ORDINANCE 20-__

AN ORDINANCE OF THE CITY OF PORT ST. LUCIE, FLORIDA, AMENDING TITLE V, PUBLIC WORKS, OF THE CODE OF ORDINANCES TO INCLUDE CH. 56, STORMWATER MANAGEMENT; AMENDING CH. 97, STREETS AND SIDEWALKS; AMENDING CH. 156, SUBDIVISION REGULATIONS; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Port St Lucie, Florida ("City") desires to amend Title V, Public Works to add Chapter 56, Stormwater Management; Title IX, General Regulations, Chapter 97, Streets and Sidewalks; and Title XV Land Usage, Chapter 156, Subdivision Regulations, of the Port St Lucie Code of Ordinances ("Code"); and

WHEREAS, Chapter 56 provides consolidated stormwater management regulations for the planning, design, construction, operation, and maintenance of the stormwater management system to protect the public health, safety, welfare and property.

NOW, THEREFORE, THE CITY OF PORT ST. LUCIE HEREBY ORDAINS:

Section 1. Ratification of Recitals. The foregoing recitals are hereby ratified and confirmed as true and correct and are hereby made a part of this Ordinance.

Section 2. Title V, Public Works, is amended by adding the following Chapter 56 (~~strikethrough text~~ indicates deletions while underlined text indicates additions):

CHAPTER 56. - STORMWATER MANAGEMENT

ARTICLE I. - GENERAL PROVISONS

Sec. 56.01. - Definitions.

Builder means a person or firm that has been properly licensed to build structures within the city. As used herein the term builder shall include, but not be limited to, owner-builder as defined in this section, septic tank and well drilling contractors.

Certificate of occupancy means an official certification that a premises conforms to the provisions of this code and may be used or occupied.

Contractor shall be defined as set forth in Chapter 489, Florida Statutes.

Discharge means any direct or indirect introduction of any solid, liquid or gaseous matter.

Drainage means the removal of surface water or groundwater from land by drains, grading or other means.

Hazardous materials means any material, including any substance, waste or combination thereof, which because of its quantity, concentration or physical, chemical or infectious characteristics, may cause or significantly contribute to a substantial present or potential hazard to human health, safety, property or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

Owner means any person, persons or entity who shall have legal or equitable title in any form whatsoever to any lot, parcel or tract or part thereof; or who shall have possession, care or control of any lot, parcel or tract or part thereof as owner, or as agent of the owner, or as a fiduciary, trustee, receiver, guardian, or mortgagee in possession, regardless of how such possession was obtained.

Owner-builder means owners of property when acting as their own contractor when exempt from the licensing requirements of Chapter 489, Florida Statutes and chapter 150 of this Code.

Person means any individual, association, organization, partnership, firm, corporation or other entity recognized by law.

Pollutant means anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter or other discarded or abandoned objects, articles and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Runoff is a term generally used to describe stormwater that is unable to soak into the ground and which flows over land.

Side lot drainage ditch means a swale in the easement between two lots that has been designated in the paving and drainage plans as a side lot ditch.

Stormwater means the flow of water which results from, and that occurs immediately following, a rainfall.

Stormwater management system means the system, facilities, structures and infrastructure, including but not limited to pipes, lines, culverts, swales, canals, drainage ditches, ponds, lakes

and related appurtenance which collectively may be referred to as a system, or combination of systems designed to treat stormwater, or collect, convey, channel, hold, inhibit, or divert the movement of stormwater.

Surface water means water above the surface of the ground whether or not flowing through definite channels.

Swale means the depressed earthen area used for stormwater drainage purposes, usually located between a street/road and the private property line.

Sec. 56.02. - Purpose and intent.

(a) The purpose of this chapter is to provide for the planning, design, construction, operation, and maintenance of a stormwater management system in accordance with applicable stormwater management regulations for the protection of the public health, safety, welfare and property.

(b) The requirements of this chapter are intended to promote the best management practice of the stormwater management system in accordance with the following objectives:

(1) Protect the quantity and quality of ground and surface waters.

(2) Perpetuate recharge into the groundwater system.

(3) Prevent and reduce saltwater intrusion.

(4) Minimize the production of nuisance and disease vectoring mosquitoes.

(5) Discourage reliance on drainage systems which depend on the use of electrical energy or petroleum fuels to move water, remove pollutants or maintain the systems.

(6) Reduce wind or water-caused erosion, loss of valuable top-soils, and subsequent sedimentation of surface water bodies and damage to adjacent properties.

(7) Protect life and property from rainfall events.

(8) Minimize the adverse impact of development on the water resources within the city.

(9) Maximize protection of class II waters.

Sec. 56.03. - Responsibilities and duties.

(a) The city shall only be responsible for planning, managing, constructing, operating, and maintaining the facilities that comprise the city's stormwater management system which is located on public property, within public rights-of-way and easements in accordance with city, state, and federal regulations.

(b) Private entities or persons are responsible for planning, managing, constructing, operating, and maintaining facilities that comprise the stormwater management systems located on private

properties and certain facilities that comprise the stormwater management systems located on public properties in accordance with city, state, and federal regulations.

(c) Should the public works director, city engineer, or designee determine that conditions or activities exist which require immediate action to protect the public health, safety, or welfare, the city engineer is authorized to take all reasonable and necessary actions, including entry upon any property for investigative purposes and/or the issuance of cease and desist orders to effectuate the immediate discontinuance of a prohibited activity or condition.

Sec. 56.04. - Prohibitions.

(a) No person shall:

(1) Throw, deposit, leave, maintain, keep or cause to be thrown, deposited, left, or maintained, in or upon any public or private property, driveway, parking area, street, alley, sidewalk, component of the stormwater management system, or water of the U.S., any refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations, so that the same may enter a stormwater management system.

(2) Block, fill, alter or obstruct any drainage course, swale, canal, ditch or any type of stormwater management area, private or public, in a manner which alters the intended use of the facility, unless specifically authorized by the city or appropriate state or federal permit.

(3) Make any changes or modify the stormwater management system except as exempted in this chapter, without first obtaining applicable city permits.

(4) Permit or cause adverse drainage impacts to the stormwater management system or property.

(5) Fail to properly maintain a stormwater management facility so that it operates as permitted.

(6) Permit, cause or establish unauthorized connection(s) to the city's stormwater management system.

(b) Unless specifically allowed or authorized by the city, the following activities are prohibited on land owned by the city used for stormwater management purposes:

(1) Swimming or diving.

(2) Operation of any motorized land vehicles (including all-terrain vehicles, motorcycles, go carts, passenger cars, or otherwise).

(3) Operation of any watercraft unless specific facilities for that use are provided or prior authorization is provided by the city.

Sec. 56.05. - Penalty.

(a) Unauthorized connections to the city's stormwater management system shall be immediately rectified by either removal of the connection or undergoing the process to permit the connection. In no instance shall the removal of the connection cause adverse impacts to adjacent properties. In the event the unauthorized connection is not removed, the city may enter upon the property to remove the connection. In addition to any other remedies authorized by law, the city is entitled to recover costs incurred in removing the unauthorized connection and repairing any damaged facilities.

(b) Tampering, damaging, or destruction of facilities, or trespassing may result in appropriate criminal prosecution. In addition, the city may seek to commence a civil action against any violator to recover the cost of restoring any damage caused.

Secs. 56.06.-56.09 Reserved.

ARTICLE II. - DISCHARGES

Sec. 56.10. - Allowable discharges.

(a) No person shall discharge or cause to be discharged into the stormwater management system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.

(b) The following is a list of substances allowed to be discharged into the city's stormwater system provided they are not restricted or otherwise identified by the public works director or his/her designee as a source of pollutants to any receiving waterbody:

(1) Water line flushing;

(2) Landscape irrigation;

(3) Diverted stream flows;

(4) Rising ground waters;

(5) Uncontaminated groundwater infiltration (as defined in 40 C.F.R. 35.2005(b)(20)), to separate storm sewers;

(6) Uncontaminated pumped ground water;

(7) Discharges from potable water sources;

(8) Foundation drains;

(9) Air conditioning condensate;

(10) Irrigation water;

(11) Springs;

(12) Water from crawl space pumps;

(13) Footing drains;

(14) Lawn watering;

(15) Individual residential car washing;

(16) Flow from riparian habitats and wetlands;

(17) Dechlorinated swimming pool discharges;

(18) Street wash waters;

(19) Discharges or flows from emergency firefighting activities;

(20) Reclaimed water line flushing pursuant to a permit issued under authority of Rule 62-610, Florida Administrative Code;

(21) Flows from uncontaminated roof drains.

Sec. 56.11. - Illegal discharges.

(a) Substances that are not listed in Section 56.10 which are discharged into the city's stormwater management system shall be considered illicit discharges and are hereby prohibited. The construction, use, maintenance or continued existence of illicit discharges and/or unauthorized connections to the stormwater management system is prohibited.

(b) Any discharge in violation of any federal, state, county, city or other governmental law, rule, regulation or permit is prohibited.

(c) No person shall discharge or cause to be discharged into the stormwater management system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants other than stormwater that cause or contribute to a violation of water quality standards.

(d) Notwithstanding other requirements of law, as soon as any person has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the city’s stormwater management system or waters of the state, said person shall take all necessary steps to ensure the discovery, containment, and reporting of such a release.

(e) In the event of a suspected release of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services.

(f) In the event of a release of non-hazardous materials, said person shall notify the city engineer, or his or her designee in person or by phone, no later than the next business day of the nature, quantity and time of occurrence of discharge. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall confirm the release by written notice addressed to the city engineer, or his or her designee, within 3 business days of the phone or in person notice, and retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least 3 years.

Sec. 56.12. - Penalty. Any person who discharges or causes to be discharged, directly or indirectly, pollutants into the city's stormwater system and who fails to correct any prohibited condition or discontinue any prohibited activity shall be responsible for paying the necessary costs that may be incurred by the city in carrying out any activities to preserve the public's health, safety and general welfare. These costs may include, but are not limited to, expenses incurred in testing, measuring, sampling, collecting, removing, containing, treating, and/or disposing of the pollutant materials.

Secs. 56.13.-56.19 Reserved.

ARTICLE III - REQUIREMENTS

Sec. 56.20. - General.

(a) Planning, design, permitting, construction, operation and maintenance requirements for a stormwater management system are provided in the Engineering Standards for Land Development.

(b) Proposed designs, operational and maintenance plans for all stormwater management systems within the city or that discharge into the city's stormwater management system shall be submitted to the city for review and approval.

(c) Construction of all stormwater management systems within the city or those that discharge into the city's stormwater management system shall be inspected and approved by the city.

(d) No work will be permitted within drainage or road rights-of-way except by prior approval from the city engineer.

Sec. 56.21. - Finished Floor Elevation.

(a) The minimum finished floor grade elevation for buildings located on:

(1) Property that does not have a permitted South Florida Water Management District (SFWMD) elevation shall be 24 inches above the crown of the road in front of the property. Corner lots shall use the nearest intersection elevation.

(2) Property that has a permitted SFWMD elevation shall be in accordance with the permit.

(3) Property subject to special flood hazards shall comply with chapter 152 of the city Code.

(b) The city engineer may require a higher finished floor grade elevation for certain buildings or structures where topographical features indicate that a deviation from the requirements in this section is warranted. The deviation from finished floor grades established by this section and shown in the permit documents shall be limited to plus 3 inches. An increase greater than 3 inches may be approved by the city engineer to allow plumbing waste lines to comply with the plumbing code, provided that the deviation will not negatively impact adjacent properties. No minimum deviation will be allowed.

(c) The slab elevation of accessory use structures constructed on lots zoned for single family dwellings shall be compatible with the site drainage plan for the dwellings.

Sec. 56.22. - Roadway swales.

(a) Roadway swales are a major component of the city's stormwater management system. The swales provide water quality treatment as well as convey the stormwater to the larger ditches, swales and canals within the city.

(b) Except as otherwise provided herein, it shall be unlawful for any person to fill or obstruct or allow the filling or obstruction or to damage or destroy or allow damage or destruction of any swale, or impede or interfere or permit interference with the drainage system within the city.

(c) The building inspector shall withhold approval of any inspection if, upon inspection of the property and adjacent or affected properties, it is determined that the swale or drainage system has been disturbed in a fashion to impede or interfere with its operation and may order the work stopped on the project until the swale and/or drainage system has been restored.

(d) In the course of construction or repairs of improvements to real property, the crossing or storage of supplies and materials and other uses of the swale area adjacent to the property under improvement or repair may occur, provided that such activities do not impede or interfere with the operation of the city's drainage system. Any such person or entity so utilizing the swale area, upon notification from the city shall immediately remove or repair any obstruction or

damage to the swale and any failure to do so within 24 hours of such notification shall be deemed a violation of this section.

(e) During the course of construction or repairs involving the crossing or disturbance of a swale the builder shall be responsible for implementing siltation control as specified in Section 56.24.

(f) The restoration, stabilization and sodding of swales shall be as specified in Section 56.25.

(g) All new construction shall include the installation or reinstallation of the swale liner as required in the permit for the work and specified in the Engineering Standards for Land Development.

Sec. 56.23. - Driveways and culverts.

(a) A paved driveway apron properly connected to the existing road pavement shall be provided for all driveways.

(b) A driveway that crosses a swale shall convey the flow of the swale within a driveway culvert. The driveway culvert design shall be constructed according to specifications set forth in the Engineering Standards for Land Development.

(c) Driveway culverts shall be maintained by the property owner in accordance with section 41.08(g).

(d) Unless approved by the city engineer, the installation of any driveway culvert across the entire frontage of any lot in the city is prohibited.

(e) To obtain approval to construct a driveway culvert, a property owner must:

(1) Obtain a permit to install the driveway culvert;

(2) Pay the fees; and

(3) Complete the inspections indicated in the Engineering Standards for Land Development.

Sec. 56.24. - Sediment and erosion control.

(a) Uncontrolled stormwater runoff from land disturbing activities may result in the acceleration of erosion, damage to downstream properties, and degradation of natural environments. For these reasons, no land disturbing activities may occur until the appropriate permits have been obtained from the city, SFWMD, Florida Department of Environmental Protection, or the Army Corps of Engineers.

(b) Requirements for the stormwater pollution prevention plan, best management practices, and design standards are provided in the Engineering Standards for Land Development.

(c) Minor land-disturbing activities such as home gardens, landscaping, repairs, maintenance work, and other related activities, provided such activities do not contribute to any on-site

generated erosion, or degradation of lands or water beyond the boundaries of the property involved, are exempt from sediment and erosion control permitting.

Sec. 56.25. - Restoration and stabilization.

(a) Any private property transversed for access to a property under construction shall be stabilized by sod or seed and straw mulch.

(b) Sod shall be used for stabilization of swales and areas within the city's right-of-way.

(c) As a condition of the issuance of any certificate of occupancy on all residential lots with new structures, the following requirements for sod apply:

(1) That portion of the swale area from the edge of the paved surface to the property line between the two side property lines extended shall be sodded.

(2) The entire front of the lot between the structure and the street right-of-way shall be sodded.

(3) The side yard between the property line and the structure on both sides to the rear wall of the structure shall be sodded.

(4) One row of sod shall be placed on the property line beginning at the rear of the structure and running to the rear property line.

(5) A 10-foot wide strip of sod shall be placed adjacent to any side lot drainage ditch or drainage right-of-way.

(6) A triangular wedge measuring 6 feet from the side property line parallel to the street and running back 30 feet from the flow line of the swale shall be sodded to insure stabilization. This will be required on adjacent vacant lots if the vegetation has been disturbed on the vacant lot.

(d) Sod shall be of satisfactory health and properly installed to ensure its healthy growth.

(e) The public works inspector shall withhold a final inspection approval for any construction that has not restored the disturbed swale area with sod.

Sec. 56.26. - Performance bond for weather delay of sod installation.

(a) In the event that weather conditions hinder the ability of a builder to complete the sod installation for a single family home, the builder may request that the city accept a performance bond for the completion of the work so that the public works inspector can issue a conditional final inspection approval if all other construction requirements have been met.

(b) The performance bond shall be double the actual cost to furnish and complete the installation of the sod, as determined by the city engineer, and shall indicate that the work will be

completed in accordance with the schedule established by the city engineer. The performance bond shall be posted in either cash or by a surety, approved by the city's attorney office.

(c) In the event the builder fails to complete the work in the agreed timeframe, the cash or surety shall be forfeited to the city, and the city engineer shall cause the work to be completed using the forfeited performance bond and any funds in excess of the actual cost of the work shall go into the stormwater fund of the city.

(d) Upon the builder completing work as required by the city engineer the cash or surety shall be returned to the builder.

Section 3. Title IX, General Regulations, Chapter 97, Streets and Sidewalks, is amended as follows (~~strikethrough text~~ indicates deletions while underlined text indicates additions):

CHAPTER 97. ~~- STREETS AND SIDEWALKS~~ RESERVED

~~ARTICLE I. - GENERAL PROVISIONS~~

~~Sec. 97.01. - Reserved.~~

~~Sec. 97.02. - Construction of private streets or roads.~~

~~(a) A permit shall be required for the construction of any private road or street.~~

~~(b) The permit fee shall be per section 150.705(c) for engineering inspections.~~

~~(c) All buildings of private roads and streets must submit three sets of plans and specifications for the approval of the city engineering department.~~

~~Sec. 97.03. - Swales.~~

~~(a) For the purpose of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning.~~

~~*Builder*. A person or firm that has been properly licensed to build structures within the city. As used herein the term builder shall include, but not be limited to, owner-builder as defined in this section, septic tank and well drilling contractors.~~

~~*Certificate of occupancy*. A certificate issued by the city building official that signifies that a structure has been completed in accordance with the city building codes and allows the same to be occupied.~~

~~*Contractor/specialty contractor*. Defined as set forth in F.S. ch. 489.~~

~~*Owner*. Any person, persons or entity who shall have legal or equitable title in any form whatsoever to any lot, parcel or tract or part thereof; or who shall have possession, care or control of any lot, parcel or tract or part thereof as owner, or as agent of the owner, or as a fiduciary,~~

~~trustee, receiver, guardian, or mortgagee in possession, regardless of how such possession was obtained.~~

~~*Owner-builder*. Owners of property when acting as their own contractor when exempt for the licensing requirements of F.S. ch. 489 and chapter 150 of this Code.~~

~~*Parcel*. Any lot, parcel or tract of land within the city.~~

~~*Plastic flowline liner*. A one-quarter portion of a 12-inch diameter corrugated smooth bore plastic pipe installed in the swale flowline.~~

~~*Restoration*. The re-establishment of an area or drainage structure to its design condition.~~

~~*Side lot drainage ditch*. A swale in the 12-foot easement between two lots that has been designated in the paving and drainage plans as a side lot ditch.~~

~~*Swale*. The depressed earthen sodded area immediately adjacent to the travelway and used for stormwater drainage purposes, usually located between a street/road and the private property line.~~

~~(b) Unlawful to obstruct swale. Except as otherwise provided herein, it shall be unlawful for any person to fill or obstruct or permit the filling or obstruction or to damage or destroy or permit damage or destruction of any swale, or impede or interfere or permit interference with the drainage system within the city.~~

~~(c) Permitted activities. Owners, builders, contractors, specialty contractors and owner-builders may, in the course of construction or repairs of improvements to real property, cross, store supplies and materials and otherwise utilize the swale area adjacent to the property under improvement or repair, provided that such activities do not impede or interfere with the operation of the city's drainage system. Any such person or entity so utilizing the swale area, upon notification from the city manager, city engineer, city public works director or city building official, or their designee, shall immediately remove or repair any obstruction or damage to the swale and any failure to do so within 24 hours of such notification shall be deemed a violation of this section.~~

~~(d) (1) Required erosion control. In connection with any improvement to residential property, the owner, builder or contractor shall install a paved driveway properly connected to the existing street pavement, that driveway having a minimum width of 16 feet with a stormwater drainage culvert pipe of the size and composition as specified by the city engineer.~~

~~(2) a. As a further condition of the issue of any certificate of occupancy, on all residential lots with new structures, the following requirements apply:~~

~~1. That portion of the swale area from the edge of the paved surface to the property line between the two side property lines extended shall be sodded.~~

~~2. The entire front of the lot between the structure and the street right-of-way shall be sodded.~~

~~3. The side yard between the property line and the structure on both sides to the rear wall of the structure shall be sodded.~~

~~4. One row of sod shall be placed on the property line beginning at the rear of the structure and running to the rear property line.~~

~~5. A ten-foot wide strip of sod shall be placed adjacent to any side lot ditch or drainage right-of-way.~~

~~6. A triangular wedge measuring six feet from the side property line parallel to the street and running back 30 feet from the flow line of the swale shall be sodded to insure stabilization. This will be required on adjacent vacant lots if the vegetation has been disturbed on the vacant lot.~~

~~7. If the adjacent property is developed, any disturbed areas shall be restored to original condition.~~

~~8. Any private property transversed for access to a property under construction shall be stabilized by sod or seed and straw mulch. Sod shall be used for restoration of swales.~~

~~9. Other areas that are not mentioned above which are disturbed and the vegetation is destroyed, shall be seeded and mulched with straw.~~

~~10. No work will be permitted within drainage rights-of-way except by prior approval from the city engineer.~~

~~b. The requirements of subsections (d)(2)a.1. through 6. of this section are graphically depicted in appendix A of this chapter.~~

~~(3) During the course of construction or repairs involving the crossing or disturbance of a swale the builder shall be responsible for implementing siltation control and, at the conclusion of the project, restoration of any and all disturbed swale areas. Furthermore, on all new construction, a plastic flowline liner shall be installed in the swale as specified by the city engineer.~~

~~(e) The building inspector shall withhold a certificate of occupancy for any construction that has an earthen swale area between it and the travelway or roadway that has not been sodded as provided for above at grade elevations as provided by the building department. The sod so provided must be of a satisfactory healthy grass sod which shall be properly installed to insure its healthy growth. In addition, the building inspector shall withhold approval of any inspection if, upon inspection of the property and adjacent or affected properties, it is determined that the swale or drainage system has been disturbed in a fashion to impede or interfere with the operation of the drainage system and may order the work stopped on the project until the swale has been restored in a fashion to permit the proper functioning of the stormwater drainage.~~

~~**Sec. 97.04. - Interruption of traffic on streets.**~~

~~It shall be unlawful for any person to block, obstruct, or otherwise interrupt the flow of traffic upon the streets within the city without having first obtained a permit from the city manager or his designee to do so. The city manager or his designee is authorized to impose such conditions and restrictions on any permit issued hereunder that he deems appropriate to insure the smooth flow of traffic within the city.~~

~~**Secs. 97.05—97.09. - Reserved**~~

Section 4. Chapter 156, Subdivision Regulations, Article VI, Design and Improvement; Model Standards, Principles and Guidelines, sections 156.126, 156.127, 156.130, 156.32 through 156.144 are amended as follows (~~strikethrough text~~ indicates deletions while <u>underlined text</u> indicates additions):

Sec. 156.126. - Stormwater Management; General Requirements.

(A) Protection of the water resources in the City is critical to the public health, safety and welfare. Innovative approaches to storm water management shall be encouraged and the concurrent control of erosion, sedimentation and flooding shall be mandatory.

(B) <u>All proposed stormwater management plans, design, calculations, general criteria and erosion control for both public and private improvements, must comply with and follow the regulations and criteria set forth in chapter 56 of this Code and the Engineering Standards for Land Development.</u> ~~The following general criteria shall be applicable to all proposed storm water management plans, for both public and private improvements, as approved by the City Engineer:~~

~~(1) When possible, the nonstructural approach shall be used to meet both surface water quantity and quality requirements.~~

~~(2) The drainage system for each phase of a development shall be capable of standing on its own if subsequent areas planned for development are not developed.~~

~~(3) The drainage system for each development shall be sized to accommodate existing upstream runoff.~~

~~(4) The general criteria, as herein and subsequently outlined, shall, in no way, be construed as prohibiting new and innovative techniques. However, all such new and innovative techniques shall be subject to the approval of the City Engineer at a pre-application conference stage prior to their use in the design of any development.~~

~~(5) The storage and controlled release or retention on site and infiltration into the ground of excess storm water runoff from any commercial, industrial and residential developments will be required so that runoff therefrom will not be substantially greater than it was prior to such development.~~

~~(6) The procedure for disposing of excess storm water runoff shall be dependent on the Hydrologic Soil Classifications of the soils within the proposed development boundaries, which Hydrologic Soil Classification shall be as are used and defined by the Soil Conservation Service of the U.S. Department of Agriculture (A, B, C or D and A/D, B/D and C/D) in the publication, St. Lucie County, Florida - Soils, and in other publications of the Soil Conservation Services. However, the location and designation of the various Soil Types as depicted therein shall be fully substantiated by Soils analysis, if required by the City Engineer.~~

~~(7) All major storm water conveyance systems shall be of the shallow, flat, slow-velocity, open channel, "floodway" type which shall be designed to delay or retard runoff from any development. The side slopes of such conveyance systems shall be kept as flat as possible (maximum of three (3) horizontal to one (1) vertical). The construction of deep artificial canals, ditches, channels and the like, or the construction of major storm sewer systems, which will rapidly convey runoff to any receiving waters or substantially reduce the level of the ground water table, is extremely prohibited. Substantial reduction of the ground water table shall be minimized and determined on a site-specific basis.~~

~~(8) All retention areas, excluding wetlands, shall be landscaped with one (1) tree every fifty (50) linear feet. Trees shall be planted at the slope of the retention area to create a vegetative buffer. Tree location, size and species selection shall be approved by the Site Plan Review Committee.~~

~~(9) Should the proposed development area contain an existing natural watercourse drainageway, channel and the like, such natural watercourse and the vegetation inherent therewith shall be maintained and the proposed development designed so as to preserve same. However, the use of such natural watercourse to carry off runoff from any development shall be permitted if provision for control of sediment in the excess runoff is made prior to entrance of the runoff to the natural watercourse. This does not preclude the use of wetlands for storage and treatment of stormwater runoff as long as the designed drainage system does not measurably degrade the affected area.~~

~~(10) Computations for street drainage and culverts shall be based upon one-day rainfall, ten-year return period.~~

~~(11) Street inlets shall be spaced in such a manner as to accept one hundred (100) percent of the design runoff and shall be separated by no more than four hundred (400) feet. Typically, the maximum allowable gutter run will be one thousand two hundred (1,200) feet on streets with standard curbs, and six hundred (600) feet on streets where Miami-type curbs are approved for special application by the City Engineer. However, the actual required spacing will depend on the characteristics of such particular site and the flow quantities to be handled.~~

~~(12) Runoff from driveways, roofs or other impervious areas shall be diverted so as to flow over grassed areas prior to flowing into any drainage system whenever possible.~~

~~(13) All detention and retention basins shall be readily accessible from streets of public right-of-way and shall be situated so that maintenance can be easily performed.~~

~~(14) The side slopes of all detention basins shall be kept as flat as possible (maximum of four (4) horizontal to one (1) vertical), providing soil conditions are suitable to sustain plant growth and control erosion.~~

~~(15) No site alteration shall adversely affect the existing surface water flow pattern.~~

~~(16) No site alteration shall cause siltation of wetlands, pollution of downstream wetlands or reduce the natural retention or filtering capabilities of wetlands.~~

~~(17) No site alteration shall allow water to become a health hazard.~~

~~(18) All site alteration activities shall provide for such water retention and settling structures and flow-attenuation devices as may be necessary to insure that the foregoing standards and requirements are met.~~

~~(19) Where necessary, easements for drainage facilities, as approved by the City Engineer, shall be provided as follows:~~

~~(a) Any off-site easements, which are needed to make the drainage system function, shall be included in the proposal for development and made a criteria for preliminary and final plat approval.~~

~~(b) Easements for all facilities must be shown on construction drawings and approved by the City Engineer. The easements and rights-of-way must be executed, accepted by the City Council, and recorded in the public records prior to issuance of a building permit.~~

~~(c) Alternative storm water management and conservation control strategies shall meet the following performance standards and requirements:~~

~~1. The outflow hydrograph, as computed for the developed or undeveloped area, shall approximate (within ten (10%) percent in terms of peak flow) the hydrograph of conditions existing before development or redevelopment for the ten-year Frequency Three-Hour Design Rainfalls prior to its entrance into any watercourse outside the developed or redeveloped area. In addition, the existing shape, timing and effect of the outflow hydrographs on downstream flow shall be maintained as much as possible. Runoff rates and volumes resulting from the development, in excess of existing amounts, shall be accommodated in an approved manner on-site.~~

~~2. The capacity of any outlet watercourse beyond the area of the developed or redeveloped area shall be adequate to convey the peak discharge from a 25-Year Frequency Six-Hour Design Rainfall. If the downstream facilities are inadequate to convey the peak discharge for the design rainfalls above, the proposed development must accommodate that portion of runoff above the downstream systems actual capacity.~~

~~3. Permitted rates and volumes of storm water runoff, whether discharged into natural or artificial watercourses, shall meet existing water quality standards at the first downstream receiving water body for which such standards have been established.~~

4. Disposition of Storm Water in Impervious Areas. The areas where the soils have been classified under the SCS Hydrologic Soils Classification System as types C and D (impervious) or A/D, B/D and C/D (high ground water table areas), the overall storm water management system shall be that of providing detention basins to attenuate peak from the contributory drainage area and to settle solids washed off or eroded therefrom. Specific guidelines area as follows:
   a. **Size.** Detention basins shall have sufficient storage so as to contain the increased runoff after development based upon the 25-year return period, three-day rainfall minus the allowable discharge with a minimum freeboard of two (2) feet in the basis. Minor flooding of the area and streets in the vicinity of the detention basin during the 100-Year Frequency – 24-Hour Design Rainfall will be permitted. The capacity of the outlet structure shall be considered in all cases.
   b. **Outlet Structure.** Outlet structures shall be as simple as possible (pipe culverts, concrete weirs and the like). Required detention storage in the basin, as defined above, shall be above the invert of the outlet structure. When combined with the detention storage required for the 25-Year Frequency – Six-Hour Design Rainfall the outlet structure shall be of sufficient size to permit seventy-five (75%) percent of the total volume of water temporarily stored in the basin to drain out within twenty-four (24) hours from the end of the theoretical storm. Consideration must be given not to adversely restrict predevelopment flow off-site.
   c. **Configuration.** The shape of all detention basins shall be such that no "short-circuiting" of flow occurs and that maximum disposition of suspended solids is achieved in the basin. Dredging of the settled sediments will be carried out when necessary so that the capacity of the basin is not reduced below that for which it is designed.
5. Disposition of Storm Water in Pervious Areas. In areas where soils have been classified under the SCS Hydrologic Soil Classification System as Types A or B (pervious), the overall storm water management strategy shall be that of on-site retention and infiltration into the ground. Specific guidelines are as follows:

a. **On-Lot Infiltration.** The parcel shall be developed to maximize the amount of natural rainfall which is infiltrated into the soil and to minimize direct overland runoff into adjoining streets and watercourses. Storm water runoff from roofs and other impervious surfaces could be diverted into swales or terraces on the lot when possible.

b. **Retention Basins.** Retention basins shall have sufficient storage so as to contain the increased runoff after development, based upon the 25-year return period, three-day rainfall minus the allowable discharge, with a minimum freeboard of two (2) feet considering that infiltration out of the basin through the side and bottom is occurring during these storms. Minor flooding of the area and streets in the vicinity of the retention basin during the theoretical 100-Year Frequency - 24 Hour Design Rainfall will be permitted.

c. **Outlet structure.** No actual outlet from a retention basin will be required where such basins are located in soils classified as Type A. However, possible overflow from the basin shall be anticipated and a path for such overflow provided and structures in the development so situated that no flood damage thereto will occur. Retention basins is classified as Type B shall have nominal positive outlet to other basins and/or watercourses. However, the nominal positive outlet shall be assumed to have no capacity when determining retention basin size.

Sec. 156.127. - ~~Stormwater Management; System Design~~ Reserved.

(A) General Requirements. All subdivision improvements shall include comprehensive drainage facilities for positive drainage and shall be prepared by a Florida registered engineer. Open swales, ditches or other waterways shall require complete engineering design data pertinent to its design and its effect within the particular drainage area to establish its adequacy by the City Engineer.

(B) Pipe Materials Permitted. Pipe shall be Class-3 reinforced concrete with patented rubber gasketed joints and shall be designed and installed in accordance with the manufacturer's specifications. Subject to acceptable soil and ground water conditions, corrugated aluminum pipe may be considered, provided the minimum cover from top of pipe to the top of subgrade at any point under a roadway shall meet the manufacturer's specifications. The minimum

~~diameter of any pipe utilized for any portion of an enclosed drainage system shall be fifteen (15) inches.~~

~~(C) Inlets, Manholes and Junction Boxes.~~

~~(1) A pipe shall extend through walls flush with inside wall. Concrete shall be constructed around them neatly. All surfaces shall be plastered so as to prevent leakage. Water-stop materials are recommended. Plastered areas should not crack and be properly prepared to bond the old surfaces. Paved inverts are required. For all concrete structure, all fins and irregular projections shall be chipped off flush with the surface immediately following the removal of forms. All projecting wires and nails shall be cut off at least one-half inch under the surface. All cavities produced by metal spacers, form ties, bolts, honeycomb spots and the like, shall be carefully cleaned, saturated with water and then carefully painted with mortar. All construction and expansion joints in the completed work shall be left carefully tooled and free of mortar and concrete. Joint filler shall be left exposed for its full length, with clean edges. Mortar topping for upper horizontal surfaces shall not be used. For all concrete surfaces which are to receive a surface finish, the contractor shall remove the forms and finish the concrete immediately after the concrete has set sufficiently. Minimum manhole diameters for intersecting pipe sizes shall be as follows:~~

~~Equivalent Pipe Diameter~~	~~Inside Diameter~~
~~Up to 27 inches~~	~~4 feet~~
~~27 inches to 36 inches~~	~~5 feet~~
~~42 inches~~	~~6 feet~~
~~48 inches~~	~~Special design~~
~~Larger~~	~~Special design~~

~~(2) Inlets shall be spaced in such a manner as to accept one hundred (100%) percent of the design runoff. The actual required spacing will depend on the characteristics of each particular site.~~

~~(3) Computation for drainage culverts, ditch sizes and inlet spacing shall be based on the storm frequency as required by the Port St. Lucie Engineering Department and shall be submitted to the City Engineer for approval.~~

~~(D) Underdrains. In cases where there is a prevalence of soils that exhibit adverse water table characteristics, underdrains and/or fill or other acceptable alternative that will provide necessary measures to maintain the structural integrity of the road will be required. The determination of need shall be made by reference to applicable portions of the most recent edition of Soil Survey and Supplement for St. Lucie County, Florida, as prepared by the U.S. Department of Agriculture, and in other publications of the Soil Conservation Services, the Soil Survey Supplements, or whatever subsequent authoritative soil survey may be published for St. Lucie County after adoption of this chapter, or according to information generated by developers.~~

~~(1) Wherever road construction or lot development is planned in areas of the proposed subdivision having soil types with unacceptable water table characteristics, underdrains and/or fill shall be provided and shown on the engineering plans. Underdrains must be designed with free gravity outlet at carefully selected discharge points. Erosion control measures shall be provided as needed at all discharge points.~~

~~(2) Wherever roadcuts in otherwise suitable soils indicate that the finish grade will result in a road surface-to-water table relationship that adversely exceeds the degree of limitation stated above, underdrains or other acceptable alternative that will provide necessary measures to maintain the structural integrity of the road will be required.~~

~~(3) Wherever roadway construction reveals unexpected water bearing strata that would cause deterioration of the pavement, underdrains or other acceptable alternative that will provide necessary measures to maintain the structural integrity of the road will be required even though not shown on the plans.~~

~~(4) Filtering media shall consist of stone, gravel or slag, and shall contain no friable materials.~~

~~(5) Wherever underdrain pipe is required, the specifications shall be in accordance with the American Society for Testing and Materials Designation: D3033-5.~~

Sec. 156.130. – ~~Paving~~ Reserved.

~~(A) All unstable materials such as muck, peat, plastic clays, and/or marls shall be removed from roadbed areas. The areas then shall be backfilled with suitable material, and the subgrade stabilized to a depth of ten (10) inches below the base course to seventy-five (75) pounds per square inch, Florida Bearing Value. The materials to be added for stabilization, if needed, shall~~

be either high bearing soils, sand clay, ground limerock or any other material which is suitable. (Muck shall not be used.)

(B)(1)Pavement design for streets shall follow the following specifications:

Materials	Structure Number	Asphalt Thickness	Base Thickness	Subgrade Thickness
Local roads and parking lots	1.89	1 inch	6 inches	8 inches
Collector roads	2.54	1½ inches	8 inches	12 inches
Arterial roads	3.19	1½ inches	8 inches	12 inches

(2) Local roads and parking lots may utilize Type S-3 Asphaltic concrete. Collector streets and above shall use Type S-1 Asphaltic concrete. When base material is substituted in lieu of subgrade, a minimum eight (8) inches of base material is required. Portland cement concrete is acceptable for use on local roads and parking areas and must be constructed of FDOT approved Class II concrete. A concrete control joint plan must be submitted and approved by the City Engineer. The above tolerances are minimum requirements which may be upgraded at the discretion of the engineer of record.

(3) Alternate types of pavement, base and subgrade. Alternate types of pavement, base and subgrade which in the opinion of the City Engineer are equal to or superior to those specified may be approved. Application for such approval shall be accompanied by written data, calculations and analysis which show, by accepted engineering principles, that the alternate types are equal or superior to those specified. The stabilized subgrade shall have a minimum of 40 limerock bearing ratio or 75 psi Florida Bearing Value.

(4) Stabilized shoulders. Stabilized shoulders eight (8) feet wide shall be provided, for distress lanes unless paved lanes provided. The shoulder shall consist of a six-inch layer of soil having a minimum of 75 psi Florida Bearing Value.

(C) Written test results, taken by a competent testing laboratory, shall be submitted giving Florida Bearing Value sufficient to obtain uniform results for each and every type of soil appearing in the roadbed or at random locations designated by the City Engineer.

Sec. 156.132. - Erosion Control.

Seeding, mulching, sodding and/or other acceptable methods shall be used to prevent erosion during and after all phases of clearing, grading, site preparation and construction. The developer shall be required to prevent sediment from soil erosion and maintain curb and gutters,

~~swales and canals free of accumulation of sand and earth. Temporary sedimentation basins may be required during construction. All sedimentation control measures shall be consistent with the approved soil erosion and sedimentation plan. The "operator" or any construction project that disturbs one acre or more, or is part of the larger common plan of development or sale which disturbs one acre or more, is required to obtain the proper stormwater permit from the Florida Department of Environmental Protection and to comply with all the terms and conditions of the permit, in addition to any city requirements. The city engineer or his or her designee is hereby authorized to issue stop work orders on any site that is not in compliance with the applicable stormwater permit or that has failed to obtain said permit and upon issue of such stop work order all site work effected thereby shall immediately cease until authorized by the city engineer.~~

Secs. 156.132~~3~~—156.144. - Reserved.

Section 5. Chapter 156, Subdivision Regulations, Article V, Off-Site Improvements, sections 156.072, Cost Allocation, subsection (B)(2)(a) is amended as follows (~~strikethrough text~~ indicates deletions, underlined text indicates additions, and asterisks (***) identify sections of text that remain unchanged and are not printed herein):

* * *

(B) Proportionate Allocation. Where it is determined that properties outside the development will also be benefited by the off-site improvement, the following criteria shall be utilized in determining the proportionate share of the cost of such improvements to the developer.

(2) **Drainage Improvements.** The applicant's proportionate share of storm water and drainage improvements including the installation, relocation or replacement of storm drains, culverts (upsizing to handle additional runoff of storm water), catch basins, manholes, riprap, improved drainage ditches and appurtenances, and relocation or replacement of other storm drainage facilities or appurtenances, shall be determined as follows:

(a) The capacity and the design of the drainage system to accommodate storm-water runoff shall be based on the standards specified in sections 156.085 through 156.131~~2~~, chapter 56 and the Engineering Standards for Land Development, and computed by the developer's engineer and approved by the City Engineer.

* * *

Section 6. Conflict. If any ordinances, or parts of ordinances, are in conflict herewith this Ordinance shall control to the extent of the conflicting provisions.

Section 7. Severability. The provisions of this Ordinance are intended to be severable. If any provision of this Ordinance is determined to be void or is declared illegal, invalid, or unconstitutional by a Court of competent jurisdiction, the remainder of this Ordinance shall remain in full force and effect.

Section 8. Codification. The provisions of this Ordinance shall be made a part of the Code of Ordinances of the City of Port St. Lucie, Florida. The sections of this Ordinance may be renumbered or re-lettered to accomplish such intentions; the word "ordinance" may be changed to "section" or other appropriate word as may be necessary.

Section 9. Effective Date. This Ordinance shall become effective immediately upon final adoption on second reading.

PASSED AND ADOPTED by the City Council of the City of Port St. Lucie, Florida, this _____ day of _____, 2020.

CITY COUNCIL
CITY OF PORT ST. LUCIE

By: _____
Gregory J. Oravec, Mayor

ATTEST:

_____
Karen A. Phillips, City Clerk

APPROVED AS TO FORM:

_____
James D. Stokes, City Attorney