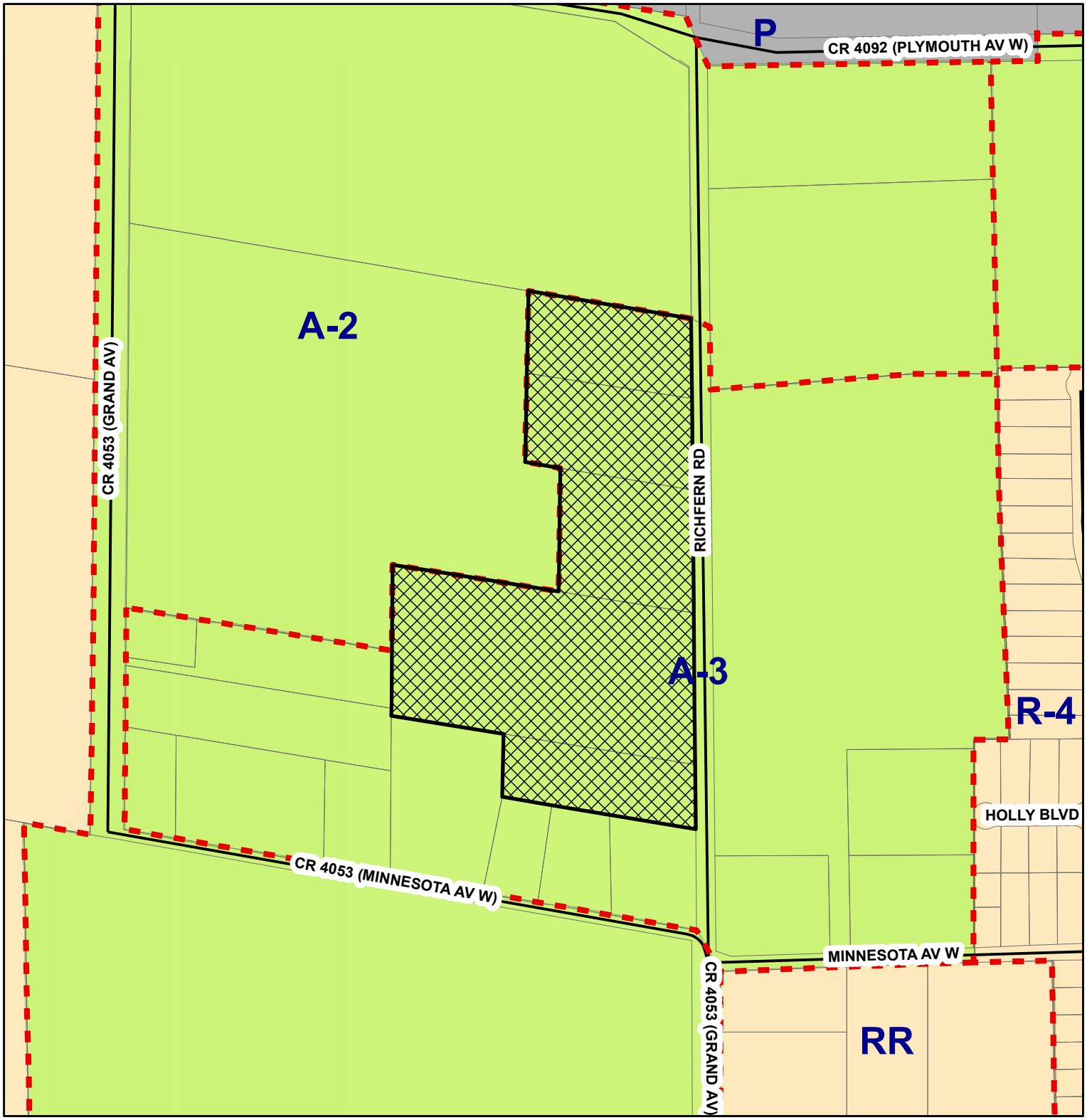
REQUEST AREA ECO NRMA INCORPORATED

CASE NUMBER
S-15-040

AERIAL 2012

1 inch = 400 feet

SPECIAL EXCEPTION CASE NUMBER S-15-040

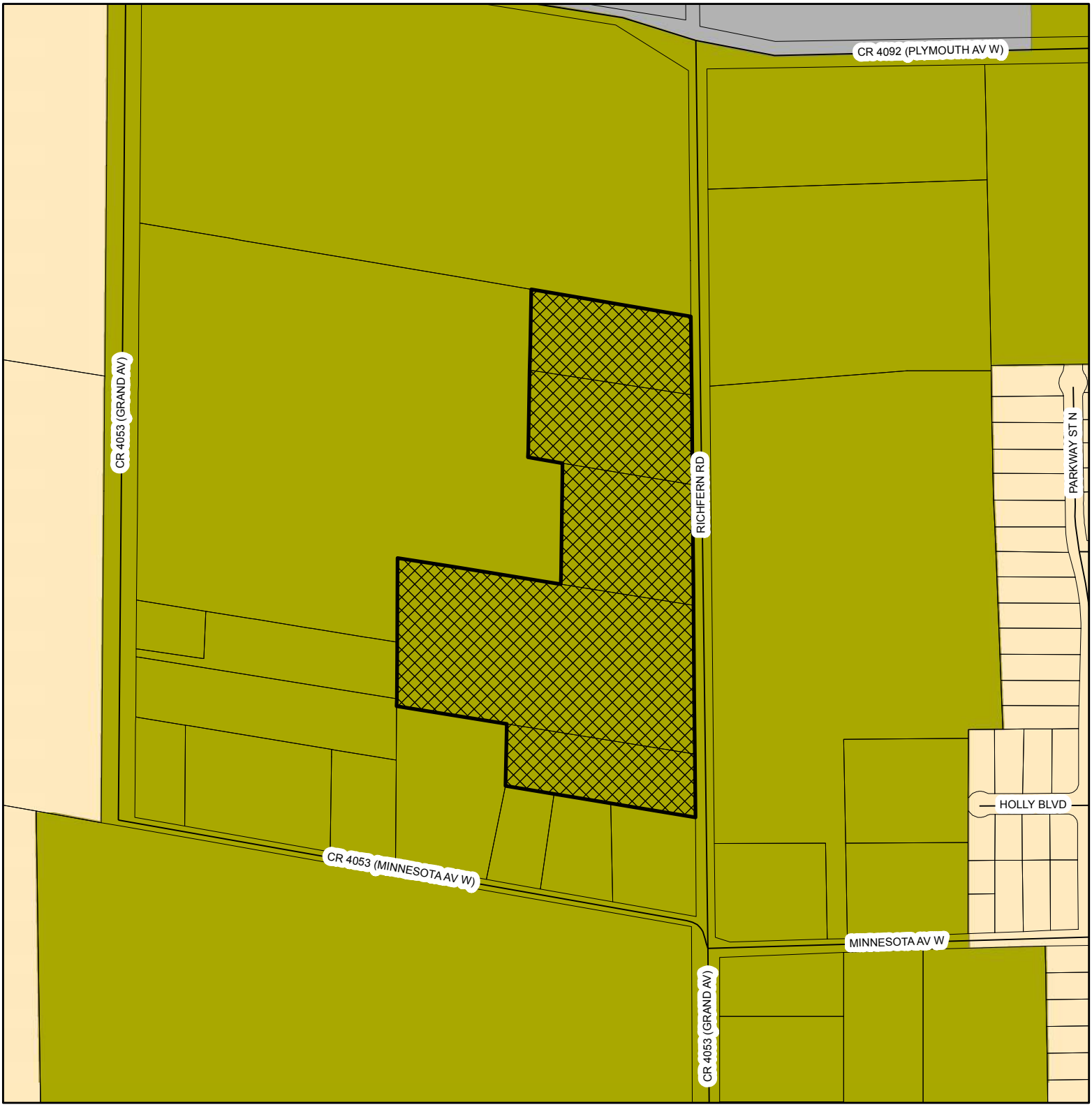


ZONING CLASSIFICATION

AGRICULTURAL
RESIDENTIAL
PUBLIC
REQUEST AREA

1 inch = 400 feet

SPECIAL EXCEPTION CASE NUMBER S-15-040



FUTURE LAND USE DESIGNATION

1 inch = 400 feet

PUBLIC/SEMI PUBLIC

URBAN LOW INTENSITY

RURAL

REQUEST AREA

SPECIAL EXCEPTION CASE NUMBER

N

S-15-040