



**SEXTON ENGINEERING ASSOCIATES, INC.**

Consulting Engineers and Surveyors

# **DRAINAGE STATEMENT**

*for*

**THE LAGOON AT EQUESTRIAN VILLAGE**

**WELLINGTON, FLORIDA**

*Prepared by*

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**SEA PROJECT NO: 2242T15**

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**Revised: October 5, 2022**

**Revised: November 1, 2022**

## **DRAINAGE STATEMENT**

### *Introduction:*

The 59-acre property was formerly the Palm Beach Polo Stadium, and a portion of the property has been redeveloped into the World Dressage Complex, also known as Equestrian Village, which includes equestrian arenas, a covered equestrian ring, stables, parking areas, buildings, concrete vendor decks, and equestrian support facilities. The property drains to dry detention areas and exfiltration trenches for water quality treatment prior to discharging into the ACME Improvement District canal system.

### *Project Description:*

The Lagoon at Equestrian Village is a residential development that will incorporate 300 residential units comprised of 29 single-family and 271 multi-family units and a 13.28-acre lagoon project. The project will also include a member's club, sports club, golf course and club house, and tennis and pickleball courts that will serve the residential units on this project as well as 197 additional single family residential units at the proposed Equestrian Village Estates project.

The lagoon technology is designed as a closed-loop system for the lagoon only with a separate outfall. The surrounding community will be graded away from the lagoon to minimize overflow to avoid flow into the lagoon system. The proposed 13.28-acres lagoon property will be excluded from the stormwater management system.

In addition to the 59-acre property the project area will expand to the adjoining property to the east that will increase the size of the development to a 101.86-acre property. The existing stormwater lakes around the proposed project serve the Palm Beach Polo and Country Club development. These lakes will be expanded into the perimeter area of the subject property to provide additional flood protection for the project in accordance with the ACME Basin A rules. The platted existing 7.43-acres of stormwater lake will be excluded from the proposed stormwater management system.

### *Existing SFWMD Permit:*

The original property was permitted for construction under the original permit for ACME Units of Development 1 and 2 on March 16, 1978 (SFWMD ERP No. 50-00548-S, App. Nos. 27833 and 09227-B). Permit No. 50-00548-S-09 modified the site plan for Palm Beach Polo and Country Club to include additional lake areas and an improved maintenance plan for the Big Blue area, but did not affect the subject property. The property is currently located in Basin A of the Village of Wellington's surface water management system, which is in the SFWMD C-51 West drainage basin. The permitted design elevations for Basin A are as follows:

Maintained Water Elevation	= 12.0 feet NGVD
Minimum Road Elevation	= 16.0 feet NGVD
Minimum Finished Floor Elevation	= 17.5 feet NGVD

The SFWMD ERP was modified on November 22, 2011 for a surface water management system to serve a 20-acre facility known as the World Dressage Complex (ERP No. 50-00548-S-203).

The SFWMD ERP was later modified on June 18, 2013 to increase the project area to 24.1 acres to include a landscape berm, cul-de-sac, and additional area for compensating storage. The construction of these

improvements have been completed and accepted by SFWMD on January 28, 2014.

The SFWMD ERP was again modified on November 3, 2014, to add paved parking, access drives, relocate the access driveway and modified the stabling plan.

*Drainage Methodology:*

The surface water management design shall be based on the "Permit Criteria and Best Management Practices Manual for Woks in the Village of Wellington" as revised in April 2010 and adopted by the Village of Wellington under Ordinance 2010-14 on June 8, 2010.

Per Ordinance 2010-14 the applicant has the option to provide calculations demonstrating that the storage provided is consistence with the original Basin A Design Criteria for minimum flood protection, provided a minimum of the established storage requirements as follows:

Storage at Elevation 16.0' NGVD	0.40 acre-feet/acre
Storage at Elevation 17.5' NGVD	0.89 acre-feet/acre

Any reduction in soil storage shall be compensated for by excess site storage in order to provide an overall storage in excess of the ACME Basin A requirements.

Under SFWMD Permit No. 50-00548-S, approximately 340 ac-ft of water or 0.5 inch over Unit of Development 1 was retained in the system before discharging via pumps into the C-51 canal. This project is in what was formerly known as Unit of Development 1. Per the Village of Wellington and SFWMD permit criteria, the project shall provide the greater of 1" of water quality treatment over the drainage area, or 2.5" of water quality treatment times the percentage of imperviousness. Therefore, 0.5 inch shall be subtracted from these volumes as previously permitted for Equestrian Village. This water quality reduction was previously approved by the Village of Wellington Land Development Permit 13-2051 for the World Dressage Complex and the South Florida Water Management District Permits 50-00548-S-203 applications 110518-1 and 140915-8 issue on June 18th, 2013, and November 3rd, 2014, for the World Dressage Complex and Equestrian Village projects, respectively.

The proposed stormwater system for the development will provide the required water quality and quantity volumes required by the SFWMD and the ACME Improvement District within the limits of the proposed project.

As noted above lagoon stormwater management system will be independent from the property stormwater management. Overflow water from rain events will be discharged to onsite stormwater management facilities, which will treat and attenuate the water before discharging to the existing ACME Improvement District canal system.

*Conclusion:*

The stormwater management system for the Lagoon at Equestrian Village project will provide the water quality treatment and water quantity storage required by the SFWMD and the ACME Improvement District within the limits of the proposed project. The proposed project will provide, the water quality treatment by using 2 acres of wet detention ponds in the golf course area and underground storm chambers in the parking areas along the south boundary of the property. Additional water quantity

storage for flood protection will be provided within a 5 acres expansion of the 7 acres of existing perimeter stormwater lakes within the proposed project boundary which also serve the Palm Beach Polo and Country Club development. Conceptually the proposed outfalls of the stormwater system will be located along the south and east sides of the property connecting to the existing C-23 and C-6 ACME Improvement District Canal System. Conceptual drainage outfall locations have been noted on the Conceptual Site Plan for the project.

After a storm event any overflow from the lagoon will be discharged to a separate dry onsite stormwater management facility, which will treat and attenuate the water before discharging to the existing C-23 ACME Improvement District Canal System. The lagoon improvements will require a separate Environmental Resource Permit (ERP) for the SFWMD and will be subject to the discharge requirements from SFWMD and the ACME Improvement District.