

June 2, 2008

ARRIVED IN
PALATKA

HNTB

JUN 06 2008

REGULATORY
INFORMATION MGT.

Ms. Ruth E. Grady, E.I.
Department of Water Resources
St. Johns River Water Management District
975 Keller Road
Altamonte Springs, FL 32714

RECEIVED

JUN 4 2008

PDS
ALTAMONTE SVC. CTR

Re: South Hancock Road
US 27 to Hartwood Marsh Road
Application Number 40-069-76466-2
Response to Request for Additional Information

76466-2

76466-2

Dear Ms. Grady:

Please find enclosed the following revised documents to the South Hancock Road Environmental Resource Permit Application.

- Three (3) copies of the Construction Plans
- Three (3) copies of the Response to Request for Additional Information

We offer the following responses to your comments.

Comment 1: Please be advised that the proposed Pond I ultimately discharges (via the adjacent wetland system) to Lake Louisa which is considered an Outstanding Florida Water (OFW). The plans and calculations submitted indicate that both the treatment and permanent pool volumes provided do not account for the additional 50% volume as per the OFW criteria.

Please note that, in accordance with the current OFW stormwater treatment systems, the proposed treatment volume is found by taking the total site acreage multiplied by 1.0 inches of runoff or the total impervious surface multiplied by 2.5 inches, which ever is greater, plus:

- An additional fifty percent of the applicable treatment volume specified above, and an additional fifty percent of the applicable permanent pool volume specified in 40C-42.026(4)(c) or (d) 2., or:
 - Treatment pursuant 40C-42.026 (1), (2), (3), or (5), prior to discharging into a wet detention pond designed pursuant to 40C-42.026 (4)(a)-(j).
- a. Accordingly, please provide revised plans and calculations demonstrating that the proposed wet detention *Pond I* will retain and recover the required pollution abatement volume of stormwater pursuant to District OFW stormwater rules.
 - b. The plans submitted indicate that the proposed wet detention *Pond I* will be susceptible to short-circuiting. In particular, staff has concerns regarding the location of the drainage structure *S-112* mitered end section with respect to outfall structure *S-127*.

Please note that the alignment and locations of inlets should be designed to maximize flow paths in the wet detention pond. The proposed treatment pond should be designed so that the flow path through the pond's permanent pool volume (i.e., from the inlet to the outlet) has an average length to width ration of at least 2:1. By locating the drainage structure *S-112* mitered end section in close proximity to the *S-127* outfall structure, as proposed, will result in an effectively short-circuited treatment system.

Have you considered relocated the drainage structure *S-112* mitered end section to a point as distant as possible from the *S-127* outfall structure? Please clarify, and revise the plans as appropriate, for consistency with subparagraph 40C-42.026(5)(f), F.A.C.

- c. Demonstrate that the proposed *Pond I* can effectively operate under one of the tailwater conditions specified in subsection 40C-42.025(7), F.A.C.
 - In your particular case, this tailwater condition is the tailwater condition of the immediate receiving system (i.e., adjacent wetlands) in which the bleed down system discharges during the recovery of the treatment volume.

- Provide the supporting documentation, such as vegetative and biological indicators, used in estimating the post-development seasonal high water elevations within the adjacent wetlands.

Please note that, in order to provide reasonable assurance that the proposed *Pond I* will function properly and not result in a drawdown of the adjacent wetland system, the pond should be controlled at or above the mean annual seasonal high water level of the adjacent wetland and at or above the seasonal high groundwater table elevation.

Submit any revised plans and/or calculations, as appropriate. [40C-4.301(1)(a)(b)(c)(e)(i); 40C-42.025(7); 40C-42.026(4)(a)(b)(c)(d) 2.a. (h)(j)(k) 1.; F.A.C.]

Response: a. An additional 50% of the applicable treatment volume and an additional 50% of the permanent pool volume was added to the required volumes respectively. Please see the revised drainage calculations located in the appendix.

b. The mitered end section for S-112 has been relocated to outfall from S-115. The outfall structure (S-127) has been relocated equidistant between the mitered end sections of S-111 and S-115. Please see the revised Construction Plans.

c. The control elevation (98.1 feet) of the outfall structure is set at the 25 year/ 24 hour stage. The average elevation of the wetland (approximately 97.5 feet) is below the control elevation of the outfall structure. The normal water level is below the wetland elevation. Please see the revised drainage calculations and Construction Plans.

Comment 2: Taking into account the information presented in Item No. 1 above, provide revised calculations demonstrating that the storage capacity within *Pond I* will be restored within 14 days following the design (25-year, 24-hour) storm event. P40C-4.301(1)(a)(b)(c)(i), F.A.C.]

Response: The pond is designed as a wet detention pond; therefore the 14 day recovery is not applicable. The pond recovers the treatment volume.

Comment 3: It appears that the outfall from the proposed *Pond 2* system will create a point discharge of stormwater runoff into the adjacent wetlands. As such, please revise the plans to show that the proposed outfall will discharge treated stormwater runoff

through sheetflow, as historically occurred. A spreader swale may be utilized to obtain the historic sheetflow. [40C-4.301(1)(i), F.A.C.]

Response: A spreader swale has been added to the outfall for Pond 2 to allow the discharge to sheetflow to the adjacent wetlands.

Comment 4: Please address and/or provide the following with respect to *Sheet Nos. 75, 76, 79, 80, 82, 83, 84 and 85* of the set of construction plans submitted)

- a. The *Section A-A* and *B-B* details (*Sheet No. 75*) indicate a proposed 2:1 (horizontal:vertical) side slope ratio from elevation 94.0 feet to 96.0 feet and a 4:1 (horizontal:vertical) side slope ratio from elevation 96.0 feet to 101.0 feet for *Pond 1*. This appears to be inconsistent with the plan view, which indicates a proposed 4:1 (horizontal:vertical) side slope ratio from the elevation 94.0 feet to 101.0 feet. Please clarify and revise as appropriate, for accuracy with the proposed conditions.
- b. The *Pond 1* bottom elevation (94.0 feet) utilized in the calculations and delineated on *Sheet No 75*, appears to be inconsistent with that (94.5 feet) indicated by the vertical scale for *STA 105+00.00* and that (92.0 feet) indicated by the vertical scale for *STA 106+00.00* on *Sheet No. 79*. Please verify and revise where appropriate, for accuracy with the post development condition.
- c. The *Pond 1* bottom elevation (94.0 feet) utilized in the calculations and delineated on *Sheet No. 75*, also appears to be inconsistent with those (less than 90.0 feet) indicated by the vertical scale for both *STA 107+00.00* and *STA 108+00.00* on *Sheet No. 80*. Please clarify and revise where appropriate, for accuracy with the post development condition.
- d. Revise the *Section A-A* and *B-B* details (*Sheet No. 76*) to indicate that non-muck grown sod will be used for stabilization of the proposed *Pond 2*. Please note that the placement of muck-grown sod may impede the percolation of runoff into the ground and is, therefore, not recommended for the stabilization of the retention pond bottoms. Provide notes, as necessary, for clarification.
- e. Please revise the vertical scales on *Sheet Nos. 82, 83, and 84*, to accurately reflect proposed *Pond 2* bottom elevation of 92.8 feet.
- f. Revise *Sheet No. 85* include the invert elevations for the proposed *Structure Nos. S-127 and S-238* outfall conveyance pipes.

[40C-4.301(1)(a)(b)(c)(e)(i); 40C-42.025(4); 40C-42.026(1)(4), F.A.C.]

- Response:*
- a. The plan view for Pond 1 (previously Sheet 75, currently Sheet 81) has been corrected to show 1:2 (vertical:horizontal) side slopes from elevation 94.0 to elevation 96.0.*
 - b. The cross sections for Pond 1 (previously Sheet 79, currently Sheet 85) have been revised to show the correct elevations.*
 - c. The cross sections for Pond 1 (previously Sheet 80, currently Sheet 86) have been revised to show the correct elevations.*
 - d. The Applicant's Handbook does not specifically state that non-muck grown sod cannot be used. However, notes have been added (previously Sheet 76, currently Sheet 82) that require the contractor to remove construction material and to use non-muck grown sod.*
 - e. The sheets (previously Sheets 82, 84, and 84; currently Sheet 87, 88, and 89 respectively) have been revised to show the Pond 2 bottom elevation of 95.8.*
 - f. The sheet (previously Sheet 85, currently Sheet 91) has been revised to show the invert elevations for S-127 and S-238 outfall conveyance pipes.*

Comment 5: Section 7.3 of the Drainage Calculations submitted states, in part, "In the past development condition, the Basin 3 area consists of the roadway (Sta. 426+20 to Sta. 457+20) on the right hand side of the road. Basin 3 is included in the Basin 2 calculations for Hartwood Marsh Road (Permit Application No. 40-069-114354-1).

In the past development condition, the basin area contributing to Pond 2 (Hartwood) consist of Hartwood Marsh Road, South Hancock Road and offsite basins directly adjacent to the road. Pond 2 (Hardwood) is considered a separate basin. Pond 2 is located on the future First Baptists Church of Clermont property. The County has designed this pond to accommodate the runoff from the First Baptist church site assuming that the future development will be no more than 80% impervious.

Water quality treatment and attenuation of the 25 year/96 hour runoff volume will be provided in Pond 2 (Hartwood). Pond 2 is designed as a wet detention pond. The pond control structure consists of a ditch bottom inlet with a bleed down orifice and the grate set above the required 25 year/96 hour attenuation volume. The discharge from this pond is limited to the calculated runoff rate from the church property as included in the Regency Hills (Permit No. 40-069-82413-2) drainage system immediately south of the pond."

Please note that, in accordance with the current stormwater treatment criteria for wet detention systems, the proposed treatment volume is calculated by taking the greater of the total site acreage multiplied by 1.0 inches of runoff or the total impervious surface multiplied by 2.5 inches. Accordingly, please clarify.

- a. Provide revised water quality calculations demonstrating that the *Hartwood Marsh Road Pond 2* treatment system will retain and recover the required pollution abatement volume of stormwater pursuant to District stormwater rules.
- b. Provide the supporting construction plans for the proposed *Hardwood Marsh Road Pond 2*. This information is needed to verify the parameters utilized in the water quality and quantity analyses.
- c. Provide revised calculations demonstrating that the post-development discharge rates and volumes from *Hartwood Marsh Road Pond 2* will not exceed those previously established for the Regency Hills system. Include all supporting information.

[40C-4.301(1)(a)(b)(c)(e)(i), F.A.C.]

- Response:*
- a. *Hartwood Marsh Road Pond 2 has been revised to a dry retention pond. Please see the Appendix for the revised calculations.*
 - b. *Hartwood Marsh Road Pond 2 has been revised to a dry retention pond. Please see the Construction Plans for the revised pond detail sheets.*
 - c. *This comment is no longer applicable because the connection to Regency Hills has been eliminated from the project.*

Comment 6: It appears that the outfall from the two proposed 24-inch RCP bypass pipes (approximate STA 402+00) will create a point discharge of stormwater runoff into the adjacent wetlands. As such, please revise the plans to show that the proposed outfall will discharge treated stormwater runoff through sheetflow, as historically occurred. A spreader swale may be utilized to obtain the historic sheetflow. [40C-4.301(1)(i), F.A.C]

Response: *A spreader swale has been added to allow the runoff to sheetflow to the wetland.*

Comment 7: Please address and/or provide the following with respect to the *Interconnected Channel and Pond Routing Model (ICPR)* water quantity analyses submitted:

- a. It appears that for drop structure *Pond 1*, the *Upstream Invert (ft)* elevation input parameter (97.900 feet) does not appear to be consistent with that (97.000 feet) specified on the set of construction plans.
- b. It appears that *Weir 1 of 3 for Drop Structure POND 1* was modeled with an invert elevation of 100.40 feet. This appears to be inconsistent with *Sheet Nos. 75 and 85* of the set of construction plans submitted, which indicate an invert elevation of 100.04 feet.

Accordingly, please clarify each of the above. Where applicable, revise the *POND 1* routing analyses for accuracy with the proposed condition. Submit any revised plans and/or calculations.

[40C-4.301(1)(a)(b)(c)(d)(i); 40C-42.025(8), F.A.C.]

Response: a. *The invert elevation for the drop structure has been revised to show 97.00 feet. Please see the Appendix for the revised calculations.*

b. *The invert elevation for Weir 1 of 3 has been revised to show 100.40 feet. Please see the Construction Plans (previously Sheets 75 and 85; currently Sheets 81 and 91 respectively) for the revised sheets.*

Comment 8: Please provide documentation from the appropriate entity allowing the connection of the *Hartwood Marsh Road Pond 2* overflow into the existing Regency Hills surface water management system. Be advised that the previously permitted master system did not include the overflow discharge from the additional basin areas.

This documentation is needed in order to verify District presumptive pursuant to 40C-42.025 (6) *Design and Performance Criteria for Stormwater Management Systems*, which states that the *applicant must obtain sufficient legal authorization as appropriate prior to permit issuance for stormwater management systems which propose to utilize offsite areas to satisfy the requirements in subsection 40C-42.023(1), F.A.C.* [40C-4.3-1(1)(i); 40C-42.025(6); 40C-42.026(4), F.A.C.]

Response: *This comment is no longer applicable because the connection to Regency Hills was eliminated from the project.*

Comment 9: Please provide a draft copy of the joint use agreement between Lake County and the First Baptist Church of Clermont. Clearly identify, in the agreement, which components of the *Hartwood Marsh Road Pond 2* treatment system each entity will maintain. [40C-42.027(1)(2); 40C-42.025(6), F.A.C.]

Response: Lake County will utilize the eminent domain process to obtain drainage easements and right-of-way. The County will provide the pertinent documentation prior to construction.

Comment 10: District staff needs to be able to determine the location of all wetlands and other surface waters within the project area and the extent of work proposed within wetlands and other surface waters. During a visit to the project site on March 25, 2008, staff could not locate the wetland flags in the field. Note also that an environmental report by Lotspeich and Associates does not depict the accurate location of the proposed ponds for the road expansion in relation to existing wetlands (e.g., north end of Pond 2). Please address the following:

- a. Reestablish the wetland flags and contact Gayle Albers at 407-659-4882 to set up a site inspection. Provide a survey depicting the wetland flag numbers at a scale that is legible at the time of inspection.
- b. Provide an aerial map clearly labeling the onsite wetlands and other surface waters (e.g., Wetland 1) and all associated impacts (e.g., Impact 1), as applicable.
- c. Describe how any temporarily disturbed areas will be revegetated after the proposed work is completed. Please note that the planting of non-native vegetation within these areas could adversely affect surrounding wetland by encouraging the spread of nuisance species.
- d. Revise the construction plans to clearly depict the extent of wetlands and other surface waters within and adjacent to the project area on a plan view. Crosshatch any proposed impact areas, as applicable.
- e. Revise the application form (Section A, C, and E, Tables 1-3), as necessary:
 - Total existing onsite wetland and other surface water acreages;
 - Proposed impact acreages for each wetland and other surface water;
 - Proposed unaffected acreages for each wetland and other surface water;
 - Natural community type (e.g., FLUCCS code or list abundant canopy and groundcover species) of each wetland and other surface water;
 - Type of impact (temporary or permanent) to each wetland and other surface water.

[40C-4.301 (1); 40C-4.302(1)(a), F.A.C.]

- Response:*
- a. Please refer to the attached response prepared by Lotspeich and Associates, Inc.*
 - b. There are no impacts to the onsite wetlands or other surface waters. Please refer to the Construction Plans (Sheets 2, 3, 4, and 5) for the labeled wetlands.*
 - c. Please refer to the attached response prepared by Lotspeich and Associates, Inc.*
 - d. There are no impacts to the onsite wetlands or other surface waters. Please refer to the Construction Plans (Sheets 2, 3, 4, and 5) for the labeled wetlands.*
 - e. Please refer to the attached response prepared by Lotspeich and Associates, Inc.*

Comment 11: The submittal for the proposed road project does not include details on how you intend to address secondary impacts to wetlands or other surface waters that may be caused during and after construction. Although the environmental report by Lotspeich and Associates, Inc. states that all direct and secondary impacts have been avoided, the locations of the retention ponds associated with the road extension are not accurately depicted (e.g., Figure 5). In addition, construction of the gravity wall appears to be within 10 feet of onsite wetlands (e.g. Plan Sheet 16). An applicant must provide reasonable assurance that a regulated activity will not cause unacceptable adverse secondary impacts to water resources (12.2., ERP A.H.). Reasonably expected activities (e.g., landscaping maintenance, increased traffic, litter) will diminish the ecological functions provided by the wetlands by destroying wildlife habitat and introducing nuisance plant species.

Pursuant to subsection 12.2.7 (a), ERP A.H., on way to demonstrate that the proposed project will not have adverse secondary impacts to water resources is to establish a 15-foot minimum, 25-foot average undisturbed upland buffer landward of wetlands and other surface waters. The present design does not specify upland buffers on the construction plans or clearly demonstrate that the proposed works are sufficiently distant from offsite water resources.

Please indicate how you will demonstrate that the proposed project will not have adverse unacceptable secondary impacts to water resources. Alternatively, secondary impacts will be assessed. Provide the linear extent of all impacted

wetlands where adverse secondary impacts are expected to occur. Additional mitigation may be required to offset these impacts.

[40C-.301(1)(d)(e)(f)(3); 40C-4.302(1)(a)2.,7.,(b), F.A.C.]

Response: Please refer to the attached response prepared by Lotspeich and Associates, Inc.

Comment 12: Should you choose to utilize upland buffers as a recourse for addressing secondary impacts to water resources, you must provide reasonable assurance that the upland buffers and unaffected onsite wetlands will remain in an undisturbed condition and that the buffers it will be sufficient to prevent secondary impacts to water resources in perpetuity. Pursuant to Subsection 12.2.7 (a), Applicant's Handbook, one way to provide such assurance is to place the upland buffer and wetland areas under a conservation easement (CE) dedicated to the District that will adequately preserve buffer structure and function. If you choose to establish a conservation easement, please specify the acreage for the preservation of onsite wetlands and uplands separately in the supporting documentation.

Please submit a draft conservation easement that is consistent with Section 704.06, Florida Statutes, and that contains restrictions ensuring the ecological viability of the site. The draft easement must (i) identify the grantor of the easement and include an appropriate signature block for the grantor, (ii) include a "Return Recorded Original to:" block in the top left hand corner of the first page of the conservation easement indicating the recorded original easement should be returned to the Office of the General Council, St. Johns River Water Management District, 4049 Reid Street, Palatka, Florida 32177-2529, and (iii) the permit number for the proposed project in entities or individuals, a draft conservation easement must be submitted for each mitigation area owned by each entity or owner. Be sure to attach Exhibits. Additionally, please submit the following documentation in support of each conservation easement:

- a) Proof of ownership of the real property described in the conservation easement area by the grantor. Examples of such documents include, but are not limited to, an attorney's title opinion, title certificate, owners and encumbrance report or warranty deed.
- b) An attorney's title opinion, title certificate, or ownership and encumbrance report to demonstrate that the conservation easement area is not subject to any encumbrance(s) (e.g. utility

easements and right of way easements) which may impair the ecological value of the area subject to the conservation easement. If encumbrances exist or will exist at the time the conservation easement is recorded, please provide a copy of the instrument creating each such encumbrance and depict the location of the encumbrance within the conservation easement area on the mitigation plans and/or surveyor's sketch.

- c) Is the property that will be encumbered by a conservation easement subject to a mortgage? If so, please submit a draft Consent and Joinder of Mortgagee containing the name of the mortgagee, the title of the mortgage document(s), including any amendments and UCC financing statements, and the official records book and page number(s) of the public records of the county where the mortgage is recorded. The Consent and Joinder of Mortgagee will need to be executed by the lending institution in the presence of two witnesses.
- d) The conservation easement must be executed by an individual who has the authority to transfer interests in the real property being encumbered by the conservation easement. Therefore, please identify the person who will be executing the easement on behalf of the grantor. If the grantor is a business entity (corporation, limited liability company, limited partnership, etc.), please identify the name and title or position of the signatory in the signature block appearing at the end of the conservation easement. Please also submit documentation of the signatory's authority to convey property interests on behalf of the business entity. Examples of such documents include, a corporate resolution, partnership or limited liability company affidavit, or partnership/operating agreement.
- e) The draft conservation easement should include as an attachment (1) a metes and bounds legal description of the area to be placed under conservation easement, and (2) a surveyor's sketch with the easement area clearly delineated and labeled, with the acreage of the easement area noted on the sketch. Please clearly label the pages as Exhibit "___", page ___ of ___. The District will need to review these documents and approve them in writing before the easement may be recorded. Please provide the acreages for the uplands and wetlands for each easement separately.

- f) If the conservation easement area will be described by reference to a plat, please provide a copy of the plat. The conservation easement must reference the book and page number in the recorded plat. If the plat has not yet been recorded, please provide a preliminary or draft plat with the following note added to the face of the plat:

Tracts ____ are subject to Conservation Easement in favor of the St. Johns River Water Management District pursuant to Section 704.06, Florida Statutes.

- g) Please submit a USGS quadrangle map depicting the area to be preserved by conservation easement. Please ensure that the official quad map name is included on your submittal.
- h) The District must be assured of access to mitigation areas that will be encumbered by the conservation easement. Please provide information confirming the District's right of access via public road or, if not available, a draft access easement conveying a right of access to the District.

[Section 40C-4.301(1)(d),(f), F.A.C.; 40C-4.302(1)(a), 2,7,F.A.C., 12.3.8,A.H.]

Response: Please refer to the attached response prepared by Lotspeich and Associates, Inc.

If you have any questions or need further information, please do not hesitate to contact our office.

Sincerely,

HNTB Corporation



Melinda S. Fischl, E.I.
Project Designer

cc: Tom McCann, P.E. (Lake County Public Works)