### **STORMWATER MANAGEMENT**

#### REGULATIONS, STANDARDS, PROCEDURES

**AND** 

#### **DESIGN CRITERIA**

# CENTRAL BROWARD WATER CONTROL DISTRICT BROWARD COUNTY, FLORIDA

#### **BOARD OF COMMISSIONERS**

Angie Leto, Chair, Zone 5
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#### **DISTRICT SECRETARY/MANAGER**

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#### **DISTRICT ATTORNEY**

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#### CENTRAL BROWARD WATER CONTROL DISTRICT

8020 Stirling Road (Davie) ♦ Hollywood, Florida 33024 954-432-5110

April 13, 2016???, 2020

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#### **EXHIBITS INCORPORATED HEREIN BY REFERENCE:**

- A Central Broward Water Control District Boundary Area
- **B** Submittal Requirements For Stormwater Management Permit Approval CBWCD Document Submittal Requirements
  - C Paving and Drainage Check List for Applicants
  - D 100-Year Flood Elevation Map
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  - F Florida Department of Transportation 3-Year Storm Zone 10
  - **G** Exfiltration Trench System
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- N-6 Ingress/Egress Easement Agreement
- District Variance Sign Detail
- P Maintenance Agreement
- Q Application for Stormwater Management Permit
- R Boat Ramp Detail
- S Dock and Deck Agreement
- T Suggested Wetland and Aquatic Plants and Planting Depth Ranges
- Volume 1 Not used Florida Exotic Pest Plant Council's 2011 List of Florida's Most Invasive Species
- V Stormwater Certification Report
- W Checklist of for Single Family Homes Plan Approval
- X Sample Problem: Bleed Down Time for Retention Systems Sample Problem
- Y Typical Wetland Preserve AreaPlanting Sign
- Z Surface Water Management Designation and Declaration of Restrictive Covenant
- AA Water Stormwater Management Works Permit Form

Copies of the exhibits are available at the District's office and on the District's web site <u>centralbrowardwcd.org</u>.

#### **BIBLIOGRAPHY**

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#### 1. GENERAL

#### **1.01 SCOPE**

The provisions of these regulations and criteria shall apply to all existing and future development, construction, or reconstruction within the boundaries of the Central Broward Water Control District (District or CBWCD). District boundaries are shown in the Exhibits. For the purpose of these regulations and criteria development, construction or reconstruction shall be defined as any work which would affect the flow or level of water, whether surface or subterranean in origin; the alteration of ground elevations and/or dredging or filling activities.

#### 1.02 PURPOSE

The purpose of these regulations and criteria are to promote the general health, safety, welfare, convenience, and economic well-being of the citizens within the Central Broward Water Control District by minimizing flooding and ensuring proper water management.

These regulations and criteria have been developed to provide engineers, surveyors and mappers, architect4s, and land planners with requirements for the design of all projects within the District.

#### 1.03 AUTHORITY

These regulations and criteria have been prepared under the authority of the Central Broward Water Control District (District) as provided by an act of the State Legislature in 1982 describing the District boundary and authority, and additionally that authority vested and granted by the Water Resources Act, Chapter 61-1969, Laws of Florida and Chapter 2009-257, Laws of Florida, as amended.

#### 1.04 REQUIREMENTS

All projects within the regulatory area of the District shall require that a Florida Registered Licensed Professional Engineer submit to the District a permit application for approval of the paving, grading, drainage and storm water management and discharge into the District's Waterway. The project information, documentation details, standard, and engineering analysis shall conform in content to the requirements stipulated in these regulations and criteria.

The permit holder shall be responsible for ensuring the constructed project meets the District's design criteria at the time of permit approval. The applicant shall submit sufficient details and avoid errors and omissions in the plans and supporting documentation to ensure the project is constructed in accordance with District criteria. The permit holder shall correct any deviations from District criteria in the constructed project unless specifically exempted by a variance.

Submittal of a permit application and permitting by the District shall in no way eliminate the applicant's responsibility to conform to the Florida Building Code, Florida Building Code - Accessibility, Florida Fire Prevention Code, and the rules, regulations, policies or permitting requirements of other regulatory agencies such as: U.S. Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), Florida Department of Transportation (FDOT), South Florida Water Management District (SFWMD), Broward County Environmental Protection and Growth Management Department (EPGMD), and the Applicable Unit of Local Government.

If the permitted plans include work that is outside of the project property limits, then the applicant must acquire written permission from the affected property owner(s) to perform such work and shall provide proper documentation (agreements, easements, approvals, etc.) to the District to work outside the limits of the applicant's property. Final acceptance of record drawings and release of bonds shall be contingent upon receiving no objections from affected property owner(s) within 30 days of initial Board action.

The criteria herein set forth by the District are the minimum criteria which must be met by an applicant in order to seek approval of the commission. Nothing herein shall prevent the District's Commission from imposing more stringent requirements than set forth by the criteria as circumstances may warrant on a case-by-case basis to protect the health, safety, and welfare of the residents of the District.

#### 1.04.1 EXISTING ROADWAYS

Projects that abut a public road or street where there is no existing drainage, shall address this problem for the prevention of standing water.

#### 1.04.2 EXISTING CANALS

Projects whose traffic circulation elements (existing or proposed) abut District canals shall provide guardrail when there is insufficient recovery area.

Projects with property having a common border with a District canal that is adjacent to a roadway must provide guardrail along the canal for the length of the affected property boundary. This also applies when the property abuts a roadway and the District canal is located on the opposite side of the road.

#### 1.04.3 CANAL RIGHTS-OF-WAY

Where the District requires canal Rights-of-Way, the Developer shall dedicate such right-of-way, and in addition shall dedicate a minimum twenty foottwenty-foot (20') strip of land from the top of bank of the canal for a maintenance easement.

#### 1.04.4 DRAINAGE EASEMENTS

All projects within the District, shall dedicate to the District, drainage easements as the District deems necessary for the project; to provide for adjacent property and for conformance with the District's Water Control Plan.

#### 1.04.5 MAINTENANCE IMPROVEMENTS AND DISTRICT EASEMENTS

Except as provided for <a href="herein and">herein and</a> in Section 2.14 of this criteria, all canal rights-of-way, canal easements, canal maintenance easements, drainage, flowage and storage easements, lake maintenance easements, <a href="maintenance">and</a> drainage easements, <a href="maintenance">and</a> ingress/egress easements shall be kept free and clear of all improvements, <a href="maintenance">trees</a>, <a href="plants">plants</a>, or encroachments.

The following improvements are allowed within a drainage, drainage, flowage, and storage, lake maintenance, and ingress/egress, and ingress/egress easement to be dedicated to the District subject to providing adequate access: asphalt/concrete/paver pavement; curbing; sidewalks and hardscape; chain link fencing; and guardrail.

Ingress/egress easements that are coincident with a private road or entrance from the public right-of-way are allowed improvements within the easement limits provided it improvements does not conflict-block vehicular access to with the prohibition against improvements, trees, plants and encroachments within other easements to be dedicated to the District. The ingress/egress easement shall provide for a minimum 12-foot clear vehicular access path from the public right-of-way to other easements to be dedicated to the District.

Ingress/egress easements not coincident with a private road or entrance from the public right-of-way must be kept free and clear of all improvements, trees, plants, or encroachments, except as provided above.

No utilities shall be placed in any District easement or right-of-way without approval by the District, and the utility system owner entering into a hold harmless and indemnification agreement with the District.

#### 1.05 MAINTENANCE

Unless otherwise provided, all drainage easements dedicated to the District shall be maintained by the property owner or a property owners' association.

- **1.05.1** Drainage within the Rights-of-Way of public streets is the maintenance responsibility of the unit of local government responsible for the maintenance of the street.
- **1.05.2** Maintenance of lakes/ponds and water bodies is the responsibility of the property owner abutting, or a property owners association.
- **1.05.3** Notwithstanding the above, the District retains the right to enter into and perform such maintenance as it feels necessary to protect the District's drainage system.

In the event the District performs such maintenance, it will assess the property owner(s) for the costs involved and will lien the property as necessary.

#### 1.06 RENEWALS

District Operating permits shall be valid for a period not to exceed five (5) years from the date that project as-built drawings are approved. Renewal applications shall be submitted to the District 60 days prior to permit expiration.

Paving and drainage plans and maintenance agreements approved by the District prior to renewal requirements shall submit renewal applications within 120 days of receiving notification by the District. Such surface water management works shall comply with all conditions and requirements at the time of District approval.

Each renewal application shall be accompanied by the applicable fee, a log of the operation and maintenance schedules for all the components of the stormwater management system, and a stormwater certification report (Exhibit V) signed and sealed by a Florida registered Licensed Professional Engineer certifying that the components of the stormwater management system are functioning as permitted. Refer to Exhibit V, Stormwater Certification Report, for minimum list of stormwater management system components that must be certified with each renewal cycle. If required, the property owner shall upgrade the drainage system to ensure proper operation for water quality and drainage as required and in place at the time of the original approval.

#### 1.07 EXISTING DEVELOPMENT

All water management works for which permits, approved paving and drainage plans, and/or maintenance agreements have been issued by the District shall continue to comply with all conditions and requirements at the time of District approval. If such water management works are determined to have caused, are causing, or will cause an immediate adverse impact on the public, the property

owner shall be required to modify the portion of the water management works which is causing or will cause the adverse impact.

Existing development and water management works constructed prior to the requirement for permits and District approved paving and drainage plans, shall be exempt from the requirements of these regulations and criteria. If it is determined that the existing works (or lack of water management works) have caused, are causing, or are predicted to cause an immediate adverse impact on the public, the property owner shall be required to modify the portion of the water management work which is causing or will cause the adverse impact to meet the District's current criteria to the extent practical and in the discretion of the District.

#### 1.08 VIOLATIONS AND PENALTIES

The District Manager is hereby authorized to serve notices of violation or stop work orders to owners of property involved, to the owner's agent, or to the person or persons performing the work, and penalize permittees for violations of the District's regulations. Any person found in violation of these regulations shall be notified in writing by the District Manager or his designee. The penalty for each violation shall be made in the following manner:

- 1.08.1 Upon initial violation, the permit holder shall be formally notified of the violation and shall be required to conform with the provisions of the District's Stormwater Management Regulations, Standards, Procedures and Design Criteria within [add "reasonable" time frame subject to discretion of the District Manager. Use calendar days if a specific time is inserted].
- 1.08.2 Upon a second infraction of this section, the permit holder shall be fined in the amount of two hundred fifty dollars (\$250.00).
- 1.08.3 A third violation shall result in the immediate suspension of the permit and, upon review by the District, revocation if warranted. The permit holder shall be fined in the amount of five hundred dollars (\$500.00).
- 1.08.4 Unlawful continuance. Any person who shall continue any work after having been served with a notice of violation or a stop work order, except such work as that person is directed to perform to remove or remedy a violation or unsafe condition, shall be subject to penalties as prescribed by law [need to define what is "as prescribed by law"].
- 1.08.5 [Add provisions for imposing a lien]

#### 2. ENGINEERING CRITERIA

#### 2.01 GENERAL

The following regulations and criteria will be utilized by the District in the review of plans, plats, as-builts, or other submittals.

#### 2.01.1 DEFINITIONS

Definition and terms that are not defined below shall be given their ordinary and customary meaning or usage of the trade or will be defined using published, generally accepted dictionaries, together with any rules and statutes of the Agencies that have additional authority over the regulated activities.

"Aquatic plant" or "aquatic vegetation" means a plant, including the roots, which typically floats on water or requires water for its entire structural support, or which will desiccate outside of water. Also see "prohibited aquatic plant" definition.

"As-Built Drawings" means plans that accurately represent the constructed condition of the permitted facility that is certified by a Florida registered Licensed Professional Surveyor and Mapper, including identifying any substantial deviations from the permitted design.

"Canal" means an artificial ditch utilized for confining surface water to a defined channel, the purpose of which is to receive runoff from adjacent land and to convey flows downstream to another canal, river or natural water body. Canals in this context refer to the primary canals owned and maintained by the SFWMD, the secondary canals maintained by the CBWCD, and canals on private property. manmade trench intended primarily to convey flows, the bottom of which is normally covered by water, with the upper edges of its two sides normally above water. Canals also include those defined in § 403.803(2), F.S.

"Common Area" means real property which is subject to the common ownership of a single party for the benefit of all of the property owners which is responsible for such ownership, unified control, monitoring, operation, and maintenance of the drainage facilities located in the common area.

"Construction commencement" means the actual on-site, continuous and systematic activity of land surface alteration, construction and fabrication of a facility in accordance with a stormwater management works permit authorizing construction of the project in conformance with the terms and conditions of the permit. Minor clearing, dredging, or filling with an apparent purpose of keeping the permit active will not be considered to meet this requirement.

"Detention" means the collection and temporary storage of stormwater in an impoundment in such a manner as to provide for treatment through physical,

chemical, and biological processes with subsequent gradual release of the stormwater.

"Discharge" means to allow or cause water to flow.

"Development" means: 1) the division of a plat, tract, parcel or lot of land into two (2) or more parcels that requires platting or re-platting by the municipality having jurisdiction or by Broward County; 2) the meaning given in §380.04, F.S.

"District Canal" or "District Waterway" means the canals, waterways, easements, rights and reservations, rights-of-way, maintenance strips, swales, and all and every work or facility appurtenant or adjacent to or utilized by the Central Broward Water District (the District) in connection with the functioning of its waterways.

"Exotic plant species" means a plant species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida, including naturalized exotic species (an exotic plant that sustains itself outside cultivation) and invasive exotic species (an exotic plant that not only has naturalized, but is expanding on its own in Florida native plant communities). Exotic plant species are defined by the "Florida Exotic Pest Plant Council" (EPPC), and include cattails, melaleuca, Brazilian pepper, Australian pine, laurel fig (ficus) and other nuisance species that are not native to Florida, exhibit rapid growth, out compete native vegetation, and can clog lakes/ponds and canals (Exhibit "U"). Additional information on Florida's exotic plant species is available at: <a href="http://www.fleppc.org/">http://www.fleppc.org/</a>.

"Filling" or "fill" means the deposition or to deposit, by any means, of materials in a lake, pondlake/pond, wetland, canal, or other waterway, detention, or retention area.

"Licensed Professional" means an engineer, land surveyor and mapper, architect, landscape architect, or geologist licensed by the State of Florida practicing under Chapter 471, 472, 481, or 492, F.S., respectively, and includes any of the following designations: "licensed engineer"; "licensed professional engineer"; "professional engineer"; "registered engineer"; "registered professional engineer"; and similar "licensed...", "licensed...professional", "professional...", "registered...", or "registered professional..." regarding surveyors, architects, landscape architects, and geologists licensed under Chapter 472, 481, or 492, F.S.

"NAVD 88" means North American Vertical Datum of 1988.

"NGVD 29" means National Geodetic Vertical Datum of 1929.

"Nuisance <u>plant</u> species" means any species of flora or fauna, <u>including exotic plant</u> <u>species</u>, <u>prohibited aquatic plants</u>, <u>and invasive nonnative plants</u> whose noxious characteristics or presence in sufficient number, biomass, or areal extent that prevents, or interferes with, uses or management of resources, and which are native or naturalized in the area where it occurs. <u>See § 369.251</u>, F.S. for a list of invasive nonnative

http://www.leg.state.fl.us/Statutes/index.cfm?App\_mode=Display\_Statute&Search\_String=&URL=0300-0399/0369/Sections/0369.251.html

"Positive outfall" means discharge via a device or devices designed to convey discharges of stormwater from the applicant's property across downstream properties and ultimately into a District canal by means of a system consisting of one or a combination of pipes, culverts, canals, swales, or ditches in a concentrated and not diffuse manner.

"Pre-development" means the land use immediately previous to submittal of an application for paving and drainage approval if no District water management works permit was issued for the property, or the land use and storm water management design described in the latest District approved water management works permit for the property.

"Prohibited aquatic plant" means any of the aquatic plants designated by the Florida Department of Agriculture and Consumer Services on the prohibited aquatic plant list in Rule 5B-64.011, F.A.C., or in an emergency order issued under Rule 5B-64.012, F.A.C. See https://www.flrules.org/gateway/ruleno.asp?id=5B-64.011

"Record drawing" means plans certified by a registered professional Licensed Professional that accurately represent the constructed condition of an activity, including identifying any substantial deviations from the permitted design that are based on the As-built drawings submitted by the contractor and certified by a Florida registered Licensed Professional Surveyor and Mapper. Mapper.

"Registered Professional" means a professional registered or licensed by and in the State of Florida and practicing under Chapter 471, 472, 481, or 492, F.S.

"Retention" means a system designed to prevent the discharge of a given volume of stormwater runoff into surface waters in the state by complete on-site storage. Examples are systems such as excavated or natural depression storage areas, pervious pavement with subgrade, or above ground storage areas.

"Stormwater Management Facility" means a facility that is designed to treat, collect, convey, channel, hold, inhibit, or divert the movement of stormwater runoff on, through, and from a property. Such facilities are utilized to control or manage the path, storage, or rate of release of stormwater runoff. Such facilities may include canals, channels, culverts, inlet or outlet structures, lakes, pendslakes/ponds, retention and detention areas, spillways, storm sewers, swales, or other similar facilities.

"Structural slab-on-ground" means a slab that is cast directly on the ground and is a required part of a load path which transmits vertical or lateral loads to the ground and must conform to applicable structural building codes. Non-structural slabs-onground serve only as an architectural wearing surface and are not subject to structural building code requirements and are not subject to the six inches (6") above berm elevation requirement.

"Substantial Damage" means damage of any origin sustained by a structure (i.e., a building, storm sewer, culvert, or bridge) whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before damage occurred.

"Substantial Improvement" means any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official having jurisdiction and that is the minimum necessary to assure safe living conditions.

"Swale" means a manmade trench that: (a) Has a top width to depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3H:1V feet (horizontal to 1-foot vertical);— (b) Contains contiguous areas of standing or flowing water only following a rainfall event; (c) Is planted with vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; (d) is designed to take into account the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge; and (e) has a channel invert no lower than one (1) foot above the water control elevation. The top of bank of the swale must be an observable and distinct break in slope between the toe of slope or swale invert and areas landward of the outer edge of the swale.

"Water Control Elevation" equals elevation: 1.4' NAVD 88 east of the Turnpike; 2.4' NAVD 88 south the C-11 Canal between the Turnpike and Palm Avenue; 2.4' NAVD 88 north of the C-11 Canal between the Turnpike and the N-17 Canal; 3.4' NAVD 88 south of the C-11 Canal and west of Palm Avenue; and 3.4' NAVD 88 north of the C-11 Canal and west of the N-17 Canal. The District's standard differential between NAVD 88 and NGVD 29 datums for purposes of calculating the water control elevation and elevation references in these regulations is 1.60' (e.g., 0.0' NGVD 29 -1.6' = (-)1.6' NAVD 88).

#### 2.01.2 VERTICAL DATUM

Elevation data in engineering documents and construction drawings submitted to the District shall be based on the NAVD 88 datum. Requests for modifications to permits issued prior to the updated FEMA Flood Insurance Rate Maps that took effect on August 18, 2014 shall include on the paving, drainage and grading drawings the site-specific conversion factor between NGVD 29 and NAVD 88 data for historical record keeping purposes.

#### 2.02 FINISHED FLOOR, 100 YEAR ELEVATIONS

All habitable structures shall be set at or above the higher of:

- 2.02.1 Federal Emergency Management Act (FEMA) Flood Studies
- 2.02.2 Broward County 100 Year Flood Studies, latest edition
- 2.02.3 Eighteen inches (18") above the nearest highest crown of road of the internal traffic circulation element bordering the structure. The traffic circulation element can be a public or private street, or an internal drive aisle. If the roadway is not crowned, or has an inverted crowned section, then the highest edge of pavement cross section nearest bordering the structure shall apply. In subdivision lots, the elevation shall be based on the highest crown of road along each lot frontage.
- 2.02.4 Stage storage calculations for the 100-year, 3-day rainfall with zero discharge
- 2.02.5 Florida Building Code in accordance with the American Society of Civil Engineers Standard 24 Flood Resistant Design and Construction (ASCE 24), latest edition

Nonresidential structures shall be set at or above the higher of Criterion 2.02.1, 2.02.2, and 2.02.4 enumerated herein and six inches (6") above the nearest crown of road of the adjacent roadway, whichever is higher.

Applicants shall verify that structural slabs-on-ground elevations are at least six inches (6") above the proposed berm elevation.

#### 2.03 ROAD FLOOD CRITERIA

All roadways (public and private) and parking lots (public and private) shall have a minimum crown elevation (normal or inverted) set at the higher elevation of:

- 2.03.1 10-year flood criteria map of Broward County
- 2.03.2 Peak stage storage calculations for the 10-year, 1-day rainfall

The minimum crown elevation for inverted road sections shall refer to the center of the roadway and the minimum crown elevation for parking lots shall refer to the centerline of each drive aisle.

Rims of drainage structures may be set no more than six inches (6") below the edge of the roadway, parking lot or drive aisle provided the structure is located outside of the limits of the driving surface (e.g., inside a green area adjacent to the driving surface).

#### 2.04 EXCAVATIONS

All lake, wetland, pondlake/pond, wetland, canal, or other waterway excavations shall be in accordance with South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) rules for Storage Areas unless specified herein.

- 2.04.1 <u>CRITERIA COMMON TO LAKES, WETLANDS, PONDS</u>LAKES/PONDS, WETLANDS, CANALS, OR WATERWAYS
  - <u>2.04.1.1</u> All side slopes of excavations shall be stabilized with a suitable vegetative cover to provide stability against erosion in conformance with these criteria.
  - 2.04.1.2 All lake, wetland, pondlake/pond, wetland, canal, or other waterway maintenance areas shall be cleared of all trees and shrubbery plants and no new trees or shrubbery plants shall be planted.
  - <u>2.04.1.3</u> <u>Nuisance</u> plant species shall not be planted in <del>lakes, wetlands, pondslakes/ponds, wetlands</del>, canals, waterways, District property, or easements dedicated to the District.
  - 2.04.1.4 The applicant shall provide evidence of site specific geotechnical investigations in a engineering report that documents the type and extent of soils found within areas to be excavated for water quantity or water quality storage purposes (e.g., Unified Soil or AASHTO Soil classification, standard penetration tests, sieve analyses, etc.). Soil borings shall be taken to a minimum depth of five feet (5') below the water control elevation for each ½ acre of storage area or fraction thereof. Deleterious soils shall be removed and filled with permeable material that will allow the stored water to infiltrate into the ground water. Locations of known deleterious soils such as muck layers shall be depicted on the construction drawings along with the appropriate notes requiring removal and disposal.
  - 2.04.1.5 All lakes, pondslakes/ponds, canals or other waterways shall have stabilized maintenance easements that are twenty feet (20') in width, measured from the top of bank. Canal and waterway maintenance easements shall either be sloped up to a continuous 5% slope away from the canal, or up to a 10% slope that creates an inverted section at the midpoint of the access way. In either case, the

maintenance way shall be sloped away (i.e., downward) from the top of bank of the canal or waterway to create a ridge along the top of bank.

These twenty feet (20') shall be considered a setback for any buildings, structures, or water bodies and shall be suitable for vehicular traffic. For the purpose of this paragraph, structure is defined as any installed, or erected object on or in the ground.

2.04.1.6 The top of bank must be an observable and distinct break in slope between the toe of slope and areas landward of the discernable physical feature that is located at the outer edge of a lake, wetland, pendlake/pond, wetland, canal or waterway, including any freeboard, and coincides with the inner edge of the maintenance easement.

#### 2.04.2 CANALS AND WATERWAYS

2.04.2.1 Canal excavation shall have a side slope that provides stability against erosion from the top of bank (<a href="minimum">minimum</a> elevation <a href="minimum">equal</a> to 3.4' NAVD88 east of Palm Avenue/SW100th Ave/Nob Hill Road and 4.4' NAVD88 west of Palm Avenue/SW100th Ave/Nob Hill Road <a href="minimum">5.0</a> feet <a href="minimum">NGVD 29 [3.4' feet NAVD 88] minimum</a>) to 3.0 three feet <a href="minimum">minimum</a> below the water control elevation.

2.04.2.2 Canal side slopes shall be no steeper than 4<u>H</u>:1<u>V</u> (horizontal:vertical) from top of bank to three feet (3.0') feet below the water control elevation. Below this point, side slopes shall be as the material permits, but no steeper than 2<u>H</u>:1<u>V</u> unless a steeper slope can be justified based on supporting engineering and geotechnical information.

2.04.2.3 Canals shall be excavated to provide a minimum of ten feet (10') of depth below the water control elevation, or shallower at the discretion of the District Manager.

2.04.2.4 Existing District canals adjacent to properties applying for a water management works permit or plat approval shall be brought to the design standards of the District, including provision of a 20-foot (20') canal maintenance easement, and removal of all trees, plants, nuisance plant species, and encroachments from canal under the water surface, or on the banks, slopes, or maintenance easements.

<u>2.04.2.5</u> Canal banks down to the water control elevation and canal maintenance easements shall be sodded.

#### 2.04.3 LAKES/PONDS, AND WETLANDS AND PONDS

<u>A surface A surface</u> water body that provides <u>attenuation</u>, <u>flood</u>plain <u>storage</u> or water quality detention <u>or retention</u> storage shall be considered a <u>lake</u>, <u>wetlandlake/pond or wetland</u>, <u>or pond</u>. All three are referred to as a lake/pond in the following sections.

- <u>2.04.3.1</u> All <u>pendlake/pond</u> shorelines shall be planted with aquatic vegetation in littoral zones around the <u>entire perimeter of the pond</u> excavation near the water's edge to create an average minimum littoral zone width of twenty feet (20').
- <u>2.04.3.2</u> As an alternative to planting <u>all shorelines</u>, an equivalent area of aquatic vegetation may be concentrated\_along <u>one or more banks of one or more pendlakes/ponds</u>, or the center of one or more <u>pendlakes/ponds</u> as an island or as an anchored floating treatment wetland.
- <u>2.04.3.3</u> Lake, wetland, and pond side slopes Littoral zones shall be planted with aquatic vegetation from no higher than up to one foot (1') above to a depth of 1 foot (1') to 2 no lower than two feet (2') below the water control elevation or as recommended by the applicant's biologist, ecologist, landscape architect or environmental engineer. Exhibit "T" provides a list of suggested species and planting depths. Littoral zones not covered by aquatic plants above the water control elevation shall be seeded to prevent erosion due to bare soil.
- 2.04.3.4 The area planted shall have hydric soils suitable for wetland plants. A minimum hydric top soil (i.e., muck) depth of 0.5<sup>2</sup> feet shall be provided.
- 2.04.3.5 For shorelines planted with aquatic vegetation, side slopes shall be no steeper than 4<u>H:</u>1<u>V</u> from the top of bank <u>down to the landward edge of the littoral shelf and from the waterward edge of the littoral shelf down to three feet (3') below the water control elevation. Beyond that point, side slopes shall be as the material permits, but no steeper than 2<u>H:</u>1<u>V</u> unless a steeper slope can be justified based on supporting engineering and geotechnical information.</u>
- 2.04.3.6 The littoral shelf shall be no steeper than 8H:1V. Any combined width of 4H:1V bank and littoral shelf can be used to provide the twenty-foot (20') wide average minimum littoral zone.
- <u>2.04.3.7</u> Wetland Aquatic plantings adjacent to residential homes shall not exceed 4-four feet (4') in height for mature plants as measured from the control water control elevation. Plantings of trees adjacent to residential homes and within District easements shall be subject to approval by the Board.

2.04.3.8 For shorelines not planted with aquatic vegetation, side slopes shall be no steeper than 5H:1V from the top of bank to a depth of three feet (3') below the water control elevation. Beyond that point, side slopes shall be as the material permits, but no steeper than 2H:1V unless a steeper slope can be justified based on supporting engineering and geotechnical information. Grade transitions from 4H:1V to 5:1V banks must be gradual, continuous, and not steeper than 4H:1V. Shorelines shall be sodded or seeded from the top of bank down to the water control elevation.

- 2.04.3.9 The minimum top of pondlake/pond bank elevation shall be:
  - 1.4' NAVD 88 east of the Turnpike
  - 2.4' NAVD 88 south of the C-11 Canal from the Turnpike to Palm Avenue
  - 2.4' NAVD 88 north of the C-11 Canal from the Turnpike to the N-17 Canal
  - 3.4' NAVD 88 south of the C-11 Canal and west of Palm Avenue
  - 3.4' NAVD 88 north of the C-11 Canal and west of the N-17 Canal
- 2.04.3.10 <u>Lake or Lake/pPond</u> excavations shall have a minimum depth of ten feet (10') below the water control elevation and a maximum depth as governed by SFWMD Environmental Resource Permit (ERP) Applicant's Handbook Volume II or a bottom elevation of (-) 41.6' NAVD 88, whichever is less.
- <u>2.04.3.11</u> Permanent signs shall be visibly posted <u>adjacent to on lake</u> and <u>pondlake/pond</u> <u>side slopes banks</u> planted with <u>suitable</u> aquatic vegetation to prevent removal <u>of aquatic plants</u> or spraying with harmful chemicals. The sign panel must be visible above the expected mature height of aquatic plantings. Exhibit "Y" provides a typical detail for the required signage. <u>At least one (1) sign is required along each planted side of a lake/pond</u>. <u>Additional The sign locations</u> and spacing <u>of the signs shall be determined by may be required by the District</u>.
- 2.04.3.12 Restoration and or repair of lake, wetland, and pondof pendlake/pond and wetland side slopes shall require plans, specifications, and supporting documentation submitted to the District Manager for review and approval. The District Manager may require any such plans to be signed and sealed by a Florida Licensed Professional Registered Engineer. Restoration andor repair of side slopes and banks shall utilize gradual slopes and erosion control blanketsproducts made of natural fibers, and the slopes sodded or seeded as per section 2.04.5.1. For more severe erosion, stabilization shall be accomplished using a combination of filter geofabrics and hardened materials such as interlocking concrete blocks, rip rap, etc., with appropriate soil stabilization measures.sedded above the water line.

2.04.3.13 The use replacement of existing seawalls, bulkheads, and retaining walls is discouraged. However, if a seawall, bulkhead, or retaining wall is proposed to replace an existing one, the top of such wall shall be constructed no higher than 1 foot above the lake water control elevation and shall be aesthetically consistent with the established pattern of existing seawalls, bulkheads, and retaining walls within the lake lake/pond. Plans for seawalls, bulkheads, and retaining walls shall be signed and sealed by a Registered Florida Licensed Professional Registered Engineer in conformance with the structural design criteria of the Florida Building Code, latest edition.

2.04.3.14 Where a conservation easement is in place or proposed to be dedicated to with Broward County and/or South Florida Water Management District the 20twenty-foot (20') Lake Maintenance Easement (LME) may be reduced to a 10ten-foot (10') LME to allow for foot traffic only. However, the 20-twenty-foot (20') setback to any building shall still apply. In addition, proper easements for maintenance and access shall be provided for any drainage structures or culverts. Lake maintenance easement areas that are reduced to ten feet (10') adjacent to conservation easements may be planted with appropriate ground cover plants such as sedges and rushes in lieu of sodding.

2.04.3.15 All lakes, pondlakes/ponds or other waterways shall be provided with a concrete boat ramp from the top of bank to two feet (2') below the water control elevation. The ramp shall be twelve feet (12') in width. A stabilized ingress/egress easement twenty feet (20') twelve feet (12') in width shall be provided from the nearest roadway or parking lot drive aisle to the ramp. Ramp locations must be designed to allow reasonable turning movements of truck and trailer completely inside the limits of the required ingress/egress or lake maintenance easement. Boat ramps are not required for pondlakes/ponds that are less than 0.25 acres in area as measured at the water control elevation.

#### 2.04.4 DRY DETENTION OR RETENTION AREAS

2.04.4.1 \_\_Dry rdetention or dretention areas shall have a side slope of 4H:1V-(horizontal to vertical) below the top of bank and shall be excavated no deeper than one foot (1') above the water control elevation. Control elevation in the District is defined as elevation 4.00' NGVD 29 [2.4' NAVD 88] west of SW 100<sup>th</sup> Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100<sup>th</sup> Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike. The banks and bottom of dry rdetention or dretention areas shall be sodded or seeded.

2.04.4.2 Retaining Walls shall not be allowed within detention or retention areas except for areas abutting perimeter retaining walls which shall be designed located in accordance with the Alternate Retaining Wall Detail in Exhibit "I". In this case, the outer limit of the drainage, flowage and storage easement shall coincide with the inner face of the retaining wall. Plans for retaining walls shall signed and sealed by a Registered Florida Professional Engineer in conformance with the structural design criteria of the Florida Building Code, latest edition.

2.04.4.3 The required drainage, flowage and storage easement must coincide with the top of bank. The top of bank must be an observable and distinct break in slope between the toe of slope and areas landward of the The top of bank must be a discernable physical feature that is located at the outer edge of the detention or retention area, including any freeboard.

2.04.4.4 The applicant shall provide evidence of site specific geotechnical investigations in a geotechnical engineering report that documents (e.g., Unified Soil or AASHTO Soil classification, standard penetration tests, sieve analyses, etc.) the type and extent of soils found within areas to be excavated for water quantity or water quality storage purposes. Soil borings shall be taken to a minimum depth of five feet (5') below the water control elevation for each ½ acre of storage area or fraction thereof. Deleterious soils shall be removed and filled with permeable material that will allow the stored water to infiltrate into the ground water. Locations of known deleterious soils such as muck layers shall be depicted on the construction drawings along with the appropriate notes requiring removal and disposal.

#### 2.04.5 UNDERGROUND STORAGE

A variance in accordance with Section 7, Variance and Appeals, shall be required for underground or vault storage systems proposed for flood control or floodplain compensation storage. The District will only consider these requests when a hardship is proven and when open storage systems (lakes, wetlands, pondlakes/ponds, other waterways, or dry detention and retention areas) are not feasible to meet the criteria of the District. Land use plans that are satisfy the criteria of other agencies capable of being accomplished but do not comply with District criteria do not satisfy the test of whether an open storage system is not feasible.

2.04.5.1 Underground storage systems shall provide for diversion of the first flush into isolated chambers with observation ports and full maintenance access with the intent of capturing at least 90%75% of sediments, or as required by the Statewide Environmental Resource Permit

<u>regulations</u>. These chambers shall be accessible for periodic cleaning using readily available equipment.

- 2.04.5.2 The applicant shall provide evidence of site specific geotechnical investigations in a geotechnical engineering report that documents (e.g., Unified Soil or AASHTO Soil classification, standard penetration tests, sieve analyses, etc.) the type and extent of soils found within areas to be excavated for water quantity or water quality storage purposes. Soil borings shall be taken to a minimum depth of five feet (5') below the water control elevation for each ½ acre of storage area or fraction thereof. Deleterious soils shall be removed and filled with permeable material that will allow the stored water to infiltrate into the ground water. Locations of known deleterious soils such as muck layers shall be depicted on the construction drawings along with the appropriate notes requiring removal and disposal.
- <u>2.04.5.3</u> Underground storage shall amount to <u>100% 450%</u> of the required storage for vault storage and 200% of the required storage for seepage systems as determined by routing calculations. For underground storage in seepage systems, the SFWMD ERP Exfiltration Trench formula parameter "V<sub>add</sub>" shall equal the flood control or floodplain compensation volume and the Factor of Safety, FS, shall be 2.0 (i.e., V<sub>add</sub> x FS = 200% of required storage volume). Refer to the SFWMD ERP Information Manual, Part III References and Design Aids, Appendix G, Exfiltration Trenches, Equation 7 and 8.
- 2.04.5.4 A 3-year letter of credit or 3-year bond for 110% of the value of the underground system shall be provided as a condition of approval of the variance and water management works permit.
- <u>2.04.5.5</u> The <u>storm</u> water management <u>works</u> permit shall be renewed annually in accordance with Section 1.06, Renewals, as a condition for final release of the 3-year bond or letter of credit.
- <u>2.04.5.6</u> Minimum operation, inspection and maintenance procedures and schedules shall be depicted and annotated on the record drawings.

## <u>2.04.6 LAKE, WETLAND, POND</u>LAKE/POND, WETLAND, CANAL, OR WATERWAY FILLING

2.04.6.1 No natural or artificial lake, pondlake/pond, wetland, canal, or other waterway, detention, or retention area— collectively referred to herein as a water body- shall be partially filled unless the remaining portion of the water body is hydraulically connected to a proposed water body and the storage volume of the proposed water body is greater than the volume of the existing water body to be filled. Partial filling of a

waterbody that includes storage volume compensation described herein does not require a variance from these regulations. See Section 2.04.6.3 for additional submittal requirements.

Otherwise, no 2.04.6.2 Except as allowed per Section 2.04.6.1, no water body shall be filled unless a variance is granted by the Board of Commissioners of the Central Broward Water Control District. This section does not apply to the filling of water bodies having a bottom elevation higher than the elevation depicted in the Broward County Water Table Map for Average Wet Season, or the construction of culverts within the secondary system as covered under Section 2.12, Culverts.

2.04.6.3 Any water body to be filled, excluding the construction of culverts within the secondary system as covered under Section 2.12 shall be accompanied by the following.

- A. Survey and engineering data to include:
- a. area at top of bank, water control elevation, and bottom of water body to be filled
- b. maximum/minimum depth from top of bank to bottom of water body
- c. cross sections (top-of-bank to top-of-bank) every 100' of perimeter at top of bank
- d. volume of fill to be placed from the District water control elevation to the 100-year flood stage at the top of bank
- e. volume of fill to be placed from the District water control elevation to the bottom of the water body
- f. volume of material to be dredged above and below the District water control elevation
- B. Biological report showing no adverse impacts to aquatic life as a result of the proposed work. This section does not apply to the filling of dry detention or dry retention areas. The report must include:
- a. the methodology and data sources used to assess aquatic life (both flora and fauna) present, or could potentially be present, at the subject site(s).
- b. an assessment of flora and fauna present, or could potentially be present, at the subject site(s).
- c. a determination with respect to whether the proposed work will adversely affect aquatic life at the subject site(s).

If the determination concludes that the proposed work could adversely affect aquatic life, then it must include the proposed measures necessary to mitigate the impacts resulting from the proposed work at each site.

#### 2.05 WATER QUALITY RETENTION VOLUME

All projects shall provide on-site retention for one inch of run off from the total project area, or 2<sup>1</sup>/<sub>2</sub>" times SFWMD ERP percent impervious, whichever is greater. Additionally, commercial or industrial sites shall provide dry retention for one half inch (1/2") of run off from the total project area. The designer shall allow for SFWMD ERP criteria as a minimum.

In addition, tThe District shall require dry pretreatment for the first one half inch (½") of runoff for commercial projects, industrial sites, roadway projects, and other projects where the impervious area exceeds 60% of the total area. Water surface and roofed areas can be deducted from the site area only for the purpose of water quality pervious/impervious calculations.

All retention areas (dry, and wet, and underground) must be capable of percolating the water quality design storage retention volume within 72 hours. One "open hole test" in accordance with SFWMD ERP Applicant's Handbook Volume II, shall be performed for each 500 feet or fraction thereof of retention area perimeter to determine the hydraulic conductivity of the soil. Copies of test results along with hydraulic calculations (Exhibit "X") shall be submitted to the District along with the permit application.

Projects located upstream of a secondary canal where the canal flow or elevation is controlled by a District operated control structure are exempt from the water quality retention requirement described in 2.05 provided: 1) the CBWCD has a valid Environmental Resource Permit that expressly allows the permit exemption described herein, and 2) with the exception that dry pretreatment shall be provided on-site for commercial and industrial projects, roadway projects, and other projects where the impervious area exceeds 60% of the total area.

Any water quality treatment mechanism or system allowed under the Statewide Environmental Resource Permit regulations (Ch. 62-330, F.A.C. and Ch. 40E, F.A.C.) may be used to satisfy the required water quality retention or pre-treatment volume as modified herein. The treatment mechanism must be capable of retaining the required water quality retention and pre-treatment volume in vaults, chambers, seepage systems, or filtration units that are isolated upstream from the remainder of the underground storage components. Pollution retardant baffle(s) shall be placed on the influent side of all drainage structures leading to the isolated vault(s), chamber(s), filtration unit(s).

#### 2.06 ADJACENT PROPERTY

In addition to the grant of easement required in Section 1.04 of this criteria, applicants shall be required to design and/or construct the drainage system so as not to preclude existing upstream drainage from reaching a District facility.

- 2.06.1 No developed property shall shed water on adjacent land. The applicant shall erect either a wall or berm, or combination thereof, to retain the runoff from the twenty-five yeartwenty-five-year, three-day storm event.
- 2.06.2 Perimeter berms shall be designed in accordance with Exhibit "I". Retaining walls and foundations shall be located sufficiently away from the applicant's property line to permit construction of the wall without encroaching into adjacent property, unless the applicant secures a written letter of no objection from the affected property owner to construct the wall prior to construction commencement.
- **2.06.3** Perimeter berm elevations shall be 6 inches (6") below structural slab elevations.

#### 2.07 DISCHARGE CRITERIA

The maximum allowable discharge into the District's canals is outlined in SFWMD ERP Applicant's Handbook Volume II, and is repeated herein. In the west C-11 basin (west of SW 100th and/or Palm Avenue) maximum discharge is three quarters of one inch (3/4") per day, or 20 CSM (cubic feet per second per square mile). In the east C-11, maximum discharge is one and one-half inches per day, or 40 CSM. Maximum allowable discharge is computed on the twenty-five yeartwenty-five-year, three-day event.

Projects located upstream of a secondary canal where the canal flow or elevation is controlled by a District operated control structure are exempt from the maximum discharge requirement.

- 2.07.1 Project discharge shall be the sum of individual discharge values determined for the project. In determining allowable discharge, the capacity of all elements in the control structure (notches, orifices, etc.) shall be considered.
- **2.07.2** Discharge shall be evaluated at the control elevations established herein.
- 2.07.3 Minimum allowable orifice size shall be the equivalent of a 3-inch (3") diameter for circular orifices, or the equivalent for other geometries.
- **2.07.4** All properties shall provide for a positive outfall with the capacity to discharge the allowable discharge.

#### **2.08 RUNOFF**

Ground storage capacity may be taken into account in determining total runoff volume. Storage capacity of soils are described in the SFWMD ERP Applicant's

Handbook Volume II and should be used. For the purpose of determining soil storage, the wet season water table shall be the <u>water</u> control elevations established by the District.; 4.00' NGVD 29 [2.4' NAVD 88] west of SW 100<sup>th</sup> Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100<sup>th</sup> Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike.

#### 2.08.1 ROOF RUNOFF

Roof runoff from roofs of 2500 square feet or more, and from zero lot line housing, shall be specifically addressed on the plans as it relates to erosion and protection of adjacent property. Details shall be provided which indicate points at which runoff will be collected and the method utilized to control it.

Drainage easements in accordance with Section 3.04 of these criteria shall be required.

enough to allow water to readily pass and thus significantly influence

2.08.2 Pervious, porous or permeable pavements such as porous concrete, porous asphalt, permeable interlocking concrete pavers, etc. specifically fabricated, engineered and designed to infiltrate surface runoff through the pavement section may be considered as pervious area for the purpose of ground storage and runoff calculations. The pavement must have sufficient porosity and permeability high

hydrology.

Regarding the in-situ soils to remain under the pervious pavement, the applicant shall provide evidence of site specific geotechnical investigations in a geotechnical engineering report that documents (e.g., Unified Soil or AASHTO Soil classification, standard penetration tests, sieve analyses, etc.) the type and extent of soils found. Soil borings shall be taken to a minimum depth of five feet (5') below the water control elevation for each ½ acre of pervious pavement or fraction thereof. Deleterious soils shall be removed and filled with permeable material that will allow the stored water to infiltrate into the ground water. Locations of known deleterious soils such as muck layers shall be depicted on the construction drawings along with the appropriate notes requiring removal and disposal.

#### 2.09 GRADING

Grade slopes shall be away from structures to be protected and toward drainage facilities. A grading plan shall be prepared and submitted to the District; said plan shall clearly indicate that no runoff from the applicant's project shall discharge or flow onto adjacent property (refer also to 2.06 this criteria).

- 2.09.1 Roadways and roadway swale sections shall have a minimum gradient of three tenths of one percent (0.3%) or .003 foot per foot. A maximum run of three hundred feet (300') between high point and low point shall be permitted. No roadway swale shall be permitted which has an elevation less than one foot above the District's <a href="Water Control Elevation">Water Control Elevation</a>.
- 2.09.2 In addition to a longitudinal gradient herein specified, all roadways and parking lots shall have a minimum cross pitch (transverse gradient) of one eight of an inch per foot (1/8" per foot) or one percent (1.0%), and a maximum gradient of five percent (5.0%).
- 2.09.3 Swales utilized for water quality treatment and conveyance purposes may have a longitudinal gradient of zero percent (0%) and include downstream ditch blocks or raised inlets to retain the treatment volume. This type of swale must be located in Common Areas within a drainage, flowage and storage easement. The paving and drainage application must include engineering calculations and soil percolation tests demonstrating drawdown of the swale within the required time described in Section 2.05.
- 2.09.4 Swales utilized solely for conveyance purposes (i.e., "conveyance-only swales") must not have standing water after the end of a three-year one-hour rainfall event. Conveyance-only swales that remain flooded beyond one (1) hour due to a hydraulic connection to another stormwater management facility are not permissible. The paving and drainage application must include engineering calculations and soil percolation tests demonstrating drawdown of the swale within the required time.

#### 2.10 DRAINAGE SYSTEMS

All roadways and parking lots shall have a drainage system designed to convey the rainfall\_runoff from a three-year rainfall\_event. The rational formula, Q = CIA, shall be used for design. The rainfall intensity (I) shall be obtained from the Florida Department of Transportation (FDOT) Zone 10 Intensity-Duration-Frequency rainfall curves described in Exhibit F. A breakdown of this curve is included herein. The minimum\_starting\_time of concentration shall be ten (10) minutes. Design of the drainage system shall be such that no hydraulic gradient (the energy grade line) is no higher than is above the lowest edge of pavement nearest each frame and/or grate of any drainage structure in the system.

- **2.10.1** Minimum drain pipe diameter in the District:
  - "Building Storm Drains" and "Building Storm Sewers" (as defined in the Florida <u>Building Building</u> Code) downstream to

- first yard drain, catch basin, or manhole: size according to the Florida Building Code Plumbing Storm Drainage chapter, latest edition
- Pipes that: convey runoff from greater than 0.25 acres of contributory drainage area, or; form part of a storm sewer main trunk line that discharges into a stormwater detention or retention facility, or outfall: 15" minimum
- Perforated or slotted pipe in exfiltration trenches, excluding under drain systems in detention/retention areas: 15" minimum
- Lake/pond interconnecting pipes: 48" minimum or the minimum diameter necessary to result in a head loss of less than or equal to 0.1', whichever is greater.
- **2.10.1.1** The maximum pipe spacing between structures shall be as follows:

Diameter (inches)	Spacing (feet)	
Up to 18"	300'	
24" to 36"	400'	
42" and up	500'	

The following Any drainage pipe materials are permitted by the Florida Department of Transportation (FDOT) or Broward County is acceptable, which shall utilize the following roughness coefficients "N." The Manning Roughness Coefficient "n" shall be per the FDOT Drainage Design Guide. Pipes under roadways in public rights-ofway shall be reinforced concrete pipe unless other pipe materials are allowed by the entity that owns the right-of-way.

Pipe Material	MANNING "N"	
Concrete	.012	
CMP	.021	
CAMP	.019	
P.V.C.	<del>9</del>	
HDPE	.012	

- 2.10.3 Hydraulic design of storm sewers shall utilize a static tail—water elevation equal to the —design head over the outlet weir in an exfiltration trench network, the stage inside the on-site point of discharge to a wet pond or dry detention/retention area corresponding to hour 12 of a 3-year 1-day rainfall event, or the design head over any intermediate control structure(s), whichever is higher.stage at the end of hour 12 of stage storage calculations for the 3-year, 1-day rainfall.
- **2.10.4** Catch basins and drainage collection structures shall be designed with an eighteen inch (18") vertical sump from the invert elevation (or

bottom of baffle) to the bottom of the structure. In addition, a twelve inch (12") diameter open sump, filled with washed grade rock, no larger than one and one—half inches  $(1^{1}/2")$  shall be placed in the base of the structure. Prior to discharge to any body of water or any seepage trench, a pollution retardant baffle shall be installed.

- All outfalls shall be protected with an appropriately designed headwall of either concrete or rip-rap. In the case of rip-rap, a six inch (6") poured concrete cap is required (Exhibits "H" or "K"). Mitered end sections (M.E.S.) may be utilized only in dry detention or retention areas. The invert of the M.E.S. shall be no lower than the bottom of the detention/retention area.
  - 2.10.5.1 The top of the headwall shall be set one foot (1') above the water control elevationat the crown elevation of readway for for culvert crossings of the secondary canals (Exhibit "K""H") and project outfalls to secondary canals. Each existing and proposed headwall for pipes discharging into a District canal shall include a permanent benchmark stamped with the corresponding NGVD29 and NAVD88 elevation.
  - 2.10.5.2 The top of the headwallcrown of pipe(s) shall be set no higher than the water control elevation (Exhibit "H") for lake/and-pond outfalls.

At the discretion of the District Manager or Engineer, headwalls of deep outfalls to lakes <u>/-or-</u>ponds may be replaced with a metal pipe attached to a concrete jacket in accordance with FDOT design standards.

- 2.10.6 When routing stormwater to a wet detention treatment facility, inlets to the facility shall be directed to the opposite side of the facility from the discharge structure.
- 2.10.7 Pipes interconnecting lake/pond systems shall be sized to comply with all the provisions of this Section 2, Engineering Criteria. Stage-storage routing shall be performed to demonstrate that interconnected lakes/ponds comply with the criteria for all design storm events (3-year, 10-year, 25-year, and 100-year).

#### 2.11 SEEPAGE SYSTEMS

Seepage systems may be used for purposes of water quality retention, but shall not be used for purposes of flood control. The storage and exfiltration capacity of a seepage system shall not be credited to pipe routing calculations. The storage and exfiltration capacity of seepage systems may be credited toward stage-storage

routing calculations, provided that the maximum amount of credit shall not exceed the water quality design volume of the seepage system. Excess seepage system capacity beyond the required water quality design volume shall not be credited toward stage-storage routing calculations.

On-site subsurface retention, seepage system, or french drain shall be considered as being a perforated pipe system (fifteen—inch (15") minimum diameter) surrounded by three quarter of an inch (3/4") washed rock, and protected on four (4) sides by a pervious geotextile (mMirafi, tTypar, etc.).

- 2.11.1 Design and length of seepage systems shall be in accordance with SFWMD ERP Information Manual, Part III References and Design Aids, Appendix G, Exfiltration Trenches .Trenches. An applicant may include the parameter "Vadd" to determine the length of exfiltration trench required to store any additional volume beyond the required water quality treatment volume only if the applicant receives approval for the use of underground storage in accordance with Section 2.04.11.
- 2.11.2 One standard open hole falling head percolation test shall be taken for each five hundred feet (500') or fraction thereof of seepage system designed, copies of which shall be submitted to the District with hydraulic calculations.
- 2.11.3 Depth to water table shall be from finished grade to the District Water Control eElevation-4.00' NGVD 29 [2.4' NAVD 88] west of SW 100<sup>th</sup> Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100<sup>th</sup> Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike.
- 2.11.4 No seepage system shall be considered as dry retention unless the invert of the perforated pipe is at or above the District Water Control Elevation\_4.00' NGVD 29 [2.4' NAVD 88] west of SW 100<sup>th</sup> Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100<sup>th</sup> Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike.
- 2.11.5 Maintenance structures shall be placed at the terminal ends of all french drains/seepage systems and debris pollution retardant baffles shall be placed on the drain field side of all drainage inlets.

#### 2.12 CULVERTS

Culverts shall be installed where roadways and driveways cross District canals. The size of new culverts or culvert replacements shall be determined by the District Engineer, but in no case shall be less than required to pass the allowable discharge for the basin or 48 inches in diameter, whichever is higher. The –applicant shall

provide calculations to demonstrate that the proposed culvert will pass the 100-year peak design flows with a head loss under 0.10 feet including entrance losses; or has the equivalent hydraulic capacity of 110% of the design cross-section of the channel as determined by the District. Additionally, the applicant will be required to excavate the canal to two feet (2') below the proposed culvert invert for a distance of fifty feet (50') upstream and downstream of the crossing. No driveway culvert shall be installed within fifty feet (50') of an existing culvert. As a condition of permitting, the District may require dedication of a roadway easement for adjacent property owners.

- 2.12.1 Notwithstanding the provisions of this section, no additional culverts will be permitted in the District's S-35 canal (Hancock Road), N-27 canal (Boy Scout Road), N-25 canal (SW 37136 Avenue), S-22 canal (SW 106 Avenue), S-24 canal (SW 48 Street), and S-25 canal (Hiatus Road). All future crossings on these canals shall be made by a bridge with a clear span of 15 feet (15') and a minimum bottom of structure elevation of 6.0' NGVD 29 [3.4'4.4' NAVD 88]. An applicant may utilize a concrete culvert, box culvert, or arch culvert in lieu of a bridge crossing provided the culvert creates no more than 0.01' of total head loss (including form, entrance and exit losses) and meets the other requirements of this Section. The District may impose additional conditions such as improving the conveyance capacity of existing nearby culverts as mitigation for anticipated head loss resulting from the addition of a culvert in the Canals referenced in this sub-section.
- **2.12.2** No culverts in the secondary canal system shall exceed 100 feet without a variance.
- **2.12.3** All culverts in the secondary canal system shall be made of reinforced concrete.
- The culvert crown elevation shall be set at the District's <u>wWater eControl eElevation.</u>: 4.00' NGVD 29 [2.4' NAVD 88] west of SW 100 Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100 Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike.
- 2.12.5 A minimum safety factor of 6–12 inches (12") shall be added to the minimum required calculated culvert size.
- 2.12.6 Culvert replacements and driveway culverts on Secondary Canals that provide access to buildings undergoing substantial improvement shall conform to the design requirements of new culverts.

#### 2.13 UTILITY CROSSINGS

- 2.13.1 Overhead power, telephone, cable, and other utility crossings must have a minimum vertical clearance of twenty-five feet (25') between low wire elevation and the elevation of the maintenance berm or natural ground.
- Over water crossings shall be supported on piling with a minimum spacing between piles of twenty feet (20'). A clear height of six feet (6') from the District control elevation to the underside of any portion of the structure shall be provided.
- 2.13.3 Submarine or subaqueous crossings of any nature shall be laid to a depth of two-three feet (2'3') below the depth and cross section of the District's canal's ultimate or design bottom elevation. Additionally, a concrete cover eight inches (8") in thickness shall be placed immediately above the crossing if utilizing a "cut and cover" excavation method. The cover-subaqueous crossing length shall be the full width of the canal and shall extend two feet (2') outside the If utilizing a horizontal directional drilling crossing material. installation method, the minimum clearance between the canal bottom and the outside of the pipe shall be three feet (2'3'). The applicant shall install an object marker with the appropriate message along the centerline of the crossing and within five feet (5) of the top of bank on both sides of the canal. The message shall describe the type of utility crossing (e.g., Gas, Electric, Sewer, Cable, etc.)
- 2.13.4 Notwithstanding the provisions of this section, the utility system owner which owns or will own the utility, shall be required to enter into a hold harmless and indemnification agreement, indemnifying and holding the District harmless from any and all damages as a result of the utility line being constructed in the District's property.

#### 2.14 DOCKS, DECKS, AND OTHER STRUCTURES

- **2.14.1** Docks and Decks may be erected in a drainage, flowage and storage easement, or lake maintenance easement with permission of the District.
  - 2.14.1.1 In order to obtain permission the property owner shall be required to enter into an agreement with the District. The agreement is described in Exhibit "S", Dock and Deck Agreement.
- 2.14.2 No structure of any nature (refer to 2.04.6) shall be erected which would encroach into a canal, canal right-of-way, canal easement, or canal maintenance easement.

#### 2.15 SINGLE FAMILY HOMES

Single family home sites not covered under a District approved stormwater management permit shall, at a minimum, comply with the following requirements. Compliance with other provisions of the engineering criteria shall be at the discretion of the District Manager.

- 2.15.1 Prior to initiating any construction activity, including clearing grubbing, or earth moving operations, applicants shall submit two sets of plans and the information in Exhibit "W", Checklist for Single Family Homes Plan Approval, for review and approval by the District Manager. The plans and water management calculations must depict the proposed and planned ultimate or future build-out areal extent of buildings, building extensions, structures, decks, pools, site filling, and any other encroachment that would reduce floodplain storage below the required minimum volume.
- 2.15.2 No developed property shall shed water on adjacent land. The applicant will be required to erect either a wall or berm, or combination thereof, to retain the runoff from the twenty-five year, three-day storm event.
- 2.15.3 At a minimum, thirty percent (30%) of the site shall remain at existing grade to provide for storage of the 25-year, 3-day, rain storm event. Proposed grade shall be one foot above the water control elevation.

  4.00' NGVD 29 [2.4' NAVD 88] west of SW 100 Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100 Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike. Higher proposed elevations may be allowed provided that ground elevations in the general area are naturally higher and that the proposed grade elevation is no higher than ground elevations of adjacent properties.

The surface water management area (30% of the site) shall be designated and recorded with the Broward County Board of County Commissioners, County Records Division, Recording Section, 115 South Andrews Avenue, Room 114, Fort Lauderdale, FL 33301, utilizing the forms provided in Exhibit "Z".

- 2.15.4 If offsite discharges are designed to occur during 25-year and lesser storms, the applicant shall utilize best management practices, in accordance with these engineering criteria, to reduce pollutant discharges.
- 2.15.5 Prior to receiving the Certificate of Occupancy, the applicant shall submit as-built drawings in accordance with the Checklist for Single Family Homes Plan Approval (Exhibit "W") for the review and approval of the District Manager. Applicant shall grant District staff

access to the property for the purpose of conducting visual inspections.

2.15.6 Refer to Section 1.08 regarding enforcement of violations and imposition of penalties.

#### 2.16 FLOOD-PLAIN ENCROACHMENT

No net encroachment into the floodplain shall be allowed that adversely affects the existing rights of others. With regard to runoff storage, the volume of useful storage available to the basin shall not be decreased as a result of proposed development or redevelopment. The area subject to no net encroachment shall extend from the peak 100-year 3-day water surface elevation for the nearest District canal to the water control elevation. 4.00' NGVD 29 [2.4' NAVD 88] west of SW 100 Avenue (Palm Avenue/Nob Hill Road), 3.00' NGVD 29 [1.4' NAVD 88] from SW 100 Avenue to the Florida Turnpike, and 2.00' NGVD 29 [0.4' NAVD 88] east of the Florida Turnpike. Calculations to demonstrate no net floodplain encroachment shall follow the same guidelines as the SFWMD ERP Applicant's Handbook Volume II. In addition, the applicant shall provide calculations demonstrating that the allowable storage to the basin has not been reduced at the District 100-year flood encroachment elevation. The District 100-year flood encroachment elevation shall be provided by the District Engineer.

A request for a variance from this Section does not require demonstrating a genuine hardship with respect to Sub-Section 7.02.1 of the Criteria. Any variance requested shall be the minimum necessary deviation from the Criteria to afford relief considering the flood heights or flood hazard. In lieu of demonstrating a genuine hardship, the District may require alternative mitigation measures be provided as part of any request for variance. Alternative measures include, but not necessarily limited to, upgrading existing secondary canal culverts, providing additional off-site flood plain storage, or providing a basin-specific capital improvement or maintenance project.

Applicants have the option of performing floodplain encroachment calculations using the guidelines of the SFWMD ERP Applicant's Handbook Volume II, or providing a lake/pond size of 25% of the area of the property for properties exceeding 10 acres in size, or 15% of the property for properties of 10 acres or less. In either case, these percentages are the maximum lake/pond area required after the applicant demonstrates to the District Engineer that the site grading has been lowered to the maximum extent practicable. Lake/pond areas shall be measured at the top of bank\_minimum\_elevation of 6.00' NGVD 29 [3.40' NAVD 88] west of SW 100 Avenue (Palm Avenue/Nob Hill Road), 5.00' NGVD 29 [2.40' NAVD 88] from SW 100 Avenue to the Florida Turnpike, and 4.00' NGVD 29 [2.4' NAVD 88] east of the Florida Turnpike.

- 2.16.2 If selecting the 15%/25% options, Aapplicants have the option of may utilize providing a lake pendlake/pond, or a rdetention or dretention area, or vault-style underground storage provided that the site storage of the rdetention/or dretention area(s) or vault(s) is no less than the site storage provided by the required lake lake/pond area, as measured from the water control elevation proceeding upward to the lake's pendlake's/pond's top of bank elevation up to the 100-year water surface elevation of the nearest District canal. The use of vault-style underground storage for floodplain compensation does not include seepage systems described in Section 2.11.
- 2.16.3 Projects located upstream of a secondary canal where the canal flow or elevation is controlled by a District operated control structure shall maintain pre-development flood plain storage volumes on—site, or provide the necessary flood plain storage volume based on a site-specific engineering analysis that complies with District criteria, whichever is greater.

#### 2.17 LANDSCAPING

Stormwater management permit applications shall include a landscape plan identifying proposed vegetation and existing vegetation to remain along with a legend identifying all species. The landscape plan shall show the location of all vegetation in relation to existing or proposed easements, rights-of-ways, stormwater management systems, drainage structures, and overall site plan.

Except as provided for herein and in Section 1.04.5 of this criteria, Eeasements dedicated to the District (canal easements, canal maintenance easements, drainage, flowage and storage easements, lake maintenance easements, and drainage easements, and ingress/egress easements) shall be cleared of all trees, shrubberyplants, and exotic nuisance plant species, and no new trees or shrubbery plants shall be planted.

- 2.17.1 Trees where the lateral extent of the drip line of the canopy at mature height is expected to encroach within ten (10) feet of the near edge of a storm sewer-shall not be planted closer than ten (10) feet from the near edge of a storm sewer pipe. shall require the following pipe protection measures.
  - 2.17.1.1 Trees should be limited to the following species: Lysiloma Bahamensis (Wild Tamarind); Ilex cassine (Dahoon Holly); Tabebuia heterophylla (PinePink Tabebuia); or Coccoloba diversifolia (Pigeon Plum); native (i.e., "Florida Friendly") palm species that develop non-invasive roots.— Other species may be utilized if found to be acceptable by the District Engineer with respect to safeguarding the integrity of the storm sewer.

2.17.1.2 All drainage trunk line pipes running parallel with the drainage easement shall be lowered so that the outside top of pipe is at least one foot (1') below the water control elevation. All storm sewer pipes within an easement shall be installed such that the outside top of pipe is at least one (1) foot below the water control elevation. Root barrier shall be installed in the same trench excavated for the storm sewer pipe from below the invert of the storm sewer pipe to one half (1/2) inch above finished grade if the outside top of pipe is less than one (1) foot below the water control elevation,

2.17.2.3 Root barrier shall be installed in the same trench excavated for the drainage pipes.

2.17.2.4 Trees shall be planted with a minimum three (3) feet offset from the tree centerline to the near edge of a twenty (20) feet drainage easement that encompasses a storm sewer pipe. For drainage easement widths greater than twenty (20) feet, the tree may be planted just outside the easement boundary.

#### 2.18 EXHIBITS

Exhibits referenced in these regulations and criteria form a part thereof and are incorporated by reference. In the case of conflict, the more stringent shall apply. Copies of the exhibits are available at the District's office and on the District's web site <a href="mailto:centralbrowardwcd.org">centralbrowardwcd.org</a>.

#### 3. PLAT CRITERIA

#### 3.01 GENERAL

The following criteria will be utilized by the District in the review of all plats. Variances to these criteria may be granted by the District's Board of Commissioners at their discretion.

- **3.01.1** The submittal and review process shall be as outlined in Section 4 and as detailed herein.
- 3.01.2 References to plats that were recorded in the official records of "Dade County" shall be referenced as "Miami-Dade County".

#### 3.02 CONCEPTUAL DRAINAGE PLAN

Applications for plat approval shall be supported with a submission of conceptual paving and drainage plans. If no plan exists, the conceptual plan may be replaced with a report that outlines the following:

- **3.02.1** Allowable land use and zoning of the property. Identify the existing or proposed land use designation (i.e. A-1) along with a brief description of the zoning designation.
- **3.02.2** How drainage will be handled for the project.
- **3.02.3** A designation of whether drainage easements will be required.
- **3.02.4** How drainage easements will be provided.
- 3.02.5 A signed statement by the property owner, or the owner's agent, and the engineer of record affirming the future development will comply with District rules at the time of submittal of a paving and drainage application.

The conceptual plan, if submitted, shall show the preliminary layout of the project with proposed methods to achieve compliance with District's standards. Applicants should note that compliance with Section 2.16, Floodplain Encroachment, should be reviewed because of its impact on-site storage requirements and <a href="storage-requirements-sto

The conceptual paving and drainage plan or report shall be signed and sealed by a Florida Registered Licensed Professional Engineer.

Approval of a plat, with or without a conceptual plan, does not grant approval of the plan or report as submitted. Compliance with District's standards at the time of permit approval of drainage plans and calculations may require adjustments to water management areas facilities shown on the conceptual plans and plat.

#### 3.03 **CANAL RIGHT-OF-WAY**

The District will review the plat and inform the applicant of the need to provide by dedication additional canal Rights-of-Way.

#### 3.04 **EASEMENTS**

The District shall require the dedication of easements for canals, canal maintenance, drainage, flowage and storage, lake maintenance, drainage, and ingress/egress. The provisions of this Section shall also apply to Paving and Drainage Plan submittals. Any easement to be dedicated to the District shall be recorded in the official records of Broward County prior to any lot or unit sales within the property served by the stormwater management facility, or upon completion of construction of the facilities, whichever occurs first. The District, at the discretion of the District Secretary/Manager, may require the recordation of easements prior to initial permit approval.

3.04.1	Twenty feet (20') maintenance easements are required for lakes/ponds,
	ponds and canals. The twenty feet (20') is measured landward from the top
	of bank.

- 3.04.2 Lake/-pond, canal, and boat ramp access shall be by ingress/egress easement a minimum of twenty twelve feet (20'12') in width from the closest traveled way. All other ingress/egress easements shall be a minimum of 12' wide with no above-ground encroachments within the easement.
- 3.04.3 Drainage piping shall have a minimum easement width in accordance with

.04.3	the following:					
	Pipe Diameter (inches)	Drainage Easement Width (feet)				
	Building storm drains or	No easement required				
	Building storm sewers					
	downstream to first					
	manhole or catch basin.					
	Pipes less than 15"	No easement required if located in a common area				
	Pipes (any size) for	No easement required upstream				
	secondary drainage	of first structure outside of field				
	systems surrounding	perimeter				
	sports fields					

15" to less than 36" 20' 36" to 54" 30' 60" or larger 40'

#### **3.04.4** Drainage Easement for Swales:

**3.04.4.1** Swales that convey stormwater runoff from the rear or side yards of single-family residential subdivisions that conveys runoff from two (2) or more lots within the subdivision shall have a minimum drainage easement width that coincides with the top-of-bank to top-of-bank limits of the swale or ten (10) feet, whichever is greater.

Swales shall have a maximum width of twenty feet (20') from top of bank to top of bank. Swales that convey stormwater runoff from two (2) or more lots within a single-family residential subdivision shall not exceed a width of ten feet (10') on each side yard of each lot, for a maximum total width of twenty feet (20') centered between adjoining lots, or a maximum width of twenty feet (20') on the front or rear yard of each lot.

- **3.04.4.2** Swales that convey stormwater runoff from the <u>front or</u> rear yard, side yard, or between buildings of multi-family residential subdivisions do not require an easement provided that the swale or pipe: 1) is wholly within the "Ccommon Aarea" under the control of the homeowners' association; 2) does not include the passage of drainage from off-site upstream areas; 3) is not utilized to store or treat any portion of the required water quality treatment volume; and 4) conveys runoff from less than or equal to 0.25 acres of contributory drainage area, including roof area.
- **3.04.4.3** Swales that convey stormwater runoff from contributory drainage areas greater than 0.25 acres shall have a minimum drainage easement width that coincides with the top-of-bank to top-of-bank limits of the swale or ten-twenty (10) feet (20'), whichever is greaterless.
- 3.04.5 Retention, detention and Stormwater management areas facilities shall be enclosed within a drainage or drainage, flowage and storage easement. Where these areas allow drainage from upstream areas to pass through, a drainage, flowage and storage easement twenty feet (20') in width shall be provided, or wider if piped as required per Section 3.04.3.
- 3.04.6 All developments, including platted single-family subdivisions, shall include the following storm water management facilities areas in common areas:

- Wet detention and retention lakes/ponds up to the top of bank
- Dry detention and retention areas up to the top of bank-
- 3.04.7 Drainage, flowage and storage easements for other stormwater
  management facilities within individual lots of single-family residential
  subdivisions shall not exceed a width of ten feet (10') on each side yard of
  each lot, for a maximum total width of twenty feet (20') centered between
  adjoining lots, or a maximum of twenty feet (20') on the front or rear yard
  of each lot.
- 3.04.787 Drainage, maintenance, flowage, storage, and ingress/egress easements shall be dedicated to the District. Retention, detention, and <a href="stormwater">stormwater</a> management <a href="areas-facilities">areas-facilities</a> shall be dedicated by easement to the District, with perpetual maintenance the responsibility of the property owner or homeowners' association.
- **3.04.898** Easements dedicated during plat approval shall be considered preliminary and subject to change pending review and approval of drainage plans, reports, and calculations.
- **3.04.9109** Easements shall be provided to allow proper access to all District easements from an adjacent public right-of-way or access easement.
- **3.04.10110** Easements shall be provided for future outfall connections as determined by the Board.
- Any easement to be dedicated to the Central Broward Water Control District that overlaps with a proposed conservation easement shall be dedicated and recorded in the public records of Broward County prior to the recordation of the conservation easement. The conservation easement shall not prevent the use of the CBWCD easement for drainage purposes as contemplated in the appropriate CBWCD form of easement.

#### 3.05 STANDARD PLAT LANGUAGE

The following standard plat language shall be included in plats submitted for District approval:

3.05.1.a DEDICATION (ONLY IF EASEMENTS WILL BE DEDICATED AT TIME OF PLAT APPROVAL):

"All [insert specific type(s) of easement(s) described in the plat plan that will be dedicated to the District] easements are hereby dedicated to the Central Broward Water Control District with perpetual maintenance the responsibility of the property owner or homeowners' association."

"No improvements, trees or encroachments including utilities (except for overhead power, cable or telephone lines with a minimum 25 foot clearance) or landscaping are allowed within easements dedicated to the Central Broward Water Control District without the approval of and a permit from the Central Broward Water Control District and the utility system owner entering into a hold harmless and indemnification agreement with the Central Broward Water Control District. It is the intent of this provision that all utilities (except for overhead power, cable or telephone lines with a minimum 25 foot clearance) proposed to be constructed within utility easements that cross or coincide with easements dedicated to the Central Broward Water Control District must be reviewed and permitted by the Central Broward Water Control District.

# **3.05.1.b** DEDICATION (ONLY IF EASEMENTS WILL NOT BE DEDICATED AT TIME OF PLAT APPROVAL):

"No improvements, trees or encroachments including utilities (except for overhead power, cable or telephone lines with a minimum 25 foot clearance) or landscaping are allowed within easements dedicated to the Central Broward Water Control District without the approval of and a permit from the Central Broward Water Control District and the utility system owner entering into a hold harmless and indemnification agreement with the Central Broward Water Control District. It is the intent of this provision that all utilities (except for overhead power, cable or telephone lines with a minimum 25 foot clearance) proposed to be constructed within utility easements that cross or coincide with easements dedicated to the Central Broward Water Control District must be reviewed and permitted by the Central Broward Water Control District.

# "This is to certify that this plat is hereby approved and accepted by the Central Broward Water Control District this \_\_\_\_\_ Day of \_\_\_\_\_\_, 2\_\_\_\_. Prior to development of this property, owner shall contact the Central Broward Water Control District for determination of additional easements and/or other dedications which may be required by the Central Broward Water Control District for drainage or access purposes." "This plat was approved by the Central Broward Water Control District the following dates":

Date

By:

District Manager

Chair

SIGNATURE BLOCK:

3.05.2

Date

#### 3.06 SIGNATURE

All plats shall provide for the signature of the Chair, Vice Chair, or acting Chair of the District Board of Commissioners, and the Secretary/Manager of the District, or a Second Commissioner.

3.06.1 Chair, Vice Chair, or acting Chair of the Board of Commissioners, and the District Secretary/Manager will sign the original plat following its approval by the Board of Commissioners.

#### 3.07 REVISIONS

If, in the opinion of the District Secretary or the Second Commissioner of the District, revisions to the plat as originally approved may affect drainage, the plat shall be resubmitted to the District for re-review and approval.

#### 3.08 RECORDATION

The applicant shall furnish a print of the recorded plat to the District for its files.

#### 4. PERMIT APPROVAL

#### 4.01 GENERAL

The Central Broward Water Control District Board of Commissioners meets regularly the second and fourth Wednesday of each month—at 7:30 p.m.. The Board of Commissioners meeting is held at the District office located at 8020 Stirling Road, Hollywood, Florida 33024. See the calendar on District's web site for meeting dates and times: <a href="http://centralbrowardwcd.org/calendar/">http://centralbrowardwcd.org/calendar/</a>

- **4.01.1** All questions involving fees, schedules, agendas, meetings, or bonding shall be directed to the District Secretary/Manager.
- 4.01.2 All questions regarding preparation of paving, grading, and drainage plans, which involve engineering criteria or clarification to the District's Standard Criteria, shall be directed to the District's Engineer.

#### 4.02 REQUIREMENTS

All plans submitted shall be prepared under the direction of and signed and sealed by <a href="mailto:thea-appropriate">thea-appropriate</a> Registered licensed Pprofessional Eengineer, licensed professional surveyor and mapper, or licensed professional landscape architect licensed by the State of Florida Department of Business and Professional Regulations, Board of Professional Engineers. Refer to Exhibit C for the minimum required documentation.

- 4.02.1 All plans submitted shall be on standard 22" X 34" (full-size), 24" X 36" (full-size), sheets and/or 11" X 17" (half-size) sheets with a maximum scale of 1' = 100' on full-size sheets for overall exhibits and 1" = 40' for paving, grading, drainage plans. All text must be large enough to be legible on half-size sheets or annotated with a font size greater than or equal to 0.080", or equivalent to Arial 8 point. Any plans submitted on oversized sheets will be returned without comment. The District may also require plans to be submitted (or transmitted) in digital format.
- **4.02.2** As a minimum, plans submitted for District approval shall provide:
  - **4.02.2.1** Location sketch at 1" = 300' accurately relating the project to section lines and/or corners.
  - **4.02.2.2** North arrow and scale and legal description of the property.
  - 4.02.2.3 Acreage of the project with a schedule of pervious/impervious areas, stormwater management facilities areas, all electro-mechanical equipment such as

transformers, irrigation assemblies, air-conditioning equipment pads, light poles, etc. and building coverage, including future build-out limits of all buildings, decks, patios, and pools.

A recent (i.e., <u>last date of field data collection is</u> less than 6 months from date of initial <u>application</u> submittal) topographic and boundary survey of the project and surrounding area showing where appropriate section lines, rights-of-way, recorded easements, property lines, reservations, references to official records<u>-and\_-pag\_e(s)</u>, etc., all properly depicted and annotated<del>identified</del>.

In lieu of providing a survey that is less than 6 months old from the date of initial submittal, provide a properly signed and sealed survey to be accompanied by a Florida registered Surveyor and Mapper's notarized affidavit affirming no additions or changes to the property have been made since the date shown on the submitted survey.

For District canals adjacent to the property, locate right-ofway (ROW), easements, edge of water, and top of bank en the plat and plans. Provide cross-sections of District canals every hundred feet (100') of property frontage to include all grade breaks from top of bank to top of bank.

- **4.02.2.5** Paving, grading and drainage plans are to include:
  - 4.02.2.5.1 Existing ground elevations at no greater than a 100\_-foot grid extending 100 feet beyond the boundaries of the development, existing buildings, roadways, and other permanent structures; and location and elevations of existing drainage facilities within 150 feet of the project boundary.
  - 4.02.2.5.2 Proposed development layout with horizontal and vertical control. The paving and drainage plan(s) must graphically depict the future build-out limits of all buildings, decks, patios, and pools in addition to a detailed geometry of the currently proposed improvements.
  - **4.02.2.5.3** Drainage structures, <u>storm</u>water management <u>areasfacilities</u>, drainage piping, and culverts with grate and invert elevations, and pipe sizes.

- **4.02.2.5.4** Direction of flow in swales and other transmission facilities with control elevations.
- **4.02.2.5.5** Typical sections for roads, canals, lakes/ponds, drain fields, and drainage structures. Lot grading plan(s).
- **4.02.2.5.6** Specifications of material to be utilized for roadway and drainage construction.
- 4.02.2.5.7 Proposed easements for drainage and/or water management.stormwater management facilities.
- **4.02.2.5.8** Percolation test reports to support design of seepage trench systems.
- 4.02.2.5.9 Routing of the 10-year, 1\_-day; 25-year, 3\_-day; and 100-year, 3\_-day zero discharge storm events to support pavement elevation, perimeter berm, and finished floor elevations.
- **4.02.2.5.10** Details of project control structure including stage/discharge rating curves.
- **4.02.2.5.11** Pipe routing calculations for the 3-year storm to support pipe sizes and catch basin rim elevations.
- **4.02.2.5.12** Central Broward Water Control District General Notes (see Exhibit J).
- **4.02.2.5.13** Completed check list. Projects submitted without check list will be returned without comment.
- **4.02.2.5.14** Other information as required by the District's Engineer.
- 4.02.2.6 For existing developments that do not have a CBWCD Paving and Drainagewater management works permit, provide a log of the operation and maintenance schedules for all the components of the stormwater management system to remain, and a stormwater certification report (Exhibit V) signed and sealed by a Florida registered Licensed Professional Engineer certifying that the components of the stormwater management system are functioning as designed.

#### 4.03 SUBMITTAL

One (1) original set of the application form, drawings, supporting information, and the requisite fees, shall be submitted to the District Secretary at the District Office, located at 8020 Stirling Road, Hollywood, Florida 33024, prior to the close of business no later than three (3) weeks before the next scheduled meeting of the Board of Commissioners, for which the applicant would like to have his project considered.

- 4.03.1 Two (2) copies of the application form, checklist, and signed/sealed drawings and supporting information shall be submitted directly to the District's Engineer's office on the same day. Electronic submittal of digitally or electronically signed/sealed/dated plans, specifications, reports or other documents will be accepted for initial and interim submittals provided the document is signed and sealed in accordance with the digital or electronic signing and sealing requirements and rules of the registered professional in responsible charge. For engineering documents, see Ch. 61G15-23.004, F.A.C. and 61G15-23.005, F.A.C. For survey maps, see Ch. 5J-17.062, F.A.C. For landscape architecture work, see Ch. 61G10-11.011, F.A.C. Final submittal documents must be physically signed, sealed and dated.
- 4.03.2 Requests for permit application forms can be made in person, by letter or by phone, directly to the Central Broward Water Control District office at 8020 Stirling Road, Hollywood, FL 33024, 954-432-5110. There is no charge for issuance of an application form for a permit.

#### 4.04 ENGINEER REVIEW

The District's Engineer will review all submittals for conformity to the District's Design Standards and general acceptable engineering standards. The Engineer will convey comments and/or remarks, if any, to the applicant in a timely manner so that revisions (if any) can be made for board submittal. The Engineer's review findings or the District's acceptance of the proposed work shall not be construed as an approval of a violation of the provisions of these criteria or of other rules and regulations of authorities having jurisdiction. The applicant, through their design professionals, is solely responsible for complying with the rules and regulations of other authorities having jurisdiction.

4.04.1 An appeal of the District's Engineer's requirements may be presented to the District's Board of Commissioners at the applicants request through the District Secretary/Manager.

#### 4.05 BOARD SUBMITTAL

Once the application is deemed complete, the Applicant shall submit eight (8) copies of the revised application form, drawings (11" X 17"), one (1) set of full size signed/sealed construction drawings, and supporting information to the District Secretary/Manager at the District Office located at 8020 Stirling Road, Hollywood, Florida 33024 prior to the close of business no later than two (2) weeks before the next scheduled meeting of the Board of Commissioners. In addition, the District may require the drawings and supporting information to be submitted (or transmitted) in digital format.

4.05.1 Two (2) revised copies of the application form, signed/sealed drawings (24" X 36") and supporting information shall be submitted directly to the District's Engineer's office on the same day. All drawings and calculations submitted to the District Engineer shall be signed and sealed by a Florida Registered Licensed Professional Engineer. If the Board approved drawings and supporting information differs from the information submitted prior to the Board meeting, the applicant shall resubmit all required information within three weeks of Board approval.

#### 4.06 BOND BEFORE CONSTRUCTION

If any construction is started prior to District Board approval of the plans and receipt by applicant of signed Water Management Works Permit, or after approval and permit issuance; but before a bond is posted in an acceptable manner, the District Attorney will secure an injunction to halt construction. The costs of bringing said action including attorney's fees shall be borne by the Developer.

4.06.1 A certificate of the District's Engineer or District Secretary shall be prima facie evidence of non-compliance of the Developer with these criteria. The court may issue a temporary injunction upon the showing of non-compliance without a further need to show damage to the health, safety, or welfare of the residents of the District.

### 4.07 EXPIRATION UNLESS BOND HAS BEEN POSTED AND WORK HAS BEEN COMMENCED

All approvals expire after eighteen (18)twenty-four (24) months from the date of issuance.

- 4.07.1 Permits will become invalid two (2) years from date of issuance if work has not begun on a permitted project unless other provisions have been made with the District. The District must be notified in writing before construction commences or re-commences after a period of construction suspension longer than sixty (60) days after initial construction commencement. Permits will become invalid upon suspension of work in excess of one hundred eighty (180) days on any permitted work unless an extension has been granted by the District.
- 4.07.2 If the permittee wishes to begin, continue, or resume work after permit expiration, a new permit must be obtained which will be reviewed in accordance with all current conditions and regulations, and which will require new plan approval. The construction phase of the permit will expire upon completion of the permitted work and acceptance of the record drawings of the installation.
- 4.07.43 An extension of time may be granted by the Board of District Commissioners at their discretion.\_\_\_
- 4.07.4 The declaration of a state of emergency issued by the Governor of Florida for a natural emergency tolls the period remaining to exercise the rights under a permit or other authorization for the duration of the emergency declaration subject to the provisions in § 252.363, Florida Statutes.

#### 4.08 TRANSFER OF OWNERSHIP

The permittee shall notify the District by letter within five (5) days of any sale, conveyance, or other transfer of ownership or control of a permitted water management works or the real property on which the permitted works is located. The permittee shall remain liable for performance in accordance with the permit and for corrective actions that may be required as a result of any violations prior to the transfer.

Any new owner of a permitted water management works shall apply by letter for a transfer of permit within (5) days after sale or legal transfer. The new owner shall be liable for performance in accordance with the permit after the transfer.

#### 5. BONDS AND INSPECTION

#### 5.01 GENERAL

Upon District Board of Commissioners approval of plans, but before construction can commence, the following items must be complied with:

- 5.01.1 Bond (cash or surety), in the District's favor, must be posted in the amount of 110 percent of the Developer's Engineer's (Engineer of Record) estimate of cost of construction of the paving and drainage works. (Subject to approval of the cost estimate by the District Secretary/Manager.)
- Upon compliance with the conditions required by the Board for approval, and receipt of approved plans from the District Engineer, the District Secretary/Manager will mark the plans "Approved", and sign same, and distribute the approved plans to the governmental agency involved, the developer, and retain one (1) set in the District files.
- 5.01.4 The District's Bond Form is the only form approved for use, and it shall be a recorded instrument. Release or reduction from the recorded instrument shall be the responsibility of the applicant.
- **5.01.5** Bonds shall be provided by the principals of developments only. Contractor or Sub-Contractor bonds are not acceptable.

#### 5.02 INSPECTION

When construction is in progress, the District's inspector will inspect the installation of drainage works, according to an inspection schedule established by the Board of Commissioners. Inspection must be made by District personnel of all underground storm drain facilities before backfilling; call 954-432-5110 for an inspection appointment a minimum of twenty-four (24) hours in advance. All costs of periodic inspections of construction by the District shall be borne by the Developer.

#### 5.03 SEPARATE BOND FOR EXCAVATION

Swales, lake/pond banks, slopes, canals, and other excavations, including aquatic plantings in the required littoral zones shall be bonded separately from other drainage improvements and will be held by the District until successful completion. The amount of this separate bond will be determined by the District Board of Commissioners and by recommendation of the District Secretary/Manager.

A portion of the bond for excavation shall be held by the District until each excavated water body with a littoral zone(s) achieves <u>aan</u> 80% coverage or appropriate survival rate for planted and recruited species and no more than 5% nuisance or exotic plant species coverage following the one (1) year anniversary of the approved as-built drawings. If the survival requirement is not met, the applicant, or his successors and/or assigns, shall plant and maintain each site until the 80% coverage or survival rate is achieved.

#### 5.04 RECORD DRAWING

Record drawings certified by the Engineer of Record <u>based on as-built drawings certified</u> <u>by a Florida Registered Professional Surveyor and Mapper</u> will be required before release of performance bonds. <u>Both certifications must appear on each sheet of the record drawing.</u>

#### 5.05 BOND RELEASE

Subject to the provisions stated herein, upon successful completion of construction and acceptance of "As-Builts", the amount of the performance bond as determined by the District Board may be reduced. The balance of the bond shall remain in full force and effect for the minimum of an additional twelve (12) months after final inspection and approval, unless supplemented by a new bond form in the required amounts and as approved by the District Secretary/Manager. The procedure for reduction and/or release of bonds shall include the following:

5.05.1 At least three (3) weeks prior to the Meeting of the Board of Commissioners the request for a reduction or release of bond is to be considered by the District Board of Commissioners, the developer shall provide to the District's Secretary/Manager, a current list of the names and addresses of all property owners owning property within the development for which the bond is requested to be either reduced or released.

5.05.2	Upon receipt of the list of property owners, the District Secretary/Manager shall mail by certified mail, return receipt requested, notification to all property owners in substantially the following form:					
	The developer of ( <u>name of development</u> ) has requested a (reduction) (release) of the developments construction performance bond in the amount of \$ which is being held by the Central Broward Water Control District to assure completion of construction of paving and drainage improvement within ( <u>name of development</u> ) of which the District has been advised you have acquired a part of. This bond in the amount of \$ will be considered for (reduction) (release) at the District's Board of Commissioners Meeting scheduled for the day of, 2 @ PM at 8020 Stirling					
	Road (Davie), Hollywood, Florida 33024. If you have any questions regarding the reduction or release of this bond you may contact the District's Secretary/Manager at 954-432-5110 or present your comments to the District Board of Commissioners at the District's Meeting.					

#### 6. RECORD DRAWINGS

#### 6.01 GENERAL

Prior to the release of any bond or surety, the Developer, through his Engineer, shall submit "Record" drawings to the District for review and approval.

- **6.01.1** The submittal and review process shall be as outlined in Section 4 and as detailed herein.
- As-built drawings must accurately reflect site conditions and be no older than six (6) months from the date of submittal to the District<u>or six (6)</u> months from the last date of field data acquisition by the Surveyor of Record, whichever is older.
- One CD containing electronic files of plat, paving and grading plans, reports, other supporting information, and the final version of as-builts drawings shall be submitted to the District's Engineer's office on the same day. The CD shall contain an index file with a brief description of CD file contents, and shall be labeled with project name, company name, and point of contact. Documents and spreadsheets shall be submitted in either MS Word, Word Perfect, Excel, Lotus, or otheranother format approved by the engineer. Drawings shall be submitted in AutoCadAutoCAD, AutoCadAutoCAD compatible file- type, or otheranother format approved by the District's Engineer.
- All easements, deed restrictions, maintenance agreements, deeds, and water management works permit as required by the Board shall be presented to the District Secretary/Manager and Attorney for approval before recordation. All costs of recording the applicable instrument will be borne by the developer.

#### 6.02 SIGNATURE AND SEAL

All record drawings shall be signed and sealed by the Engineer of Record. The Record drawings shall be based on as-built drawings certified by a Florida registered Licensed Professional Surveyor and Mapper and must contain the signature and seal of the Licensed Professional Engineer of Record as well as the signature and seal of the

<u>Licensed Professional</u> Surveyor and Mapper of Record. Such signature shall evidence that he has reviewed the information, finds it in substantial accordance with the design; and where deviations from the design exist, that said deviations are not to the detriment of the project or the District. The record drawing must include the following certification statement on each drawing and be signed/sealed by the Engineer of Record:

I	HEREBY	CERTIFY	THAT	THE	SURFA	<del>CE</del> _ST	<u>DRM</u> WA	ιTER
M	ANAGEME	NT FACILI	TIES FO	R TH	IS PRO	JECT H	AVE B	EEN
CC	ONSTRUC <sup>*</sup>	TED IN SUB	STANTIA	L ACC	ORDANC	E WITH T	HE DES	SIGN
ΑF	PROVED	BY THE	CENTRA	L BR	OWARD	WATER	CONT	ROL
DI	STRICT, A	AND HERE	BY AFFIX	( MY ;	SEAL TH	HS	DAY	′ OF
		, 20	•					
(S	EAL)							

#### 6.03 DRAWINGS

As-Built information shall be superimposed on the original design drawings. <u>All references</u> to "proposed" shall be struck through and replaced with the appropriate text acknowledging the constructed facility.

#### 6.04 INFORMATION TO BE SUPPLIED

- Roadway elevations crown edge of pavement, swale, and right-of-way line at 100' intervals; and at the high and low points of the road.
  - 6.04.1.1 If roadway elevations are not the finished pavement, a note detailing the stage of construction when the elevations were taken, i.e. top of rock first lift of asphalt, etc.
- 6.04.2 Drainage structures shall show rim and grate elevations, invert elevations of all pipes along with their size, material, and length, top and invert of headwalls, and the elevations of the control structure, including weir size and length, notches, and orifices.

- Lake/\_pond, canal, and/or waterways shall be cross sectioned at 100\_foot (100') intervals. The cross section shall be referenced to the easement line, shall show with annotations the top of bank, sodded area, edge of water, planted wetland vegetation, slope breakpoints, and bottom, and their elevations, and all slopes annotated as a ratio of H:V. The design template shall be shown on the eacheach section.
- 6.04.4 Perimeter berms <u>and walls</u> shall be cross sectioned at 100—foot (100') intervals. The cross sections shall be referenced to the property line and show the elevations of the top of berm, top of wall, property line, and top berm width.
- **6.04.5** Drainage swales shall have flowline elevations shown at 100–foot (100') intervals or fraction thereof.
- Dry <u>fd</u>etention or <u>dr</u>etention areas shall show <u>top of bank and bottom</u> elevations at 100—foot <u>(100')</u> grid points, and <u>limits of bottom area and grade break at top of bank.</u>
- **6.04.7** Actual Average width and total area of aquatic plantings in littoral zones.
- Results of video inspection of pipe and structure cleaning up to the first existing structure beyond the first existing pipe run upstream and downstream of any new connections depicted in the approved drawings.

  Additional lengths of existing pipe and structures may be required to be cleaned, inspected and televised if determined to be necessary by the District Engineer or District Manager.
- 6.04.9 Permanent benchmark elevation data (NGVD29 and NAVD88) for headwalls installed in District canals shall be annotated on the record drawing.

#### 6.05 CONSTRUCTION TOLERANCES

Variations in horizontal and vertical dimensions for non-critical stormwater management facility or site improvement components may be allowed at the discretion of the District Engineer or District Manager in accordance

with generally accepted good engineering practices and standards recognized in Broward County.

Any portion of a critical stormwater management facility that is not within the acceptable tolerance described in Exhibit K must be reconstructed, reinspected by the engineer of record, and re-surveyed prior to submittal of as-built and record drawings.

#### 7. VARIANCES AND APPEALS

#### 7.01 GENERAL

The Board of the District Commissioners, at their discretion and as hereinbefore provided, may grant a variance to the District Criteria.

#### 7.02 VARIANCE

In exercising the powers and duties under 7.02 the Central Broward Water Control District Commission shall not grant a variance unless and until the following has been demonstrated:

- **7.02.1** A letter from the applicant outlining the variance request which demonstrates that the following prerequisites to the granting of variance have been met:
  - A. Special conditions and circumstances affect the land, building or structure concerning which the variance is sought.
  - B. The existing conditions and circumstances are not the result of the actions of the applicant or his agents.
  - C. Strict application of the provisions of this District's criteria would deprive the applicant of reasonable use of said land, building or structure and that a genuine hardship exists provided, however, previously granted variances shall not be considered grounds for issuance of a variance.
  - D. Alternative measures are proposed to mitigate not complying fully with the subject criterion and that the variance proposed is the minimum variance that will make possible the reasonable use of the land, building or structure.

- DE. The Board of Commissioners shall find that the granting of the variance will be in harmony with the general purpose and intent of the District's variance criteria and that the variance proposed is the minimum variance that will make possible the reasonable use of the land, building or structure.
- F. The variance to District Criteria will not adversely affect adjacent private property not owned by the applicant or adjacent public property and right-of-ways.
- 7.02.2 A sketch and a legal description of the property showing all easements and rights-of-way. If the property fronts a water body, the sketch shall clearly show the location by dimension of the top of bank and edge of water. The elevation of the top of bank and water at time of survey shall be shown.
- **7.02.3** A sketch of encroaching structure (existing or proposed), if applicable, shall be furnished. Said sketch shall show the amount of encroachment.
- **7.02.4** Other information as may be required by the District Manager/Secretary, or by the Board of District Commissioners, to properly evaluate the request.
- **7.02.5** The District Manager/Secretary will make the determination that the application is complete, and complete and shall schedule the application on the next available Board of Commissioners meeting.
- 7.02.6 Fourteen (14) days prior to the Board of Commissioners meeting date for the variance request, a sign shall be posted by the applicant on the subject property indicating that the subject property is the subject of a variance request before the District. All signs shall be eighteen inches by twenty fourtwenty-four inches, double sided with a yellow background and shall be made of weather resistant material. Signs shall be posted along each street frontage of the subject property and shall be visible from the street. All signs shall contain the following information:
  - General Description of the Variance Request (iei.e.: "This property will be the subject of a variance request on \_\_\_\_\_\_\_ before the Central Broward Water Control Board to \_\_\_\_\_")
  - Project Name
  - Date, time, and location of the District Board meeting.

Telephone number and contact name for additional information.

All signs shall be removed by the applicant within seven days after the District Board meeting.

7.02.7

In granting a variance request, the District shall require that the applicant, his successors, and assigns, indemnify and hold harmless the District. The cost of preparing said indemnification and hold harmless agreement, including attorney fees and recording, shall be borne by the applicant.

#### 7.03 APPEAL

Appeal of the District's Engineer's application, or interpretation of District Criteria, shall be submitted by letter to the District Manager/Secretary.

#### 7.04 PLAN APPROVAL WITH VARIANCE

An application for development approval, which requires a variance to District Criteria, will not be heard by the Board of District Commissioners prior to the Board acting on the variance request.

#### 8. FEES

#### 8.01 GENERAL

The District will collect fees to be utilized to defray the cost of review and processing applications for development. The fees include, but are not necessarily limited to:

8.01.1	Plat Review
8.01.2	Plan Review
8.01.3	Variance
8.01.4	Culvert Installations
8.01.5	Permit Renewal Culvert Installations
8.01.6	Single Family Home Plan Approval
8.01.7	After-the-Fact Permit Approval
8.01.8	Pre-application Conference
8.01.9	District Engineer Cost Recovery
8.01.10	Enforcement Compliance Cost Recovery
8.01.11	Use of District Easements

#### 8.02 FEE AMOUNT

Fees charged by the District may be varied from time to time, and the applicant is cautioned to contact the District Secretary at the District office (8020 Stirling Road, Hollywood, Florida 33024) at 954-432-5110 to determine the fee amount.

#### 8.03 FEE REMITTANCE

**8.03.1** An application will not be considered complete without the remittance of the necessary fees.

**8.03.2** Permit and review fees for permits and review of paving and drainage plans, plats and other matters which are submitted to the District by religious organizations and schools shall not be waived.

#### 8.04 LEGAL FEES

Costs incurred by the District for the preparation and/or review of indemnification agreements, easement dedications, vacations, bond reductions or the calling of a bond, enforcement of District Criteria, or as required by the Board of District Commissioners as part of the approval and permitting process, shall be paid by the applicant.

# 9. RULES OF CENTRAL BROWARD WATER CONTROL DISTRICT REGARDING PERMITS FOR WORK WITHIN DISTRICT RIGHTS-OF-WAY

#### 9.01 GENERAL

The Board has the power to establish a code of general specifications for the obtainment of a permit; and for hearings in connection therewith before the Board of Commissioners for approval of plans for any construction or work done, which comes into, over, onto, or through any of the waterways of the District created hereby. Waterways for the purposes of these requirements are hereby defined as "the waterways, easements, rights and reservations, rights-of-way, maintenance strips, swales, and all and every work or facility appurtenant or adjacent to, or utilized by the District in connection with the functioning of its waterways.

# 9.02 POLICY OF THE DISTRICT IN CONSIDERING AND ISSUING PERMITS

- **9.02.1** No permit will be granted for any use of a District's works that will adversely affect such works, or interfere with, or impose hardships upon the District's operation, maintenance, or construction activities.
- **9.02.2** No permit will be granted for any use of District's works when granting such would be inconsistent with the comprehensive plans for the District.
- **9.02.3** The District reserves the rights to: (a) change, regulate, and limit discharges into, or withdrawals from, District works, and (b) amend or change any of its policies, practices, procedures, regulations, or fees; and such action shall not constitute any claim for damages, nor become the basis for legal suit by any permittee.
- **9.02.4** In the event that the District exercises its rights reserved in 9.02.3 (a) and (b) above, the permit holder will be required to comply by alteration or otherwise, as required.

#### 9.03 APPLICATION FOR PERMIT

9.03.1 Requests for application for permit forms can be made in person, by letter, or by phone, directly to the Central Broward Water Control District office at 8020 Stirling Road, Hollywood, Florida 33024, (954) 432-5110. There is no charge for issuance of an application for a permit.

#### 9.03.2 PREPARING THE APPLICATION

- **9.03.2.1** Simply state what use is intended; bridge crossing, culvert connection, beautification of right-of-way, etc.
- **9.03.2.2** Location of work to be done, stating County, Section, Township, Range, Block, Lot, Subdivision, where pertinent.
- **9.03.2.3** Name or project number of canal or levee involved.
- **9.03.2.4** Name of owner of proposed work or structure, and address.
- **9.03.2.5** Area proposed to be served.
- **9.03.2.6** Date of commencement of work contemplated in application, and date of completion of work.

#### 9.03.3 PREPARATION OF THE SKETCH

- **9.03.3.1** Drawings are to be submitted on letter size paper (8 1/2" X 11"), in duplicate.
- **9.03.3.2** The sketch should locate the installation or construction by referencing it to a section line, a road, or some obvious and/or permanent land mark.
- **9.03.3.3** The sketch should clearly portray the construction in its relationship to the channel and/or right-of-way. Elevations must be indicated.

#### 9.04 EMERGENCY PERMITS

A letter of authorization for emergency use of the District's facilities can be obtained prior to the issuance of a permit at the Board's discretion, if the delay of normal permit procedure would cause extreme hardship, or endanger lives or property; provided, however, an application for permit is regularly filed.

#### 9.05 TEMPORARY PERMITS

Installation based upon seasonal requirements such as irrigation, pump connections, or semi-permanent facilities subject to relocation or modification such as temporary power lines, may be authorized under a temporary permit. Said temporary permits are to be issued for the use of District facilities for a period not exceeding ninety (90) days. However, should a use of installation approved under temporary status be desired for a period in excess of the maximum period allowed under the temporary status, a reasonable time extension may be applied for, or an application for regular permit may be made.

#### 9.06 USE OF DISTRICT EASEMENTS

For the purpose of this section "Utility", "Utility Work" or "Utility Crossings" shall refer to any work (aerial, trenching, directional boring, buried, subaqueous, pavement cuts, etc.) involving potable water mains, force mains, sanitary sewer mains, water re-use lines, irrigation, gas, electric, telephone, cable TV, communications systems, fiber optics, internet cable, traffic signals, cameras, conduits, meters, junction boxes, access structures, or other similar work.

For proposed Utility Work or placement of communications facilities within CBWCD's property, rights-of-ways and easement areas, including, but not limited to Canal and Lake Maintenance Easements, the District shall require an initial user fee plus an annual user fee, which will become due one (1) year after the Utility Work or communications facilities are installed and completed and every year thereafter for as long as the utility and communications systems remain within CBWCD's property, rights-of-ways or easement areas. These funds may be used by the District for any expenses incurred by the District. In addition, the utility provider (or communications services provider) shall enter into a non-exclusive Agreement with CBWCD whereby the District is indemnified and held harmless from any and all damages that are caused as a result of the Utility Work installation or operation of the communications system, and may require a surety bond or letter of credit for Utility Work or placement of communications facilities within CBWCD's property, rights-of-ways or easement areas that may be withdrawn by the District to restore damaged or abandoned facilities within such areas. If the user of CBWCD's property, rights-of-ways or easement areas violates any terms or requirements of an Agreement or the District Criteria, or fails to correct said violation, District violation, District may remove the utility or communications system placed within the property, rights-of-ways or easement areas and shall be reimbursed for all costs and expenses incurred by District in removing the said systems. District may terminate an Agreement for failure to cure such violations. These costs and expenses shall include, but not be limited to, reasonable attorney's fees and legal expenses incurred by the District.

#### 9.07 MODIFICATION OR RELOCATIONS OF WORK UNDER PERMIT

Modifications to existing works under permit can be made without applying for a new permit; this also applies to the relocation of structures or facilities to a new site; provided, however, that the Board shall be advised in writing of the intent to do so, and shall consent thereto by a letter of approval.

A letter of request to amend the existing permit, in duplicate, accompanied by adequate drawings, also in duplicate, should be submitted to the District. Approval of the requested change will be granted in the form of a letter of acceptance.

#### 9.08 TRANSFER OF PERMITS

By a separate agreement, the holder of a District permit may allow a third party the use of his permitted facility; but such agreement must be made known to the District in writing. Permits are not assignable without the specific consent of the District. A valid permit, upon request, can be transferred from one owner to a new owner. Request must be made in a letter form by the new owner, with the consent of the previous owner shown therein.

# 9.09 CONDITIONS UPON WHICH PERMITS ARE ISSUED ARE AS FOLLOWS:

- **9.09.1** Abidance by the terms and conditions of the permit issued to the holder.
- **9.09.2** The maintenance of any work or structures, the title to which remains with the permittee, in good and safe conditions.
- 9.09.3 The holding and saving of the District and its successors harmless from any and all damages, claims, or liabilities, which may arise by reason of the construction, operation, maintenance, of the use, of the work or structure involved in the permit.
- **9.09.4** Permitting inspection at any time by the District, its agents, servants, or employees, of any works and structures established under the permit.
- **9.09.5** The prevention of the discharge of debris and/or aquatic growth into any District works should the construction be a culvert, open channel, or pump connection.
- 9.09.6 Conformance with any alterations of, or amendments to the requirements of minimum standards of construction that may be deemed necessary by the District.
- **9.09.7** If in the event the Board requires our Engineer's approval, said costs shall be fully reimbursed by the applicant.
- **9.09.8** The granting of a permit does not convey to the permittee any property rights, nor any rights or privileges other than those specified in the permit.

#### 9.10 **BOND**

Where deemed necessary by the District, a bond in an amount to be set by the District, may be required to insure compliance with the terms of the permit.

#### 9.11 FEE

A fee will be charged for the issuance of the permit, which shall cover the cost of one inspection if necessary.

You are cautioned to call the District Secretary/Manager at 954-432-5110 for the current fee schedule as the Board of Commissioners may periodically update it

#### **BIBLIOGRAPHY**

The following is a list of publications incorporated by reference in this <u>Document.</u>

The use of certain transcripts, verbiage, and exhibits from these publications is acknowledged.

Florida Building Code with Broward County amendments, latest edition

Rules of the South Florida Water Management District related to the Environmental Resource Permit program

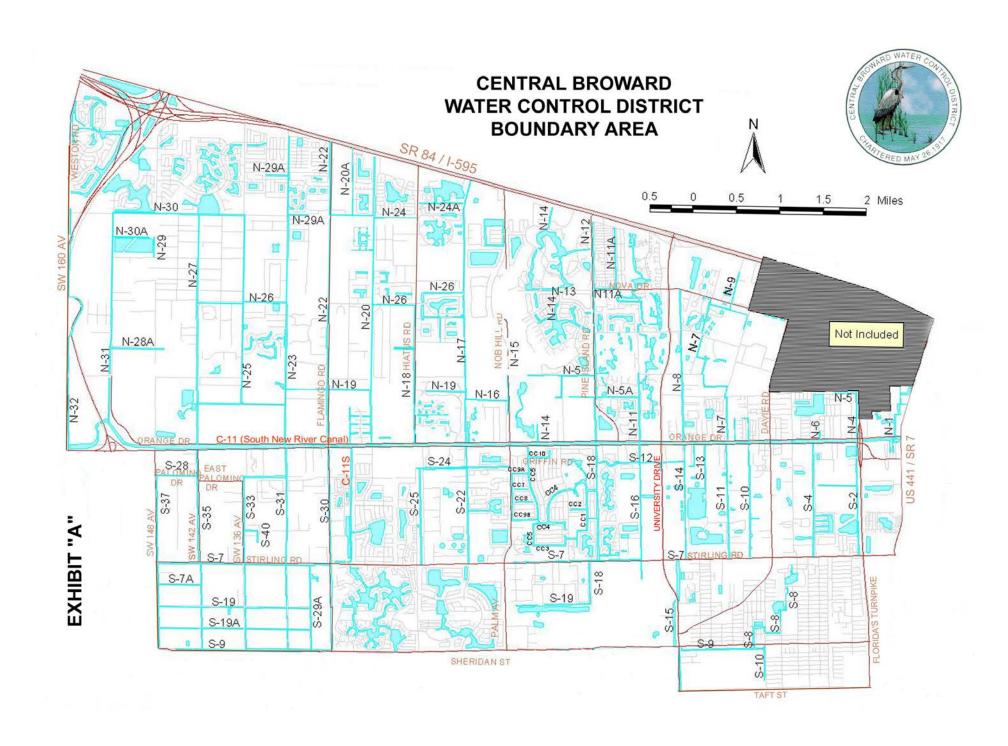
<u>SFWMD Environmental Resource Permit (ERP) Permit Information</u>

<u>Manual, Applicant's Handbook - Volumes I and II, and Part III – References</u>

<u>and Design Aids, latest edition</u>

Florida Department of Transportation, Drainage Manuals, latest editions.

Broward County, Florida - Code of Ordinances, Chapter 27, Pollution Control, Article V, "Water Resource Management," latest edition.



#### **CBWCD DOCUMENT SUBMITTAL REQUIREMENTS**

PLEASE SEND ALL PACKAGES SEPARATELY TO THE DISTRICT AND TO THE DISTRICT ENGINEER (DE)

	INIT	IAL	RE-SUBMITTALS**		FINAL	**
	<b>CBWCD</b>	DE	CBWCD	DE	CBWCD*	DE
PLAT SUBN	IITTALS					
	T	Number	of sets to Dis	trict and D	istrict Engineer	
Transmittal Page	1	2	1	2	1	2
Application	1	2	1	2	1	2
Plat Request Letter Signed by Owner	1	2	1	2	-	-
S/S Boundary & Topographic Survey	1	2	1	2	-	-
Recorded ORB docs (paper copies & PDF)	1	2	1	2	-	-
Other pertinent documents	1	2	1	2	-	-
Legal Description	-	1	-	1	-	-
CD w/ CADD (AutoDesk®) and PDF files of Survey & Draft Plat	-	1	-	1	-	1
Draft Plat***	1	2	1	2	8 – 11X17	2
Didit Flat			•	2	1 – Full Size	Full Si
PAVING & DRAINAG	E SUBMITT	ALS				
Transmittal Page	1	2	1	2	1	2
Application	1	2	-	-	-	_
Application Fee	1	-	-	-	-	-
CBWCD Criteria Manual Exhibit C Checklist completed	1	2	-	-	-	-
Legal Description	-	1	-	1	-	-
S/S Boundary & Topographic Survey	1	2	1	2	-	-
S/S Engineering Report	1	2	1	2	-	-
Recorded ORB docs (paper copies & PDF)	1	2	1	2	-	-
Other pertinent documents	1	2	1	2	-	-
CD w/ CADD (AutoDesk®) and PDF files of Engineering Report,	_	1	_	1	_	1
Survey, Civil & Landscape Drawings		'		•	_	
S/S Civil Engineering Drawings ***	1	2	1	2	8 – 11X17	2
(final sets to CBWCD do not have to be S/S)	'		•		1 – Full Size	Full Si
S/S Landscape Architecture Drawings ***	1	2	1	2	8 – 11X17	2
(final sets to CBWCD do not have to be S/S)	•		•		1 – Full Size	Full Si
AS-BUILT / RECORD DR.	AWING SUB	MITTALS	}			
Transmittal Page	1	2	1	2	1	2
Water Management Works Form [get permit # from District]	1	2	1	2	-	-
Executed Easement Form(s) [must use District's form(s)]	1	2	1	2	-	_
Esmt. Exhibit "A" Legal Description (8 1/2" x 11")	-	1	-	1	-	_
Esmt. Exhibit "B" S/S Sketch & Descriptions (8 1/2" X 11")	1	2	1	2	-	-
S/S Stormwater Certification Report ("5-Yr Recert") for exist. systems	1	2	1	2	-	_
Other pertinent documents	1	2	1	2	-	-
Recorded Easement(s) (PDF and hard copy)	-	-	-	-	1	1
CD w/ CADD (AutoDesk®) & PDF files of As-built/Record Dwgs	-	1	-	1	-	1
S/S As-built / Record Drawings***	1	2	1	2	8 – 11X17	2
(final sets to CBWCD do not have to be S/S)	'	2	<u>'</u>	2	1 – Full Size	Full S

S/S = signed/sealed/dated by surveyor /civil engineer /landscape architect of record

<sup>&</sup>lt;sup>†</sup> Digital and paper versions of initial and final submittals of all survey, engineering and landscape architecture documents must signed/dated/sealed by the appropriate licensed professional. Interim PDF & paper copies of all documents, except for easement sketches with accompanying legal descriptions, do not have to be digitally/electronically signed/dated/sealed.

<sup>\*</sup> Only re-submit [all pages] if any portion of the document was updated or modified.

<sup>\*\*</sup> Please do not submit final documents to the District until the application is deemed complete by the DE.

<sup>\*\*\*</sup> Ensure that fonts for all text are large enough to be legible when sheets are reduced to 11"X17" or half size.

#### **EXHIBIT "C"** [Reformatted and edited entire exhibit]

#### PAVING AND DRAINAGE CHECK LIST FOR APPLICANTS

This checklist is provided to assist the applicant in providing the appropriate information to the District. It must be completed and included with the initial submittal package. When a question is answered NO or N/A, submit a brief statement as to why this information is not provided. This check list is not all-inclusive. Additional information may be required to confirm compliance with District regulations, standards, procedures, and design criteria.

#	Submittal Item Description	Yes	No	N/A
1. I	PROPERTY AND PROJECT INFORMATION	<u> </u>		<u> </u>
1.1	Boundary and topographic survey with:			
	Legal description including property area			
	Existing improvements			
	<ul> <li>Existing grades at no greater than a 100' grid extending 100'-sufficiently beyond the property boundaries to determine direction of off-site flows</li> </ul>			
	<ul> <li>Vertical elevation datum and site-specific algebraic difference between NAVD88 and NGVD29</li> </ul>			
	FEMA FIRM panel number and flood zone			
	All easements of record and known encumbrances			
	<ul> <li>Section lines, rights-of-way, property lines, reservations with references to official record book and page number or instrument number</li> </ul>			
	<ul> <li>For District canals adjacent to or adjoining the property (includes canals on the opposite side of the adjacent right-of-way): all grades from top of bank to top of bank including any intermediate grade breaks in plan view and cross sections spaced 100' apart with grades and slopes</li> </ul>			
1.2	PDF of all recorded easements and reservations			
1.3	Current and proposed zoning			
1.4	Current and proposed land use			
1.5	Development area in acres (total and for each phase)			
2. I	ENGINEERING DOCUMENTS			
2.1	Narrative of existing land use and drainage conditions			
2.2	Narrative of proposed development and stormwater management plan			
2.3	Engineering analyses:			
	<ul> <li>Land use breakdown (building, green, dry detention, pavement, lake/pond)</li> </ul>			
	<ul> <li>Pervious/impervious land cover breakdown based on maximum impervious coverage that accounts for future phases and building expansion such as decks, patios and pools</li> </ul>			
	Water quality <u>and exfiltration trench storage</u> calculations			
	72-Hour drawdown or bleed-down calculations			
	Soil storage calculations			
	Existing and proposed stage-area-storage table by land use or land cover			

#	Submittal Item Description	Yes	No	N/A	
	Floodplain storage encroachment (SFWMD Importer/Exporter) calculations				
	Site-specific maximum allowable discharge calculation				
	Discharge rating curves				
	Pre- and Post-Development Runoff computations				
	<ul> <li>Surface water management model input and output data for 10-Year 1-Day, 25-Year 3- Day, and 100-Year 3-Day Zero Discharge design events</li> </ul>				
	Storm sewer pipe sizing and hydraulic grade line calculations with map of contributory areas				
	Supporting documents and exhibits such as FEMA FIRM panel, SFWMD isohyetal maps, County flood maps, TR-55 Curve Number table, culvert sizing nomographs, FDOT intensity/duration/frequency curves, product-specific cut sheets or technical data, NRCS Soil Survey, etc.				
2.4	Geotechnical engineering report with:				
	Results of sub-surface exploration				
	Report and map of core borings				
	<ul> <li>Laboratory testing results (sieve analyses, in-situ standard penetration test, usual openhole test, double-ring infiltrometer, etc.)</li> </ul>				
	<ul> <li>Unified or AASHTO soil classification for each soil strata to a minimum depth of 5' below the water control elevation</li> </ul>				
	Engineering evaluations and recommendations				
3.	SUPPORTING DOCUMENTS				
3.1	Biological assessment report				
3.2	Special geotechnical or hydrogeological investigation reports such as an ASTM Phase I or II				
	Environmental Site Assessment for properties with known or suspected soil or groundwater contamination				
3.3					
	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes				
4. (Con	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater	rawn t	o sca	le	
4. (Con	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  struction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) drawings are contaminated by the contamination of soil or groundwater.	rawn to	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  struction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) drawingler than 1"=40'	rawn to	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  estruction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) dismaller than 1"=40'  Civil Engineering miscellaneous drawings:  Key sheet with legal description, location map with scale and location of District	rawn t	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  estruction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) do smaller than 1"=40'  Civil Engineering miscellaneous drawings:  Key sheet with legal description, location map with scale and location of District canal(s), north arrow and sheet index  Specifications for paving, embankment materials, storm sewer materials, drainage	rawn t	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  struction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) do smaller than 1"=40'  Civil Engineering miscellaneous drawings:  Key sheet with legal description, location map with scale and location of District canal(s), north arrow and sheet index  Specifications for paving, embankment materials, storm sewer materials, drainage structure materials, and as-built requirements	rawn t	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  astruction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) dismaller than 1"=40'  Civil Engineering miscellaneous drawings:  Key sheet with legal description, location map with scale and location of District canal(s), north arrow and sheet index  Specifications for paving, embankment materials, storm sewer materials, drainage structure materials, and as-built requirements  CBWCD General Notes	rawn t	o sca	le	
4. (Conno s	contamination  Remedial Action Plan when the results of a Phase I or Phase II assessment includes recommendations for site-specific remediation of soil or groundwater  CONSTRUCTION DRAWINGS  struction drawings no larger than 24" x 36" (full size) and no smaller than 11" x 17" (half size) dismaller than 1"=40'  Civil Engineering miscellaneous drawings:  Key sheet with legal description, location map with scale and location of District canal(s), north arrow and sheet index  Specifications for paving, embankment materials, storm sewer materials, drainage structure materials, and as-built requirements  CBWCD General Notes  Demolition plan	rawn t	o sca	le	

#	Submittal Item Description	Yes	No	N/A
4.2	Civil Engineering Paving, Grading, and Drainage plans:			
	Construction phasing limits			
	Stormwater management design data table (see page 45)			
	Existing and proposed topography sufficient to identify high/low points and ridges			
	Location of District canals and proposed outfall			
	All stormwater management facilities depicted and annotated			
	Existing and proposed building limits with minimum finished floor elevation			
	<ul> <li>Roof runoff controls (e.g., gutters connected to storm sewer structures)</li> </ul>			
	<ul> <li>Lot grading plan depicting maximum building footprint (including pools, decks, and patios)</li> </ul>			
	<ul> <li>Roadway gradients (or slopes) and elevations at sag and crest points</li> </ul>			
	<ul> <li>Location of drainage structures with rim (if manhole) or grate (if catch basin or yard drain) elevation, invert elevations, and pollutant pollution retardant baffle for each corresponding pipe invert included in structure callouts</li> </ul>			
	<ul> <li>Pipe type, size, and length to include overall length from center of structure to center of structure and <u>separate</u> length of exfiltration trench</li> </ul>			
	Overland flow arrows			
	<ul> <li><u>"Treatment Swales" and/or "Conveyance Swales"</u> with flow arrows, top of bank and channel invert elevations and locations. Provide at least 15% change in slope at top of bank transition between swale bank and areas landward of the outer edge of swale.</li> </ul>			
	Roof runoff control details (e.g., type and size of rain leaders)			
	<ul> <li>Wet detention/retention limits of lake maintenance easement, top of bank and contours at each grade break down to bottom, area at water control elevation, and <u>aquatic</u> <u>planting</u> required vs. provided area <u>and limits of aquatic plantings</u></li> </ul>			
	<ul> <li>Dry detention/retention area limits of top of bank and contours at each grade break down to bottom. Provide at least 8% and 11% change in slope at the top of bank transition from 1:5 and 1:4 banks, respectively, to areas landward of the outer edge of the detention/retention area.</li> </ul>			
	Existing and proposed guardrail limits			
	Proposed easements to be dedicated to the District depicted and annotated			
	<ul> <li>Location of adjacent properties that will require accommodation for bypass drainage conveyance through the subject property</li> </ul>			
	<ul> <li>Location of air conditioner pads, electrical transformers, light poles, irrigation pump housing and control panels, and any other pad mounted electro-mechanical equipment</li> </ul>			
	Perimeter berm alignment			
	Note prohibiting trees and plants within District easements			
4.3	Typical sections depicting grades, slopes, fencing, and CBWCD easement limits, if applicable, for:			
	Roads			
	Drive aisles			
	Parking spaces			

#	Submittal Item Description	Yes	No	N/A
	Canals			
	Lakes/ponds with <u>minimum/maximum slope ratios</u> , <u>minimum lake depth</u> , <u>top of bank annotated</u> , <u>aquatic planting notes</u> , <u>details and plant list</u> , <u>and muck layer</u>			
	<ul> <li>Dry detention/retention areas with top of bank, toe of slope, and water control elevation annotated</li> </ul>			
	Lot grading <del>plan depicting maximum building footprint</del>			
	Perimeter berm			
4.4	Civil Engineering Paving, Grading, and Drainage plan details:			
	Paving such as pavement section, grading, drainage, exfiltration trench, and control structure details			
	Grading details such as trench excavations			
	<ul> <li>Drainage details such as typical manhole and catch basin details:         <ul> <li>Inner and outer structure dimensions</li> <li>Sump callout with minimum depth</li> <li>Pollution Retardant Baffle (PRB) material and mounting details with minimum 24" separation between outside of PRB and interior wall or adjacent PRB</li> <li>Inverted PRB material and mounting details</li> </ul> </li> </ul>			
	<ul> <li>Control structure details:         <ul> <li>Elevation (profile) view</li> <li>Plan view</li> <li>Cross section view</li> <li>Grate or top elevation</li> <li>Weir crest or overflow elevation and dimensions</li> <li>Orifice invert elevation and dimensions</li> <li>Outgoing pipe annotated to indicate proposed point of discharge (e.g., "To N-1 Canal")</li> </ul> </li> </ul>			
	<ul> <li>Exfiltration trench details:         <ul> <li>Width, height and minimum cover over trench</li> <li>Elevations of top, bottom, pipe invert, and water control elevation</li> <li>Material specifications and installation instructions</li> </ul> </li> </ul>			
	Specialty stormwater system component details (e.g., underground stormwater storage vaults), operation and maintenance requirements and inspection schedules			
	Boat ramp details			
	Headwall details with minimum top of cap elevation			
	<ul> <li>Retaining wall schematics with the appropriate statements regarding compliance with the Florida Building Code</li> </ul>			
4.5	Landscape Architecture drawings:			
	Tree disposition plan			
	Planting plan depicting easements to be dedicated to CBWCD			
	Planting notes and details including root barrier and details			
	Note regarding no trees or plant materials to be installed inside easements to be dedicated to the District			

### DESIGN DATA TABLE REQUIRED ON FIRST PAVING & DRAINAGE CONSTRUCTION DRAWING\*

STORMWATER MANAGEMENT DESIGN DATA TABLE				
ITEM	ELEVATION IN FEET			
	REQUIRED	PROVIDED		
ELEVATIONS IN THESE DRAWINGS ARE BASED ON:		4		
NGVD29 TO NAVD88 CONVERSION FACTOR	0.00 NGVD29	= (-) <b>B.BB</b>		
	NAVD88			
MINIMUM FINISHED FLOOR ELEVATION CRITERIA	<u> </u>			
FEMA MIN. BASE FLOODPLAIN ELEVATION WITH ASCE 24	С	D		
MODIFIER				
BROWARD COUNTY 100-YEAR FLOOD ELEVATION	E	D		
100-YEAR 3-DAY ZERO DISCHARGE PEAK STAGE	F	D		
18" ABOVE NEAREST ROAD CROWN ELEVATION –	G	D		
RESIDENTIAL STRUCTURES				
6" ABOVE NEAREST ROAD CROWN ELEVATION –	H	D		
NON-RESIDENTIAL STRUCTURES				
MINIMUM CROWN OF ROAD ELEVATION CRITERIA				
BROWARD COUNTY 10-YEAR FLOOD ELEVATION	I	D		
10-YEAR 1-DAY PEAK STAGE	F	D		
MINIMUM PERIMETER BERM ELEVATION				
25-YEAR 3-DAY PEAK STAGE	F	D		

### Data insertion guidelines

A: Insert either "NGVD29" or "NAVD88"

B.BB: Insert value to two decimal places after the minus sign "(-)"

- C: Insert the minimum FEMA Base Flood Elevation or Design Flood Elevation, including any adjustments per ASCE 24 (latest edition per the Florida Building Code)
- **D**: Insert the minimum elevation provided. NOTE: The Provided minimum elevation must be the greater of all relevant criteria.
- E: Insert the minimum elevation based on the Broward County 100-year Flood Map in CBWCD Criteria Manual Exhibit D, or latest Broward County 100-Year flood elevation map
- **F**: Insert the peak stage from the site-specific engineering calculations
- **G**: Insert the elevation of the crown of road nearest the lowest building entrance, or "N/A" if it is not a residential structure
- H: Insert the elevation of the crown of road nearest the lowest building entrance, or "N/A" if it is not a non-residential structure
- I: Insert the minimum elevation based on the Broward County 10-year Flood Map in CBWCD Criteria Manual Exhibit E, or latest Broward County 10-Year flood elevation map

<sup>\*</sup>See Section 2.02, Central Broward Water Control District Criteria Manual, latest edition

### BROWARD **BROWARD COUNTY 100 YEAR FLOOD ELEVATIONS** RYBLVD 7.5 (9) **PLANTATION** 7.5 (9) W BROWARD BLVD 6.5 (8) 8 (9.5) 7 (8:5) 6.5 (8) SW 136T TERS RD HILL SBOR O-BEACH. 6.5(8)ROYAL PALM BLVD SW 30TH ST DAVIE BETH ST 6 (7.5) 100TH 6(7.5)NS. CH SOUTHWEST RANCHES DALE-SEA SEM COOPER 75 TRIB CITY 6.5(8)8 1 SHERIDANST SHERIDAN ST 7.5 (9 **PLANTATION** 5 (9) FORT LAUDERDALI 6.5 (8) 7 (8:5) 6.5 (8) WESTON DAVIE 6 (7.5 6 (7.5) DANIA BEACH 6.5 (8) SOUTHWEST SEMINOLE COOPER 6.5 (8) 5.5 (7) 6.1 (7.6) 5 (6.5) PEMBROKE PINES PEMBROKE PARK HALLANDALE BEACH WEST 8.5 (10) PARK MIRAMAR 6.5 (8) 5.8 (7.3) BROWARD Of Section Of

100 Year Flood Contours NAVD (NGVD) Example: 6.5 (8)

EXHIBIT "D" 100-YEAR FLOOD MAP

This map is for conceptual purposes only and should not be used for legal boundary determinations.

Elevations converted from NGVD to NAVD using the FEMA approved conversion factor for Broward County of (-)1.5, based on 1997 FEMA Flood Data

## **EXHIBIT E**

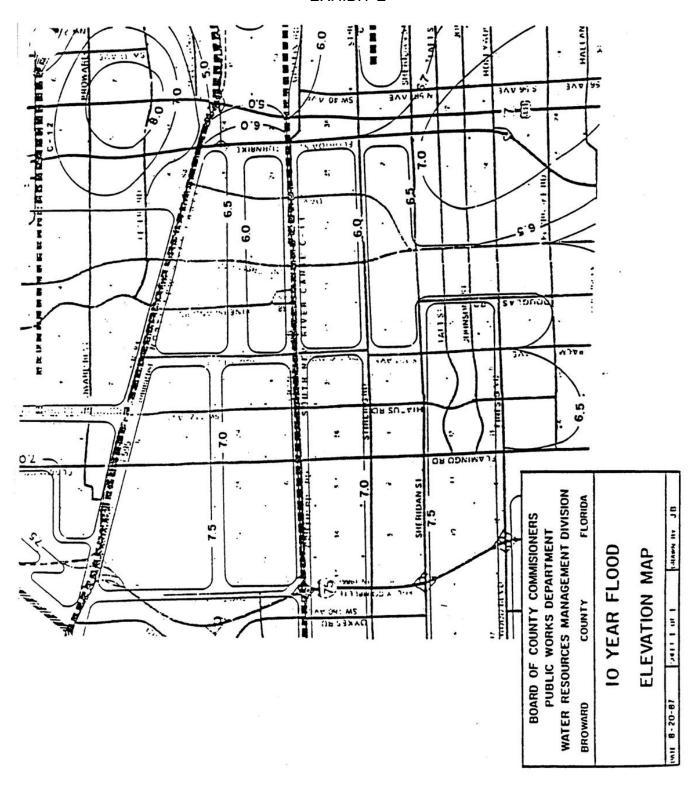


EXHIBIT E 10 YEAR FLOOD MAP

### **EXHIBIT F**

## 3-YEAR STORM ZONE 10 D.O.T

(TC) Min	)									
		1	2	3	4	5	6	7	8	9
10	6.81	6.59	6.39	6.21	6.04	5.88	5.74	5.60	5.47	5.35
20	5.23	5.13	5.02	4.92	4.83	4.74	4.66	4.57	4.49	4.42
30	4.35	4.28	4.21	4.14	4.08	4.02	3.96	3.90	3.85	3.80
40	3.74	3.69	3.64	3.60	3.55	3.51	3.46	3.42	3.38	3.34
50	3.30	3.26	3.22	3.18	3.15	3.11	3.08	3.05	3.01	2.98
60	2.95	2.92	2.89	2.86	2.83	2.80	2.77	2.75	2.72	2.69
70	2.67	2.64	2.62	2.59	2.57	2.54	2.52	2.50	2.48	2.45
80	2.43	2.41	2.39	2.37	2.35	2.33	2.31	2.29	2.27	2.25
90	2.24	2.22	2.20	2.18	2.16	2.15	2.13	2.11	2.10	2.08
100	2.07	2.05	2.04	2.02	2.00	1.99	1.98	1.96	1.95	1.93
110	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.81	1.80
120	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.71	1.70	1.69
130	1.68	1.67	1.66	1.64	1.63	1.62	1.61	1.60	1.59	1.58

1.54

1.45

1.37

1.30

Time

140 1.58

150 1.48

160 1.40

170 1.33

1.57

1.48

1.40

1.32

1.56

1.47

1.39

1.32

1.55

1.46

1.38

1.31

### Inches of Rainfall

1.53

1.44

1.37

1.30

1.51

1.43

1.35

1.28

1.52

1.43

1.36

1.29

1.50

1.42

1.34

1.28

1.49

1.41

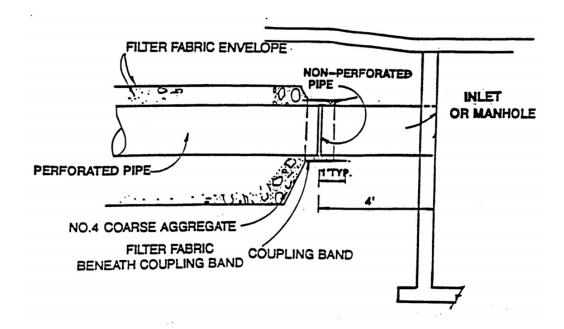
1.34

1.27

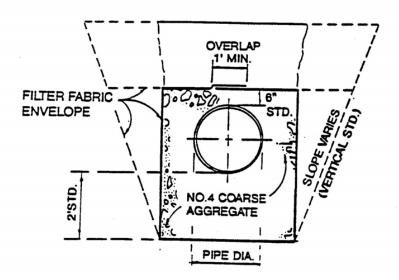
Example: For a three (3) year storm with a time of concentration of 45 min. the rainfall in inches is 3.51.

EXHIBIT F 3-YEAR STORM ZONE 10 D.O.T

### **EXHIBIT G**



# LONGITUDINAL SECTION

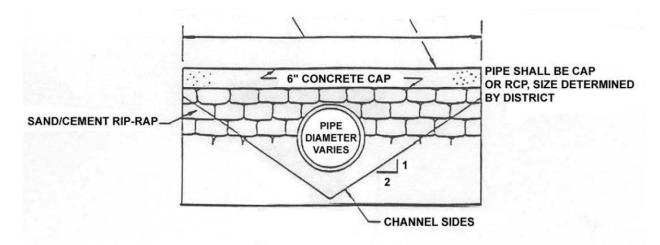


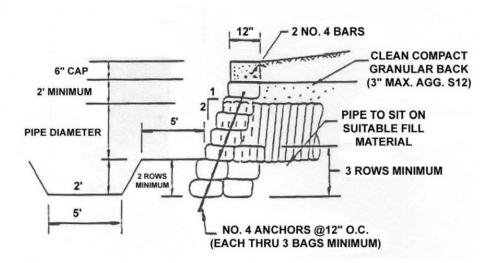
# STANDARD CROSS SECTION

# **EXFILTRATION TRENCH**

EXHIBIT G EXFILTRATION TRENCH DETAIL

#### **EXHIBIT "H" – HEADWALL DETAIL**

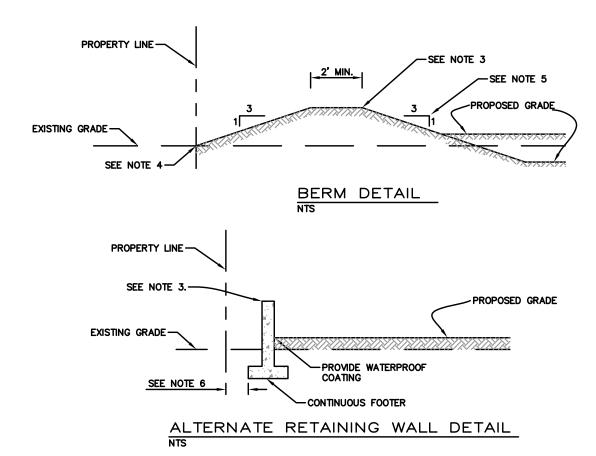




- 1. Owner shall retain a registered professional engineer licensed in the State of Florida to inspect and certify the installation.
- Owner's engineer shall supply record drawings showing the invert(s), top of headwall, and upstream and downstream cross sections of excavated canal.
- 2.3. Headwalls shall include winged endwalls similar to the FDOT "Winged Concrete Endwalls" detail [FDOT Standard Plans Index No. 430-040, latest edition] for precast headwalls or the Town of Davie "Rip Rap Headwall" detail [TOD Standard Paving and Drainage Detail D-6, latest edition] for rip rap headwalls.
- 3.4. Pre-case or cast-in-place concrete headwall may be installed as an alternative to a rip-rap headwall. Owner's engineer shall provide signed/sealed design drawings for the appropriate installation type.
- 4.5. For headwalls installed in lakes/<u>lakes and ponds</u>, the maximum crown of pipe shall be the District's water control elevation.
- 6. For headwalls installed in District canals, the top of headwall shall be set at 1' above the District's water control elevation.
- 5.7. Provide 1 NAVD88 and 1 NGVD29 stable and permanent benchmark at each headwall in a District Canal. Refer to the CBWCD Criteria Manual for required information.

## EXHIBIT I

# TYPICAL PERIMETER BERM DETAILS



#### NOTES:

- BERM TO BE CONSTRUCTED OF SUITABLE FILL MATERIAL. NO MUCK OR OPEN GRADED SILICA (SUGAR) SAND WILL BE ACCEPTABLE.
- 2. BERM TO BE COMPACTED TO 92% DENSITY AND SODDED OR STABILIZED IN AN APPROVED METHOD TO PREVENT EROSION.
- 3. TOP OF BERM OR WALL TO BE CONSTRUCTED TO A MINIMUM ELEVATION EQUAL TO THE PROJECTED 25 YEAR EVENT STORM.
- 4. NO TEMPORARY OR PERMANENT GRADING WORK SHALL ENCROACH ON ADJACENT PROPERTY.
- 5. SLOPES MUST BE 4H:1V OR SHALLOWER WHEN BANK IS PART OF A DRY DETENTION/RETENTION AREA.
- 6. PROVIDE ADEQUATE SEPARATION FROM PROPERTY LINE TO AVOID ABOVE OR BELOW GROUND ENCROACHMENTS ONTO ADJACENT PROPERTY DURING AND AFTER CONSTRUCTION.
- 7. WALLS SHALL BE DESIGNED PER THE STRUCTURAL DESIGN CRITERIA OF THE FLORIDA BUILDING CODE, LATEST EDITION.

### **EXHIBIT "J"**

### **GENERAL NOTES**

The following general notes shall be placed on all paving and drainage plans submitted to the District.

### **CBWCD GENERAL NOTES**

- 1) The following General Notes are required by Central Broward Water Control District. They are not meant to be all inclusive, and it is the Engineer of Records' responsibility to add any notes which will inform the Owner and the Contractor of any additional requirement of the Central Broward Water Control District.
- 2) Any revisions to these plans must be approved by the Central Broward Water Control District prior to construction.
- 3) Bonds: Upon District Board of Commissioners approval of plans, but before construction can commence, the following items must be complied with:
  - A) Bond (cash or surety), in the District's favor, must be posted in the amount of 110 percent of the developer's Engineer of Record's estimate of cost of construction of the paving and drainage works.

    (Subject to approval of the cost estimate by the District Secretary/Manager or District Engineer.)
  - B) Swales, lake/pond banks, slopes, canals, and other excavations shall be bonded separately from other drainage improvements and will be held by the District until successful completion. The amount of this separate bond will be determined by the District Board of Commissioners and by recommendation of the District Secretary/Manager.
  - C) The District's Bond Form is the only form approved for use, and it shall be a recorded instrument. Release or reduction from the recorded instrument shall be the responsibility of the applicant.

- D) Bonds shall be provided by the principals of development only. Contractor or Sub-Contractor bonds are not acceptable.
- E) Upon successful completion of construction, and acceptance of "As-Builts/Record Drawings" by the District Board of Commissioners, a percentage of the performance bond as determined by the District may be released. The balance of bond shall remain in full force and effect for an additional twelve (12) months after final inspection and approval, unless supplemented by new bond forms in the required amounts and approved by the District Attorney.
- 4) Inspections: When construction is in progress, the District's Inspector will inspect the installation of drainage works, according to an inspection schedule established by the Board of Commissioners. Inspection must be made by District personnel before backfilling of any storm drain structures, pipes, exfiltration trenches, work in District canals, and before placement of asphalt or concrete pavement. Call (954) 432-5110 for an inspection appointment a minimum of twenty-four (24) hours in advance. All costs of periodic inspections of construction by the District shall be borne by the developer.
- <u>5)</u> Limerock base course shall conform to the requirements of Section 911 of Florida Department of Transportation Standard Specifications, except the minimum percentage of carbonates of calcium and magnesium shall be sixty percent (60 %).\_
- 6) All muck and deleterious soils shall be removed from the top of bank to top of bank limits of dry detention/retention areas, and exfiltration trenches down to a minimum of five feet (5') below the water control elevation and replaced with suitable well-draining soils.
- 7) All nuisance vegetation shall be removed from within the project limits and within the portion of the CBWCD canal that falls within the property boundary. This also applies when the property abuts a roadway and the District canal is located on the opposite side of the road with respect to the property. In this case, nuisance vegetation shall be removed from the canal bank nearest the property line.
- 8) Existing storm sewers shall be cleaned from the point of connection with new storm sewers or drainage structures to the first existing structure upstream and downstream of the point of connection. Television inspection of the pipes shall be reviewed and certified that they are clean by the Engineer of Record prior to submittal of as-built drawings to the District.

- 9) The limits of any easement to be dedicated to the District shall be staked prior to installing trees to be located within three (3) feet of a District easement. The stakes shall remain in place until the site or landscape contractor verifies the intended plant location does not encroach into a District easement.
- 10) The District Secretary/Manager and District Engineer shall be notified prior to the submittal of as-built/record drawings of any encroachment within a District easement not expressly approved by the District Board of Commissioners.
- 11) As-Built Survey and Record Drawing: "As-Built" plans from the Surveyor of Record must be certified as "Record Drawings" by the Engineer of Record. The Surveyor's certification shall include the last date of field data acquisition. The Engineer's certification shall include the CBWCD permit compliance statement. As-Builts shall be provided as an overlay on the approved construction drawings at the same scale for comparison purposes. All references to "proposed" shall be struck through and replaced with the asbuilt condition. As-Built submittals shall follow the same format of general review as described in the Central Broward Water Control District's Stormwater Management Regulations, Standards, Procedures, and Design Criteria Manual.
- 12)Lake/pond, canal, and dry detention/retention area as-builts will be crosssectioned showing the designed section as dashed, as-built section as solid, and have the top of bank reference to the Lake/Canal Maintenance Easement. Spacing between each cross-section shall be such as to provide enough data to determine if the lake/pond/canal/dry detention/retention area was constructed as designed. The maximum spacing between cross sections shall be 100'.
- 13) The contractor shall provide stable and permanent elevation benchmarks on the top of each headwall cap for pipes discharging into District canals and driveway culverts along District canals. The benchmark elevation shall be based on North American Vertical Datum of 1988 (NAVD88) and include the datum reference using National Geodetic Survey benchmarks or Florida Department of Transportation benchmarks in NAVD88 and only converted back to National Geodetic Vertical Datum of 1929 (NGVD29). The other shall be based on NGVD29 and include the datum reference. Each headwall shall have one (1) NAVD88 and one (1) NGVD29 benchmark. Culverts connecting District canals only require one (1) benchmark per each pair of headwalls.
- 4)14) The Surveyor of Record shall annotate the benchmark elevations on the as-built drawing in the format provided by the District Engineer. The benchmark data shall also include a Northing/Easting coordinate at the center

- of each headwall. The horizontal datum shall be based on State Plane, Florida East Zone, North American Datum of 1983/1990 (NAD83/90).
- 2) Central Broward Water Control District will be called 24 hours prior to backfilling of drainage trench and prior to the placement of asphalt. Call (954) 432-5110.
- 3) Any revisions to these plans must be approved by Central Broward Water Control District prior to construction.
- 4) Bonds and Inspections:
- 1) <u>Bonds: Upon District Board of Commissioners approval of plans, but before construction can commence</u>, the following items must be complied with:
  - A) Bond (cash or surety), in the District's favor, must be posted in the amount of 110 percent of the developer's engineer's (Engineer of Record) estimate of cost of construction of the paving and drainage works. (Subject to approval of the cost estimate by the District Engineers.)
  - B) All easements, deed restrictions, maintenance agreements, and deeds as required by the Board shall be presented to the District Secretary and Attorney for approval before recordation. All costs of recording the applicable instrument will be borne by the Developer.
  - C) Upon compliance with the conditions required by the Board for approval, and receipt of approved plans from the District Engineer, the District Secretary will mark the plans "Approved"; sign same and distribute the approved plans to the governmental agency involved, the developer, and the District files.
  - D) The District's Bond Form is the only form approved for use, and it shall be a recorded instrument. Release or reduction from the recorded instrument shall be the responsibility of the applicant.
  - Bonds shall be provided by the principals of development only. Contractor or Sub-Contractor bonds are not acceptable.

- Swales, lake banks, slopes, canals, and other excavations shall be bonded separately from other drainage improvements and will be held by the District until successful completion. The amount of this separate bond will be determined by the District Board of Commissioners and by recommendation of the District Secretary.
- E) "As-Built" plans from the Surveyor of Record that are certified as "Record Drawings" by the Engineer of Record will be required before acceptance of the completed project by the Board of Commissioners and release of performance bonds.
- 2) Inspections: When construction is in progress, the District's Inspector will inspect the installation of drainage works, according to an inspection schedule established by the Board of Commissioners. Inspection must be made by District personnel of all underground storm drain facilities structures, pipes, exfiltration trenches, and placement of asphalt or concrete pavement before backfilling.; cCall (954) 432-5110 for an inspection appointment a minimum of twenty-four (24) hours in advance. All costs of periodic inspections of construction by the District shall be borne by the developer.
- 3)1) Swales, lake banks, slopes, canals, and other excavations shall be bonded separately from other drainage improvements and will be held by the District until successful completion. The amount of this separate bond will be determined by the District Board of Commissioners and by recommendation of the District Secretary.
- Existing storm sewers shall be cleaned from the point of connection with new storm sewers or drainage structures to the first existing structure upstream and downstream of the point of connection. Television inspection of the pipes shall be reviewed and certified that they are clean by the Engineer of Record prior to submittal of as-built drawings to the District.
- 4) Certified "As-Built" plans from the Engineer of Record will be required before release of performance bonds. <u>As-Built Survey and Record Drawing: "As-Built" plans from the Surveyor of Record must be certified as "Record Drawings" by the Engineer of Record. The Surveyor's certification shall include the last date of field data acquisition. The Engineer's certification shall include the CBWCD permit compliance statement. As-Builts shall be provided as an overlay on the approved construction drawings at the same scale for comparison purposes. <u>All references to "proposed" shall be struck through and replaced with the as-built condition.</u> As-Built submittals shall follow the same format of Ggeneral Rreview as outlined in Section 3.2 (2) of</u>

<u>described in the Central Broward Water Control District's Stormwater Management Regulations, Standards, Procedures, and Design cCriteria Manual.</u>

- 15) Lake, and canal, and dry detention/retention area Aas-Bbuilts will be cross sectioned showing the designed section as dashed, Aas-Bbuilt section as solid, and have the top of bank reference to the Lake/Canal Maintenance Easement. Spacing between each cross-section shall be such as to provide enough data to determine if the lake/canal/dry detention/retention area was constructed as designed. The maximum spacing between cross sections shall be 100'.
- 5) Upon successful completion of construction, and acceptance of "As-Builts/Record Drawings"; a percentage of the performance bond as determined by the District Board, and retained by the District, may be released. The balance of bond shall remain in full force and effect for an additional twelve (12) months after final inspection and approval, unless supplemented by new bond forms in the required amounts and approved by the District Attorney.

# EXHIBIT K [NEW EXHIBIT] CONSTRUCTION TOLERANCES

Any portion of a stormwater management facility that is not within the allowable tolerance described below must be reconstructed, re-inspected by the engineer of record, and re-surveyed prior to submittal of as-built and record drawings. Maximum slope means the steepest allowable slope. All slope ratios are based on horizontal unit to vertical unit (H:V).

CRITICAL STORMWATER MANAGEMENT FACILITY OR PROJECT COMPONENT	TOLERANCE
CANALS, LAKES AND WET DETENTION/RETENTION LAKES/PONDS	
Minimum average slope in any 100' section of waterfront for banks designed at a 4H:1V	≥ <u>3.8</u> 3.8:1
<u>slopes</u>	
Minimum bank slope for banks designed at a 4H:1V slopes	<u>≥ 3.60:1</u>
Minimum average slope in any 100' section of waterfront for banks designed at a 5H:1V	≥ 4.84.8:1
slopes	
Minimum bank slope for banks designed at a 5H:1V slopes	<u>≥ 4.60:1</u>
Deviation from top of bank elevation	<u>(-) 0.2'</u>
Deviation above required from grade break at transition from shallow to steep slope at 3'	<del>(+) 0.5'</del> (+) 0.2'
below the water control elevation	( ) ( 00)
Deviation from required area at the water control elevation	<u>(-) 1.0%</u>
Minimum slope in any 100' section of canal or lake maintenance easement slope	≥ <del>17</del> 18.0:1
<u>DRY DETENTION/RETENTION AREAS</u>	
Minimum average slope in any 100' section of waterfront for banks designed at a 4H:1V	<u>≥ 3.8:1</u>
<u>slopes</u>	
Minimum bank slope for banks designed at a 4H:1V slopes	<u>≥ 3.60:1</u>
Deviation from top of bank	<u>-0.2'</u>
Deviation from bottom of dry detention/retention area	(+) to (-) 0.2'
CONTROL STRUCTURES AND EXFILTRATION TRENCHES	
Cast-in-place, pre-cast, pre-fabricated, or fabricated-in-place orifices and weirs (including	(+) to (-)
grates if designed as an overflow weir or orifice) regarding elevations, lengths, widths,	<u>0.0417'</u>
<u>circumferences</u> , <u>or other design geometry</u> . <u>Includes components constructed using concrete</u> , <u>masonry</u> , <u>metallic</u> , <u>or non-metallic materials</u> .	
Exfiltration trench pipe invert	<del>(+) to</del> (-) 0.1'
Exhittation trench pipe invert	<del>(+) to</del> (-) 0.1
PERIMETER BERMS AND FINISHED GRADES	
Minimum front and back side slope	≥ <del>2.80</del> 2.70:1
Top width	(-) 0.2'
Minimum top of berm elevation	(-) 0.2'
Swale channel invert	(-) 0.2'
Deviation from minimum & maximum roadway, drive aisle, and parking space elevations	<u>(+) to (-)</u> <del>0.2'</del> 0.1'
	<u>∪.∠</u> ∪.1_

1 2 3 4 5 6	Please return to: Central Broward Water Control District 8020 Stirling Road Hollywood, FL 33024
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9 10 11	CENTRAL BROWARD WATER CONTROL DISTRICT SUBDIVIDER'S COMPLETION AGREEMENT
12 13	KNOW ALL MEN BY THESE PRESENTS:
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15 16	That,
17	Hereinafter called "Principal", whether one or more and,
18 19 20	a corporation duly authorized to issue letters of credit within the State of Florida, hereinafter called "Bank", are held and firmly bound unto the CENTRAL BROWARD WATER CONTROL DISTRICT, a political subdivision of the State of Florida, hereinafter called the "District", for the use of said
<ul><li>21</li><li>22</li><li>23</li></ul>	District in connection with improvements described in Exhibit "A", attached hereto and incorporated herein in its entirety, (which improvements may consist of, but are not necessarily limited to paving, curb and gutter grading, excavation, embankment, drainage culverts, and
<ul><li>24</li><li>25</li></ul>	appurtenances, or other similar improvements, whether specifically mentioned herein or not, and whether or not particularly described by any attached documents) in the sum of
<ul><li>26</li><li>27</li></ul>	(\$) , lawful money of the United States of America. Said sum being one hundred
28	ten per cent (110%) of the estimated construction cost of the improvements described in Exhibit
29	"A" and which shall be prepared by a registered professional engineer in the State of Florida. Said
30	estimate being part of Exhibit "A", to be paid unto said District, its successors and assigns, to
31	which payment well and truly to be made we bind ourselves, our heirs, personal representatives,
32	successors and assigns, jointly and severally, firmly by these presents.
33	WHEREAS, the Bank has issued Letter of Credit No in the amount of \$
34	dated on behalf of Principal, hereinafter called "Letter of Credit".
35	

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in all respects fully comply with, carry out, construct, erect and build the improvements referred to in Exhibit "A" hereof, in accordance with the aforesaid regulations of the District, the plans, specifications and schedules covering said work, and such improved additions, amendments or alterations as may be made in the plans, specifications and schedules for said work (it being understood that the Principal shall remain bound under this Agreement although not informed of any such additions, amendments or alterations), and shall complete all of said work on or before , and shall pay all costs as incurred and billed by the District in connection with the investigation, approval, and inspection of the improvements referred to in Exhibit "A" hereof; then the Principal of this Agreement shall promptly repair or replace any of said improvements to the original condition required by said District or any ordinances and regulations thereof, as amended, should the same because of defective material, engineering and/or faulty workmanship, require such repair or replacement within twelve (12) months after final inspection and approval of said improvements by the District, then this obligation shall be void, otherwise remaining in full force and effect. And the Principal on this Agreement, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the work or to the plans, specifications and schedules covering the same, or in the term or mode of payment for the same shall in any way affect the liability of payment under this Agreement, and it does hereby waive notice of any and all changes, extensions of time, alterations and additions to the work or to the plans, specifications and schedules covering said work.

This Agreement shall be for the use and benefit of the District if it shall elect to proceed with said work upon the failure or refusal of the Principal to do so by the date hereinabove specified, or any subsequent extension date agreed to by the Principal and the District, or in the event the Principal for any reason fails to complete the improvements described in Exhibit "A" to this Agreement and may be enforced by the District in the manner authorized by law.

The Bank further agrees to notify the District a minimum of thirty (30) days prior to cancellation or termination of the Letter of Credit. The Principal further agrees to notify the District of any change in ownership of all or part of the property described in Exhibit "B" to this Agreement.

That the District will have the right and authority to enter upon and cross over the property described in Exhibit "B" hereto for the purpose of inspecting these improvements, and in the event that the District determines that the improvements are not being timely completed by the Principal, notice will be given by the District to the Principal and the Principal will be given a period of fifteen

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(15) days from and after the mailing of such notice within which to commence construction of the improvements or obtain from the District, in writing, an extension, for good cause shown, of the time within which the improvements will be completed, failing which the District may at its option complete the improvements described in Exhibit "A" for and on behalf of the Principal.

That in the event the District is required to complete the improvements described in Exhibit "A" on behalf of the Principal, then and in such event, the District shall be deemed to have a lien against the property described in Exhibit "B" which lien shall be inferior only to any existing first mortgage then encumbering said property, ad valorem taxes and such other liens, impositions and assessments as may be given priority by applicable statutes, and said liens shall be for all such costs incurred by the District together with interest thereon computed at ten per cent (10%) per annum. In the further event that the District is required to foreclose this lien, then and in such event, the District will be entitled to payment of any costs or attorney's fees incurred in connection with such foreclosure or collection proceedings, whether suit be brought or not; and the Principal and Bank, jointly and severally, shall be liable for same.

Should the Principal subdivide the property described in Exhibit "B" hereto, the Principal's obligations under this Agreement to complete the improvements in Exhibit "A" shall devolve upon the individual purchasers of the subdivided parcels, their heirs, successors and assigns, and shall be a covenant to run with the land. Regardless of whether or not the Principal subdivides the property described in Exhibit "B" hereto, their obligation to complete the improvements described in Exhibit "A" hereto shall be binding upon its heirs, successors and assigns, regardless of how their heirs, successors or assigns came into ownership and shall be a covenant running with the land. If construction of the improvements described in Exhibit "A" attached hereto is not substantially commenced within one (1) year from the date of this Agreement, the Principal shall submit, prior to this one (1) year period, revised cost estimates to the District for review. Following this review, if the District so requires, the Principal shall submit a revised Subdivider's Letter of Credit based on the revised cost estimate. If the Principal fails to comply with this paragraph, this Agreement shall be null and void and of no further force and effect and all previous approvals of the District shall be cancelled effective one (1) year from the date of the Letter of Credit.

This agreement shall be governed by the laws of the State of Florida.

This agreement shall be placed upon the public records of Broward County, Florida, the Principal to bear the cost.

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102	IN WITNESS WHEREOF, the Principal	and Bank have caused these presents to be duly
103	executed on this day of	_, 20
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106		Principal
107	Corporate Seal	_
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112		Bank
113	Corporate Seal	
114	•	By:
115	Attest:	
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117 118		
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	(Signature of person taking acknowledgment)
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	(Serial number, if any)
FOR A LIMITED LIABILITY CO	MPANY:
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COUNTY OF	
	cknowledged before me by means of □ physical presence or
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206 207	FOR A PARTNERSHIP:							
208	STATE OF							
209	COUNTY OF							
210	The foregoing instrument was acknow	wledged before me by	means of l	□ pl	hysical p	orese	ence or	
211	☐ online notarization, this (date)		by (nam	e of	partner	or a	gent)	
212			, partner	(or	agent)	on	behalf	of
213	(name of partnership)				a partn	ersh	ıip.	
214	He/She is personally known to me or							
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1 Please return to: 2 Central Broward Water Control District 8020 Stirling Road 3 4 5 Hollywood, FL 33024 6 7 8 CENTRAL BROWARD WATER CONTROL DISTRICT 9 SUBDIVIDER'S COMPLETION BOND 10 11 12 KNOW ALL MEN BY THESE PRESENTS: 13 14 15 Hereinafter called "Principal", whether one or more and 16 17 18 a corporation duly authorized to operate a surety business within the State of Florida, 19 hereinafter called "Surety", are held and firmly bound unto the CENTRAL BROWARD WATER 20 CONTROL DISTRICT, a political subdivision of the State of Florida, hereinafter called the 21 "District", for the use of said District in connection with improvements described in Exhibit "A", 22 attached hereto and incorporated herein in its entirety, (which improvements may consist of, but 23 are not necessarily limited to paying, curb and gutter grading, excavation, embankment, 24 drainage culverts, and appurtenances, or other similar improvements, whether specifically 25 mentioned herein or not, and whether or not particularly described by any attached documents) 26 in the sum of 27 (\$ ), lawful money of the United States of America. Said sum being one 28 hundred ten per cent (110%) of the estimated construction cost of the improvements described 29 in Exhibit "A" and which shall be prepared by a registered professional engineer in the State of 30 Florida. Said estimate being part of Exhibit "A", to be paid unto said District, its successors and 31 assigns, to which payment well and truly to be made we bind ourselves, our heirs, personal 32 representatives, successors and assigns, jointly and severally, firmly by these presents. 33 NOW, THEREFORE, the condition of this obligation is such that if the Principal shall in 34 all respects fully comply with, carry out, construct, erect and build the improvements referred to 35 in Exhibit "A" hereof, in accordance with the aforesaid regulations of the District, the plans, 36 specifications and schedules

covering said work (it being understood that the Surety shall remain bound under this Bond), and such improved additions, amendments or alterations as may be made in the plans, specifications and schedules for said work (it being understood that the Principal shall remain bound under this Agreement although not informed of any such additions, amendments or alterations), and shall complete all of said work on or before \_\_\_\_\_ pay all costs as incurred and billed by the District in connection with the investigation, approval, and inspection of the improvements referred to in Exhibit "A" hereof; then the Principal of this Bond shall promptly repair or replace any of said improvements to the original condition required by said District or any ordinances and regulations thereof, as amended, should the same because of defective material, engineering and/or faulty workmanship, require such repair or replacement within twelve (12) months after final inspection and approval of said improvements by the District, then this obligation shall be void, otherwise remaining in full force and effect. And the Surety on this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the work or to the plans, specifications and schedules covering the same, or in the term or mode of payment for the same shall in any way affect the liability of payment under this Bond, and it does hereby waive notice of any and all changes, extensions of time, alterations and additions to the work or to the plans, specifications and schedules covering said work.

This Bond shall be for the use and benefit of the District if it shall elect to proceed with said work upon the failure or refusal of the Principal to do so by the date hereinabove specified, or any subsequent extension date agreed to by the Principal and the District, or in the event the Principal for any reason fails to complete the improvements described in Exhibit "A" to this Agreement and may be enforced by the District in the manner authorized by law.

The Surety further agrees to notify the District a minimum of thirty (30) days prior to cancellation or termination of the Bond. The Principal further agrees to notify the District of any change in ownership of all or part of the property described in Exhibit "B" to this Agreement.

That the District will have the right and authority to enter upon and cross over the property described in Exhibit "B" hereto for the purpose of inspecting these improvements, and in the event that the District determines that the improvements are not being timely completed by the Principal, notice will be given by the District to the Principal and Surety and the Principal and/or Surety will be given a period of fifteen (15) days from and after the mailing of such notice within which to commence construction of the improvements or obtain from the District, in writing, an extension, for good cause shown, of the time within which the improvements will be

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completed, failing which the District may at its option complete the improvements described in Exhibit "A" for and on behalf of the Surety.

That in the event the District is required to complete the improvements described in Exhibit "A" on behalf of the Principal and Surety, then and in such event, the District shall be deemed to have a lien against the property described in Exhibit "B" which lien shall be inferior only to any existing first mortgage then encumbering said property, ad valorem taxes and such other liens, impositions and assessments as may be given priority by applicable statutes, and said liens shall be for all such costs incurred by the District together with interest thereon computed at ten per cent (10%) per annum. In the further event that the District is required to foreclose this lien, then and in such event, the District will be entitled to payment of any costs or attorney's fees incurred in connection with such foreclosure or collection proceedings, whether suit be brought or not; and the Principal and Surety, jointly and severally, shall be liable for same.

Should the Principal subdivide the property described in Exhibit "B" hereto, the Principal's obligations under this Bond to complete the improvements in Exhibit "A" shall devolve upon the individual purchasers of the subdivided parcels, their heirs, successors and assigns, and shall be a covenant to run with the land. Regardless of whether or not the Principal subdivides the property described in Exhibit "B" hereto, their obligation to complete the improvements described in Exhibit "A" hereto shall be binding upon its heirs, successors and assigns, regardless of how their heirs, successors or assigns came into ownership and shall be a covenant running with the land.

If construction of the improvements described in Exhibit "A" attached hereto is not substantially commenced within one (1) year from the date of this Bond, the Principal shall submit, prior to this one (1) year period, revised cost estimates to the District for review. Following this review, if the District so requires, the Principal shall submit a revised Subdivider's Completion Bond based on the revised cost estimate to the District for review. If the Principal fails to comply with this paragraph, this Bond shall be null and void and of no further force and effect and all previous approvals of the District shall be cancelled effective one (1) year from the date of the Bond.

This Subdivider's Completion Bond shall be governed by the laws of the State of Florida. Venue shall be in Broward County, Florida for any dispute.

101	This Subdivider's Completion Bond shall be placed upon the public records of Broward
102	County, Florida, the Principal to bear the cost.
103	IN WITNESS WHEREOF, the Principal and Surety have caused these presents to be duly
104	executed on this day of, 20
105	
106	
107	Principal
108	Corporate Seal
109	
110	
111	By:
112	
113	
114	Attest:
115	
116	
117	Surety
118	Corporate Seal
119	
120	D
121 122	By:
123	PRINTAddress
123	
125	Telephone
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127	
128	
129	
130	Attest:
131	
132	

(date) by (name of,who is personally
by (name ofby (name of
by (name ofby (name of
,who is personally e of identification)
(Signature of person taking acknowledgment)
(Signature of person taking acknowledgment)
(Name typed, printed or stamped)
(Name typed, printed or stamped)
(Title or rank)
(Serial number, if any)
wledged before me by means of   physical
(date) by (name of officer or agent,
by (name of officer of agent,
,a (state
_ corporation, on behalf of the corporation.
as produced (type of identification)
cation.

171		
172 173		(Signature of person taking acknowledgment)
174 175		(Name typed, printed or stamped)
176 177		
178		(Title or rank)
179 180		
181 182		(Serial number, if any)
183		
184 185		
186		
187 188	FOR A LIMITED LIABILITY CO	MPANY:
189	STATE OF	
190	COUNTY OF	
191	The foregoing instrument w	vas acknowledged before me by means of □ physical
192	presence or □ online notariza	ation, this (date) by (name of member,
193	manager, officer or agent, title	e of member, manager, officer or agent)
194		, of (name of corporation
195	acknowledging)	, a (state or
196		limited liability company, on behalf of the
197	company, who is personally k	known to me or who has produced (type of identification)
198		as identification.
199		
200 201		(Signature of person taking acknowledgment)
202		(eignature of person taking asknowledgment)
203 204		(Name typed, printed or stamped)
205		( 2 2 3) 227
206 207		(Title or rank)
208		
209 210		(Serial number, if any)
211 212		

214	
215	
216	
217	
218 219	FOR A PARTNERSHIP:
220	STATE OF
221	COUNTY OF
222	The foregoing instrument was acknowledged before me by means of □ physica
223	presence or □ online notarization, this (date) by (name of partner or agent)
224	, partner (or agent) on behalf o
225	(name of partnership) a partnership.
226	He/She is personally known to me or has produced (type of identification)
227	as identification.
228 229	
230	(Signature of person taking acknowledgment)
31	
32	(Name typed, printed or stamped)
34	(Name typed, printed of stamped)
35	(T'tto on worth)
36 37	(Title or rank)
38	
39	(Serial number, if any)
240 241	
242	
243	
244	

Prepared By:
Return to:
RELEASE OF SUBDIVIDER'S COMPLETION AGREEMENT
That CENTRAL BROWARD WATER CONTROL DISTRICT, a political subdivision existing under the laws of the State of Florida, the owner and holder of a certain Subdivider's Completion Agreement executed by
CONTROL DISTRICT being dated the day of, 20, recorded in Official Records Book Page in the Office of the Country Administrator of Broward County, State of Florida, for the sum of dollars and certain promises and obligations set forth in said State and County described as follows, to wit:
Hereby acknowledges that all obligations under the aforestated Subdivider's Completion Agreement have been satisfied and that said Subdivider's Completion Agreement is hereafter of no force and effect.
Exhibit M Page 1 of 2

Exhibit M March 6, 2020

caused these presents to be	EOF, the said CENTRAL BROWARD WATER CONTROL DISTRICT has executed in its name and its official seal affixed hereto by its proper officers day of
Corporate Seal	CENTRAL BROWARD WATER CONTROL DISTRICT
	BY:Secretary
Signed, sealed and delivered	
in the presence of:	
STATE OF FLORIDA	
COUNTY OF BROWARD	
	his day, before me, an officer duly authorized in the State and County
aforesaid, to take acknowled	ments, personally appeared,
political subdivision of the Sta presence of two subscribing v CENTRAL BROWARD WATE	peretary of the CENTRAL BROWARD WATER CONTROL DISTRICT, a te of Florida, and that he does acknowledge executing the same in the vitnesses, freely and voluntarily under authority duly vested in them by said R. CONTROL DISTRICT, and that the seal affixed thereto is the true seal of VATER CONTROL DISTRICT.
WITNESS my hand and offici 20	al seal in the County and State last aforesaid thisday of,
My Commission Expires:	
	Notary Public - State of Florida
STATE OF FLORIDA COUNTY OF	
presence or □ online no	nt was acknowledged before me by means of Dephysical physical phys
(name of person)	
officer, trustee, attorn	ey in fact) for CENTRAL BROWARD WATER CONTRO
Exhibit M March 6, 2020	Page <del>2</del> 2 of 2

(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known
Produced Identification
Type of Identification Produced

Exhibit M Page 2 of 2

1 2 3 4 5 6 7 8	Prepared by and return to: Central Broward Water Control District 8020 Stirling Road Hollywood, FL 33024 954-432-5110
9	FOLIO NO.:
10	CANAL EASEMENT
11	
12	THIS CANAL EASEMENT is granted this day of, 20,
13	by,
14	a, Company, whose address is
15	
17 18 19 20 21 22	the State of Florida, located at 8020 Stirling Road, (Davie) Hollywood, Florida 33024, hereinafter referred to as "District".  WITNESSETH  That the Grantor, for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby grant and convey:
23 24	To District, its successors and assigns, a perpetual and non-exclusive canal easement over, across, through and upon a portion of the following described real property located in the
25	Central Broward Water Control District, County of Broward, State of Florida, to wit:
26	SEE EXHIBIT "A" ATTACHED ("Grantor's Property").
27	together with the right to construct, reconstruct, remove, maintain, operate, improve, add to, and
28	repair such facilities and appurtenances in or on said real property which may be required for
29	the full enjoyment of the rights herein granted; the right of ingress and egress to personnel and
30	equipment to the canal and abutting real property at all times; the right to keep the land cleared
31 32	of obstructions within the easement area; and further providing that the Grantor shall not erect or place any building, tree or other improvement on the above-described real property.
33 34	The portion of Exhibit "A" comprising the easement is described in Exhibit "B" attached ("Canal Easement").

35 36	Grantor hereby acknowledges that he/she/it is the fee simple owner of the real property as described in Exhibit "A".
37 38 39 40	Grantor may, for its own purposes, utilize the easement area and shall retain a right of free ingress and egress under, over and upon the easement area; provided that, in no event, shall any of the rights of ingress and egress reserved to Grantor impede the easement herein granted or restrict the exercise of the rights of use there under by District.
41 42 43	The provision of the easement shall be binding on the parties hereto and their respective successors and assigns as a covenant running with the land and binding upon the servient estate.
44 45	The easement shall not be released or amended without consent of the District as evidenced by a document signed with the same formalities as this document.
46	This document shall be recorded in the Public Records of Broward County, Florida, the Grantor
47	to bear the cost. Grantor shall bear the cost of attorney and engineering fees incurred by
48	District in the application for this easement.
49	IN WITNESS WHEREOF, Grantor has executed this instrument on the day of,
50	20
51	
52	Signed, sealed and
53 54	delivered in the presence of: GRANTOR
55	Witnesses:
56	
57 58	By: Sign above, print name below
59	
60	Print Name:
61 62	
63	Sign above, print name below Date:
64 65	

66	FOR AN INDIVIDUAL ACTING IN HIS OF	R HER OWN F	RIGHT:			
67						
68	STATE OF					
69	COUNTY OF					
70	The foregoing instrument was acknowledge	ged before me	by means of $\square$	physical	prese	ence or
71	☐ online notarization, this (date)		by	(name	of	person
72	acknowledging)			,who	is	personally
73	known to me or who has produced (type of	of identification	)			
74	as identification.					
75						
76 77 78 79		(Signature	e of person takir	ıg acknov	wledg	ment)
80 81 82		(Name typ	ed, printed or s	tamped)		
83 84 85		(Title or rar	nk)			
86 87		(Serial nun	nber, if any)			
88						
89						
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91	FOR A CORPORATION:					
92						
93	STATE OF					
94	COUNTY OF					
95	The foregoing instrument was acknowledge					
96	□ online notarization, this (date)					
97	title of officer or agent)					
98	of (name of corporation acknowledging)					•
99	or place of formation)					
100	He/She is personally known to me or has	produced (type	e of identification	า)		
101	as identification.					
102						
103						
104			(	Continue	d on	next page)

	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
	OMPANIV
FOR A LIMITED LIABILITY C	OMPANY:
07475.05	
STATE OF	
COUNTY OF	
COUNTY OF The foregoing instrument was	acknowledged before me by means of □ physical presence or
COUNTY OF The foregoing instrument was a contine notarization, this (date	te) by (name of member
COUNTY OF The foregoing instrument was a continuous notarization, this (data manager, officer or agent, title	te) by (name of member of member of member)
COUNTY OF The foregoing instrument was a property of the country of the cou	te) by (name of member of member of member, manager, officer or agent), of (name of corporation
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of)
COUNTY OF The foregoing instrument was a property of the original online notarization, this (data manager, officer or agent, title acknowledging)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of) limited liability company, on behalf of the
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of member), a (state of member)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member of member, manager, officer or agent), of (name of corporation, a (state of), a (state of) imited liability company, on behalf of the own to me or who has produced (type of identification)as identification.
COUNTY OF The foregoing instrument was a continuous notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member) of member, manager, officer or agent), of (name of corporation, a (state of member), a (state of member)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member, manager, officer or agent), of (name of corporation, a (state o limited liability company, on behalf of the own to me or who has produced (type of identification)as identification.  (Signature of person taking acknowledgment)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member of member, manager, officer or agent), of (name of corporation, a (state of), a (state of) imited liability company, on behalf of the own to me or who has produced (type of identification)as identification.
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member, manager, officer or agent), of (name of corporation, a (state o limited liability company, on behalf of the own to me or who has produced (type of identification)as identification.  (Signature of person taking acknowledgment)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member, manager, officer or agent), of (name of corporation, a (state o limited liability company, on behalf of the own to me or who has produced (type of identification)as identification.  (Signature of person taking acknowledgment)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member of member, manager, officer or agent)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member, of member, manager, officer or agent)
COUNTY OF The foregoing instrument was a property on line notarization, this (data manager, officer or agent, title acknowledging) place of formation)	by (name of member of member of member, manager, officer or agent)

149	FOR A PARTNERSHIP:	
150		
151	STATE OF	
152	COUNTY OF	
153	The foregoing instrument was acknowledge	owledged before me by means of □ physical presence or
154	☐ online notarization, this (date)	by (name of partner or agent)
155		, partner (or agent) on behalf of
156		a partnership.
157		r has produced (type of identification)
158	as ide	
159		
160		
161		(Signature of person taking acknowledgment)
162 163		
164		(Name typed, printed or stamped)
165		
166 167		(Title or rank)
168		(Thic or fank)
169		
170 171		(Serial number, if any)
172		
173		

1 2 3 4 5 6	Prepared By and Return To: Central Broward Water Control District 8020 Stirling Road Hollywood, FL 33024 954-432-5110
7	
8	Esta Na
9 10	Folio No.:
11 12	CANAL MAINTENANCE EASEMENT
13	THIS CANAL MAINTENANCE EASEMENT is granted this day of
14	, 20, by
15	aCompany, whose address is
16	, hereinafter referred to as "Grantor" to CENTRAL
17	BROWARD WATER CONTROL DISTRICT, a political subdivision of the State of Florida,
18	located at 8020 Stirling Road, (Davie) Hollywood, Florida 33024, hereinafter referred to as
19	"District".
20	WITNESSETH:
21	That the Grantor, for and in consideration of the sum of ten dollars (\$10.00) and other
22	good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby
23	grant and convey:
24	To District, its successors and assigns, a perpetual and non-exclusive canal
25	maintenance easement for ingress, egress and access to and maintenance of an adjacent canal
26	together with any appurtenances incidental and necessary thereto, over, across, through and
27	upon the real property, owned in fee simple by Grantor and located in the Central Broward
28	Water Control District, County of Broward, State of Florida, to wit:
29	SEE EXHIBIT "A" ATTACHED ("Grantor's Property").
30	for the purposes necessary, convenient or incidental to or in connection with the construction
31	and operation of drainage system and appurtenances thereto. This easement is inclusive of the
32	right to traverse with equipment across the eased area to accomplish said maintenance.
33	The portion of Exhibit "A" comprising the easement is described in Exhibit "B", attached, ("Canal
34	Maintenance Easement Area").
35	

- This Easement is subject to the following terms, conditions and covenants:
- 37 1. Although the easement granted to the District herein is non-exclusive, should any
- 38 easement over the Canal Maintenance Easement Area be granted, subsequent to the date of
- 39 this easement, the holder of any such subsequent easement shall be required to obtain
- 40 approval from the District for the use of the Canal Maintenance Easement Area. Such approval
- by the District shall not be unreasonably withheld, denied or delayed.
- 42 2. No improvements, trees, landscaping or encroachments including utilities shall be
- placed within the Canal Maintenance Easement Area without the approval of and a permit from
- District, which approval will not be unreasonably withheld or delayed.
- 45 3. The rights granted herein to the District may be released or modified by a written,
- recordable release or modification approved by the Grantor and executed by the District.
- 47 4. Grantor acknowledges that Grantor and Grantor's successors and assigns shall be
- 48 responsible for maintenance or repair of the Canal Maintenance Easement Area, including the
- 49 canal bank slope and that District shall have the right, but not the obligation, to maintain or
- 50 repair said Canal Maintenance Easement Area.
- 51 5. Grantor acknowledges that in the event the District incurs any expenses in maintaining
- 52 or repairing the Canal Maintenance Easement Area or the adjacent canal area as a result of
- Grantor's failure to maintain or repair such area, Grantor and Grantor's successors and assigns
- shall reimburse District for reasonable expenses including attorney's fees and costs to collect
- said expenses. However, before incurring any expenses, except in an emergency, District shall
- provide written notice to Grantor at least five (5) working days prior to performing any work to
- 57 maintain or repair the Canal Maintenance Easement Area or the adjacent canal area. During
- 58 such period of time, Grantor or Grantor's successors and assigns may perform the work
- 59 proposed by District or notify District that Grantor will perform said work to District's
- 60 requirements in a reasonable period of time.
- 6. At the request of the Grantor, District shall provide an estoppel letter from time to time
- 62 confirming whether any outstanding amounts are due by Grantor to District under this
- Easement.

65			
66	NOTE: This Canal Maintena	nce Easement is subjec	t to the terms and provisions of a
67	Maintenance and Indemnifica	ation Agreement between	the Grantor and District that will be
68	recorded in the Broward Cou	inty Public Records.	
69			
70	IN WITNESS WHEREC	F, the said Grantor has ca	used these presents to be signed in its
71	name by its proper officer, the	day and year above written	
72	Signed, sealed and delivered in	n the presence of:	
73 74 75 76			"Grantor"
77	Witness Signature	-	
78 79		By:	
80 81 82	Witness Printed Name	- ,	
83 84	Witness Signature	-	Name and Title
85 86 87 88	Witness Printed Name	-	

89	FOR AN INDIVIDUAL ACTING IN HIS OR HER OWN RIGHT:
90 91	STATE OF
92	COUNTY OF
93	The foregoing instrument was acknowledged before me by means of □ physica
94	presence or □ online notarization, this (date) by (name of person
95	acknowledging),who is personally
96	known to me or who has produced (type of identification)
97	as identification.
98	
99	
100 101	(Signature of person taking acknowledgment)
102	
103 104	(Name typed, printed or stamped)
105 106	(Title or rank)
107	(Title Of Tarik)
108 109	(Serial number, if any)
110	
111 112	
113	
114 115	FOR A CORPORATION:
116	STATE OF
117	COUNTY OF
118	The foregoing instrument was acknowledged before me by means of □ physica
119	presence or □ online notarization, this (date) by (name of officer or agent
120	title of officer or agent),
121	of (name of corporation acknowledging)
122	or place of formation) corporation, on behalf of the corporation.
123	He/She is personally known to me or has produced (type of identification)
124	as identification.
125	
126	
127	(Continued on next page,

	·
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
FOR A LIMITED LIABILITY CO	MPANY:
STATE OF	
COUNTY OF	
The foregoing instrument wa	as acknowledged before me by means of □ physical
	tion, this (date) by (name of member,
	of member, manager, officer or agent)
	, of (name of corporation
	, a (state or
	limited liability company, on behalf of the
	nown to me or who has produced (type of identification)
company, who is perconally ki	as identification.
	as identification.
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)

FOR A PARTNERSHIP:		
STATE OF	_	
COUNTY OF	_	
The foregoing instrumen	t was acknowledged b	efore me by means of $\Box$ physica
presence or □ online nota	rization, this (date)	by (name of partner or agent)
		, partner (or agent) on behalf o
(name of partnership)		a partnership.
He/She is personally know	vn to me or has produced	d (type of identification)
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	/Cianatu	
		es of person taking asknowledgment\
	(Oigriatai	re of person taking acknowledgment)
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		re of person taking acknowledgment) rped, printed or stamped)
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	(Name ty	rped, printed or stamped)
	(Name ty	ped, printed or stamped)

1 Prepared By and Return To: 2 Central Broward Water Control District 3 8020 Stirling Road 4 Hollywood, FL 33024 5 954-432-5110 6 7 8 9 Folio No.: 10 DRAINAGE, FLOWAGE AND STORAGE EASEMENT 11 12 13 14 THIS DRAINAGE, FLOWAGE AND STORAGE EASEMENT is granted this day of \_\_\_\_\_, 20\_\_\_, by \_\_\_\_\_, a \_\_\_\_Company, 15 whose address is , hereinafter referred to as "Grantor" to 16 17 CENTRAL BROWARD WATER CONTROL DISTRICT, a political subdivision of the State of 18 Florida, located at 8020 Stirling Road (Davie) Hollywood, Florida 33024, hereinafter referred to 19 as "District". 20 WITNESSETH: 21 That the Grantor, for and in consideration of the sum of ten dollars (\$10.00) and other 22 good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby 23 grant and convey: 24 To District, its successors and assigns, a perpetual and non-exclusive Drainage, 25 Flowage and Storage Easement for the drainage, flowage and storage of stormwater, and 26 construction and maintenance of a lakelake/pond, together with any necessary appurtenances 27 incidental and necessary thereto, over, across and through the real property, owned by Grantor 28 in fee simple and legally described in Exhibit "A" attached hereto and made a part hereof. 29 ("Grantor's Property"), together with ingress and egress across said Drainage, Flowage and 30 Storage Easement Area for the purpose of constructing, maintaining and repairing the 31 lakelake/pond, drainage system and appurtenances contained therein and to make a proper 32 and adequate drainage system that District, its successors and assigns may establish. 33 The portion of Exhibit "A" comprising the easement is described in Exhibit "B", attached, 34 ("Drainage, Flowage and Storage Easement"). 35

- This Easement is subject to the following terms, conditions and covenants:
- 1. Although the easement granted to the District herein is non-exclusive, should any
- easements over the Drainage, Flowage and Storage Easement Area be granted, subsequent to
- 39 the date of this easement, the holder of any such subsequent easement shall be required to
- 40 obtain approval from the District for the use of the Drainage, Flowage and Storage Easement
- 41 Area. Such approval by the District shall not be unreasonably withheld or delayed.
- 42 2. Grantor acknowledges that the Drainage, Flowage and Storage Easement Area will be
- used for drainage from Grantor's property and for drainage of property adjacent thereto.
- 44 3. No improvements, trees, landscaping or encroachments including utilities shall be
- 45 placed within the Drainage, Flowage and Storage Easement Area without the approval of and a
- permit from the District, which approval shall not be unreasonably withheld, denied or delayed.
- 47 4. The rights granted herein to the District may be released or modified by a written,
- recordable release or modification approved by the Grantor and executed by the District.
- 49 5. Grantor acknowledges that Grantor and Grantor's successors and assigns shall be
- responsible for construction, maintenance, and repair of the lakelake/pond and all drainage
- facilities constructed within the Drainage, Flowage and Storage Easement Area and that District
- shall have the right but not the obligation to maintain or repair said lakelake/pond, drainage
- facilities within the Drainage, Flowage and Storage Easement Area.
- 54 6. Grantor acknowledges and affirms that Grantor shall be responsible for maintaining the
- 55 lakelake/pond bank slope located within the limits of the Exhibit "A" property and on the Exhibit
- 56 "B" property from the Exhibit "B" property to the lakelake/pond deep cut line, which is defined as
- 57 the bank slope beginning at three feet below the District's water control elevation. Any erosion
- or change in grade of the lakelake/pond bank slope from design grade within the limits of the
- 59 Exhibit "B" property and lakelake/pond deep cut line shall be repaired/corrected by the Grantor
- 60 to the satisfaction of the District.
- 61 7. Grantor acknowledges that in the event the District incurs any expenses in maintaining
- 62 the lakelake/pond and/or drainage facilities within the Drainage, Flowage and Storage
- 63 Easement Area, Grantor and Grantor's successors and assigns shall reimburse District for said
- 64 expenses including attorney's fees and costs to collect said expenses. However, before
- incurring any expenses, except in an emergency, District shall provide written notice to Grantor

66 at least five (5) working days prior to performing any work to maintain or repair said drainage 67 facilities. During this period of time, Grantor and Grantor's successors and assigns may 68 perform the work proposed by District or notify District that Grantor will perform said work to 69 District's requirements in a reasonable period of time. 70 8. This Easement is subject to the Drainage, Flowage and Storage Easement Area 71 remaining in perpetuity as a lakelake/pond area. 72 9. At the request of the Grantor, District shall provide an estoppel letter from time to time 73 confirming whether any outstanding amounts are due by Grantor to District under this 74 Easement. 75 NOTE: This Drainage, Flowage and Storage Easement is subject to the terms and 76 provisions of a Maintenance and Indemnification Agreement between the Grantor and 77 District that will be recorded in the Broward County Public Records. 78 IN WITNESS WHEREOF, the said Grantor has caused this presents to be signed in its name by 79 their proper officer, the day and year above written. 80 81 "Grantor" Signed, sealed and delivered in the presence of:

Bv:

Name and Title

Witness Signature

Witness Signature

Witness Printed Name

Witness Printed Name

82 83

84 85 86

91 92 93

95	FOR AN INDIVIDUAL ACTING IN HIS OR HER OWN RIGHT:
96 97	STATE OF
98	COUNTY OF
99	The foregoing instrument was acknowledged before me by means of □ physical □
100	presence or □ online notarization, this (date) by (name of person
101	acknowledging),who is personally
102	known to me or who has produced (type of identification)
103	as identification.
104	
105	
106 107	(Signature of person taking acknowledgment)
107	
109	(Name typed, printed or stamped)
110 111	
112	(Title or rank)
113 114	
115	(Serial number, if any)
116 117	
117	
119	
120 121	FOR A CORPORATION:
122	STATE OF
123	COUNTY OF
124	The foregoing instrument was acknowledged before me by means of □ physical
125	presence or □ online notarization, this (date) by (name of officer or agent,
126	
	title of officer or agent)
127	of (name of corporation acknowledging)
128	or place of formation) corporation, on behalf of the corporation.
129	He/She is personally known to me or has produced (type of identification)
130	as identification.
131	
132	(Continued on next page)

133	
134 135	(Signature of person taking acknowledgment)
136	
137	(Name typed, printed or stamped)
138 139	
140	(Title or rank)
141	
142 143	(Serial number, if any)
144	(Conditionally)
145	
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148	
149 150	FOR A LIMITED LIABILITY COMPANY:
151	STATE OF
152	COUNTY OF
153	The foregoing instrument was acknowledged before me by means of □ physical
154	presence or □ online notarization, this (date) by (name of member,
155	manager, officer or agent, title of member, manager, officer or agent)
156	, of (name of corporation
157	acknowledging), a (state or
158	place of formation) limited liability company, on behalf of the
159	company, who is personally known to me or who has produced (type of identification)
160	as identification.
161	
162	
163	(Signature of person taking acknowledgment)
164 165	
166	(Name typed, printed or stamped)
167	
168	
169	(Title or rank)
170 171	
172	(Serial number, if any)
173	(23
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180 181		
182	182 STATE OF	
183		
184	The foregoing instrument was acknowledged before	e me by means of $\square$ physical
185	presence or □ online notarization, this (date)	by (name of partner or
186	186 agent)	partner (or agent) on behalf of
187		
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190 191		
192	192 (Signature of	person taking acknowledgment)
193 194		
194		printed or stamped)
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197 198		
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200 201		if anyl
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206 207		

1 2 3 4 5 6	Prepared By and Return To: Central Broward Water Control District 8020 Stirling Road Hollywood, FL 33024 954-432-5110
7	
8	
9 10 11 12	Folio No.:  LAKE MAINTENANCE EASEMENT
13	THIS LAKE MAINTENANCE EASEMENT is granted this day of
14	, 20, by, aCompany,
15	whose address is, hereinafter referred to as "Grantor" to
16	CENTRAL BROWARD WATER CONTROL DISTRICT, a political subdivision of the State of
17	Florida, located at 8020 Stirling Road, (Davie) Hollywood, Florida 33024, hereinafter referred to
18	as "District".
19	WITNESSETH:
20	That the Grantor, for and in consideration of the sum of ten dollars (\$10.00) and other
21	good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby
22	grant and convey:
23	To District, its successors and assigns, a perpetual and non-exclusive lake maintenance
24	easement for ingress, egress and access to and maintenance of an adjacent lakelake/pond
25	together with any appurtenances incidental and necessary thereto, over, across, through and
26	upon the real property, owned in fee simple by Grantor and located in the Central Broward
27	Water Control District, County of Broward, State of Florida, to wit:
28	SEE EXHIBIT "A" ATTACHED for the purposes necessary, convenient or incidental to or in
29	connection with the construction and operation of the drainage system and appurtenances
30	thereto. This easement is inclusive of the right to traverse with equipment across the eased area
31	to accomplish said maintenance. The portion of Exhibit "A" comprising the easement is
32	described in Exhibit "B", attached, ("Lake Maintenance Easement Area").

- This Easement is subject to the following terms, conditions and covenants:
- 35 1. Although the easement granted to the District herein is non-exclusive, should any
- 36 easement over the Lake Maintenance Easement Area be granted, subsequent to the date of
- 37 this easement, the holder of any such subsequent easement shall be required to obtain
- 38 approval from the District for the use of the Lake Maintenance Easement Area. Such approval
- 39 by the District shall not be unreasonably withheld, denied or delayed.
- 40 2. No improvements, trees, landscaping or encroachments including utilities shall be
- 41 placed within the Lake Maintenance Easement Area without the approval of and a permit from
- District, which approval will not be unreasonably withheld or delayed.
- 43 3. The rights granted herein to the District may be released or modified by a written,
- recordable release or modification approved by the Grantor and executed by the District.
- 45 4. Grantor acknowledges that Grantor and Grantor's successors and assigns shall be
- 46 responsible for maintenance or repair of the Lake Maintenance Easement Area including the
- 47 lakelake/pond bank slope and that District shall have the right but not the obligation to maintain
- 48 or repair said Lake Maintenance Easement Area.
- 49 5. Grantor acknowledges that in the event the District incurs any expenses in maintaining
- or repairing the Lake Maintenance Easement Area or the adjacent lakelake/pond area as a
- result of Grantor's failure to maintain or repair such area, Grantor and Grantor's successors and
- 52 assigns shall reimburse District for reasonable expenses including attorney's fees and costs to
- 53 collect said expenses. However, before incurring any expenses, except in an emergency,
- 54 District shall provide written notice to Grantor at least five (5) working days prior to performing
- 55 any work to maintain or repair the Lake Maintenance Easement Area or the adjacent
- 56 lakelake/pond area. During such period of time, Grantor or Grantor's successors and assigns
- 57 may perform the work proposed by District or notify District that Grantor will perform said work
- to District's requirements in a reasonable period of time.
- 59 6. At the request of the Grantor, District shall provide an estoppel letter from time to time
- 60 confirming whether any outstanding amounts are due by Grantor to District under this
- 61 Easement.

63	NOTE: This Lake Maintena	ance Easement is subject to the terms and provisions of a
64	Maintenance and Indemnific	cation Agreement between the Grantor and District that will be
65	recorded in the Broward Co	ounty Public Records.
66	IN WITNESS WHERE	OF, the said Grantor has caused these presents to be signed in its
67	name by its proper officer, the	e day and year above written.
68	Signed, sealed and delivered	in the presence of:
69		
70		"Grantor"
71		
72 73	Witness Signature	
73 74		By:
<b>75</b>	Witness Printed Name	
76 77		
78	Witness Signature	Name and Title
79 80		
81	Witness Printed Name	<del>_</del>
82		
83 84		
85		
86		
87		

FOR AN INDIVIDUAL ACTING IN HIS OR	HER OWN RIGHT:
STATE OF	
COUNTY OF	
The foregoing instrument was acknowledg	ed before me by means of □ physical presence or
☐ online notarization, this (date)	by (name of person acknowledging)
	,who is personally known to me or who has
produced (type of identification)	as identification.
	(Signature of person taking acknowledgment)
	(dignature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Name typed, printed of stamped)
	(Title or rank)
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	(Serial number, if any)
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FOR A CORPORATION: STATE OF	
COUNTY OF	
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	by (name of officer or agent,
	, , a (state
	corporation, on behalf of the corporation.
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ac identification	
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Exhibit N-4	

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2 3	(Signature of person taking acknowledgment)
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5 6	(Name typed, printed or stamped)
7 8	(Title or rank)
9	(Title of Tarik)
0 1	(Serial number, if any)
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FOR A LIMITED LIABI	LITY COMPANY:
STATE OF	
STATE OF COUNTY OF	
	nt was acknowledged before me by means of □ physical presence or
	his (date) by (name of member,
	nt, title of member, manager, officer or agent)
	, of (name of corporation
	, a (state or
	limited liability company, on behalf of the
company, who is perso	nally known to me or who has produced (type of identification)
	as identification.
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Title of Tarik)
	(Serial number, if any)
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178 179 180	FOR A PARTNERSHIP:			
181	STATE OF			
182	COUNTY OF			
183	The foregoing instrument was ackno	wledged before me by means o	of 🗆 p	hysical presence or
184	☐ online notarization, this (date)	by (na	ame o	of partner or agent)
185		, partne	er (or	agent) on behalf of
186	(name of partnership)			_ a partnership.
187	He/She is personally known to me or	has produced (type of identific	ation	)
188	as ide	ntification.		
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190 191		(Signature of person	takina	a coknowledgment)
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193		/None a true and invitate of		
194 195		(Name typed, printed	Of Sta	ampea)
196		( <del></del> ),		
197 198		(Title or rank)		
199				
200 201		(Serial number, if any)		
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203				
204 205				
206				

1 2 3 4 5 6	Prepared By and Return To: Central Broward Water Control District 8020 Stirling Road Hollywood, FL 33024 954-432-5110
8	
9	Folio No.:
10 11 12	DRAINAGE EASEMENT AGREEMENT
13	THIS DRAINAGE EASEMENT is granted this day of,
14	20, byCompany, whose
15	address is, hereinafter referred to as "Grantor" to
16	CENTRAL BROWARD WATER CONTROL DISTRICT, a political subdivision of the State of
17	Florida, located at 8020 Stirling Road, (Davie) Hollywood, Florida 33024, hereinafter referred to
18	as "District".
19	WITNESSETH:
20	That the Grantor, for and in consideration of the sum of ten dollars (\$10.00) and other
21	good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby grant
22	and convey:
23	To District, its successors and assigns, a perpetual and non-exclusive drainage easement
24	for the construction and maintenance of drainage facilities, together with any necessary
25	appurtenances incidental and necessary thereto, over, across, upon and through a portion of the
26	following described real property, owned in fee simple by the Grantor and located in the Central
27	Broward Water Control District, County of Broward, State of Florida, to wit:
28	SEE EXHIBIT "A" ATTACHED ("Grantor's Property").
29	together with the right to construct, reconstruct, remove, maintain, operate, improve, add to and
30	repair the drainage system and appurtenances contained therein.
31	The portion of Exhibit "A" comprising the easement is described in Exhibit "B", attached,
32	("Drainage Easement Area").
33	

- This Easement is subject to the following terms, conditions and covenants:
- 35 1. Although the easement granted to the District herein is non-exclusive, should any
- 36 easements over the Drainage Easement Area be granted, subsequent to the date of this
- easement, the holder of any such subsequent easement shall be required to obtain approval from
- 38 the District for the use of the Drainage Easement Area. Such approval by the District shall not be
- 39 unreasonably withheld, denied or delayed.
- 40 2. Grantor acknowledges that the Drainage Easement Area will be used for drainage from
- 41 Grantors property which is further described on Exhibit "A", attached hereto, and for drainage of
- 42 property adjacent thereto.
- 43 3. No improvements, trees, landscaping or encroachments, including utilities, shall be placed
- within the Drainage Easement Area without the approval of and a permit from the District, which
- approval shall not be unreasonably withheld, denied or delayed.
- 46 4. The rights granted herein to the District may be released or modified by a written,
- 47 recordable release or modification approved by the Grantor and executed by the District.
- 48 5. Grantor acknowledges that Grantor and Grantor's successors and assigns shall be
- 49 responsible for construction, maintenance, and repair of all drainage facilities constructed within
- 50 the Drainage Easement Area and that District shall have the right but not the obligation to
- 51 construct, maintain, or repair said drainage facilities and Drainage Easement Area.
- 52 6. Grantor acknowledges that in the event the District incurs any expenses in constructing,
- 53 maintaining or repairing the drainage facilities within the Drainage Easement Area, Grantor and
- 54 Grantor's successors and assigns shall reimburse District for said expenses including attorney's
- fees and costs to collect said expenses. However, before incurring any expenses, except in an
- 56 emergency, District shall provide written notice to Grantor at least five (5) working days prior to
- 57 performing any work to construct, maintain or repair said drainage facilities. During this period of
- 58 time, Grantor or Grantor's successors and assigns may perform the work proposed by District or
- 59 notify District that Grantor will perform said work to District's requirements.
- 7. At the request of the Grantor, District shall provide an estoppel letter from time to time
- 61 confirming whether any outstanding amounts are due by Grantor to District under this Easement.

<ul><li>63</li><li>64</li><li>65</li></ul>	_	ent is subject to the terms and provisions of a Maintenance ent between the Grantor and District that will be recorded in ecords.
66	IN WITNESS WHEREO	F, the said Grantor has caused these presents to be signed in its
67	name by its proper officer, the d	lay and year above written.
68	Signed, sealed and delivered in	the presence of:
69		"Grantor"
70 71 72 73	Witness Signature	
74 75 76 77	Witness Printed Name	By:
78 79 80	Witness Signature	Name and Title
81 82 83 84	Witness Printed Name	

85	FOR AN INDIVIDUAL ACTING IN HIS OR I	HER OWN RIGHT:
86 87	STATE OF	
88	COUNTY OF	
89	The foregoing instrument was acknowled	lged before me by means of □ physical presence
90		by (name of person
91		,who is personally
92		of identification)
93	as identification.	,
94		
95		
96 97		(Signature of person taking acknowledgment)
98		
99 100		(Name typed, printed or stamped)
101 102		(Title or rank)
103		(Title of Tarik)
104 105		(Serial number, if any)
106		(Ocharhamber, ir arry)
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108 109		
110 111	FOR A CORPORATION:	
112	STATE OF	
113	COUNTY OF	
114	The foregoing instrument was acknowled	lged before me by means of □ physical presence
115	or □ online notarization, this (date)	by (name of officer or agent,
116	title of officer or agent)	,
117	of (name of corporation acknowledging)	,a (state
118	or place of formation)	corporation, on behalf of the corporation.
119	He/She is personally known to me or has	s produced (type of identification)
120	as identification	ation.
121		
122		(Continued on next page)
	Exhibit N-5 February 7, 2020	
	i Chidaly 1, 2020	

	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
FOR A LIMITED LIABILITY COM	PANY:
STATE OF	
COUNTY OF	
The foregoing instrument was a	cknowledged before me by means of □ physical presence
or □ online notarization, this (c	date) by (name of member,
	by (name of monitor)
manager, officer or agent, title of	of member, manager, officer or agent)
	of member, manager, officer or agent)
	of member, manager, officer or agent), of (name of corporation
acknowledging)	of member, manager, officer or agent), of (name of corporation, a (state or
acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or limited liability company, on behalf of the
acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or limited liability company, on behalf of the own to me or who has produced (type of identification)
acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or limited liability company, on behalf of the
acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or limited liability company, on behalf of the own to me or who has produced (type of identification)
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acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or, a (state or) limited liability company, on behalf of the own to me or who has produced (type of identification) as identification.
acknowledging)place of formation)	of member, manager, officer or agent), of (name of corporation, a (state or, a (state or) limited liability company, on behalf of the own to me or who has produced (type of identification) as identification.
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170 171	FOR A PARTNERSHIP:	
172	STATE OF	
173	COUNTY OF	
174	The foregoing instrument was acknown	wledged before me by means of □ physical presence
175	or □ online notarization, this (date)_	by (name of partner or agent)
176		, partner (or agent) on behalf of
177		a partnership.
178		r has produced (type of identification)
179		as identification.
180		
181 182		(Signature of person taking acknowledgment)
183		, , , , , , , , , , , , , , , , , , , ,
184 185		(Name typed, printed or stamped)
186		(Name typed, printed of stamped)
187		(Title or real)
188 189		(Title or rank)
190		
191 192		(Serial number, if any)
192		
194		
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196 197		
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1 2	Folio No.:
3	
4 5	INGRESS/EGRESS EASEMENT
6	THIS INGRESS/EGRESS EASEMENT is granted this day of,
7	20, by,, aCompany, whose address is
8	, hereinafter referred to as "Grantor" to CENTRAL BROWARD
9	WATER CONTROL DISTRICT, a political subdivision of the State of Florida, located at 8020
10	Stirling Road, (Davie) Hollywood, Florida, 33024, hereinafter referred to as "District".
11	WITNESSETH:
12	That the Grantor, for and in consideration of the sum of ten dollars (\$10.00) and other
13	good and valuable consideration in hand paid by District, the receipt whereof is hereby
14	acknowledged, does hereby grant and convey:
15	To District, its successors and assigns, a non-exclusive ingress/egress easement for
16	access to and, as may be the case, from the Drainage Easement, Drainage, Flowage and
17	Storage Easement, Lake Maintenance Easement, Canal Easement and Canal Maintenance
18	Easement dedicated to District and located on or adjacent to the property, owned in fee simple
19	by the Grantor, located in the Central Broward Water Control District, County of Broward, State
20	of Florida, to wit:
21	SEE EXHIBIT "A" ATTACHED ("Grantor's Property") over, across and through the property
22	described on Exhibit "A" together with ingress, egress and regress across said lands for the
23	purpose of obtaining access to and from the aforedescribed easements and
24	drainage/stormwater management improvements contained therein. The portion of Exhibit "A"
25	comprising the easement is described in Exhibit "B", attached ("Ingress/Egress Easement
26	Area").
27	

28	NOTE: This Ingress/Egress	Easement is subject to the terms and provisions of a
29	Maintenance and Indemnifica	tion Agreement between the Grantor and District that will be
30	recorded in the Broward Cou	nty Public Records.
31	IN WITNESS WHEREO	F, the said Grantor has caused these presents to be signed in its
32	name by its proper officer, the c	lay and year above written.
33		
34	Signed, sealed and delivered in	the presence of:
35 36 37 38		Grantor:
39	Witness signature	
40 41		By: Name and Title
42 43	Witness printed name	
44 45 46 47	Witness signature	
48 49 50	Witness printed name	

51	FOR AN INDIVIDUAL ACTING IN HIS OR HER OWN RIGHT:
52 53	STATE OF
54	COUNTY OF
55	The foregoing instrument was acknowledged before me by means of $\square$ physical
56	presence or □ online notarization, this (date) by (name of person
57	acknowledging),who is personally
58	known to me or who has produced (type of identification)
59	as identification.
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62 63	(Signature of person taking acknowledgment)
64	(No man to mand a minter of a material and a little of a material and a material
65 66	(Name typed, printed or stamped)
67 68	(Title or rank)
69	(This of Tallity
70 71	(Serial number, if any)
72 73	
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76 77	FOR A CORPORATION:
78	STATE OF
79	COUNTY OF
80	The foregoing instrument was acknowledged before me by means of □ physical
81	presence or □ online notarization, this (date) by (name of officer or agent,
82	title of officer or agent),
83	of (name of corporation acknowledging)
84	or place of formation) corporation, on behalf of the corporation.
85	He/She is personally known to me or has produced (type of identification)
86	as identification.
87	
88	(Continued on next page)

89 90	(Signature of person taking acknowledgment)
91	(Oignature of person taking acknowledgment)
92 93	(Name typed, printed or stamped)
94	(Name typed, printed of stamped)
95 96	(Title or reals)
96	(Title or rank)
98	
99 100	(Serial number, if any)
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105 106	FOR A LIMITED LIABILITY COMPANY:
107	STATE OF
108	COUNTY OF
109	The foregoing instrument was acknowledged before me by means of □ physical
110	presence or □ online notarization, this (date) by (name of member,
111	manager, officer or agent, title of member, manager, officer or agent)
112	, of (name of corporation
113	acknowledging), a (state or
114	place of formation) limited liability company, on behalf of the
115	company, who is personally known to me or who has produced (type of identification)
116	as identification.
117	
118 119	(Signature of person taking acknowledgment)
120	(eignature et percent tammig dermite digiterin)
121	(Name to read privated an atomic of)
122 123	(Name typed, printed or stamped)
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125	(Title or rank)
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127	(Serial number if any)
	(Serial number, if any)

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6 <b>FOR A PARTNERSHIP:</b> 7	
STATE OF	<u></u>
COUNTY OF	
The foregoing instrume	— nt was acknowledged before me by means of □ physical
•	arization, this (date) by (name of partner or agent)
	, partner (or agent) on behalf of
(name of partnership)	a partnership.
He/She is personally kno	wn to me or has produced (type of identification)
	as identification.
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Name typea, printed of etampea)
	(Title on real)
	(Title or rank)
	(Serial number, if any)

## THIS PROPERTY WILL BE THE SUBJECT OF A VARIANCE REQUEST ON (ENTER DATE) BEFORE THE CENTRAL BROWARD WATER CONTROL DISTRICT TO (DESCRIBE THE VARIANCE). (PROJECT NAME) (DATE, TIME AND LOCATION OF THE DISTRICT BOARD MEETING) FOR ADDITIONAL INFORMATION CONTACT

DISTRICT ENGINEER
(NAME)
(TELEPHONE NUMBER)

www.centralbrowardwcd.org

**EXHIBIT O** 

## CBWCD VARIANCE SIGN DETAIL

## NOTES:

- 1. THE SIGNS SHALL BE DOUBLE SIDED AND MADE OF WEATHER RESISTANT MATERIAL ON A YELLOW BACKGROUND.
- SIGNS SHALL BE POSTED ALONG EACH STREET FRONTAGE OF THE SUBJECT PROPERTY AND SHALL BE VISIBLE FROM THE STREET.
- 3. THE SIGNS SHALL BE POSTED BY THE APPLICANT ON THE SUBJECT PROPERTY FOURTEEN (14) DAYS PRIOR TO THE BOARD OF COMMISSIONERS MEETING DATE FOR THE VARIANCE REQUEST.
- 4. ALL SIGNS SHALL BE BE REMOVED BY THE APPLICANT WITHIN SEVEN (7) DAYS AFTER THE BOARD OF COMMISIONERS MEETING DATE.

PLEASE RETURN TO: Central Broward Water Control District 8020 Stirling Road Hollywood, Florida 33024

1	MAINTENANCE AGREEMENT				
2	CBWCD Permit No.: W-				
4	CBWCD Application No.:				
5	·				
6	THIS AGRI	EEMENT made and entered into this day of20,			
7	by and between CENTRAL BROWARD WATER CONTROL DISTRICT a political subdivision of				
8	the State of Florida, hereinafter referred to as "The District," and				
9		, a			
10	qualified to	do business in the State of Florida hereinafter referred to as "The Developer".			
11	RECITAL				
12	A.	The District is a political subdivision of the State of Florida charged with the			
13		responsibility of effecting drainage within its geographical boundaries.			
14	B.	The Developer is a developing that project			
15		known as,, which development is			
16		situated entirely within the geographical boundaries of the District.			
17	C.	As a part of the development of intends to			
18		install lakeslakes/ponds, canals, underground storage and treatments systems, dry			
19		retention/detention areas, drainage pipes and other types of water courses for storm			
20		water management including floodplain storage, conveyance and treatment.			
21	D.	The District requires that such storm water facilities be properly maintained and the			
22		Developer has agreed to affect such maintenance and the parties desire to reduce			
23		such agreement to writing.			
24	NOW, THE	REFORE, in consideration of the mutual promises each to the other running, and other			
25	good and v	aluable consideration, the parties agree as follows:			
26	A.	The Developer shall be responsible for and shall bear the cost of maintaining in good			
27		condition, as the same is hereinafter defined, all lakeslakes/ponds, canals, swales,			
28		retention/detention areas, berms, grading, exfiltration trenches, control structures,			
29		catch basins, manholes, headwalls, underground storage systems, sodded banks,			
30		aquatic plants, retaining walls, drainage pipes and drainage channels, hereinafter			

Exhibit P

February 7, 2020 Page 1 of 11

- 31 collectively referred to as "storm water facilities", which may be on or about the real 32 property described on Exhibit "A" attached hereto.
  - B. The Developer shall also be responsible for the constant maintenance and care for areas designated for RETENTION, DETENTION, and TREATMENT quantitatively described in Exhibit "B" attached hereto. Said Exhibit "B" shall be prepared by a registered Professional Engineer in the State of Florida.
  - C. That "good condition" shall be that standard of care and maintenance as may be established from time to time by the District and shall be deemed to include, but not limited to, the control of weeds and other nuisance and invasive vegetation, control of erosion, and the maintenance of slopes, depth, aquatic vegetation, sodded slopes, and percolation capacity of seepage areas.
  - D. That the District will have the right and authority to enter upon and cross over the property described on Exhibit "A" hereto for the purpose of inspecting the storm water facilities, and in the event that the District determines that the maintenance of said storm water facilities do not meet the standards established by the District, notice will be given by the District, to the Developer and the Developer will be given a period of 15 days from and after the mailing of such notice within which to remedy such defect or obtain from the District, in writing, an extension, for good cause shown, of the time within which to remedy such defect, failing either of the foregoing, the District may, at its option, correct such defect for and on behalf of the developer.
    - E. That in the event that the District is required to perform such maintenance on behalf of the Developer, then and in such event, the District shall be deemed to have a lien against the Developer's property, which lien will be inferior only to any existing first mortgage then encumbering said property, ad valorem taxes, and such other liens, impositions and assessments as may be given priority by applicable statues, and said liens shall be for all reasonable costs incurred by the District together with interest thereon computed at 18 percent (18%) per annum. Any lien pursuant to this paragraph shall be effective upon recording in the Broward County Public Records. In the further event that the District is required to foreclose its lien, the and in such event, the District will be entitled additionally to receive its reasonable attorney fees and costs expended in connection with such foreclosure or collection procedure.

- F. The Developer has acquired the stormwater management permits as required by the District and acknowledges that said permits shall be renewed every five years from the date the permit is issued pursuant to the District's regulations and any amendments thereto based on the following inspection schedule:
  - a. Above-ground wet and dry retention/detention systems, drainage structures and piping, water control structures, outfall structures, perimeter berms and aquatic vegetation: every five years
  - b. Underground storage systems, exfiltration trenches, and other seepage systems: every year.

Each inspection shall be performed by a registered Professional Engineer. The fiveyear renewal shall include a certification statement from the Professional Engineer and include the appropriate documentation from each inspection event per the frequencies described above. Actual inspection and reporting frequencies will be documented in the permit conditions as necessary based on site-specific operational and maintenance requirements.

- G. Should the Developer subdivide the property described on Exhibit "A" hereto, the Developer's obligation to maintain shall devolve upon the individual purchasers or the subdivided parcels, their heirs, successors, and assigns, and shall be a covenant to run with the land. Regardless of whether or not the Developer subdivides such property, their obligation to maintain shall be binding upon its heirs, successors, and assigns, and shall be a covenant running with the land.
- H. Whenever either party desires to give notice unto the other, it must be given by written notice, sent by registered United States mail, with return receipt requested, addressed to the party for whom it is intended, at the place last specified, and the place for giving notice shall remain such until it shall have been changed by written notice in compliance with the provisions of this Article. For the present, the parties designate the following as the respective places for giving of notice, to-wit:

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92 For the Developer: 93 94 95 96 97 For the District: 98 Mike Crowley, District Manager 99 Central Broward Water Control District 8020 Stirling Road 100 101 Hollywood, Florida 33024 102 103 104 I. Amendment. No modification, amendment, or alteration of the terms and conditions 105 contained herein shall be effective unless contained in a written document executed 106 with the same formality and of equal dignity herewith. 107 J. Assignment. The Developer shall not transfer, assign or subcontract the activities 108 provided for in this Agreement without the prior written consent of the District. 109 K. Compliance with Laws. The Developer shall, without additional expense to the 110 District, be responsible for obtaining any necessary licenses and for complying with 111 any and all applicable federal, state, county and municipal laws, codes and 112 regulations in connection with the performance of the activities described herein. 113 L. Third Party Beneficiaries. Neither the Developer nor the District intend to directly or 114 substantially benefit a third party by this Agreement. Therefore, the parties agree 115 that there are no third-party beneficiaries to this Agreement and that no third party 116 shall be entitled to assert a claim against either of them based upon this Agreement. 117 The parties expressly acknowledge that it is not their intent to create any rights or 118 obligations in any third person or entity under this Agreement. 119 M. Waiver of Breach. Failure by either party to enforce any provision of this Agreement 120 shall not be deemed a waiver of such provision or modification of this Agreement. A 121 waiver of any breach of a provision of this Agreement shall not be deemed a waiver 122 of any subsequent breach and shall not be construed to be a modification of the 123 terms of this Agreement.

- N. Indemnification. Developer agrees to indemnify and hold District harmless, to extent provided by law, from any and all liability incurred now or in the future as a result of any injury, death or property damages because of the existence of or the failure to maintain the encroachment.
  - O. Severance. In the event this Agreement or a portion of this Agreement is found by a court of competent jurisdiction to be invalid, the remaining provisions shall continue to be effective unless either party elects to terminate this Agreement. The election to terminate this Agreement based upon this provision shall be made within seven (7) days after the finding by the court becomes final.
  - P. Joint Preparation. The parties hereto acknowledge that they have sought and received whatever competent advice and counsel as was necessary for them to form a full and complete understanding of all rights and obligations herein and that the preparation of this Agreement has been a joint effort of the parties, the language has been agreed to by parties to express their mutual intent and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than the other.
  - Q. Prior Agreements. This document incorporates and includes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.
  - R. Applicable Law and Venue. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. Any controversies or legal problems arising out of this Agreement and any action involving the enforcement or interpretation of any rights hereunder shall be submitted to the jurisdiction of the State courts of the Seventeenth judicial Circuit of Broward County, Florida. By entering into this Agreement, the parties hereby expressly waive any rights either party may have to a trial by jury of any civil litigation related to, or arising

February 7, 2020 Page 5 of 11

154		out of this Agreeme	ent. In any action to er	nforce the terms of this Agreement, whether
155		suit be brought or r	not, the prevailing par	ty shall be entitled to reasonable attorney's
156		fees and costs.		
157	S.	This agreement sh	nall be placed of reco	ord among the Public Records of Broward
158		County, Florida, the	e Developer to bear th	ne cost.
159	IN WITNES	S WHEREOF, the p	arties hereto have he	reunto set their hands and seals the day
160	and year fire	st above written.		
161	Witness by:	CENTRAL BROW	ARD WATER CONTR	ROL DISTRICT
162			<b>D</b>	
163 164			By Manager/Secret	ary and/or Chair/Vice Chair
165			Wanage// Ocoret	ary aria/or oriali/vioc oriali
166				
167				(SEAL)
168 169				
170				
171				
172	As to Distric	t		
173				
174 175	WITNESSE	· · ·		
176	WITHLOOL	<b>o</b> .		
177				
178				
179				
180				
181 182				
183			Ву	
184	As to Devel	oper	President	
185				(0541)
186 187				(SEAL)
188				
189				
190			Attest	
191				Secretary
192 193				
1/3				

FOR AN INDIVIDUAL ACTING IN HIS OR HER OWN RIGHT:
STATE OF
COUNTY OF
The foregoing instrument was acknowledged before me by means of □ physical presence
or □ online notarization, this (date) by (name of person
acknowledging),who is personally
known to me or who has produced (type of identification)
as identification.
(Signature of person taking acknowledgment)
(Nome typed printed or stores of)
(Name typed, printed or stamped)
(Title or rank)
(Time of Talling)
(Serial number, if any)
FOR A CORPORATION:
STATE OF
COUNTY OF
The foregoing instrument was acknowledged before me by means of □ physical presence
or □ online notarization, this (date) by (name of officer or agent
title of officer or agent),
of (name of corporation acknowledging)
or place of formation) corporation, on behalf of the corporation
He/She is personally known to me or has produced (type of identification)
as identification.
(Continued on next page

230	0	
231 232		(Signature of person taking acknowledgment)
233 234 235	4 5	Name typed, printed or stamped)
236 237 238	7 8	Fitle or rank)
239 240 241 242 243 244	0 1 2 3	Serial number, if any)
2 <del>44</del> 245		
246 247		
248	8 STATE OF	
249	9 COUNTY OF	
250	The foregoing instrument was acknowledge	ed before me by means of $\square$ physical presence
251	or □ online notarization, this (date)	by (name of member,
252	2 manager, officer or agent, title of member,	manager, officer or agent)
253	3	, of (name of corporation
254	4 acknowledging)	, a (state or
255	5 place of formation)	limited liability company, on behalf of the
256	6 company, who is personally known to me o	or who has produced (type of identification)
257	7	as identification.
258		
259 260 261	0	(Signature of person taking acknowledgment)
262 263 264 265	3 4	Name typed, printed or stamped)
265 266 267 268	6 7	Fitle or rank)
269		erial number, if any)

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273 274	FOR A PARTNERSHIP:	
275	STATE OF	
276	COUNTY OF	
277	The foregoing instrument was ackr	nowledged before me by means of □ physical presence
278	or □ online notarization, this (date	e) by (name of partner or agent)
279		, partner (or agent) on behalf of
280	(name of partnership)	a partnership.
281		e or has produced (type of identification)
282		as identification.
283		
284		
285 286		(Signature of person taking acknowledgment)
287		
288 289		(Name typed, printed or stamped)
290		-
291 292		(Title or rank)
293		
294 295		(Serial number, if any)
296		
297		
<ul><li>298</li><li>299</li></ul>		

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349	EXHIBIT "B"	
350 351 352	CBWCD Permit No.:	
352 353 354	CBWCD Application No.:	
355 356 357 358 359 360	RETENTION/DETENTION AREAS, AS DESIGNATED ON THE APPROVED PAVING DRAINAGE PLANS, SHALL BE MAINTAINED AT A MINIMUM VOLUME OF [insert sto volume from top of bank to Water Control Elevation (CF or Ac-Ft)]	
361	Certified by:	
362	Signature Print Name	
363		
364	Date of Certification:	
365	State of Florida Professional Engineer License Number:	
366 367 368 369		

APPLICATION NO.
PERMIT NO.
For District Use Only

# APPLICATION FOR <u>STORMWATER MANAGEMENT</u> PERMIT

## CENTRAL BROWARD WATER CONTROL DISTRICT

TO: Board of Commissioners

Central Broward Water Control District

8020 Stirling Road Hollywood, Florida 33024 Phone: (954) 432-5110 Fax: (954) 432-8603

TYPE OF PERMIT REQ	UESTED:[ ]	New <del>Pav</del>	ring and Drair	nage-Stormwater Management	(SWM)
Permit_[_] Modification	of Existing <u>Paving ar</u>	nd Drainage	<u>-SWM</u> Permit	t_[ ] <u>SWM_</u> Permit Renewal_[	] Work
within District Right-of-W	'ay				
PROJECT TITLE					
STREET ADDRESS (if k	nown)				
LOCATION: 1/4 Section	Section	Town	nship	Range	
			•		
			<del></del>		
PURPOSE		ZO	NING		
(Residential, Ag	ricultural, Commercial, etc	:.)			
JURISDICTION					
(City of,	Town of, etc.)				
PROJECT SIZE (Acres)			Total Acres	(Per Survey)	
(10000)				(. 5. 55. 75)	
PROPERTY OWNER					
ADDRESS					
CITY	STATE	ZIP	PHONE		
FAX	_ EMAIL				
DEVELOPEDADDLICAN	ı <del>T</del>				
ADDRESS					
FAX					
FINANCIAL RESPONSI	BILITY FOR BILLING	<b>.</b>			

ADDRESS					
CITY	STATE	ZIP	PHONE		
	EMAIL				
PROJECT ENGINE	ER		AGENO	CY CORPORATIO	N
ADDRESS					
	STATE _				
FAX	EMAIL				
	PONSIBLE <u>OPERAT</u>			_	CONSTRUCTION
	STATE				
PROJECT IS:	PRO	POSED		EXISTING	TO BE
PROJECT CONST	RUCTION TO BE PH	IASED Y	N	_ LAKE <u>/POND</u> E	XISTING ON SITE
DATE CONSTRUC	TION/ALTERATION I	S EXPECTE	D TO START	& то	) BE COMPLETED
Continued on next	page				
	ERS FOR PROJEC				
ownership and the Standards, Procedule edition. Construct approval; otherwite application feem District.  DESCRIBE IN GEN	idered a complete per supporting document ires, and Design Criter tion of this project se a new surface ust be submitted for NERAL TERMS THE DE DISTRICT RIGHT-	tation requieria manual of must be costormwate or review ar	red by the St of the Central I ommenced w r managemen nd approval k	ormwater Manage Broward Water Co ithin 18 months at permit applic by Central Browa SYSTEM, OR ACT	ement Regulations, ontrol District, lates from the date of ation and perminard Water Contro

Owner	or Authorized Agent		
(Complete the Agent Authorization must be	in writingsection)		
[If the owner or applicant is a non-individual Florida Secretary of State, it must be regist authority to bind the entity with the terms, subsequent permit, if issued. Further, any Florida Secretary of State for the duration of	ered, and the person signing conditions, and liabilities and such entity must maintain	ng the application rassociated with su	must have the legal sch application and
By signing this application form, I am application and represent that such information the project site for employees of the Centre Engineer's company with proper identification of the purpose of making preliminary ones for such employees to monitor permitted we not a permit, and that work prior to approvation issued pursuant thereto does not relieve me water management district, or local permit maintain the permitted system unless the Dientity.	cation. I am familiar with ation is true, complete and all Broward Water Control on or documents from the Control of the analyses. Further, I agree ork if a permit is granted. It is a violation. I understange of any obligation for obtain prior to commencement of	th the information accurate. I agree District and emplo Central Broward Wiee to provide entry understand this is not that this applicationing any other requestion. I agree Distriction.	to contained in this to provide entry to yees of the District ater Control District to the project site an application and tion and any permit uired federal, state, pree to operate and
STATE OF FLORIDA ) COUNTY OF BROWARD)			
Before me personally appeared	as	of of	to me
known to be the person(s) described in and and before me that executed sa			<del>cknowledged to</del>
WITNESS my hand and official seal this	day+	of	<del></del>
	<del>NO</del>	TARY PUBLIC, S	FATE OF FLORIDA
		,	
Owner	or Applicant or Author	ized Agent	
	(Complete the Agent /	Authorization section	<u>on)</u>

# FOR AN INDIVIDUAL ACTING IN HIS OR HER OWN RIGHT:

STATE OF					
COUNTY OF					
The foregoing instrument was acknowled	edged before me	by mea	ans of □ pl	nysica	al presence
or □ online notarization, this (date)		by	(name	of	person
acknowledging)			,who	is	personally
known to me or who has produced (typ	e of identification)			_	
as identification.					
	(Signature of po	erson t	aking ackn	owle	dgment)
	(Name typed, p	orinted	or stampe	<u>d)</u>	
	(Title or rank)				
	(Serial number	, if any	)		
FOR A CORPORATION:					
STATE OF					
COUNTY OF					
The foregoing instrument was acknowled	edged before me	by mea	ans of □ pl	nysica	al presence
or □ online notarization, this (date)		by (na	ame of offic	cer or	agent, title
of officer or agent)					
of (name of corporation acknowledging	)				, a (state
or place of formation)	corporati	ion, on	behalf of	the o	corporation.
He/She is personally known to me or ha	as produced (type	of ide	ntification)		
as identified	cation.				

(Signature of person taking acknowledgment)

	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
FOR A LIMITED LIABILITY COMPAN	NY:
STATE OF COUNTY OF	
The foregoing instrument was acknow	rledged before me by means of □ physical presence
or □ online notarization, this (date)	by (name of member, manager,
officer or agent, title of member, mana	iger, officer or agent)
-	, of (name of corporation acknowledging)
	, a (state or place of
formation) limi	ted liability company, on behalf of the company, who
is personally known to me or who has	produced (type of identification)
	as identification.
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)

FOR A PARTNERSHIP:	
STATE OF	
COUNTY OF	
The foregoing instrument was acknowl	edged before me by means of □ physical presence
or □ online notarization, this (date)	by (name of partner or agent)
	, partner (or agent) on behalf of
(name of partnership)	a partnership.
He/She is personally known to me or h	as produced (type of identification)
as i	dentification.
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)

### AFFIDAVIT AS TO OWNERSHIP OF PROPERTY

STATE OF	FLORIDA	) (						
COUNTY	F BROWAR	)ss. D)						
BEFORE		the					personally orn, deposes an	
following:			·	,	J .	,	· , · · · , · · · · · · · · · · · · · ·	
1.	That		am					
2.			sign this affida	•	•	•	the property desc	cribed herein 
3.	situated in	Broward Cou		in the geo	graphical	bound	real property lying aries of the Cen	
4.	That is:		al descri	•		the	aforestated	property
5.	encumbran		the aforedeso				ges, liens, leas address, and d	

- 6. That no other individuals or entities have any ownership interest in the above-described real property except for those named herein and signing this affidavit.
- 7. That the undersigned acknowledges that the Central Broward Water Control District has or will be relying on the contents of this affidavit regarding the ownership of the aforedescribed property and encumbrances thereon in the preparation of permits, maintenance agreements and other agreements which have been or will be entered into between the owner(s) and the Central Broward Water Control District.
- 8. That the owner(s) will be developing the property described herein and until the improvements on this property have been completed and accepted by the Central Broward Water Control District, the undersigned acknowledges that they will notify the Central Broward Water Control District of any changes in ownership of the property described herein within five (5) days of such change in ownership.

the property described herein, the owner and its successors, assigns, and grantees shall keep the Central Broward Water Control District notified of the status of ownership of this property. FURTHER AFFIANT SAYETH NAUGHT. IN WITNESS WHEREOF, the \_\_\_\_\_, the owner of the property described herein have hereunto set their hand(s) and seal(s) the \_\_\_\_\_ day of \_\_\_\_\_\_, 20\_\_\_\_\_. Signed, sealed, and delivered OWNER In the presence of: STATE OF FLORIDA COUNTY OF Sworn to (or affirmed) and subscribed before me by means of □ physical presence or □ online notarization, this \_\_\_\_\_ day of \_\_\_\_\_, 20 by (name of person making statement) Signature of Notary Public – State of Florida Print, Type of Stamp Commissioned Name of Notary Public Personally Known Produced Identification Type of Identification Produced

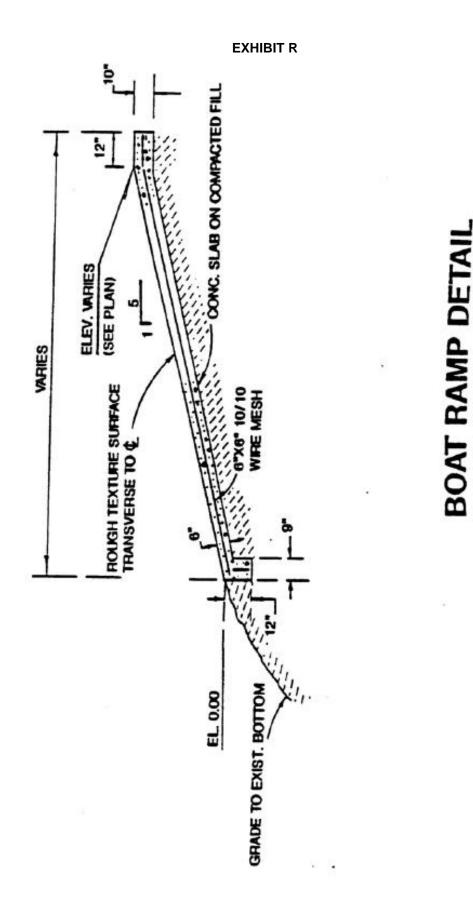
That the undersigned acknowledges that this affidavit may be recorded in the Public Records of Broward County, Florida and that prior to the acceptance of any improvements constructed on

AGENT AUTHORIZATION	ON SECTION					
AGENT'S NAME						
COMPANY						
ADDRESS CITY	STATE	ZIP	PH	IONE		
FAX	EMAIL			0112		
	listed above to negotia to any stipulations on		ns or rev	isions, whe	n ned	cessary,
Owner's Signature				Date		
Owner's Name					_	
Agent's Signature Agent's Name				Date		
Agents Name					-	
AGENT'S NOTARIZA STATE OF FLORIDA COUNTY OF BROW	<del>\</del>					
Before me personally				as AG		
	own to be the person		in and w			
	owledged to and befo	ore me that		<u>executed</u>	said	<u>instrument</u>
for the purpose expre	<del>38800.</del>					
WITNESS my hand a	and official seal this			<del>day of</del>		
-	<u>, 20           </u>					
NOTARY PUBLIC, S	STATE OF FLORIDA					
My Commission Exp	ires:					
FOR AN INDIVIDUA	L ACTING IN HIS O	R HER OWN I	RIGHT:			
STATE OF						
COUNTY OF						
The foregoing instru	ment was acknowledo	ged before me	by mea	ans of □ ph	nysic	al presence
or □ online notarizat	ion, this (date)		by	(name	of	person
acknowledging)				,who	is	personally
known to me or who	has produced (type o	of identification	1)		_	
as identification.						
CBWCD PermitCBWCD – Updated 4/13/18 – 2/10/20 Page 9 of 12 Application Form 07/2010			12			

	(Signature of person taking acknowledgment)		
	(Name typed, printed or stamped)		
	(Title or rank)		
	(Serial number, if any)		
FOR A CORPORATION:			
STATE OF			
COUNTY OF			
The foregoing instrument was acknowled	dged before me by means of □ physical presence		
or □ online notarization, this (date)	by (name of officer or agent, title		
of officer or agent)			
of (name of corporation acknowledging)	, a (state		
or place of formation)	corporation, on behalf of the corporation.		
He/She is personally known to me or has	s produced (type of identification)		
as identifica	ation.		
	(Signature of person taking acknowledgment)		
	(Name typed, printed or stamped)		
	(Title or rank)		
	(Serial number, if any)		

FOR A LIMITED LIABILITY COMPAN	NY:
STATE OF	
COUNTY OF	
The foregoing instrument was acknow	ledged before me by means of □ physical presence
or □ online notarization, this (date)	by (name of member, manager,
officer or agent, title of member, mana	ger, officer or agent)
	, of (name of corporation acknowledging)
	, a (state or place of
formation) limit	ted liability company, on behalf of the company, who
is personally known to me or who has	produced (type of identification)
	as identification.
	(Signature of person taking acknowledgment)
	<del></del>
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
FOR A DARTHERSUID.	
FOR A PARTNERSHIP:	
STATE OF	
COUNTY OF	
The foregoing instrument was acknow	ledged before me by means of □ physical presence
or □ online notarization, this (date)	by (name of partner or agent)
	, partner (or agent) on behalf of
(name of partnership)	a partnership.
He/She is personally known to me or h	nas produced (type of identification)
as	identification.

	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	<del></del>
(Serial number, if any)	



NTS

### 1 **DOCK & DECK AGREEMENT** 2 3 4 **AGREEMENT** 5 THIS AGREEMENT, made and entered into this \_\_\_\_\_day of \_\_\_\_\_, 6 20\_\_\_\_\_, by and between CENTRAL BROWARD WATER CONTROL DISTRICT, a political 7 subdivision of the State of Florida, hereinafter referred to as "District", 8 and 9 , hereinafter referred to as "Property Owners". 10 WITNESSETH: 11 WHEREAS, District is a political subdivision of the State of Florida charged with the 12 responsibility of effecting drainage and water management within its geographical boundaries 13 and approving all subdivision plats and development plans affecting lands within its 14 geographical boundaries; and 15 WHEREAS, Property Owners are the owners of the property described in Exhibit "A" 16 attached hereto and incorporated herein in its entirety, hereinafter referred to as "Subject 17 Property" and which is further identified by Broward County Property Appraiser Folio No. 18 ; and 19 WHEREAS, Subject Property lies completely within the geographical boundaries of 20 District; and 21 WHEREAS, a lake maintenance/drainage easement dedicated to the District is located 22 on the Subject Property which is adjacent to a lakelake/pond/water body over which by the 23 District has a drainage, flowage and storage easement, lake easement, and/or other easement 24 rights and which the District has the right to maintain, and 25 WHEREAS, District has established, in accordance with its rule making authority, that no 26 improvements can be placed or constructed in or over any drainage, flowage and storage 27 easement, maintenance easement, drainage easement, or other property owned by the District 28 or over which the District has permitting authority (hereinafter collectively referred to as 29 "easement") without approval and authorization by the District; and 30 WHEREAS, District has established, in accordance with its rule making authority, a 31 minimum building set back of twenty (20) feet (hereinafter referred to as "setback") from any 32 waterway, drainage, flowage and storage easement, or canal easement lying within District; and

Exhibit S February 7, 2020

33 WHEREAS, Property Owners desire approval from District for themselves, their 34 successors, assigns and heirs for the purpose of obtaining a permit to construct a wood deck 35 and/or dock (hereinafter referred to as "Improvements"), within the easement; and 36 WHEREAS, as a condition of approval of the Improvements within the easement and 37 setback, District requires that certain minimum criteria be complied with and that Property 38 Owners enter into a hold harmless agreement indemnifying District from any and all claims, 39 losses, damage and expenses, arising out of the construction of the Improvements within the 40 easement and setback; and 41 WHEREAS, District has determined and approved by Central Broward Water Control 42 District Resolution No. 92-1 that Property Owners owning property adjacent to 43 lakelakes/ponds/ponds and certain other water bodies within the District may obtain a permit 44 without Board approval for construction of Improvements within the District's easement and 45 setback so long as the Improvements comply with all of the following criteria: 46 Α. Property Owners submit a copy of warranty deed or other acceptable 47 document stating that Property Owners are the owners of Subject Property. 48 B. Property Owners submit a current survey dated no earlier than one (1) 49 year prior to submittal date of the permit/approval request. This survey shall show for the 50 Easement and Subject Property at a minimum, the following data: 51 i. Edge of water on date of survey. 52 ii. Elevation of water on date of survey and water control elevation 53 for the affected water body. 54 iii. Drawings, plat, or other acceptable documentation for all platted 55 and recorded easements according to the Broward County Public Records within ten (10) feet of 56 the proposed improvements. 57 iv. All structures located on or within the easement and setback

which the improvements are proposed to be constructed within.

٧.

been constructed within the easement and setback.

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All underground drainage culverts and other utilities which have

61	vi. Top of bank for adjacent lakelake/pond with elevation of top of
62	bank.
63 64	C. Property Owners shall submit a sketch of the proposed Improvements which shows the Subject Property, easement and setback.
65	D. The Improvements must further comply with the following criteria:
66 67	i. Maximum dimensions of twenty (20) feet along the water and twelve (12) feet wide.
68 69	ii. The Improvements shall not extend beyond more than four (4) feet beyond the water side of the shoreline as shown by the survey. However, in no event shall the
<ul><li>70</li><li>71</li><li>72</li></ul>	location of the Improvements be based on a shoreline which is lower than two (2) feet below the established control elevation for the <a href="lakelake/pond">lakelake/pond</a> or water body that the Improvements are constructed over.
73 74	iii. The lowest horizontal structural member shall be a minimum of three (3) feet above the water elevations shown by the survey.
75 76	iv. The Improvements shall not be constructed closer than ten (10) feet to any side yard property line.
77 78 79	v. No encroachments of the Improvements shall be allowed over any platted and/or recorded easements, except as provided by this agreement and shown on the attached drawing/sketch.
80 81	vi. No part of the Improvements structure shall extend above the floor surface except handrails or built-in seating.
82 83	vii. Only material approved by the Broward County edition of the South Florida building Code and the District will be allowed for the Improvements.
<ul><li>84</li><li>85</li><li>86</li></ul>	WHEREAS, District and Property Owners are desirous of entering into an agreement to provide for approval of a permit for construction of the Improvements within the easement and setback; and
87 88	NOW, THEREFORE, in consideration of the premises and Ten and No/100 (\$10.00) Dollars and other good and valuable considerations, the receipt and sufficiency of which are

**Exhibit S**February 7, 2020 Page 3 of 12

- hereby acknowledged by District and Property Owners, each intending to be legally bound, do hereby represent, warrant, covenant and agree as follows:
- 1. The foregoing statements are true and correct and are incorporated herein by reference as though set forth verbatim.
- 2. District agrees to issue a permit and approval to Property Owners permitting construction of Improvements within the easement and setback, provided Property Owners first submit to District for approval, construction plans which are in substantial compliance with the minimum engineering design specifications and criteria established by District and as stated above. The proposed plans or sketch for these Improvements are attached to this agreement as Exhibit "B".
- 3. All subsequent owners of Subject Property shall be bound by this Agreement which shall be a covenant running with the land.
- 4 Property Owners do hereby agree for themselves and their successors, assigns and heirs, with respect to Subject Property on which the Improvements are constructed within the easement and setback, to indemnify District and hold it harmless from any claims, losses, damages or expenses, specifically and exclusively arising out of the construction of the Improvements within the easement and setback and also following construction of the Improvements. This indemnification includes, but is not limited to any and all personal injuries which may be suffered by any individuals or property damage which may be incurred by any individuals or entities as a result of the construction of the Improvements within the easement and setback. Property Owners agree to indemnify District from any and all liability, loss or damage District may suffer as a result of such claims, demands, costs or judgments and further agree to take over and defend any such claims brought or actions filed against District with respect to the subject of the indemnity contained in this Agreement. The foregoing indemnity shall include reasonable attorney's fees and court costs incurred by District including court costs and reasonable attorney's fees incurred at the trial and all appellate levels. Nothing contained herein shall be deemed, however, to constitute a waiver by District of any limitations of its liability that may be accorded District by virtue of Section 768.28 Florida Statutes, or any subsequently enacted similar law.
- 5. Property Owners shall on the easement, setback and lakelake/pond property adjacent to Subject Property, restore the lakelake/pond bank to its original condition or District criteria as it exists on the date of this Agreement should construction of the Improvements within

February 7, 2020 Page 4 of 12

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- the easement and setback result at any time in the collapse of the <a href="lakelake/pond">lakelake/pond</a> bank or any other damage to the <a href="lakelake/pond">lakelake/pond</a> bank.
- In the event the Property Owners fail to restore the <a href="lake|ake/pond">lake|ake/pond</a> bank within thirty (30) days of receiving written notice from District, then District may undertake to perform such <a href="lake|ake/pond">lake|ake/pond</a> bank restoration as may be deemed by it to be necessary and Property Owners shall fully reimburse District for the cost of all such <a href="lake|ake/pond">lake|ake/pond</a> bank restoration work within thirty (30) days of receiving a bill.
  - 6. Property Owners agree that during and following construction of the Improvements within the easement and setback, they shall take all reasonable and necessary steps to prevent pollution or damage to the adjacent <a href="lakelake/pond">lakelake/pond</a> as a result of said construction. In addition, Property Owners agree to be responsible for and reimburse District for all expenses arising out of pollution or damage to the adjacent <a href="lakelake/pond">lakelake/pond</a> resulting from said construction.
  - 7. Property Owners agree to maintain the Improvements built by Property Owners or with their permission, in or on the easement and setback and Property Owners agree to fully and completely indemnify and hold harmless District, its successors and assigns for damages because of bodily injury or death resulting therefrom, sustained by any person or persons, or because of any damage to real property or personal property of District or of any entity due to any act or omission of Property Owners, their employees, subcontractors, designees, or agents and in or on the easement and setback.
  - 8. In It is the intent of Paragraph No. 7 of this Agreement that if the improvements approved and permitted by this Agreement deteriorate to a condition which requires maintenance or repairs, in the sole discretion of the District, that Property Owner will restore and repair the improvements to at least the condition as originally approved and permitted by the District. If the repairs are not completed within sixty (60) days following notification by District, the District may remove the improvements as provided by this Agreement.
  - 9. Property Owners agree that in the event District shall have a reasonable permanent use of the easement and setback area, that within thirty (30) days notice by District, Property Owners shall remove the Improvements within the easement and setback and constructed pursuant to this agreement. In this event, the <a href="lakelake/pond">lakelake/pond</a> bank shall be restored to its original condition or District criteria as it exists on the date of this agreement. Notwithstanding the foregoing, in the event there is not a permanent need for said property but

February 7, 2020 Page 5 of 12

there is a temporary basis which need is reasonable for reasonable use of the easement District shall use all reasonable means to avoid the necessity of removing any part of the Improvements. If after attempts to use said property temporarily without removing the Improvements fail or are reasonably determined to be impossible or unreasonably inconvenient, then and in that event, upon the giving of thirty (30) days notice to the then owner of Subject Property, Property Owners shall remove so much of the Improvements as may be reasonably necessary to permit District to effectuate the temporary use. Thereafter, and upon notice from District that said temporary need or use has been fulfilled and is no longer necessary, Property Owners shall be permitted to replace so much of the Improvements which were removed, so long as the construction necessary to complete the replacement complies with District's criteria and requirements of this agreement.

- 10. Notwithstanding the provisions of Paragraph No. 9 of this Agreement, if an emergency condition or situation arises, as solely determined by the District, District may effect such repairs or remove such portion of the Improvements as required to alleviate said emergency condition or situation without being liable to the Property Owner for any damage which may occur to the improvements.
- Notwithstanding the foregoing, District shall make a reasonable effort to contact the Property Owners to give Property Owners the opportunity to effect said repairs or removal of the Improvements.
  - 11. Property Owners agree that if it is necessary for District to remove the Improvements constructed pursuant to this agreement and to restore the <a href="lakelake/pond">lakelake/pond</a> bank, that Property Owners will reimburse District for any and all costs incurred to effect said removal and restoration, including attorney's fees and costs expended in connection with such removal and restoration.
  - 12. Any expenses including reasonable attorney's fees incurred by District as a result of the indemnification contained in this agreement and/or in removing the Improvements and restoring the lakelake/pond bank shall be paid to District by Property Owners within thirty (30) days after receiving a bill. In the event payment is not received within thirty (30) days of billing, then the District shall be entitled to file a lien in the Broward County Public Records upon Subject Property for all expenses including reasonable attorney's fees, together with interest thereon at 18 percent per year or the highest nonusurious rate allowed by law, whichever is less and all costs of collection, including reasonable attorney's fees at all trial and appellate levels. In the further event that District is required to foreclose its lien, then and in such event, District will Exhibit S

February 7, 2020 Page 6 of 12

be entitled additionally to receive its reasonable attorney's fees and costs expended in connection with such foreclosure or collection procedure.

- 13. Property Owners by signing this agreement acknowledge that District is only permitting occupancy of the easement and setback by the Improvements, that District has not reviewed and will not review, acknowledge, or comment on the structural integrity or sufficiency of the Improvements and that Property Owners are solely responsible for the structural integrity and sufficiency of the Improvements.
- Property Owners further acknowledge that the Improvements will be constructed 14. in substantial compliance with the sketch or plans attached to this Agreement as Exhibit "B".
- 15. No changes, additions, or modifications to the Improvements as approved by this Agreement shall be permitted without approval of the District Board of Commissioners.
- 16. All notices of request, demand, and other communications hereunder shall be addressed to the parties as follows:

## As to District

200 201 Central Broward Water Control District 202 Attn: District Manager/Secretary 203 8020 Stirling Road

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Hollywood, Florida 33024 205

### As to Property Owners:

208 Name:

210 Address:

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and/or to the record owner of Subject Property according to the Broward County Property Appraiser's Office if the original Property Owner is no longer the owner of the Subject Property; unless the address is changed by the party by notice given to the other parties. Notice shall be in writing, mailed certified mail, return receipt requested, postage prepaid and shall be deemed delivered when mailed or upon hand delivery to the address indicated. Notwithstanding the foregoing, notices, requests, or demands or other communications referred to in this agreement may be sent by telegraph or private courier, but shall be deemed to have been given when received.

- 17. No waiver of any provision of this agreement shall be effective unless it is in writing, signed by the party against whom it is asserted and any such written waiver shall only be applicable to the specific instance to which it relates and shall not be deemed to be a continuing or future waiver.
- 18. This agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which will constitute one and the same agreement.
- 19. This agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, personal representatives, successors, assigns, and grantees.
- 20. This agreement shall be construed and interpreted according to the laws of the State of Florida and the venue with respect to any litigation with respect to this Agreement shall be Broward County, Florida.
- 21. All terms and words used in this agreement, regardless of the number and gender in which used, shall be deemed to include any other gender or number as the context or the use thereof may require.
- 22. This agreement shall not be modified (and no purported modification thereof shall be effective unless in writing and signed by the party to be charged.
- 23. The exhibits hereto contain additional terms of this agreement. Typewritten or handwritten provisions inserted in this agreement or exhibit (and initialed by the parties) shall control all printed provisions in conflict therewith.
- 24. Whenever approvals of any nature are required by either party to this agreement, 241 it is agreed that same shall not be unreasonably withheld.
  - 25. This agreement shall be severable and if any part or portion of this agreement shall be found to be invalid or unenforceable, such findings shall not affect the remainder of this agreement.
- 26. Property Owners shall reimburse District and pay for any and all costs incurred by District incidental to entering into the terms of this agreement, including but not limited to engineering fees, surveying costs, attorney's fees, recording costs, and any other necessary expenses.

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49	27. This agreement merges	s and supersedes any and all previous agreements on this	
50	subject matter between the parties, whether oral or written, and constitutes the entire agreemen		
51	between the parties.		
52	28. This agreement shall	be recorded in the public records of Broward County,	
53	Florida with Property Owners to pay th	e full cost thereof.	
54	IN WITNESS WHEREOF, the	parties hereto have hereunto set their hands and seals	
55	the day and year first above written		
56			
57 58 59 60	Signed, sealed, and delivered in the presence of:	PROPERTY OWNERS	
61 62 63	WITNESS	SIGNATURE	
64 65 66 67	Print Name	Print Name	
68 69 70			
71 72	WITNESS	SIGNATURE	
73 74 75	Print Name:	Print Name:	
76 77 78			
79 80			
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## AS TO PROPERTY OWNER:

FOR AN INDIVIDUAL ACTING	G IN HIS OR HER OWN RIGHT:
STATE OF	
COUNTY OF	
	was acknowledged before me by means of □ physical
	zation, this (date) by (name of person
	,who is personally
	oduced (type of identification)
as identification.	(-)
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
FOR A CORPORATION:	
FOR A CORPORATION:	
STATE OF	
COUNTY OF	
The foregoing instrument	was acknowledged before me by means of $\square$ physical
presence or □ online notaria	zation, this (date) by (name of officer or agent,
title of officer or agent)	
	nowledging),a (state
	corporation, on behalf of the corporation.
He/She is personally known	to me or has produced (type of identification)
	as identification.
Full this O	(Continued on next page)
Exhibit S	

	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
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	- <del></del> -
	(Title or rank)
	(Serial number, if any)
FOR A LIMITED LIABILITY	COMPANY:
STATE OF	
COUNTY OF	<del>_</del>
The foregoing instrumer	nt was acknowledged before me by means of $\square$ physical
presence or □ online not	arization, this (date) by (name of member,
	t, title of member, manager, officer or agent)
	, of (name of corporation
acknowledging)	, a (state or
place of formation)	limited liability company, on behalf of the
	ally known to me or who has produced (type of identification)
company, who is persone	
	as identification.
	(Signature of person taking acknowledgment)
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	(Title or rank)
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#### **EXHIBIT T**

# Suggested Wetland and Aquatic Plants and Planting Depth Ranges

The following table is a suggested list of Florida native aquatic plants suitable for planting along lake/pond and canal shorelines at or below the control water surface elevation. These plants create a natural habitat that provide slope stabilization and protection, provide water quality benefits, and create a natural aesthetic shoreline.

The criteria for selection of these plants is that they are wetland plants native to south Florida, they are easily obtained and installed, are not highly invasive, and are low growing plants with no woody stems (herbaceous). Planting of other plants which meet these criteria but are not listed in the table is encouraged.

Additional information may be obtained from the following references:

John D. Tobe, Kary C. Burks, Richard W. Cantrell, Florida Wetland Plants: An Identification Manual. University of Florida/The Institute of Food and Agricultural Sciences • Ricthey Bell and Bryan J. Taylor. 1982. Florida Wildflowers and Roadside Plants. Laurel Hill Press

The following is a sample list of suitable aquatic plants; it is not mean to be all-inclusive.

The applicant should consult with a wetland ecologist, biologist or landscape architect to select the appropriate plant types and planting zones.

PL	ANT			
Common Name	<b>Botanical Name</b>	PLANTING DEPTH		
Fakatchee grass	Tripsacum	6" above control elevation and		
	dactoloides	higher (special bushy grass to 5 feet		
		tall for erosion control in special		
		situations)		
Lizards tail	Saururus cernuus	Wet soil; water to 6" deep		
Water pennywort	Hydrocotyl spp.	Wet soil; water to 8" deep		
Iris	Iris spp.	Wet soil; water to 12" deep		
Arrowhead	Sagitaria larifolia	Wet soil; water to 12" deep		
Spike rush	Eleocharis spp.	Wet soil; water to 12" deep		
White bulrush	Scirpus albescens	Wet soil; water to 12" deep		
Thalia	Thalia geniculata	Wet soil; water to 24" deep		
Floating-heart	Nymphoides peltata	Water 4" to 12" deep		
Pickerel weed	Pontederia cordata	Water 6" to 18" deep		
Spadderdock	Nuphar luteum	Water 6" to 24" deep		
Lotus	Nelumbo spp.	Water 6" to 24" deep		
Water Lilies	Nymphaea spp.	Water 6" to 24" deep		

Note: Planting depths based on control elevation.

# The 2017 list was prepared by the FLEPPC Plant List Committee

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Jimi L. Sadle, Everglades National Park, jimi\_sadle@nps.gov

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**Arthur Stiles**, Florida Park Service, Florida Department of Environmental Protection, arthur.stiles@dep.state.fl.us

**Daniel B. Ward,** Professor Emeritus, University of Florida Department of Botany (Deceased)

**Richard P Wunderlin**, Professor Emeritus, University of South Florida, Institute for Systematic Botany rwunder@usf.edu

# Florida Exotic Pest Plant Council's 2017 List of Invasive Plant Species

The mission of the Florida Explic Pest Plant
Council is to support the management of invasive
exotic plants in Florida's fatural areas by
providing a forum for the exchange of scientific,
educational and technical information.

www.fleppc.org

Note: The FLE PC List of Invasive Plant Species is not a regulatory list. Only those plants listed as Federal Nexious Weeds, Florida Noxious Weeds, Florida Prohibited Aquatics Plants, or in local ordinances are regulated by law.

# Parpose of the List

To provide a list of plants determined by the Florida Exotic Pest Plant Council to be invasive in natural areas of Florida and to routinely update the list based on information of newly identified occurrences and changes in distribution over time. Also, to focus attention on –

- the adverse effects exotic pest plants have on Florida's biodiversity and native plant communities,
- the habitat losses in natural areas from exotic pest plant infestations,
- the impacts on endangered species via habitat loss and alteration,
- the need for pest-plant management,
- the socio-economic impacts of these plants (e.g., increased wildfires or flooding in certain areas),
- changes in the severity of different pest plant infestations over time,
- providing information to help managers set priorities for research and control programs.



#### **CATEGORY I**

Invasive exotics that are altering native plant communities by displacing native species, changing community structures or cological functions, or hybridizing with natives. This definition does not rely on the economic severity or geographic range of the problem out on the documented ecological damage caused.

Scientific Name**	Common Name	Gov. List	Zone
Abrus precatorius	rosary pea	F	C, S
Acacia auriculiformis	earleaf acacia		C, S
Albizia julibrissin	mimosa, silk tree		N, C
Albizia lebbeck	woman's tongue		C, S
Ardisia crenata	coral ardisia	F	N, C, S
Ardisia elliptica	shoebutton ardisia	F	C, S
Asparagus aethiopicus	asparagus-fern		N, C, S
(A. sprengeri, A. densiflorus)	1 0		
Bauhinia variegata	orchid tree		C, S
Bischofia javanica	bishopwood		C, S S
Calophyllum antillanum	Santa Maria, mast wood		S
(C. calaba)			
Casuarina equisetifolia	Australian-pine	F	N, C, S
Casuarina glauca	suckering Australian-pine	F	C, S
Cinnamomum camphora	camphor tree		N, C, S
Colocasia esculenta	wild taro		N, C, S
Colubrina asiatica	lather leaf	F	S
Cupaniopsis anacardioides	carrotwood	F	C, S
Deparia petersenii	Japanese false spleenwort		N, C
Dioscorea alata	winged yam	F	N, C, S
Dioscorea bulbifera	air-potato	F	N, C, S
Eichhornia crassipes	water-hyacinth	F	N, C, S
Eugenia uniflora	Surinam cherry		C, S
Ficus microcarpa	laurel fig		C, S
(F. nitida and F. retusa var. nit	ida)¹		
Hydrilla verticillata	hydrilla	F, U	N, C S
Hygrophila polysperma	green hygro	F, U	N C, S
Hymenachne amplexicaulis	West Indian marsh grass		<b>X</b> , C, S
Imperata cylindrica	cogon grass	F, U	N, C, S
Ipomoea aquatica	water-spinach	F U	С
Jasminum dichotomum	Gold Coast jasmine		C, S
Jasminum fluminense	Brazilian jasmine		C, S
Lantana camara	lantana, shrub verben		N, C, S
(L. strigocamara)			
Ligustrum lucidum	glossy privet		N, C
Ligustrum sinense	Chinese privet	$F^3$	N, C, S
Lonicera japonica	Japanese hor cysuckle		N, C, S
Ludwigia hexapetala	Uruguay y aterprimrose		N, C
Ludwigia peruviana	Peruviar primrosewillow		N, C, S
Lumnitzera racemosa	black hangrove		S
Luziola subintegra	tropical American watergr	ass	S
Lygodium japonicum	J panese climbing fern	F	N, C, S
Lygodium microphyllum	Old World climbing fern	F, U	N, C, S
Macfadyena unguis-cati	catclawvine		N, C, S
(Dolichandra unguis-cati)			
Manilkara zapota	sapodilla		S
Melaleuca quinquener ia	melaleuca, paper bark	F, U	C, S

		Gov.	
Scientific Name**	Common Name	List	Zone
Melinis repens	Natal grass		N, C, S
(Rhynchelytrum repens)			
Microstegium vimineum*	Japanese stiltgrass,		N
Mimosa pigra	catclaw min osa	F, U	C, S
Nandina domestica	nandina, keavenly bamb	000	N, C
Nephrolepis brownii	Asian s vord fern		C, S
(N. multiflora)			
Nephrolepis cordifolia	sword fern		N, C, S
Neyraudia reynaudiana	Jurma reed	F	S
Nymphoides cristata	crested floating heart	F	C, S
Paederia cruddasiana	sewer vine	F	S
Paederia foetida	skunk vine	F	N, C, S
Panicum repens	torpedo grass		N, C, S
Pennisetum purpure m	Napier grass, elephant g	rass	N, C, S
Phymatosorus scolopendria	serpent fern, wart fern		S
(Microsorum gr ssum)			
Pistia stratiot s	water-lettuce	F	N, C, S
Psidium ca tleianum	strawberry guava		C, S
(P. littor de)			
Psidiy n guajava	guava		C, S
Pu aria montana var. lobata	kudzu	F	N, C, S
Thodomyrtus tomentosa	downy rose-myrtle		C, S
Ruellia simplex²	Mexican-petunia		N, C, S
Salvinia minima	water spangles		N, C, S
Sapium sebiferum	popcorn tree,		N, C, S
(Triadica sebifera)	Chinese tallow tree		
Scaevola taccada	half-flower, beach naupa	aka	N, C, S
(S. sericea, S. frutescens)	1 (0 0 1 1		
Schefflera actinophylla	schefflera, Queensland		C, S
(Brassaia actinophylla)	umbrella tree		NI C C
Schinus terebinthifolius	Brazilian-pepper	F	N, C, S
Scleria lacustris	Wright's nutrush		C, S
Senna pendula var. glabrata	Christmas cassia, Christmas senna		C, S
Solanum tampicense		F, U	C, S
	wetland nightshade		
Solanum viarum	tropical soda apple	F, U	N, C, S C, S
Sporobolus jacquemontii (S. indicus var. pyramidalis)	West Indian dropseed		C, 3
Syngonium podophyllum	arrowhead vine		N, C, S
Syzygium cumini	Java-plum		C, S
Tectaria incisa	incised halberd fern		S
Thelypteris opulenta*	jeweled maiden fern		S
Thespesia populnea	seaside mahoe		C, S
Tradescantia fluminensis	small-leaf spiderwort		N, C
Urena lobata	Caesar's weed		N, C, S
Urochloa mutica	para grass		N, C, S
(Brachiaria mutica)	Lura Praco		1,, 0, 0
Vitex rotundifolia	beach vitex		N
			•

<sup>&</sup>lt;sup>1</sup>Does not include *Ficus microcarpa* subsp. *fuyuensis*, which is sold as "Green Island Ficus"

<sup>2</sup>Many name are applied to this species in Florida because of a complicated taxonomic and nomenclatural history. Plants cultivated in Florida, all repres

<sup>3</sup>Chinese privet is a FLDACS Noxious Weed except for the cultivar 'Variegatum'

\*Added to the FLEPPC List of Invasive Plant Species in 2017

\*\*Plant names are those published in "Guide to Vascular Plants of Florida Third Edition." Richard P. Wunderlin and Bruce F. Hansen. University of Floridarge. Not all synonyms are listed.

#### **CATEGORY II**

Invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown be Category I species. These species may become ranked Category I if ecological damage is demonstrated.

Adenanthera pavonina red sandalwood S Agave sisalana sisal hemp C, S Aleurites fordii tung-oil tree N, C (Vernicia fordii)  Alstonia macrophylla devil tree S Alternanthera philoxeroides alligator-weed F N, C, S Antigonon leptopus coral vine N, C, S Ardisia japonica Japanese ardisia N Aristolochia littoralis elegant Dutchman's pipe, (A. elegans) calico flower Asystasia gangetica Ganges primrose C, S Begonia cucullata wax begonia N, C, S Broussonetia papyrifera paper mulberry N, C, S Gallistemon viminalis bottlebrush C, S Callistemon viminalis bottlebrush C, S Callistemon viminalis bottlebrush C, S Casuarina cunninghamiana Australian-pine F C, S Cestrum diurnum day jessamine C, S Cestrum diurnum day jessamine C, S Chamaedorea seifrizii bamboo palm S Clematis terniflora Japanese clematis N, C Cocos nucifera coconut palm S Crassocephalum crepidioides redflower ragleaf, Okinawa spinach Cryptostegia madagascariensis rubber vine C, S Cyperus involucratus (martipolius) Cyperus prolifer dwarf papyrus C, S Dactyloctenium aegyptium Durban crowfoot grass Dalbergia sissoo Indian rosewood, sissoo C, S Elaeagnus umbellata silverberry, autumn of we N Epipremnum pinnatum pothos C, S Elaeagnus umbellata silverberry, autumn of we N Epipremnum pinnatum pothos C, S Flacourtia indica governor plum S Hemarthria altissima limpo ass C, S Heteropterys brachiata life plant C, S Flacourtia indica governor plum S Hemarthria altissima limpo ass C, S Flacourtia indica governor plum S Hemarthria altissima limpo ass C, S Flacourtia indica governor plum S Hemarthria altissima limpo ass C, S Flacourtia indica governor plum S Hemarthria altissima limpo ass C, S Flacourtia indica life plant C, S Flacourtia indica life plant C, S Floronoea carnae ssp. fistulosa (Irib morning-glory F C, S Flacourtia elegans flanegold tree C, S	Scientific Name**	Common Name	Gov. List	Zone
Agave sisalana         sisal hemp         C, S           Aleurites fordii         tung-oil tree         N, C           Vernicia fordii         tung-oil tree         N, C           Altonia macrophylla         devil tree         S           Alternanthera philoxeroides         alligator-weed         F         N, C, S           Artisolochia littoralis         elegant Dutchman's pipe, calico flower         N, C, S           Arsistolochia littoralis         elegant Dutchman's pipe, calico flower         N, C, S           Asystasia gangetica         Ganges primrose         C, S           Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemo viminalis         bottlebrush         C, S           Medaleuca viminalis         bottlebrush         C, S           Callisia fragrans         inch plant, spironema         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cecropia palmata         trumpet tree         S         Cectrum durnum         day jessamine         C, S <td>Adenanthera pavonina</td> <td>red sandalwood</td> <td></td> <td>S</td>	Adenanthera pavonina	red sandalwood		S
Aleurites fordii (Vernicia fordii)  Alstonia macrophylla devil tree S  Alternanthera philoxeroides alligator-weed F N, C, S  Antigonon leptopus coral vine N, C, S  Ardisia japonica Japanese ardisia N  Aristolochia littoralis elegant Dutchman's pipe, calico flower  Asystasia gangetica Ganges primrose C, S  Begonia cucullata wax begonia N, C, S  Broussonetia papyrifera paper mulberry N, C, S  Gallistemon viminalis bottlebrush C, S  Gallistemon viminalis bottlebrush C, S  Gallista fragrans inch plant, spironema C, S  Gestrum diurnum day jessamine F C, S  Cecropia palmata trumpet tree S  Cestrum diurnum day jessamine C, S  Chamaedorea seifrizii bamboo palm S  Clematis terniflora Japanese clematis N, C  Cocos nucifera coconut palm S  Crassocephalum crepidioides redflower ragleaf, Okinawa spinach  Cryptostegia madagascariensis redflower ragleaf, Okinawa spinach  Cryperus involucratus (umbrella plant G, S  Dactyloctenium aegyptium Durban crowfoot grass N, C, S  Dalbergia sissoo Indian rosewood, sissoo C, S  Elaeagnus pungens silverthorn, thorny oliva N, C  Elaeagnus pungens silverthorn, thorny oliva N, C  Elaeagnus quaminea Chinese crowp orchid C, S  Ficus altissima false banyar council tree S  Flacourtia indica governor plum S  Hemarthria altissima Impo sass C, S  Heteropterys brachiata red ying, Beechey's withe S  Hyparrhenia rufa jargua N, C, S  Ralanchoe x houghtoni* mother-of-millions N, C, S  Kalanchoe pinnata life plant C, S		sisal hemp		C, S
Vernicia fordii)   Alstonia macrophylla   devil tree   S   Alternanthera philoxeroides   alligator-weed   F   N, C, S   Ardisia japonica   Japanese ardisia   N   Aristolochia littoralis   elegant Dutchman's pipe,   calico flower   Asystasia gangetica   Ganges primrose   C, S   Begonia cucullata   wax begonia   N, C, S   Broussonetia papyrifera   paper mulberry   N, C, S   Bruguiera gymnorhiza   large-leaved mangrove   S   Callistemon viminalis   bottlebrush   C, S   Casuarina cunninghamiana   Australian-pine   F   C, S   Casuarina cunninghamiana   Australian-pine   F   C, S   Cecropia palmata   trumpet tree   S   Cestrum diurnum   day jessamine   C, S   Cestrum diurnum   day jessamine   C, S   Coson nucifera   cocon nucifera				
Alstonia macrophylla         devil tree         S           Alternanthera philoxeroides         alligator-weed         F         N, C, S           Antisgonon leptopus         coral vine         N, C, S           Ardisia japonica         Japanese ardisia         N           Aristolochia littoralis         elegant Dutchman's pipe, calico flower         N, C, S           Asystasia gangetica         Ganges primrose         C, S           Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemon viminalis         bottlebrush         C, S           Melaleuca viminalis         bottlebrush         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cestrum diurnum         day jessamine         C, S           Cestrum diurnum         day jessamine         C, S           Chamaciorea seifrizii         bamboo palm         S           Clematis terniflora         Japanese clematis         N, C           Crassocephalum crepidioides         redflower ra		8 - 1 - 1		, -
Alternanthera philoxeroides         alligator-weed         F         N, C, S           Antigonon leptopus         coral vine         N, C, S           Ardisia japonica         Japanese ardisia         N           Aristolochia littoralis         elegant Dutchman's pipe, calico flower         N, C, S           Asystasia gangetica         Ganges primrose         C, S           Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemon viminalis         bottlebrush         C, S           Melaleuca viminalis         bottlebrush         C, S           Callisia fragrams         inch plant, spironema         C, S           Callisia fragrams         inch plant, spironema         C, S           Callisia fragrams         trumpet tree         S           Casuarina cunninghamiana         Australian-pine         F         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cestrum diurnum         day jessamine         C, S           Cestrum diurnum         day jessamine         C, S           Clearing turbina turbina         S		devil tree		S
Antigonon leptopus         coral vine         N, C, S           Ardisia japonica         Japanese ardisia         N           Aristolochia littoralis         elegant Dutchman's pipe, calico flower         N, C, S           Asystasia gangetica         Ganges primrose         C, S           Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemon viminalis         bottlebrush         C, S           Melaleuca viminalis         bottlebrush         C, S           Callisia fragrans         inch plant, spironema         C, S           Callisia fragrans         inch plant, spironema         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cestrum diurnum         day jessamine         C, S           Cestrum diurnum         day jessamine         C, S           Chamaedorea seifrizii         bamboo palm         S           Clematis terniflora         Japanese clematis         N, C           Cocos nucifera         coconut palm         S		alligator-weed	F	N, C, S
Ardisia japonica       Japanese ardisia       N         Aristolochia littoralis       elegant Dutchman's pipe, calico flower       N, C, S         Asystasia gangetica       Ganges primrose       C, S         Begonia cucullata       wax begonia       N, C, S         Broussonetia papyrifera       paper mulberry       N, C, S         Bruguiera gymnorhiza       large-leaved mangrove       S         Callistemon viminalis       bottlebrush       C, S         Gallisia fragrans       inch plant, spironema       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Cectopia palmata       trumpet tree       S       S         Cestrum diurnum       day jessamine       C, S       S         Cestrum diurnum       day jessamine       C, S       S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Cryptostegia madagascariensis       N, C         Cyperus involucratus       C, S         Cyperus prolifer       dwarf papyrus       C, S				
Aristolochia littoralis (A. elegans) Calico flower  Asystasia gangetica Begonia cucullata Wax begonia Broussonetia papyrifera Paper mulberry Pruguiera gymnorhiza Australian-pine C, S  Callistemon viminalis Callisia fragrans Callisia fragrans Calsuarina cunninghamiana Australian-pine Costrum diurnum Auy jessamine Costrum diurnum Australian-pine F Costrum diurnum Auy jessamine Australian-pine F Costrum diurnum Auy jessamine Costrum diurnum Auy jessamine Australian-pine Australian-pine F Costrum diurnum Auy jessamine Australian-pine		Iapanese ardisia		
(A. elegans)       calico flower         Asystasia gangetica       Ganges primrose       C, S         Begonia cucullata       wax begonia       N, C, S         Broussonetia papyrifera       paper mulberry       N, C, S         Bruguiera gymnorhiza       large-leaved mangrove       S         Callistemon viminalis       bottlebrush       C, S         (Melaleuca viminalis)       inch plant, spironema       C, S         Callisia fragrans       inch plant, spironema       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Cestrum diurnum       day jessamine       C, S         Cestrum diurnum       day jessamine       C, S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Dattyloctenium		- 1		
Asystasia gangetica         Ganges primrose         C, S           Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemon viminalis         bottlebrush         C, S           (Melaleuca viminalis)         Callisia fragrans         inch plant, spironema         C, S           Callisia fragrans         inch plant, spironema         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cecropia palmata         trumpet tree         S         S           Cestrum diurnum         day jessamine         C, S         S           Cestrum diurnum         day jessamine         C, S         S           Chamaedorea seifrizii         bamboo palm         S         S           Clematis terniflora         Japanese clematis         N, C         S           Chamaedorea seifrizii         bamboo palm         S           Clematis terniflora         Japanese clematis         N, C           Cocon nucifera         coconut palm         S           Crassocephalum crepidioides         Colinase         Coconut palm         S </td <td></td> <td></td> <td></td> <td>, ,</td>				, ,
Begonia cucullata         wax begonia         N, C, S           Broussonetia papyrifera         paper mulberry         N, C, S           Bruguiera gymnorhiza         large-leaved mangrove         S           Callistemon viminalis         bottlebrush         C, S           (Melaleuca viminalis)         crypania         C, S           Callisia fragrans         inch plant, spironema         C, S           Casuarina cunninghamiana         Australian-pine         F         C, S           Cecropia palmata         trumpet tree         S         Cestrum diurnum         day jessamine         C, S           Cestrum diurnum         day jessamine         C, S         S           Chamaedorea seifrizii         bamboo palm         S           Clematis terniflora         Japanese clematis         N, C           Cocos nucifera         coconut palm         S           Clematis terniflora         Japanese clematis         N, C           Crassocephalum crepidioides         redflower ragleaf, Okinawa spinach         C, S           Cryperus involucratus         umbrella plant         C, S           Cyperus prolifer         dwarf papyrus         C, S           Dactyloctenium aegyptium         Durban crowfoot grass         N, C, S		Ganges primrose		C, S
Broussonetia papyrifera paper mulberry S Bruguiera gymnorhiza large-leaved mangrove S Callistemon viminalis bottlebrush C, S (Melaleuca viminalis) Callisia fragrans inch plant, spironema C, S Casuarina cunninghamiana Australian-pine F C, S Cecropia palmata trumpet tree S Cestrum diurnum day jessamine C, S Chamaedorea seifrizii bamboo palm S Clematis terniflora Japanese clematis N, C Cocos nucifera cocontu palm S Crassocephalum crepidioides redflower ragleaf, Okinawa spinach Cryptostegia madagascariensis rubber vine C, S Cyperus involucratus umbrella plant (C. alternifolius) Cyperus prolifer dwarf papyrus C, S Dactyloctenium aegyptium Durban crowfoot grass N, C, S Dalbergia sissoo Indian rosewood, sissoo C, S Elaeagnus pungens silverthorn, thorny olive N, C Elaeagnus umbellata silverberry, autumn olive N Epipremnum pinnatum pothos C, S Ficus altissima false banyar council tree S Flacourtia indica governor' plum S Hemarthria altissima limpo sass C, S Heteropterys brachiata red ying, Beechey's withe S Hyparrhenia rufa jargua N, C, S If clistulosa) Kalanchoe x houghtonii* mother-of-millions N, C, S Kalanchoe pinnata (Bryophyllum pinnatum				
Bruguiera gymnorhiza       large-leaved mangrove       S         Callistemon viminalis (Melaleuca viminalis)       bottlebrush       C, S         Callisia fragrans       inch plant, spironema       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C, S         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         Ev. Aureum       S       C <tr< td=""><td></td><td></td><td></td><td></td></tr<>				
Callistemon viminalis (Melaleuca viminalis)       bottlebrush       C, S         Callisia fragrans       inch plant, spironema       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, f         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olve       N         Epipremnum pinnatum       pothos       C, S         Ficus altissima       false banyary council tree <td></td> <td></td> <td></td> <td></td>				
(Melaleuca viminalis)       Callisia fragrans       inch plant, spironema       C, S         Casuarina cunninghamiana       Australian-pine       F       C, S         Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       cv. Aureum       C, S         Eulophia graminea       Chinese crowpforchid       C, S         Ficus altissima				
Casuarina cunninghamiana       Australian-pine       F       C, S         Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olivy       N, C         Elaeagnus umbellata       silverberry, autumn olivy       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crown orchid       C, S         Elaeagnus altissima       false banyan council tree       S         Flacourtia indica       governor' plum       S </td <td></td> <td></td> <td></td> <td>-,-</td>				-,-
Casuarina cunninghamiana       Australian-pine       F       C, S         Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         Cyperus involucratus       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olivy       N, C         Elaeagnus umbellata       silverberry, autumn olivy       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crown orchid       C, S         Elaeagnus altissima       false banyan council tree       S         Flacourtia indica       governor' plum       S </td <td></td> <td>inch plant, spironema</td> <td></td> <td>C, S</td>		inch plant, spironema		C, S
Cecropia palmata       trumpet tree       S         Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         (C. alternifolius)       C, S         Cyperus prolifer       dwarf papyrus       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olivy       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       C, S       S         Eulophia graminea       Chinese crowt orchid       C, S         Ficus altissima       false banyan council tree       S         Flacourtia indica       governor' plum <td></td> <td></td> <td>F</td> <td></td>			F	
Cestrum diurnum       day jessamine       C, S         Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         (C. alternifolius)       Cyperus prolifer       dwarf papyrus       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crowp orchid       C, S         Eulophia graminea       Chinese crowp orchid       C, S         Ficus altissima       false banyap council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo ass       C, S </td <td></td> <td><u> </u></td> <td></td> <td></td>		<u> </u>		
Chamaedorea seifrizii       bamboo palm       S         Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus (C. alternifolius)       umbrella plant       G, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       C, S       S         Eulophia graminea       Chinese crowp orchid       C, S         Ficus altissima       false banyap council tree       S         Ficus altissima       false banyap council tree       S         Flacourtia indica       governor' plum       S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jargua       N, C, S				
Clematis terniflora       Japanese clematis       N, C         Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         (C. alternifolius)       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       C, S       S         Eulophia graminea       Chinese crowpforchid       C, S         Ficus altissima       false banyan council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo glass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jargua       N, C, S         Ipomoea carnea ssp. fistulosa <td></td> <td>, ,</td> <td></td> <td></td>		, ,		
Cocos nucifera       coconut palm       S         Crassocephalum crepidioides       redflower ragleaf, Okinawa spinach       C, S         Cryptostegia madagascariensis       rubber vine       C, S         Cyperus involucratus       umbrella plant       G, S         (C. alternifolius)       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crowpforchid       C, S         Eulophia graminea       Chinese crowpforchid       C, S         Ficus altissima       false banyang council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo grass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jaragua       N, C, S         Ipomoea carnea ssp. fistulosa       nrub morning-glory       F       C, S				
Crassocephalum crepidioides redflower ragleaf, Okinawa spinach  Cryptostegia madagascariensis rubber vine C, S  Cyperus involucratus umbrella plant C, S  (C. alternifolius)  Cyperus prolifer dwarf papyrus C, S  Dactyloctenium aegyptium Durban crowfoot grass N, C, S  Dalbergia sissoo Indian rosewood, sissoo C, S  Elaeagnus pungens silverthorn, thorny olive N, C  Elaeagnus umbellata silverberry, autumn olive N  Epipremnum pinnatum pothos C, S  cv. Aureum  Eulophia graminea Chinese crowr orchid C, S  Ficus altissima false banyan council tree S  Flacourtia indica governor' plum S  Hemarthria altissima limpo grass C, S  Heteropterys brachiata red ying, Beechey's withe S  Hyparrhenia rufa jarigua N, C, S  Ipomoea carnea ssp. fistulosa Irub morning-glory F  Kalanchoe x houghtonii* mother-of-millions N, C, S  (Bryophyllum pinnatum)	·	- I		
Cryptostegia madagascariensis       rubber vine       C, f         Cyperus involucratus       umbrella plant       G, S         (C. alternifolius)       C, S         Cyperus prolifer       dwarf papyrus       C, S         Dactyloctenium aegyptium       Durban crowfoot grass       N, C, S         Dalbergia sissoo       Indian rosewood, sissoo       C, S         Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crown orchid       C, S         Eulophia graminea       Chinese crown orchid       C, S         Ficus altissima       false banyap council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo grass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jaragua       N, C, S         Ipomoea carnea ssp. fistulosa       nrub morning-glory       F       C, S         (I. fistulosa)       Kalanchoe x houghtonii*       mother-of-millions       N, C, S         (Bryophyllum pinnatun       C, S       S		redflower ragleaf,		
Cyperus involucratus (C. alternifolius)  Cyperus prolifer  Cyperus prolifer  Cyperus prolifer  Cyperus prolifer  Durban crowfoot grass  N, C, S  Dalbergia sissoo  Indian rosewood, sissoo  C, S  Elaeagnus pungens  silverthorn, thorny olive  N, C  Elaeagnus umbellata  silverberry, autumn olive  N  Epipremnum pinnatum  pothos  C, S  Ficus altissima  false banyap council tree  S  Flacourtia indica  governor' plum  S  Hemarthria altissima  limpo grass  C, S  Heteropterys brachiata  red ying, Beechey's withe  Hyparrhenia rufa  jargua  N, C, S  Ipomoea carnea ssp. fistulosa  (I. fistulosa)  Kalanchoe x houghtonii*  mother-of-millions  N, C, S  Bryophyllum pinnatun	Cryptostegia madagascariensis			C
(C. alternifolius)Cyperus proliferdwarf papyrusC, SDactyloctenium aegyptiumDurban crowfoot grassN, C, SDalbergia sissooIndian rosewood, sissooC, SElaeagnus pungenssilverthorn, thorny oliveN, CElaeagnus umbellatasilverberry, autumn oliveNEpipremnum pinnatumpothosC, Scv. AureumChinese crown orchidC, SFicus altissimafalse banyan council treeSFlacourtia indicagovernor's plumSHemarthria altissimalimpo grassC, SHeteropterys brachiatared ying, Beechey's witheSHyparrhenia rufajariguaN, C, SIpomoea carnea ssp. fistulosanrub morning-gloryFC, S(I. fistulosa)mother-of-millionsN, C, SKalanchoe x houghtonii*mother-of-millionsN, C, S(Bryophyllum pinnatunlife plantC, S				
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Dactyloctenium aegyptiumDurban crowfoot grassN, C, SDalbergia sissooIndian rosewood, sissooC, SElaeagnus pungenssilverthorn, thorny oliveN, CElaeagnus umbellatasilverberry, autumn oliveNEpipremnum pinnatumpothosC, Scv. AureumChinese crowt orchidC, SFicus altissimafalse banyan council treeSFlacourtia indicagovernor's plumSHemarthria altissimalimpo grassC, SHeteropterys brachiatared ying, Beechey's witheSHyparrhenia rufajarkguaN, C, SIpomoea carnea ssp. fistulosaInrub morning-gloryFC, S(I. fistulosa)Mother-of-millionsN, C, SKalanchoe x houghtonii*mother-of-millionsN, C, S(Bryophyllum pinnatunlife plantC, S		dwarf papyrus		C. S
Dalbergia sissooIndian rosewood, sissooC, SElaeagnus pungenssilverthorn, thorny oliveN, CElaeagnus umbellatasilverberry, autumn oliveNEpipremnum pinnatumpothosC, Scv. AureumChinese crown orchidC, SEulophia gramineaChinese crown orchidC, SFicus altissimafalse banyar council treeSHemarthria indicagovernor' plumSHemarthria altissimalimpo r assC, SHeteropterys brachiatared ying, Beechey's witheSHyparrhenia rufajaraguaN, C, SIpomoea carnea ssp. fistulosahrub morning-gloryFC, S(I. fistulosa)mother-of-millionsN, C, SKalanchoe x houghtonii*mother-of-millionsN, C, SBryophyllum pinnatunC, S				
Elaeagnus pungens       silverthorn, thorny olive       N, C         Elaeagnus umbellata       silverberry, autumn olive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crown orchid       C, S         Eulophia graminea       Chinese crown orchid       C, S         Ficus altissima       false banyary council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo grass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jargua       N, C, S         Ipomoea carnea ssp. fistulosa       nrub morning-glory       F       C, S         (I. fistulosa)       mother-of-millions       N, C, S         Kalanchoe x houghtonii*       mother-of-millions       N, C, S         Bryophyllum pinnatun       C, S				
Elaeagnus umbellata       silverberry, autumn o'ive       N         Epipremnum pinnatum       pothos       C, S         cv. Aureum       Chinese crown orchid       C, S         Eulophia graminea       Chinese crown orchid       C, S         Ficus altissima       false banyan council tree       S         Flacourtia indica       governor's plum       S         Hemarthria altissima       limpo grass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jarigua       N, C, S         Ipomoea carnea ssp. fistulosa       arrub morning-glory       F       C, S         (I. fistulosa)       mother-of-millions       N, C, S         Kalanchoe x houghtonii*       mother-of-millions       N, C, S         Kalanchoe pinnata       life plant       C, S         (Bryophyllum pinnatun       C, S				
Epipremnum pinnatum cv. Aureum  Eulophia graminea Chinese crowp orchid C, S  Ficus altissima false banyan council tree S  Flacourtia indica governor' plum S  Hemarthria altissima limpo gass C, S  Heteropterys brachiata red ying, Beechey's withe S  Hyparrhenia rufa jarigua N, C, S  Ipomoea carnea ssp. fistulosa (I. fistulosa)  Kalanchoe x houghtonii* mother-of-millions N, C, S  (Bryophyllum pinnatun)				
cv. Aureum  Eulophia graminea Chinese crown orchid C, S  Ficus altissima false banyar council tree S  Flacourtia indica governor' plum S  Hemarthria altissima limpo grass C, S  Heteropterys brachiata red ying, Beechey's withe S  Hyparrhenia rufa jar gua N, C, S  Ipomoea carnea ssp. fistulosa Inrub morning-glory F C, S  (I. fistulosa)  Kalanchoe x houghtonii* mother-of-millions N, C, S  (Bryophyllum pinnatun)				
Eulophia graminea       Chinese crown orchid       C, S         Ficus altissima       false banyan council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo glass       C, S         Heteropterys brachiata       red yang, Beechey's withe       S         Hyparrhenia rufa       jaragua       N, C, S         Ipomoea carnea ssp. fistulosa       hrub morning-glory       F       C, S         (I. fistulosa)       mother-of-millions       N, C, S         Kalanchoe x houghtonii*       mother-of-millions       N, C, S         Kalanchoe pinnata       life plant       C, S         (Bryophyllum pinnatun)       C, S		potrios		С, Э
Ficus altissima       false banyar council tree       S         Flacourtia indica       governor' plum       S         Hemarthria altissima       limpo plass       C, S         Heteropterys brachiata       red ying, Beechey's withe       S         Hyparrhenia rufa       jarkgua       N, C, S         Ipomoea carnea ssp. fistulosa       hrub morning-glory       F       C, S         (I. fistulosa)       Kalanchoe x houghtonii*       mother-of-millions       N, C, S         Kalanchoe pinnata       life plant       C, S         (Bryophyllum pinnatun)       C, S		Chinese crown orchid		C S
Flacourtia indicagovernor' plumSHemarthria altissimalimpo grassC, SHeteropterys brachiatared ying, Beechey's witheSHyparrhenia rufajarkguaN, C, SIpomoea carnea ssp. fistulosanrub morning-gloryFC, S(I. fistulosa)mother-of-millionsN, C, SKalanchoe x houghtonii*mother-of-millionsN, C, SKalanchoe pinnatalife plantC, S(Bryophyllum pinnatun)				
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Heteropterys brachiatared ying, Beechey's witheSHyparrhenia rufajarkguaN, C, SIpomoea carnea ssp. fistulosa (I. fistulosa)hrub morning-gloryFC, SKalanchoe x houghtonii*mother-of-millionsN, C, SKalanchoe pinnata (Bryophyllum pinnatun)life plantC, S				
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Ipomoea carnea ssp. fistulosaArub morning-gloryFC, S(I. fistulosa)Kalanchoe $x$ houghtonii*mother-of-millionsN, C, SKalanchoe pinnatalife plantC, S(Bryophyllum pinnatun)(Bryophyllum pinnatun)				
(I. fistulosa)Mother-of-millionsN, C, SKalanchoe x houghtonii*mother-of-millionsN, C, SKalanchoe pinnatalife plantC, S(Bryophyllum pinnatun)C, S			E	
Kalanchoe pinnata life plant C, S (Bryophyllum pinnatun	(I. fistulosa)		Г	
(Bryophyllum pinnatur)				
		life plant		<i>C</i> , <i>S</i>
		flamegold tree		C, S

O			
Scientific Name**	Common Name Li	ov. st	Zone
Landoltia punctata	spotted duckweed		N, C, S
Leucaena leucocephala	lead tree	F	N, C, S
Limnophila sessiliflora	Asian marshwerd F,	U	N, C, S
Livistona chinensis	Chinese fan palm		C, S
Macroptilium lathyroides	phasey beat.		N, C, S
Melia azedarach	Chinaberry		N, C, S
Melinis minutiflora	molas es grass		C,S
Merremia tuberosa	word-rose		C, S
Mikania micrantha	male-a-minute vine F,	U	S
Momordica charantia	balsam apple		N, C, S
Murraya paniculata	orange-jessamine		S
Myriophyllum spicatum	Eurasian water-milfoil	F	N, C, S
Panicum maximum	Guinea grass		N, C, S
(Urochloa maxima)			
Passiflora biflora	two-flowered passion vine		S
Pennisetum setac um	green fountain grass		S
Pennisetum polystachion*	mission grass,		C, S
(Cenchrus paystachos)	West Indian Pennisetum		
Phoenix y clinata	Senegal date palm		C, S
Phyllos achys aurea	golden bamboo		N, C
Pitto porum pentandrum	Taiwanese cheesewood		S
Pl dycerium bifurcatum*	common staghorn fern		S
Praxelis clematidea	praxelis		С
Pteris vittata	Chinese brake fern		N, C, S
Ptychosperma elegans	solitaire palm		S
Richardia grandiflora	large flower Mexican clover		N, C, S
Ricinus communis	castor bean		N, C, S
Rotala rotundifolia	roundleaf toothcup, dwarf Rotala, redweed		S
Ruellia blechum	green shrimp plant,		N, C, S
(Blechum brownei)	Browne's blechum		
Sansevieria hyacinthoides	bowstring hemp		C, S
Sesbania punicea	rattlebox		N, C, S
Sida planicaulis*	mata-pasto		C, S
Solanum diphyllum	two-leaf nightshade		N, C, S
Solanum torvum	turkeyberry F,	U	N, C, S
Spermacoce verticillata	shrubby false buttonweed		C, S
Sphagneticola trilobata (Wedelia trilobata)	wedelia, creeping oxeye		N, C, S
Stachytarpheta cayennensis (S. urticifolia)	nettle-leaf porterweed		S
Syagrus romanzoffiana (Arecastrum romanzoffianum)	queen palm		C, S
Syzygium jambos	Malabar plum, rose-apple		N, C, S
Talipariti tiliaceum (Hibiscus tiliaceus)	mahoe, sea hibiscus		C, S
Terminalia catappa	tropical-almond		C, S
Terminalia muelleri	Australian-almond		C, S

continued

enting the same invasive species, have in the past been referred to as Ruellia brittoniana, R. tweediana, R. caerulea, and R. simplex.

ida Press. 1011. Plant names in parentheses are synonyms or misapplied names that have commonly occurred in the literature or indicate a recent name

#### CATEGORY II (continued)

		Gov.	
Scientific Name**	Common Name	List	Zone
Tradescantia spathacea	oyster plant		C, S
(Rhoeo spathacea, Rhoeo disc	color)		
Tribulus cistoides	puncture vine, burr-nut		N, C, S
Vitex trifolia	simple-leaf chaste tree		C, S
Washingtonia robusta	Washington fan palm		C, S
Wisteria sinensis	Chinese wisteria		N, C
Xanthosoma sagittifolium	malanga, elephant ear		N, C, S

# Recent changes to plant names

Old Name	New Name
Aleurites fordii	Vernicia fordii
Aristolochia littoralis	Aristolochia elegans
Brachiaria mutica	Urochloa mutica
Hibiscus tiliaceus	Talipariti tiliaceus
Macfadyena unguis-cati	Dolichandra unguis-cati
Melaleuca viminalis	Callistemon viminalis
Panicum maximum	Urochloa maxima
Phymatosorus scolopendria	Microsorum grossum
Sapium sebiferum	Triadica sebifera
Wedelia trilobata	Sphagneticola trilobata

Current nomenclature can be found at florida.plantatlas.usf.edu

\*\*Plant names are those published in "Guide to Vascular Plants of Florida Third Edition." Richard P. Wunderlin and Bruce F. Hansen. University of Florida Press. 2011. Plant names in parentheses are synonyms or misapplied names that have commonly occurred in the literature and/or indicate a recent name change. Not all synonyms are listed.

For more information on invasive exetic plants, including links to related web pages, visit www.fleppc.org

CBWCD - Updated 4/13/18

FLEPPC List Definitions: Exotic — a species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida. Native — a species whose natural range includes Florida. Naturalized exotic — an exotic that sustains itself outside cultivation (it is still exotic; it has not "become" native). Invasive exotic — an exotic that not only has naturalized, but is expanding on its own in Florida native plant communities.

## **Abbreviations:** Government List (Gov. List):

Possession, propagation, sale, and/or transport of these plants is regulated by: F=Florida Department of Agriculture and Consumer Services; U=United States Department of Agriculture

Zone: **M** = north, **C** = central, **S** = south, referring to each species' general distribution in regions of Florida (not its potential range in the state). Please refer to the adjacent map.



## Citation example

FLEPPC. 2017. List of Invasive Plant Species. Florida Exotic Pest Plant Council. Internet: www.fleppc.org



# Daniel F. Austin and Daniel B. Ward

Daniel F. Austin (2015) and Daniel B. Ward (2016) recently passed away. Both Dans were instrumental in maintaining, managing, and providing insight into Florida's many invasive plants. They first volunteered for this effort before it was even formalized as the FLEPPC, participating from that beginning through retirement. Their sage comments and wit are missed.



#### **5B-64.011 Prohibited Aquatic Plants.**

(1) Class I Prohibited Aquatic Plants – Under no circumstances will these species be permitted for possession, collection, transportation, cultivation, and importation except as provided in Rule 5B-64.004, F.A.C.:

SCIENTIFIC NAMES COMMON NAMES

Alternanthera philoxeroides Alligatorweed, green lead plant

Casuarina spp. Australian Pine
Crassula helmsii Swamp stone crop
Eichhornia spp. Waterhyacinth

Hydrilla verticillata Hydrilla, Florida elodea stargrass, oxygen grass

Ipomoea aquatica Water spinach

Ipomoea fistulosa

Lagarosiphon spp. African elodea
Limnocharis flava Sawah flowing rush
Lythrum salicaria Purple loose trife

Melaleuca quinquenervia Melaleuca

Mimosa pigra Giant s'nsitive plant, cat's claw

Monochoria hastata

Monochoria vaginalis

Myriophyllum spicatum Eurasian watermilfoil

Nechamandra alternifolia

Oryza rufipogon Wild Red rice

Pontederia rotundifolia Tropical pickerelweed

Salvinia spp., (excluding S. minima)

Schinus terebinthifolius

Sparganium erectum

Brazilian-pepper
Exotic bur-reed

Stratiotes aloides Water-aloe, soldier plant

Trapa spp. Water chestnut
Vossia cuspidata Hippo grass

(2) Class II Prohibited Aquatic Plants – These species are considered to be highly invasive and noxious in localized areas of the State of Florida. These plants may be cultured in a cursery regulated by the Department of Agriculture and Consumer Services pursuant to Sections 581.031, 581.131 and 581.145 f.S., and shall only be sold out of state upon approval by the department. These species shall not be imported or collected from the wild. They must be contained in such a manner so as to prevent the dissemination from the nursery premises.

SCIENTIFIC NAMES COMMON NAME

Hygrophila polysperma
Limnophila sessiliflora
Pistia stratiotes

Hygro
Ambulia
Waterlettuce

- (3) The department is authorized to designate additional plants to be prohibited by emergency order as provided in Rule 5B-64.012, F.A.C.
- (4) The prohibited aquatic plant list comprises the most recent and accepted scientific and common names of the prohibited aquatic plant species. How ver, the prohibited status also applies to any synonyms.
- (5) The department is authorized to consider a plant for inclusion on the prohibited plant list when it displays, or when there is scientific evidence to believe it could display in the Florida environment, one or more of the following characteristics:
- (a) The tendenty to spread or become invasive in an ecosystem, sometimes in a rapid manner, so as to impair the ecosystem's ability to function by altering its productivity, decomposition, water fluxes, nutrient cycling and loss, soil fertility, erosion, dissolved oxygen concentrations, or its ability to maintain its existing species diversity.
- (b) The propensity to invade and disrupt aquatic and wetland ecosystems in other areas or in other countries with climates similar to that of Florida.
  - (c) The ability to create dense, monospecific stands or monotypic stands which displace or destroy native plant habitat, destroy

fish and wildlife habitats, inhibit water circulation, hinder navigation and irrigation, or severely restrict the recreational use of waterways.

(d) The ability to resist effective management by present technology or available management agents so that only extraordinary efforts, such as repeated chemical treatments at high dosage rates, can bring about effective management.

Rulemaking Authority 369.25, 369.251 FS. Law Implemented 369.25, 369.251 FS. History–New 8-11-86, Amended 6-13-93, Formerly 16C-52.011, 62C-52.011.

# CENTRAL BROWARD WATER CONTROL DISTRICT STORMWATER CERTIFICATION REPORT

Submit two copies of this form to the Central Broward Water Control District		
PERMIT NUMBER:		
PROJECT NAME:		
PROJECT ADDRESS/LOCATION:		
INSPECTION DATE(S):		
INSPECTION RESULTS:_(CHECK ONE) INVENTORY OF STORMWATER MANAGEMENT FACILITY COMPONENTS	INSPECTED	
Component	Inspected	N/A
Wet detention/retention lake(s)/pond(s)  Dry detention/retention area(s)  Underground storage system(s)  Exfiltration trench(es)  Control structure(s) & outfall(s)  Storm sewer(s) and drainage structure(s)  Swales  Perimeter berm or perimeter retaining wall  All other pervious areas are stabilized/sodded  Encroachments or trees/plants in CBWCD dedicated easements  Other:  Other:  Other:  Other:  The following maintenance was conducted since the last inspection (attaneeded):	ach additional	pages if

#### CERTIFICATION STATEMENT BY FLORIDA LICENSED PROFESSIONAL ENGINEER

of the stormwater management system at the FUNCTIONING IN CONFORMANCE with the particular to the stormwater management system at the storm	nder my direct supervision, have inspected the components he above referenced project and that the SYSTEM IS aving, grading, and drainage plans approved by the District; to the system; and that the system is well maintained at the maintenance conducted (attached).
of the stormwater management system at the FUNCTIONING IN CONFORMANCE with the pa	nder my direct supervision, have inspected the components above referenced project and that the SYSTEM IS NOT aving, grading, and drainage plans approved by the District.  I), and have informed the owner entity responsible for the ock one or more as appropriate):
(A) that the system does not appear to as determined by the District	be functioning properly and that monitoring may be required
measures are not adequate to brid	ring the system into compliance, and that if maintenance ng the system into compliance, the system may have to be constructed subsequent to District's approvals.
	he system into compliance, and that if the repairs are not o compliance, the system may have to be replaced or an sequent to District's approvals.
Engineer's Name	-
Engineer's RegistrationLicense Number	
Engineer's Email Address	-
Company Name	-
Company Engineering Business License No.	
Company Address	-
City, State, Zip Code	-
	Affix Signature, Date, and Seal
Telephone Number	L
Report Reviewed by Owner/Permittee:	
Name of Owner/Permittee:	Title:
Signature of Owner/Permittee	Date

NAME (please print)		SIGNATURE OF EN	NGINEER
		COMPANY NAME- NUMBER	= FLORIDAREGISTRATION
COMPANY STREET ADDRESS	DATE		=
CITY, STATE, ZIPCODE	=		
TELEPHONE NUMBER	_	(Aff	<del>ix Seal)</del>
Submit two copies of this form to the Central	l Broward W	/ater Control District	
<u> </u>	Titl	e	

# EXHIBIT W CENTRAL BROWARD WATER CONTROL DISTRICT CHECK LIST FOR SINGLE FAMILY HOMES PLAN APPROVAL

Single family home sites not covered under a District approved stormwater management permit shall provide two sets of plans to the Central Broward Water Control District, and provide the following information:

- A. The applicant shall provide a detailed cross-section of the berm to include onsite and existing offsite elevations.
- B. The applicant shall clearly show on the plans existing and proposed grading at no greater than 100-foot grid points extending 25 feet beyond the boundaries of the property.
- C. Plans shall clearly show lot dimensions and square footage
- D. Plans shall indicate the exact location of the building and other proposed structures
- E. Plans shall delineate all existing drainage easements and proposed easements for drainage and/or water management
- F. If offsite discharge is provided, applicant shall indicate what best management practices will be incorporated in the design to reduce pollutant discharges, and shall provide applicable details in the plans.
- G. The applicant shall provide supporting drainage calculations justifying the elevation of the berm and demonstrating that sufficient storage is available to retain the 25-year, 3-day, storm event within the property. The applicant shall tabulate the ground elevation, area, and accumulated storage of available open space, starting at the lowest elevation of the property and at each half-foot increment up to the elevation of the berm. The following sample calculation is provided as guidance:

	Partial		Accumulated
Elevation	Area	Storage	Storage
(feet NGVD 29)	(acres)	(acre-ft)	(acre-ft)
5.25 (low elevation)	0.05	0.00	0.00
5.50	0.16	0.026	0.026
6.00	0.21	0.093	0.119
6.50	0.27	0.12	0.239
7.00	0.31	0.145	0.384
7.25 (berm elevation)	0.35	0.066	0.45

Partial storage is calculated:  $0.093 = (0.21+0.16) \times (6.00-5.50) / 2$ Accumulated storage is calculated: 0.119 = 0.026+0.093

#### **EXHIBIT X**

# BLEED DOWN TIME FOR RETENTION SYSTEMS SAMPLE PROBLEM

SECTION 2.05: "All retention areas (dry and wet) must be capable of percolating the design storage volume within 72 hours..."

This criterion applies to all dry retention areas and wet retention areas with no discharge. The objective is to release the captured retention volume and free up retention storage to capture runoff from future storm events. An acceptable approach to estimate the time required to exfiltrate the design volume relies on a modified version of the following equation from the SFWMD Environmental Resource Permit Information Manual, Part III – References and Design Aids, Appendix G, Exfiltration Trenches:

$$L=V/[K(H_2W+2H_2D_u-D_u^2+2H_2D_s)+(1.39x10^{-4})WD_u]$$
 (1)

where  $V = FS[(\%WQ)(V_{wq}) + V_{add}]$  as described in the SFWMD ERP Information Manual

This equation calculates the length of exfiltration trench required to exfiltrate a given runoff volume in one hour. The total runoff volume captured by the trench accounts for the following: (1) the volume of water exfiltrated out the trench bottom; (2) the volume of water exfiltrated out the trench storage capacity.

For its application to dry and wet retention areas, terms related to trench storage and bottom exfiltration were removed, since exfiltration occurs almost exclusively through the sides of the retention area. In addition, a factor of 0.5 is applied since retention areas exfiltrate along their perimeter (one side) as oppose to two sides. The resulting modified equation is as follows:

$$V = L^*[K(2H_2D_u-D_u^2+2H_2D_s)]$$
2

For retention areas,  $H_2$  and  $D_u$  take on the same value. The saturated depth ( $D_s$ ) will vary depending on the nature of the reservoir. For dry retention areas,  $D_s$  will generally assume the value of one foot (the distance between the bottom of the retention area and the water control elevation). For wet detention areas,  $D_s$  will be equal to the depth of the lake/pond as measured from the water control elevation.

An example of the use of this formula is as follows:

Given

E. Hydraulic Conductivity = 
$$1.75 \times 10^{-4} \text{ cfs/ft}^2 - \text{ft}$$

Using the revised formula,

$$V = L[K(2H_2D_u - Du^2 + 2H_2D_s)]$$
2

V = Volume of water treated in one hour (ac-in)

$$K = 1.75 \times 10^{-4} \text{ cfs/ft}^2 - \text{ft}$$

$$H^2 = D_u = 2 \text{ ft}$$

$$D_s = 1 ft$$

$$L = 600 \text{ ft}$$

Solving for V gives,

V = .42 Ac-in/hr, when the retention area is full

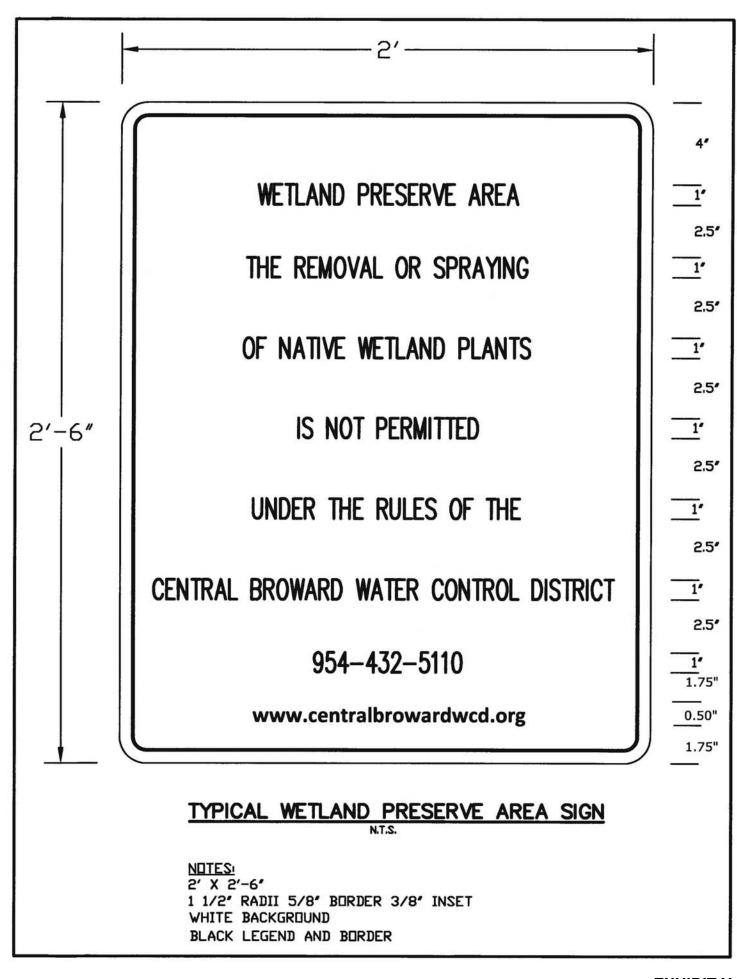
Average 
$$V = (0.0 + 0.42)/2 = 0.21$$
 acre-in

Time to drain retention volume,

$$\frac{T= 12 \text{ ac-in}}{.21 \text{ ac-in/hr}} = 57.2 \text{ hrs}$$

57.2 hrs < 72 hrs; therefore, the design meets the 72-hour bleed down criterion

**EXHIBIT X** 



#### 1 SURFACE WATER MANAGEMENT DESIGNATION 2 **DECLARATION OF RESTRICTIVE COVENANTS** 3 4 5 THIS Surface Water Management Designation and Declaration of Restrictive Covenants 6 this \_\_\_\_ of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ made day 7 whose 8 address is 9 hereinafter referred to as "Property Owner" 10 WITNESSETH: 11 12 13 WHEREAS, Property Owner is the fee title owner of certain lands lying and being in \_\_\_, Broward County, Florida, as described in Attachment "A", attached hereto 14 15 and made a part hereof, hereinafter referred to as "Property" and which is also known by Broward County Property Appraiser's Folio No. \_\_\_\_\_; and, 16 17 WHEREAS, Property Owner seeks to place certain restrictions on the proposed 18 development which will conform to the level of service for drainage as required by the Broward County Land Development Code, Chapter 5, Article IX, Broward County Code of Ordinances; 19 20 and, WHEREAS, the \_\_\_\_\_ is relying upon this 21 22 designation and covenant in issuance of a building permit for the property and the Central Broward 23 Water Control District ("District") is relying upon this designation and covenant in representing to \_\_\_\_\_ that the proposed development meets Broward 24 25 County's level of service for drainage; NOW, THEREFORE, 26 The Property Owner hereby declares that the Property shall hereafter be held, maintained, 27 transferred, sold, conveyed, and owned subject to the following designation and restrictive 28 covenants: 29 30 31 **RESTRICTIONS:** 1. 32 A surface water management area for the storage and flowage of 33 surface water to meet Broward County's level of service standards 34 is hereby established over, across and through the portion of the 35 Property described in Attachment "B" ("Water Management Area").

- B. Property Owner acknowledges that the Property Owner is responsible for maintenance of the entire surface water management area designated by this document and that this area shall be designed, developed and maintained in accordance with the requirements of the District to ensure that the water management area provides for the retention/detention of surface water to meet the applicable level of service standards.
- 2. **COVENANT RUNNING WITH THE LAND**: this Restriction and Declaration shall run with the land described in Attachments "A" and "B" and shall be binding on all parties and all persons acquiring title to the Property.
- 3. ENFORCEMENT: The \_\_\_\_\_\_\_\_, its successors and assigns, and the District are the beneficiaries of this Declaration and Restriction; and as such, either the County, the District or the municipality, or any of them, may enforce the terms of this Declaration by an action at law or in equity against any person or persons, entity or entities, violating or attempting to violate said terms. Furthermore, violations of this Designation and restriction shall be contrary to the development permit issued for the development of the Property, and as such, shall constitute a violation of Chapter 5, Article IX, the Broward County Land Development Code, Broward County Code of Ordinances, and may be enforced in any manner that a violation of a county ordinance may be enforced.
- 4. <u>AMENDMENT:</u> This Designation and Restriction may be released in part or in whole by the District upon a determination that the applicable level of service has been reduced or that the construction of additional drainage facilities reduces the need for on-site surface water management applicable level of service has been reduced or that the construction of additional drainage facilities reduces the need for on-site surface water management areas.

FOR AN INDIVIDUAL ACTING IN H	IS OR HER OWN RIGHT:
STATE OF	
COUNTY OF	
	nowledged before me by means of □ physical presence
	e) by (name of persor
	,who is personally
	d (type of identification)
as identification.	a (type of facilities and facility)
	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)
TOD A CORPORATION	
FOR A CORPORATION:	
STATE OF	
COUNTY OF	
The foregoing instrument was ack	nowledged before me by means of $\square$ physical presence
or □ online notarization, this (date	e) by (name of officer or agent
title of officer or agent)	
	dging),a (state
	corporation, on behalf of the corporation
He/She is personally known to me	e or has produced (type of identification)
as ic	
	(Continued on next page
Exhibit Z	( = ==================================

	(Signature of person taking acknowledgment)
	(Name typed, printed or stamped)
	(Title or rank)
	(Title of Tarik)
	(Serial number, if any)
FOR A LIMITED LIABILITY COM	IPANY:
STATE OF	
COUNTY OF	
The foregoing instrument was a	acknowledged before me by means of $\square$ physical presence
or □ online notarization, this (d	date) by (name of member,
manager, officer or agent, title	of member, manager, officer or agent)
	, of (name of corporation
	, a (state or
	limited liability company, on behalf of the
	own to me or who has produced (type of identification)
	as identification.
	(Signature of person taking acknowledgment)
	(eignature of percent taking delane medginem)
	(Name typed, printed or stamped)
	(Title or rank)
	(Serial number, if any)

177		
178		
179		
180 181	FOR A PARTNERSHIP:	
182	STATE OF	
183	COUNTY OF	
184	The foregoing instrument was acknown	wledged before me by means of □ physical presence
185	or □ online notarization, this (date)_	by (name of partner or agent)
186		, partner (or agent) on behalf of
187		a partnership.
188		or has produced (type of identification)
189	;	as identification.
190		
191 192		(Signature of person taking acknowledgment)
193		(Signature of person taking acknowledgment)
194		
195		(Name typed, printed or stamped)
196 197		
198		(Title or rank)
199		
200 201		(Serial number, if any)
201		(Serial Humber, II arry)
203		
204		
205		
206		
207		

**ATTACHMENT "B"** 

As shown on the attached sketch.

#### **STORM**WATER MANAGEMENT WORKS PERMIT

### CENTRAL BROWARD WATER CONTROL DISTRICT

8020 Stirling Road Hollywood, Florida 33024

Phone: (954) 432-5110; Fax (954) 432-8603

			PERMIT NO.: W-	
		EVE	ISSUE DATE:	
		EXP	PIRATION DATE:	
Permittee:				
Permittee's address:				
Project Name:				
Authorizing:	The construction	and operation of wate	er management works to ser	ve: 
Project Location:				
	Section(s):	Township:	South Range:	East
Jurisdiction:			, Broward County,	Florida
perform the work and operate specifications, as submitted.  The plans, specifications,  CBWCD Application No.	te the facility shown of by the permittee, and and supporting do	on the approved drawing made a part hereof an cuments prepared by:	amed permittee, is hereby auth gs(s), plans, documents, and d specifically described as folk	
Application Date	9:	<u> </u>		
Permittee's Engineer	r:			
Firm Engineer's Address	1:			
Engineer e Address	·			
<u>Emai</u>	<u>l:</u>			
Permit Number Syntax: W-XXX	x, where XXX is the seq	uential CBWCD file numb	er	
Application Number Syntax: YY	MMDD-Z-B			
	in was received (2-digit sion zone number C-11 "W" or "F" Basin	year, 2-digit month, 2-digi	t date)	

#### **GENERAL CONDITIONS:**

- 1. The terms, conditions, requirements, limitations and restrictions set forth herein are accepted by the permittee and enforceable by the Central Broward Water Control District (CBWCD) pursuant to the CBWCD Charter and the Stormwater Management Regulations, Standards, Procedures, and Design Criteria (RSPDC) manual of the CBWCD, latest edition. The CBWCD will review this permit periodically and may revoke the permit, initiate administrative and/or judicial action for any violation of the conditions by the permittee, its agents, employees, servants, representatives, or principals.
- 2. This permit is valid only for the specific use set forth in the permit application and any deviation from the approved uses may constitute grounds for revocation and enforcement action by the CBWCD.
- 3. In the event the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall notify CBWCD within twelve (12) hours. Within five (5) working days of the event, the permittee shall submit a written report to CBWCD that describes the incident, its cause, the measures being taken to correct the problems and prevent its reoccurrence, the owner's intention toward repair, replacement, and reconstruction of destroyed facilities, and a schedule of events leading toward operation within the permit conditions.
- 4. The issuance of this permit does not convey <u>property rights</u>, any vested rights or exclusive privileges, <u>other</u> <u>than those specified herein</u>, nor does it authorize any injury to public or private property or any invasion of personal rights, or any violations of federal, state or local laws or regulations.
- 5. This permit must be available for inspection on permittee's premises during the entire life of the permit.
- 6. By accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, that are submitted to the CBWCD, may be used by the CBWCD as evidence in any enforcement proceeding arising under CBWCD's Charter, RSPDC, and/or Chapter 27 of the Broward County Code of Ordinances except where such use is prohibited by Section 403 .111, Florida Statutes.
- 7. The permittee agrees to comply with CBWCD's RSPDC.
- 8. Any new owner of a permitted facility shall apply by letter for a transfer of permit within five (5) days after sale or legal transfer. The transferor shall remain liable for performance in accordance with the permit until the transferee applies for, and is granted a transfer of permit. The transferee shall also be liable for performance in accordance with the permit.
- 9. The permittee, by acceptance of this permit, specifically agrees to allow access to the permitted source at reasonable times by CBWCD personnel for the purposes of inspection and testing to determine compliance with this permit and the RSPDC.
- 10. This permit does not constitute a waiver of or approval of any other permit that may be required for other aspects of the total project.
- 11. If the permittee wishes to renew the permit or extend its terms, he shall make application sixty (60) days prior to its expiration. Expired permits are not renewable.
- 12. In addition to the general conditions set forth above, each permit issued by the CBWCD shall contain specific conditions determined by site conditions and requirements pursuant to the regulations as determined by the CBWCD. Permittee agrees that specific conditions are enforceable by the CBWCD for any violation thereof.

- 4.13. The permittee shall hold and save the CBWCD harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance or use of any facility authorized by the permit.
- 2.14. The permit does not convey property rights nor any rights or privileges other than those specified therein.
- 3.14. No construction authorized by the permit shall commence until a responsible entity acceptable to the CBWCD has been established and has agreed to operate and maintain the efficiency of the system and has executed a maintenance agreement with the CBWCD. The entity must be provided with sufficient ownership so that it has control over all water management facilities authorized therein. Upon receipt of written evidence of the satisfaction of this condition, the CBWCD will issue authorization to commence the construction.
- 4.15. The permit for construction shall expire twenty-four (24) months after the date of Board approval unless:

  1) the appropriate bonds have been provided to the District and remain in force and work has commenced, or
  2) an extension of time is granted by the Board of District Commissioners.
- 5.16. The operation or construction will be in accordance with be approved plans submitted with the application. Any modification must be submitted to the CBWCD in writing and receive prior approval.
- 6.17. The permittee shall comply with all applicable local land use and subdivision regulations and other local requirements. In addition, the permittee shall obtain all necessary Federal, State, County, and CBWCD authorizations prior to the start of any construction alteration of works authorized by this permit.
- 7.18. The permittee shall prosecute the work authorized in a manner so as to minimize any adverse impact of the works on fish, wildlife, natural environmental values, and water quality. The permittee shall institute necessary measures during the construction period, including fill compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters. Any erosion, shoaling or deleterious discharges due to permitted actions will be corrected promptly at no expense to the CBWCD.
- 8.19. Offsite discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism for regulating upstream water stages. Stages may be subject to operating schedules satisfactory to the appropriate regulatory agency.
- 9.20. The area under permit will be maintained in a safe and operating condition at all times. Equipment will be promptly removed from the right-of-way or easement and the right-of-way or easement will be restored to its original or better condition within a reasonable time on termination of the authorized use.
- 40.21. The permittee shall allow authorized personnel of the CBWCD, municipality, Broward County and state agencies to conduct such inspections at reasonable hours, as are necessary to determine compliance with the requirements of the permit and the approved plans and specifications.
- 11.22. The permittee shall notify the CBWCD in writing within twenty-four (24) hours of the start, finish, suspension, and/or abandonment of any construction or alteration of works authorized by this permit.
- 12.23. The surface stormwater management system must be inspected by the CBWCD to verify compliance with Specific Condition No. 13 the approved drawings and Specific Conditions of the permit. CBWCD has requested that Broward County or the municipal agency charged with issuing a certificate of occupancy (CO), shall not issue a CO until notified of the CBWCD approval.
- 43.24. Upon completion of the construction of a surface-storm water management system or phase thereof permitted by the CBWCD, it is a requirement of the issuance of the permit, and hence transfer that a Florida registered licensed professional engineer must furnish certified record drawings for approval by CBWCD. The engineer shall certify that the surface storm water management system was constructed as permitted and include the following on each sheet of the record drawing: Suggested wording for this is as follows:

I HEREBY CERTIFY THAT THE SURFACE STORM WATER MANAGEMENT FACILITIES FOR THE
ABOVE REFERENCED PROJECT REFERENCED HEREIN HAVE BEEN CONSTRUCTED IN
SUBSTANTIAL ACCORDANCE WITH THE DESIGN APPROVED BY THE CENTRAL BROWARD
WATER CONTROL DISTRICT, AND HEREBY AFFIX MY SEAL THIS DAY OF, 20
(SEAL)
(- ,

- <u>14.25.</u> All stormwater management facilities required for flood protection and water quality treatment must be provided prior to occupancy of any building or residence.
- 45.26. Water Management areas shall be legally reserved to the operation entity and for that purpose by dedication on the plat, deed restrictions, easements, etc., so that subsequent owners or others may not remove such areas from their intended use. Management areas, including maintenance easements, shall he be connected to a public road or other location from which operation and maintenance access is legally and physically available.
- 46.27. Any permit which grants any entity the permission to place a structure on property which is owned by the CBWCD or upon which the CBWCD has an easement shall be construed to create a revocable permit for that structure to remain on the property. CBWCD may require removal of such a structure at no cost to the CBWCD.
- 47.28. No beautification, or erection of any structure that will prohibit or limit access of maintenance equipment or vehicles in the right-of-way or easements will be allowed.
- 18.29. The responsible entity shall agree to maintain the operating efficiency of the water management works. Except in cases where the responsible entity is a governmental agency, the agreement shall further require that if the water management works is not adequately maintained, the CBWCD may undertake the required work and bill all associated costs to the responsible entity. If the payment for such obligations is not satisfied within 30 days, said obligation shall become a lien against the property associated with the water management works. Where ownership of the water management works is separate from property ownership, the CBWCD shall require these agreements to be recorded in the official records of Broward County, Florida.
- 19.30. The permittee shall keep a log of the operation and maintenance schedule for all components of the <a href="surface-storm">surface-storm</a> water management system.
- 20.31. Monitoring may be required for sites with high pollutant generating potential, such as industrial sites, Class I and II solid waste disposal sites, sites that have undergone or are under active remediation of contaminated groundwater or soils that due to the presence of hazardous materials, and projects discharging to areas identified in Section 27-200(b)(1)o of the Broward County Code of Ordinances. Such monitoring will be under the cognizance of the CBWCD and/or Broward County.
- 21.32. The CBWCD reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
- <u>22.33.</u> Permit The operation phase of the permit commences with approval of the as-built/record drawing by the Central Broward Water Control District, at which time the permit is converted from a permit to construct to an operating permit.
- 34. The operating permit shall be valid for a specific period of time not to exceed five (5) years from the date the permit is issued or renewed. The permit shall be renewed every five (5) years in accordance with the Stormwater Management Regulations, Standards, Procedures, and Design Criteria manual of the CBWCD, latest edition.

<u>1.</u>		
Issued this	day of	,20
Central Broward \	Water Control District	
Central bloward	valer Control District	

Mike Crowley, District Manager