

ORDINANCE NO. 2010-14

1
2
3 AN ORDINANCE OF WELLINGTON'S COUNCIL AMENDING ARTICLE
4 8 "SUBDIVISIONS, PLATTING, AND REQUIRED IMPROVEMENTS",
5 CHAPTER 24 "STORM WATER MANAGEMENT OF WELLINGTON'S
6 LAND DEVELOPMENT REGULATIONS BY ENACTING A NEW
7 SECTION 8.24.9 "ADOPTION OF PERMIT CRITERIA AND BEST
8 MANAGEMENT PRACTICES MANUAL FOR WORKS IN
9 WELLINGTON", PROVIDING FOR THE ADOPTION BY RESOLUTION
10 OF A MANUAL SETTING FORTH THE INFORMATION, PROCEDURES
11 AND REQUIREMENTS TO OBTAIN PERMITS TO CONNECT, PLACE
12 STRUCTURES ON OR ACROSS, OR MAKE USE OF LANDS OR
13 FACILITIES OF THE DRAINAGE DISTRICTS WITHIN WELLINGTON,
14 PROVIDING FOR ADMINISTRATION OF CONDITIONS OF APPROVAL
15 FOR WATER MANAGEMENT SYSTEMS IN WELLINGTON;
16 PROVIDING A CONFLICTS CLAUSE; PROVIDING A SAVINGS
17 CLAUSE AND PROVIDE AN EFFECTIVE DATE.
18
19

20 **SECTION 1:** Article 8 "Subdivision, Platting, and Required Improvements" Chapter 24
21 "Stormwater Management" of Wellington Land Development Regulators is amended by
22 enacting a new section 8.24.9 "Adoption of Permit Criteria and Best Management
23 Practices Manual for Works in Wellington" to read as follows:
24

25 **8.24.9 Adoption of Permit Criteria and Best Management Practices Manual**
26 **for Works in Wellington**
27


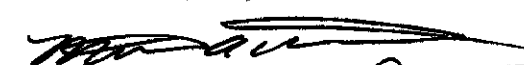
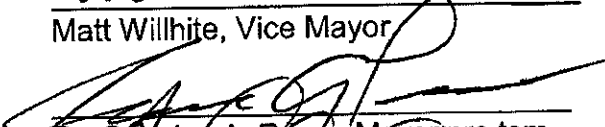
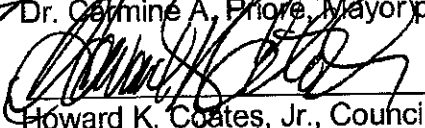
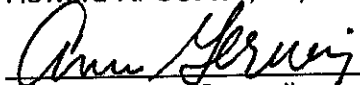
28 Land Development projects and associated increases in the previous coverage
29 alter the hydrologic response of local water sheds and increase stormwater runoff from
30 developed sites. Within Wellington three Chapter 298 drainage districts operate and
31 have water management systems that are implemented by stormwater runoff. In order
32 to provide for proper coordination with the districts and insure that all necessary
33 information is obtained for the proper issuance of land development permits, permits to
34 connect, place structures in or across or make use of lands and facilities of Wellington
35 or any of the drainage districts servicing the lands and residents of Wellington a "Permit
36 Criteria and Best Management Practices Manual for Works in Wellington" shall be
37 adopted or amended by Resolution of the Council and administered by the Growth
38 Management Department and Engineer.
39

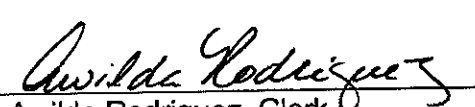
40 **SECTION 2:** All Ordinance or part of Ordinance in conflict be and the same are hereby
41 repealed.
42

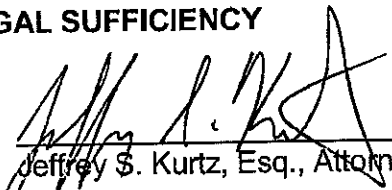
43 **SECTION 3:** Should any section or provision of this Ordinance or any portion thereof,
44 any paragraph, sentence or word be declared by a Court of competent jurisdiction to be
45 invalid such decision shall not affect the validity of the remained of this Ordinance.
46

1 **SECTION 4:** Specific authority is hereby granted to codify this Ordinance.
 2
 3 **SECTION 5:** This Ordinance shall become effective immediately upon adoption of the
 4 Council of Wellington following second reading.
 5
 6 **PASSED** this 25th day of May, 2010, upon first reading.
 7
 8 **PASSED AND ADOPTED** this 8th day of June, 2010, on second and final reading.

9
 10 **VILLAGE OF WELLINGTON**

	FOR	AGAINST
11 BY:  12 _____ 13 Darell Bowen, Mayor	✓	_____
14  15 _____ 16 Matt Willhite, Vice Mayor	✓	_____
17  18 _____ 19 Dr. Carmine A. Priore, Mayor pro tem	✓	_____
20  21 _____ 22 Howard K. Coates, Jr., Councilman	✓	_____
23  24 _____ 25 Anne Gerwig, Councilwoman	✓	_____

26
 27
 28
 29 **ATTEST:**
 30
 31 BY: 
 32 _____
 33 Awilda Rodriguez, Clerk

34
 35
 36 **APPROVED AS TO FORM AND**
 37 **LEGAL SUFFICIENCY**
 38
 39 BY: 
 40 _____
 41 Jeffrey S. Kurtz, Esq., Attorney



**Permit Criteria and
Best Management Practices Manual
for
Works in the Village of Wellington (VOW)**

Revised April, 2010

09-21.2

Permit Criteria and Best Management Practices Manual

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Permit Criteria and Best Management Practices Manual For Works in the Village of Wellington (VOW)

September 2007 – First Version

Revised April 2010

I. INTRODUCTION

Land development projects and associated increases in impervious coverage alter the hydrologic response of local watersheds and increase stormwater runoff rates, volumes, flooding, and sediment transport and deposition. Stormwater runoff can be controlled and minimized through the regulation of stormwater runoff from development sites.

The purpose of this document is to set forth the information, procedures and requirements to obtain permits to connect, place structures in or across or make use of lands or facilities of the Village of Wellington (VOW), or conditions for approval of a water management system in the VOW.

There are three Chapter 298 F.S. drainage districts within the Village. In general, lands lying adjacent to and east of State Road 441 are located within Lake Worth Drainage District (LWDD). The central portion of the Village is located in Acme Improvement District (AID). Lastly, lands lying west of Flying Cow Road (generally) are located with Pine Tree Water Control District (PTWCD). The relationship of the Village boundary with these three drainage districts is shown on Exhibit 1. A separate permit approval will be needed from LWDD for any new or modified projects. Similarly, any new or modified project within PTWCD may require a separate approval from them. AID is a “dependent” district and Village staff act as staff for AID.

The VOW issues permits to authorize work within any rights-of-way or easements. All permit applications are reviewed by the VOW engineer. Environmental Resource Permits (ERP) are issued by the South Florida Water Management District (SFWMD) and must conform to the criteria set forth in the SFWMD’s Basis of Review as well as the criteria contained in this manual.

1. PURPOSE

- A. To set forth the surface water management design criteria and Best Management Practices (BMP’s) for proposed and redeveloped projects within the Village of Wellington (VOW) with the purpose of minimizing adverse impacts to existing development and to reduce the levels of phosphorus presently being discharged into the Everglades Protection Area (EPA), and
- B. To provide information, procedures and design guidelines/requirements in order to obtain approvals to connect, place structures in or across, or make use of lands or facilities of the VOW.

2. APPLICABILITY

These criteria shall be applicable to all subdivisions, site plan reviews and estate lots within the VOW, including any re-development or re-construction projects. Single family homes in a previously approved subdivision less than 0.25 acres in area are considered exempt from the surface water design requirements portions of this document as are rural equestrian lots with less than 20 percent lot fill, except for alterations to drainage features, but are still required to obtain approvals to use VOW lands or facilities.

If required by the South Florida Water Management District (SFWMD) applicants are also responsible for obtaining an Environmental Resource Permit (ERP) and possibly a Consumptive Use (water use) Permit from SFWMD. Applicants may also be required to obtain authorizations from state, federal and other local government agencies. It is agreed and understood by the Permittee that the granting of a permit by the VOW does not give a right, but only grants the Permittee a privilege which is subject to the control of the VOW. The Permittee must adhere to the General Permit Conditions stipulated in the permit.

In addition to the criteria and polices contained herewith, projects must also conform to the criteria set forth in section 8.24 of the Village of Wellington Land Development Code.

The VOW issues permits to authorize work within any rights-of-way or easements. All water control structures, culverts or other drainage related facilities shall be operated and maintained by the permittee unless specifically specified otherwise within the permit. All permit applications are reviewed by the VOW Engineer.

3. PROCEDURE, APPLICATION REQUIREMENTS, AND TYPES OF PERMITS

No land owner or land operator shall receive any building and/or construction authorizations without first demonstrating that the criteria contained in this Manual have been satisfied.

An executed VOW Public Works/Engineering Permit Application Form with Four (4) surveys and/or engineering plans showing the exact location of the proposed improvement and its relationship to all easements or right of ways along with the applicable application fee shall be submitted to the VOW.

In addition to building permits the VOW presently issues permits for excavation activities, fill activities, culvert connections and driveway crossings.

4. GENERAL CONDITIONS FOR PERMIT ISSUANCE

- To maintain any works or structures in a good and safe condition.
- To hold and save the V.O.W. and its successors harmless from any and all damages, claims or liabilities that may arise by reason of the construction, operation, maintenance or use of the work or structure involved in the permit.
- To allow inspection at any time by the VOW of any works or structure authorized for construction with this permit.
- To make any changes and repairs required by the VOW to insure the safe operation of the VOW water management facilities during storm events.
- To prevent the discharge of debris and/or aquatic weeds into the VOW works via the permitted facility.
- To maintain the water quality of all waters discharging into the VOW works.
- A target level for Phosphorus (P) in waters discharged from a site is 50 parts per billion (ppb).
- The Permittee will be responsible for maintaining the area between the structure and the edge of an adjacent lake, canal or roadway.
- The Permittee shall comply with the rules, regulations and standards of respective homeowner's association guidelines (if applicable) for the uniform protection of the landowners throughout the VOW.
- The permit may be revoked by the VOW giving notice in writing to the Permittee at any time because of failure of the Permittee to comply with the conditions of the permit.

II. STORMWATER MANAGEMENT CRITERIA

The existing Village BMP Ordinance applies to all lands within the Village. As such, the BMP's contained in this manual apply Village-wide. The specific water management criteria contained in this manual (see Section II) are applicable primarily to those lands lying within AID. The special water quality criteria contained in Section II, paragraph 2.3 applies to lands lying within Basin B only.

1. GENERAL CRITERIA

- 1.1 A water management plan is required for all developments, new or modified (Re-development).
- 1.2 The plan shall set forth at a minimum, conceptual and schematic representation of the proposed development and the stormwater management facilities by means of maps, graphs, charts, or other written or drawn documents. Drawings for a water management system and a drainage outfall connection will include a detailed paving and drainage plan.
- 1.3 The plan shall contain the following information:
 - A location or vicinity map.
 - Field delineated and surveyed canals, bodies of water, and wetlands (include a minimum of 100 feet into adjacent properties).
 - Point (s) of discharge.
 - Cross-section of the canal or water body starting with the top of bank. The discharge culvert shall be installed with a crown 1 foot below normal water level if the canal provides adequate depth.
- 1.4 All discharges to the VOW receiving canals shall be made through structural facilities. Earth berms shall be used only to disperse sheet flows from or to ditches, swales, etc. A direct culvert connection (without a water control structure) to a Village canal can be done if the required water quality treatment volume is provided between elevation 11 and 12 feet NGVD in Basin A; and elevation 12 and 13 feet NGVD in Basin B. For discharges indirectly to Village canals, adequate conveyance capacity in the receiving water must be demonstrated.
- 1.5 New or re-developed projects within Basin B shall provide for a 50 percent increase in water quality treatment volume over what is normally required in the SFWMD's Basis of Review based on proximity to the Water Conservation Area.
- 1.6 If a water control structure is required, a V-notch or orifice shall be incorporated in the structure to promote detention of the first flush of runoff (usually the first inch). The overflow weir should be established at the detention level.

- 1.7 Gravity control structures should be sized to bleed down one half of the detention volume in 24 hours.
- 1.8 The devices should incorporate dimensions no smaller than 6 square inches of cross sectional area, nor two inches minimum dimension.
- 1.9 The water control structure, if proposed, will incorporate a pollution retardant structure or baffle upstream of VOW canal or lake facilities. Provisions shall be made for the prevention of oil, grease and sediment in the stormwater discharges.
- 1.10 Water control structures, if proposed, must be equipped with a readable staff gage set to National Geodetic Vertical Datum (NGVD) and be visible to VOW personnel.
- 1.11 Water bodies shall meet the dimensional criteria for water quality as defined in the SFWMD "Basis of Review".
- 1.12 For underground exfiltration system used as part of the retention/detention requirements, the pipe diameter shall be 12" minimum, trench width 3 foot minimum. Rock in the trench must be fully enclosed in filter material. Perforated pipes must be wrapped around at the end of the pipes.
- 1.13 Dry detention/retention areas shall be regularly maintained to ensure proper functioning and shall have a bottom elevation no lower than 13 feet NGVD in Basin A and 14 feet NGVD in Basin B.
- 1.14 All commercial projects shall be required to provide at least one-half inch of dry detention or retention pre-treatment as part of the water quality treatment requirements.
- 1.15 Any offsite flows must pass through the system without a change in the discharge rate.
- 1.16 New projects within Basin B shall meet the lake area requirement and grading assumptions listed in Exhibit No. 3, *Design Criteria for Undeveloped or Redeveloped Areas within The Village of Wellington*. As an alternative, an applicant may provide calculations demonstrating that enough storage is provided in the new or modified development to meet or exceed the pre-development storage conditions for the 100-year flood plain elevation. These have previously been established at 0.11 Acre Feet per acre at elevation 16.0 feet NGVD and 0.86 Acre feet per acre at elevation 17.0 feet NGVD. Similar requirements are listed for Basin A on Exhibit 3. If minimum storage requirement is satisfied, then berming up to the 25-year flood level at the perimeter of the site is not required.
- 1.17 Flood Protection: Building floor elevations shall be above the calculated 100-year, 3-day zero discharge flood stage for the project, or elevation 17.5 feet NGVD in Basin A or elevation 17.0 feet NGVD in Basin B, whichever is higher. Refer also to Section 8.24D of the Land Development Code.

- 1.18 Ground Storage is considered for depressional soils as stated in the SFWMD "Basis of Review", current edition. Storage beneath impervious surfaces cannot be considered for design. A maximum 4 foot soil depth will be allowed for soil storage.
- 1.19 If dry detention areas are used for water quality purposes, the outfall shall consist of a raised inlet or catch basin (a minimum of 6 inches height) set at the detention level with optional underdrains connected to the catch basin in lieu of a bleddown device.
- 1.20 Projects within an area of an existing SFWMD permit must meet the requirements of that permit.
- 1.21 Dry detention areas shall be designed such that the bottom of the dry detention area is a minimum of 1.0 foot above the wet season water table. Due to the operation schedule of the pump stations dry detention areas within Basin B should be designed assuming a wet season water table elevation of 13.0 feet NGVD (which is one foot above the permitted control elevation).

2. NEW DEVELOPMENTS

- 2.1 All new projects are required to contain, through use of berms (on roads with no cross drains), all runoff up to a 25-year 3-day storm event unless the storage criteria in Exhibit 3 is satisfied.
- 2.2 All new projects are required to be designed so that storm water discharged from the project site during to 10-year, 3-day storm event does not exceed a rate of 1 inch in 24 hours for basin A or 1.27 inches in 24 hours for Basin B unless the storage criteria in Exhibit 3 is satisfied.

All new developments within Basin B shall comply with the following site design standards in addition to the General Criteria above:

- 2.3 For new developments in the Acme Basin B, the final water quality volume requirements are to be increased by 50% over the normal SFWMD requirements. The SFWMD normal requirement is for the project's water control structure or pump must be designed to detain the first one inch of runoff or the runoff calculated by 2.5 inches times the percent of impervious area for wet detention systems, whichever is greater.

The following volume reductions for dry detention/retention apply:

Dry Detention: 75% of the requirements for wet detention

Dry Retention: 50% of the requirements for wet detention.

- 2.4 No less than 10% of the final water management lake area shall be constructed and maintained as a wetland filter marsh at and around the final outfall culvert or water control structure.

- 2.5 Lakes used for water quality treatment must be no less than 0.5 acres in size as measured at the control water elevation.
- 2.6 An eight-foot wide planted littoral shelf shall be constructed and maintained within all water management lakes. Credit for planted areas at the outfall can be used to reduce planted areas around the perimeter.
- 2.7 Mandatory berming shall be installed around the perimeter of the entire parcel or lot and shall be designed to ensure that all runoff is contained on site up to the 25-year storm event unless the storage criteria in Exhibit 3 is satisfied.
- 2.8 To prevent direct sheet flow runoff into the VOW water bodies, reverse/grade slope areas for all areas adjacent to VOW water bodies.
- 2.9 All on site catch basins shall include a sediment sump with a depth of 1 foot or greater.
- 2.10 The last catch basin prior to discharge into a water body or off-site shall include an internal baffle to trap oils and greases from discharge from the storm drainage system.
- 2.11 Pipe outfalls with raised inlets into water bodies (i.e. lakes, canals, and ditches) shall be utilized whenever practicable.
- 2.12 Each project must provide its prorated share of the overall basin storage to insure that flood plain encroachment will not occur. Exhibit 3 contains information on the amount of surface storage needed with Basin B to satisfy compensating storage in that Basin. If the minimum storage requirements are met, then perimeter berms are not required. In the event that a project cannot meet the minimum surface storage requirements contained in Exhibit 3, it may be considered for offsite storage mitigation within the basin.
- 2.13 Within AID, road crown elevations will be set no lower than 16.0 feet NGVD in Basin A and Basin B and at a minimum of 2 ft above control elevation.
- 2.14 For projects within PTWCD, minimum road elevation shall be 14.7 ft NGVD or 18 inches above existing grade, whichever is greater.. For projects within LWDD, minimum road elevations must be 2 feet above control elevation. Consult the SFWMD ERP permits for minimum road elevations in subdivisions.

3. MODIFICATIONS TO EXISTING DEVELOPMENTS.

All modifications to existing developments within VOW (or that affect more than 20% of an existing developed site) shall comply with the site design standards for new development. However, only the area directly affected by the proposed modification shall be subject to these site design standards.

All new or reconfigured lakes constructed within Basin A or B as part of a modification to existing development shall comply with the following:

- 3.1. A vegetated flow-through filter marsh shall be installed and maintained at the outfall location consisting of a minimum 10 percent of the lake area.
- 3.2. A sump shall be installed at the outfall and in new catch basins.
- 3.3. The perimeter berm (up to the 25 year flood event), if required, shall be graded with a reverse slope.
- 3.4. Floating vegetative matter shall be removed and properly disposed of on a semi-annual basis.
- 3.5. Discharge control structures must satisfy the criteria for Right-of-Way permits.

III. RIGHT-OF-WAYS PERMITS

The following Right-of-Way permit criteria applies to obtaining a permit from AID only.

1. GENERAL INFORMATION

- 1.1 Request for the Permit Application Form (exhibit 2) can be made in person, by letter, or by telephone directly to VOW Public Works Dept, 14000 Greenbriar Blvd, Wellington, FL 33414, Phone (561) 791-4003.
- 1.2 Be certain that the application is dated and signed by owner or designated officer, and include four (4) surveys and or engineering plans showing the exact location of the proposed improvement. Three (3) copies will be returned to Permittee.
- 1.3 No Right-of-Way (R/W) permits will be granted for any use of a AID works that will adversely affect such works; or interfere with or impose difficulties upon the AID operations, maintenance or construction activities; or degrades the quality of the AID waters.
- 1.4 No R/W permit will be granted for any use of the AID works if it is inconsistent with the water control plan of the AID.
- 1.5 Works is defined here to include (but not limited to) all water management facilities, lakes, canals, outfalls structures, outfall pipes, and exfiltration trenches, irrigation intakes, etc.
- 1.6 For activities within the AID Rights-of-Way or easements, the plan and cross section or elevation should clearly show the construction in its relationship to the canal or right-of-way. Certain elevations must be designated to facilitate processing of the application. These elevations are (in Ft. NGVD):
 - Canal bottom elevation
 - Water surface elevation
 - Ground elevation
- 1.7 The elevation of the low member of a bridge span must be shown. For overhead wire crossings and in the case of water or gas lines, low member elevation must also be indicated on the drawings.

2. CULVERT CONNECTIONS

The connection of pumps or ponds to the AID canals is usually accomplished by culverts. Culverts size, diameter and type vary with the requirements of each project. The diameter must be such that the purpose of the installation will adequately and properly serve under maximum conditions.

- 2.1 Culvert or pump connections to the AID facilities will be located to prevent any surface runoff from entering the canal connection downstream of the culvert or pump.
- 2.2 All such connections must provide adequate erosion protection and be accessible for proper maintenance, and indicated on plans.
- 2.3 The culvert crown shall be a minimum of 1 foot below normal water wherever possible. Installations made through or under AID levees shall be of approved design and shall have headwalls at each end.
- 2.4 Any installation above water shall include necessary erosion control measures, such as riprap or retaining walls. A headwall or slope paving will be required in all cases where the installation is in a sandy soil condition.
- 2.5 Should any connections prove inadequate to serve the needs of the installation with resulting washout or shoaling, the damages to the AID works will be repaired promptly by the Permittee at no cost to the AID.

3. RIGHT-OF-WAY GRADING

- 3.1 Grass, low plantings and the construction or removable fences are allowed within the AID Right-of-way, with the understanding that such improvements are made at the risk of the owner. In certain areas, individual homeowners may desire to regrade and existing canal bank (for reasons of aesthetics or else). Re-grading may be permissible with the following constraints:
 - A. 6 to 1 maximum slope on the maintenance side of a canal down to the water line and the right-of-way line.
 - B. 4 to 1 maximum slope on non-maintenance side of the canal.
- 3.2 The minimum design dimensions of the canal cannot be decreased.
- 3.3 The side slope must continue down two feet below the normal water elevation.
- 3.4 In areas where the AID canal is to be enlarged (for borrow material, etc.), a minimum of twelve (12) feet of water depth is required.
- 3.5 In areas where the canal bank slope is altered, the owner must acknowledge that during flood events canal waters may rise up and beyond the canal right-of-way line.
- 3.6 All trenches within the AID right-of ways shall be backfilled and compacted to a density of 100% as determined by AASHTO T-99.

4. DRAINAGE PUMP CONNECTIONS.

Since no permanent pumping stations are allowed on the AID rights-of-way, a culvert connection is the usual means by which a pump connection is made. The standards applicable to culvert connections are the criteria used in such installations.

The settling basin or forebay should also be located clear of the AID right-of-way.

5. UTILITY CROSSINGS

- 5.1 Overhead power and telephone line crossings must have a minimum vertical clearance of forty (40) feet between low wire elevation and elevation of the berm or natural ground, whichever is greater. When such installations cross AID levees, a minimum clearance of twenty five (25) feet between low wire elevation and top of the levee will be required.
- 5.2 When such construction is supported on pilings, the required clearance (both horizontal and vertical) for bridge crossings is in effect.
- 5.3 Underwater crossings of any nature, such as cables, water or gas lines, shall be laid to a predetermined depth and cross-sections that will provide for two (2) feet cover below the design bottom elevation. This depth and section will be furnished by the AID for each crossing. Should conditions warrant the laying of a cable on the bottom of a canal, such is done at the permittee's risk.

6. FENCES

Fencing on the AID rights-of-way that would prohibit continuous access is not allowed; however, fencing upon the right-of-way and parallel to it can be permitted.

7. IRRIGATION WITHDRAWAL FACILITIES

- 7.1 Installation of supply lines within the VOW right-of-way for withdrawal of water from the VOW canals and lakes for irrigation purposes may be authorized under permit. A permit from the Village of Wellington is required for pump connections 2" and greater. Village of Wellington Public Works Department must be notified of any pump connections under 2".
- 7.2 Supply lines shall be installed at a minimum elevation of 0.5 feet below the basin control elevation.
- 7.3 Permittees may be notified at any time that withdrawals must be curtailed immediately and shall not resume until further notification from the AID.
- 7.4 Water use permits must be obtained from the SFWMD.

7.5 The Permittee holds harmless the AID for damages caused as a result of the use of canal water for irrigation purposes. In addition the Permittee agrees to hold harmless the AID for any damage that occurs to the irrigation lines, fittings, pumps or other parts of the irrigation improvement which results from maintenance or excavation conducted by the AID within its R/W.

EXHIBIT 3

Design Criteria for Undeveloped or Redeveloped Areas located within The Village of Wellington

<u>Acme Improvement District:</u>	<u>Basin A</u>	<u>Basin B</u>
Minimum Road Elevation (Ft. NGVD):	16.0	16.0
Minimum Finish Floor Elevation (Ft. NGVD):	17.5	17.0
Site Grading; Linear from a low of 15.5 feet to a high of 19.0 feet for Basin B		
Site Grading; Linear from a low of 15.5 feet to a high of 19.0 feet for Basin A		
Water Quality volume stored		
Basin A: SFWMD Requirements (between elevation 11 and 12 ft. NGVD).		
Basin B: 50% in addition to SFWMD requirements (between elevation 12 and 13 ft. NGVD).		

Required Lake Area (Measured at elevation 11.0 ft for Basin A and 12.0 ft for Basin B).	4%	13 %
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Maximum Building Area:	40%	20 %
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Maximum Impervious Area (including buildings):	85%	30%
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If the above criteria is not satisfied, then the applicant has the option to provide calculations demonstrating that the storage provided is consistent with the original Basin A and Basin B calculations by showing that the following storage (acre-feet/acre) per acre is provided at the elevations of 16.0 feet NGVD (minimum road elevation), 17.5 and 17.0 feet NGVD (minimum finish floor elevation) for Basin A and Basin B respectively.

	<u>Basin A</u>	<u>Basin B</u>
Storage provided at Elevation 16.0 feet NGVD (acre-feet/acre)	0.40	0.11
Storage provided at Elevation 17.0 feet NGVD (acre-feet/acre)	----	0.86
Storage provided at Elevation 17.5 feet NGVD (acre-feet/acre)	0.89	----

Pine Tree Water Control District (PTWCD):

Minimum Road Elevation (Feet NGVD): 14.7 feet NGVD or 18 inches above existing grade, whichever is greater.

Minimum Finish Floor Elevation (Feet NGVD): 18.0 feet NGVD or 18 inches above existing grade, whichever is greater.

Lot Grading: Linear from a low of 14.3 to 16.0 feet NGVD.

Building footprint per lot assumed at maximum of 4,000 square feet.

Required Lake Area (measured at elevation 12.0 feet): 12 % of site area at elevation 12.0 feet NGVD, or equivalent storage at the 3 year, 24 hour and 100 year, 72 hour peak flood stages of 14.7 feet and 16.0 feet NGVD, respectively.

Any deviation from above will require a permit modification from the South Florida Water Management District (Permit No. 50-00458-S).

Lake Worth Drainage District (LWDD):

Minimum Road Elevation: 2 feet above control elevation.

Minimum Finish Floor Elevation: 3.5 feet above control elevation

Consult the individual SFWMD ERP Permit issued for the subdivision.