



**DONALD W. MCINTOSH
ASSOCIATES, INC.**

November 15, 2019
Via E-permit

Sandy Joiner P.E.
Senior Professional Engineer
St. Johns River Water Management District
601 S. Lake Destiny Rd.
Maitland, FL 32751

Re: Hartwood Marsh
Application Number: 158467-1

Dear Sandy,

We are in receipt of your request for additional information sent August 16, 2019 and have addressed each of your concerns in our responses below listed. The following information has been provided to supplement our previous submittal.

CIVIL ENGINEERS

LAND PLANNERS

SURVEYORS

- Hartwood Marsh Residential Final Engineering Plans revised October 25, 2019 (Sealed)
- Stormwater Management and Secondary Collection System Calculations revised October 22, 2019 (sealed)
- Stormwater Pond Geotechnical Report dated September 26, 2019 as prepared by Devo Engineering, Inc. (sealed)
- Wetland Summary Table as provided by BioTech Consulting, Inc.
- Hartwood Marsh Residential HOA Documentation

Our responses are as follows:

1. Insufficient information was provided to verify whether the stormwater management system will provide for the treatment and volumetric attenuation of stormwater runoff generated by the proposed residential development and adjacent roadways. Accordingly, please address the following:

- a. Clarify the capacity for Ponds 1 and 2 as there are discrepancies between the stage-area-volume data provided in the drainage calculations and PONDS recovery analyses. Provide revisions for consistency.

Response: The PONDS Recovery Calculations by Devo Engineering have been revised for consistency with the drainage calculations. See attached revised calculations.

- b. The curve numbers for the roads (ROW 70%) and Amenity Center (60%) land covers used in the post-development peak rate and volumetric analyses appear low. Please review and provide revisions consistent with the proposed condition. Include supporting calculations as part of your response.

Response: The curve numbers have been reviewed and adjusted as necessary based on land cover, soil type and impervious areas. See Appendix C for the revised calculations.

- c. Based on the topographic survey, it does not appear that Basin PRE-1 drain entirely to the west to the wetland as currently assumed in the design of the stormwater management system. Please review the pre-development condition and provide revised calculations for consistency. Include runoff from the off-site contributing area

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to the south in the design of the system, as applicable.

Response: The pre-development conditions have been revised. The south eastern portion of basin PRE-1 (1.08 acres) has been removed from the design and calculations. The runoff from the 2.31 acres (PRE-2) of off-site contributing area to the south has been added in the analysis. In the Post Development Condition, the runoff from this area will sheet flow to a collection system and bypass the stormwater pond to the wetland consistent with pre-development conditions. Please see Appendix B and C for the revised calculations.

- d. The rainfall amount of 10.2 inches for the 25-year, 96-hour storm event currently used in the design of the system does not appear correct for the project location. Please review and provide revisions demonstrating that the stormwater management system is sufficiently sized to retain and recover the pre-post difference in runoff volume generated by the 25-year, 96-hour storm event.

[62-330.301(1)(a),(b),(c),(e), F.A.C.; Sections 3 and 5, A.H. Vol II]

Response: According the SJRWMD Applicant's Handbook Volume II Section 3.2.6 which states that the U.S Weather Bureau Technical Paper No. 40 and 49 are acceptable sources. The National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Volume 9 supersedes these two previous publications. The 10.2 inches for the 25-year 96-hour storm was obtained using the NOAA Atlas. Please see Appendix E for the supporting documentation.

2. Please provide the following revisions, clarifications and information on the construction plans:

- a. Clarify, on the plans, how off-site runoff from the east (Basins Off-Site Pre-2 and Off-Site Pre-3) will be routed to Pond 1. The piping shown on Sheet C311 of the plans is unclear in this regard.

Response: Based on the revisions, runoff from Basin Post-3 will connect the manhole stub out (DM-133). Runoff of Basin-Post-4 will be collected in the secondary collection system for Hancock Road.

- b. Clarify the diameter for the equalizer pipe connecting Pond 1 to Pond 2. Provide revisions consistent with the calculations.

[62-330.301(1)(a),(b),(c),(e),(i), F.A.C.]

Response: The equalizer pipe used the model is a 36-inch pipe. The plans also show a 36-inch pipe, however the portion of pipe from DM-52 to MES-50 is shown as a 48-inch pipe. This is because this run is also a part of the secondary collection system and had to be upsized for hydraulic grade line purposes.

3. As noted in Nicole's August 8, 2019 email, the construction plans show a wetland line with a notation that it was flagged by Bio-Tech Consulting, Inc. (BTC) on July 6, 2015. However, the environmental report (ER) states that BTC flagged the wetlands in February 2018. There are no wetland and other surface water (OSW) figures included in the ER. Please clarify the discrepancy and verify the boundaries within the ER and the plans match.

In addition, aeriels and GIS wetland and soil layers show additional areas within the project area and adjacent to the project area that may be wetlands and OSW beyond what is shown on the plans. A site visit needs to be scheduled with District staff to determine if

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wetlands and OSW will be impacted. Please verify if additional wetlands and OSW exist within project area that need to be included in the wetland figures to be provided and contact Nicole at 407-659-4835 or nmartin@sjrwmd.com to schedule the site meeting.

Please provide an updated environmental report that includes a current, detailed description of all wetlands, OSW, and uplands within the project boundaries. Provide figures that show the wetlands and OSW referenced in the description. If wetlands or OSW impacts are proposed (after reduction and elimination is addressed), please provide a mitigation plan to offset direct and secondary impacts to wetlands and/or OSW resulting from construction of the proposed project.

[62-330.301, F.A.C., 62-330.302, F.A.C.; 10.0, A.H. Volume I]

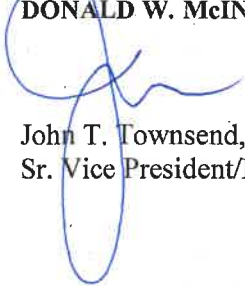
Response: Per BioTech Consultants, please see the updated wetland limits depicted on the construction plans. There is one 0.02 acre surface water impact proposed for a drainage structure. There are no wetland impact proposed. No mitigation is proposed.

4. Clarify who will operate and maintain the stormwater management system for the residential subdivision and roadway improvements for Hartwood Marsh and Hancock Roads. Provide homeowners association documents and easement agreements, as necessary. [62-330.060, F.A.C.; Section 12, A.H. Vol I; Section 2.5, A.H. Vol II]
- Response: The stormwater management ponds will be owned and maintained by the subdivision HOA with drainage easement rights to the County for Hartwood Marsh Road and Hancock Road. The onsite roadways will be dedicated to the City of Clermont and the stormwater system within the roadways will be owned and maintained by the City. Drainage easement rights will be provided to the City over the stormwater ponds with the final plat.**

We trust this information comprehensively responds to your Request for Additional Information. Should you need anything further please do not hesitate to contact our office. Thank you for your time on this project.

Sincerely,

DONALD W. McINTOSH ASSOCIATES, INC.


John T. Townsend, P.E.
Sr. Vice President/Director of Engineering

C: Jeff Fuqua
John M. Florio, P.E.

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