

ARTICLE 14
PUBLIC INFRASTRUCTURE

DIVISION I. STREETS AND SIDEWALKS	3
PART 1. IN GENERAL.....	3
<i>Sec. 18-686. Plan controlling street lines.....</i>	3
<i>Sec. 18-687. Numbering of buildings.....</i>	3
<i>Sec. 18-688. Duty of addressing coordinator with regard to street names.....</i>	4
PART 2. CONSTRUCTION AFFECTING STREETS AND SIDEWALKS	4
<i>Sec. 18-696. Delineation of line of street prerequisite to laying foundation or erecting wall or fence.....</i>	5
<i>Sec. 18-697. Encroachment by building, fence, wall or structure.....</i>	5
<i>Sec. 18-698. Projections over street generally.....</i>	6
<i>Sec. 18-699. Sheds over street or sidewalk.....</i>	6
<i>Sec. 18-700. Gates opening over street or sidewalk.....</i>	6
<i>Sec. 18-701. Awnings and canopies; permit required.....</i>	6
<i>Sec. 18-702. Permit to use of street during construction.....</i>	7
<i>Sec. 18-703. Protection of pedestrians by persons constructing or demolishing buildings.....</i>	8
<i>Sec. 18-704. Creating conditions necessitating special cleaning or repairs.....</i>	8
<i>Sec. 18-705. Indemnification of city by users of public rights-of-way and property.....</i>	10
DIVISION II. WATER AND SEWER EXTENSIONS.....	10
<i>Sec. 18-716. Application for and approval of extensions required.....</i>	10
<i>Sec. 18-717. General requirements.....</i>	11
<i>Sec. 18-718. Procedure for approval of extensions.....</i>	11
<i>Sec. 18-719. Financing of extensions.....</i>	12
<i>Sec. 18-720. Specifications; ownership.....</i>	17
<i>Sec. 18-721. Additional subdivision improvement requirement.....</i>	17
<i>Sec. 18-722. Approval of extensions outside city.....</i>	17
DIVISION III. COMPREHENSIVE STORMWATER ORDINANCE	18
PART 1. GENERAL PROVISIONS	18
<i>Sec. 18-731. Title.....</i>	18
<i>Sec. 18-732. Authority.....</i>	18
<i>Sec. 18-733. Findings.....</i>	19
<i>Sec. 18-734. Purpose.....</i>	19
<i>Sec. 18-735. Applicability and jurisdiction.....</i>	20
<i>Sec. 18-736. Interpretation.....</i>	22
<i>Sec. 18-737. Design manual.....</i>	22
PART 2. ADMINISTRATION AND PROCEDURES.....	23
<i>Sec. 18-746. Administration.....</i>	23
<i>Sec. 18-747. Review Procedures.....</i>	23
<i>Sec. 18-748. Concept plan.....</i>	26
<i>Sec. 18-749. Off-site stormwater management requirement.....</i>	27
<i>Sec. 18-750. Stormwater management measures in the CBD and RFMU districts.....</i>	27
<i>Sec. 18-751. Additional requirements for fee alternative.....</i>	29
<i>Sec. 18-752. As-built plans and final approval.....</i>	29
<i>Sec. 18-753. Other Permits.....</i>	29
<i>Sec. 18-754. Approvals.....</i>	29
PART 3. STANDARDS	30
<i>Sec. 18-760. General Standards.....</i>	30
<i>Sec. 18-761. Other considerations in design preparation.....</i>	32
<i>Sec. 18-762. Development standards near Outstanding Resource Waters.....</i>	32

<i>Sec. 18-763. Development standards near Class SA waters.....</i>	<i>34</i>
<i>Sec. 18-764. Development standards for all other areas.....</i>	<i>36</i>
<i>Sec. 18-765. Standards for stormwater control measures.....</i>	<i>37</i>
<i>Sec. 18-766. Certain wetlands excluded from density calculations.....</i>	<i>37</i>
<i>Sec. 18-767. Additional standards for special situations.....</i>	<i>38</i>
PART 4. MAINTENANCE.....	38
<i>Sec. 18-781. General standards for maintenance.....</i>	<i>38</i>
<i>Sec. 18-782. Operation and maintenance agreement.....</i>	<i>38</i>
<i>Sec. 18-783. Inspection program.....</i>	<i>40</i>
<i>Sec. 18-784. Notice to owners, Recordation.....</i>	<i>40</i>
<i>Sec. 18-785. Records of installation and maintenance activities.....</i>	<i>40</i>
<i>Sec. 18-786. Nuisance.....</i>	<i>40</i>
<i>Sec. 18-787. Maintenance easement.....</i>	<i>40</i>

ARTICLE 14.

PUBLIC INFRASTRUCTURE

DIVISION I. STREETS AND SIDEWALKS

PART 1. IN GENERAL

Sec. 18-686. Plan controlling street lines.

The boundary lines of streets shall conform to the official map of the City, and recorded subdivisions which may, from time to time, be added within the City limits, and the City Manager shall accurately ascertain and run out street lines in accordance therewith.

Sec. 18-687. Numbering of buildings.

(a) *Duty of owner.* It shall be the duty of the owner, agent or occupant of any house or building fronting on a street in the City to properly display a number which has been assigned by the addressing coordinator appointed by the City Manager. The owner, agent or occupant of such house or building shall place such number in a conspicuous place thereon so that it may be plainly seen and observed from the street.

(b) *General duty of addressing coordinator.* It shall be the duty of the addressing coordinator to prepare and maintain street address numbering maps of the City and, when a new building is built, or for any reason a number is required, to issue such number upon the request of the owner. It shall be the duty of the addressing coordinator from time to time, and upon request, to review street number assignments, resolve conflicts in numbers, reassign numbers or propose any changes which, in his opinion, are necessary.

(c) *Maps generally.* In preparation of maps and in assignment of numbers, the addressing coordinator shall follow the general system of numbering as set forth in this section and consistent with the addressing standards contained in the Technical Standards and Specifications Manual of the City of Wilmington.

(d) *Annexations.* Upon the annexation of any new areas to the City, it shall be the duty of the addressing coordinator, as soon as practical after such annexation, to prepare street address numbering maps for the new areas and to submit such maps to the City Manager and the City Council for their approval. Upon approval, it shall be the duty of the addressing coordinator to assign approved numbers to the owner and tenant of each building within the new areas.

(e) *Renumbering.* When due to conflicts, change in character or amount of occupancy of any block it becomes necessary to assign and reassign numbers within that block, the addressing coordinator shall prepare a map for the proposed renumbering of such area and submit this map to the City Manager and the City Council for their approval. Upon approval, it shall be the duty of the addressing coordinator to assign approved numbers to the owners and tenants of each building involved.

(f) *When houses considered officially numbered.* All buildings shall be considered officially numbered when numbered in strict accordance and compliance with the terms of this section and in accordance with the plans and maps prepared by the addressing coordinator prescribing the method of numbering buildings after adoption by the council.

(g) *Base lines.* The Cape Fear River and Market Street shall be the base lines for the purpose of numbering houses and buildings under the provisions of this section.

(h) *Method as to east-west streets.* Each street running east and west, or substantially in that course, shall, for the purpose of numbering under this section, have its beginning at the east line of the Cape Fear River, the numbering to begin at this initial point with the number one (1) and ending with the number one hundred (100) at the west line of Front Street, then beginning with the east line of Front Street with the number one hundred one (101), and increasing eastwardly, in like manner, to the corporate limits of the City as they now exist or may hereafter be extended.

(i) *Method as to north-south streets.* Each street running north and south, or substantially in that course, shall, for the purpose of numbering under this section, begin at the north and south side of Market Street, as the case may be, with number one (1), increasing, in the manner provided in subsection (h), north and south from such initial point to the corporate limits of the City, as they now exist or may hereafter be extended.

(j) *Location of odd and even numbers.* Even numbers shall be placed on the right-hand side of the street and odd numbers on the left-hand side of the street, going from the base lines named in subsection (g).

Sec. 18-688. Duty of addressing coordinator with regard to street names.

(a) It shall be the duty of the addressing coordinator to maintain maps or listings of the official names of the streets within the City, as they may now exist or may be extended or renamed by the council.

(b) It shall be the duty of the addressing coordinator from time to time to review the official street names of the City and recommend to the City Manager and the council any changes in names which he feels to be justified in order to permit clarity of street designation.

(c) Based on his official record of street names, the addressing coordinator shall, as submitted, review street names submitted for new subdivisions or multi-unit developments to ensure that new street names are not duplicates of names already used.

(d) From his official record, the addressing coordinator from time to time shall issue listings of official street names for use by the various departments of the City and other interested persons and agencies.

Secs. 18-689--18-695. Reserved.

PART 2. CONSTRUCTION AFFECTING STREETS AND SIDEWALKS

Sec. 18-696. Delineation of line of street prerequisite to laying foundation or erecting wall or fence.

(a) No owner or builder of any house or other structure in the City shall dig or lay the foundation thereof immediately abutting on any street, or shall erect any wall or fence or fixture running as aforesaid, before he shall have applied to the city engineer, and such officer shall have laid off and marked out the entire front line or boundary of such street.

(b) All or any buildings, walls, fences, steps or fixtures, and work done, which shall be put up contrary to the street line given, or which shall be put up without such application, and be found to be contrary to the true street line, and to encroach thereon, shall be ordered demolished by the city engineer in a written order to the owner. Any such encroachment or obstruction not removed by the owner within thirty (30) days after written notification by the city engineer shall be removed under the direction of the city engineer at the charge and expense of the person so offending, and the cost of such removal shall become a lien upon the property.

Sec. 18-697. Encroachment by building, fence, wall or structure.

(a) No building, fence, wall or any other structure or fixture shall encroach upon, or use, any part of the public streets or sidewalks within the City, except for governmental agencies as specifically authorized by the City Council; provided, however, the council may allow encroachments in the area of the City included in the National Registry of Historic Places, and the historic district and the historic district overlay zones as described in the zoning ordinance and as amended from time to time.

(b) The council may grant encroachments into City rights-of-way for the installation of drainage facilities and related fixtures in any area of the City upon recommendation of the City Manager.

(c) The council may grant encroachments into or across City utility easements, City utility rights-of-way or city-owned properties for the installation and maintenance of privately owned drives, walks, streets, utility mains, utility services, drainage facilities and fixtures, signs, fences and other items deemed to be in the best interest of the City and the general public in any area of the City upon the recommendation of the City Manager; provided, however, that such encroachment may not be granted if it would substantially impair or hinder the City's use of its property.

(d) All encroachments granted by the council shall be subject to execution of an encroachment agreement by the petitioner, as approved by the City Attorney and executed by the mayor. All encroachments granted by council shall be constructed to standards approved by the city engineer.

(e) This section is not intended to limit the authority of the City Council to grant easements and encroachments pursuant to G.S. 160A-273, or to limit the authority of the City Manager, city engineer or other City officials to issue permits for activities in public streets or sidewalks within the City as authorized by this chapter.

(f) For any encroachment granted pursuant to this section, the grantee shall pay the City an amount equal to the fair market value of said encroachment. In lieu of paying the fair market value, the grantee may, at its option, pay the City the fee established for such encroachments in the fee schedule.

(g) The City Manager shall be authorized to issue permits for minor encroachments by fences and utility connections into street and utility rights-of-way. An encroachment shall not be considered minor if the encroachment:

- (1) Interferes with, disturbs or blocks any City facilities; or significantly affects the public's use of the street or utility right-of-way;
- (2) Interferes with any planned City project or improvement;
- (3) Will increase the City's cost of maintenance, repair or construction of any facilities; or
- (4) The City Manager determines that the nature of the encroachment requires approval by the City Council.

Any permit issued pursuant to this section shall be subject to the provisions of section 18-705 of this article. The encroachment authorized by the permit shall be subject to the approval of the city engineer. The permit shall be subject to termination at any time by the City for any reason.

Sec. 18-698. Projections over street generally.

No bay window or other structure shall be placed on any building so as to project over any street or public place. Provided, however, the council may permit bay windows in the area listed in the National Registry of Historic Places.

Sec. 18-699. Sheds over street or sidewalk.

It shall be unlawful for any person to erect, maintain or suffer to remain any shed over any street or sidewalk in the City.

Sec. 18-700. Gates opening over street or sidewalk.

It shall be unlawful for any person to construct or maintain any gate or door which shall open outwardly on or over any part of any street or sidewalk of the City.

Sec. 18-701. Awnings and canopies; permit required.

(a) No awning or canopy shall be erected, suspended or maintained over or across any street or public sidewalk by any person until a permit therefore has been duly issued by the city engineer.

(b) A person desiring a permit as required in this section shall file an application therefore with the city engineer. Such application shall be accompanied by drawings and specifications indicating the location, place of erection, suspension or maintenance, method of fastening and full dimensions.

(c) A permit for the erection, suspension or maintenance of an awning or canopy issued pursuant to an application filed as provided in this section shall indicate the location, place of erection,

suspension or maintenance, method of fastening and full dimensions and shall also include such other terms and conditions as the city engineer may deem proper.

(d) It shall be unlawful for any person to erect, suspend or maintain over or across any sidewalk or public street, or any part of either, any awning or canopy unless such awning or canopy is securely fastened to a building and firmly supported by adequate metal braces and brackets, and with such vertical supports as may be required by the City Manager and the city engineer in the interest of public safety.

(e) No part of any awning or canopy shall be lower than seven (7) feet from the surface of the sidewalk or street.

Sec. 18-702. Permit to use of street during construction.

(a) *Application; issuance.* It shall be unlawful for any person to use any portion of the street right-of-way of the City during the erection, repair, rebuilding or demolition of any building within the City without having first received a permit from the city engineer. Any person desiring to use any portion of the public right-of-way for the purposes enumerated above shall apply to the city engineer for a permit. The application shall include in detail the street area to be used, and shall describe the protection to be provided for pedestrian and motor vehicular traffic and other such conditions as may be required by the city engineer. Upon receipt of such application, the city engineer shall, in conference with the City Manager or designee and the chief of police, or his duly authorized representative, determine if such use is justified and not dangerous to the safety of the general public. If the city engineer determines that such use is justified, he shall issue a permit, subject to such terms and conditions as shall be deemed necessary to protect the public safety and public property. These terms and conditions may include the posting of a bond by the person requesting use of the street, the erection of proper fences, barricades and lighting thereof and such other conditions as the city engineer may deem necessary.

(b) *Contents.* A permit for the placing of any brick, stone, lumber or other building material upon the streets, sidewalks or other public places of the City issued pursuant to an application filed as provided in subsection (a), shall describe and indicate the location of the building or repair operation in connection with which the permit is issued.

(c) *Conditions.* Permits, as required in subsection (a), shall be subject to the following conditions.

(1) *Use of street or sidewalk generally.* Any person actually building, repairing or about to build or repair any building, and having received a permit, as required, may collect and lay such material as may be necessary for such building or repairs in the street next adjoining or in front of such building or proposed building, for a space not exceeding the front of the lot on which said building is to be erected or repaired, and such person so building or repairing shall have the privilege of using such portion of the sidewalk and of the street as the city engineer may determine to be proper and in the interest of public safety.

(2) *Precautions for public safety; enclosures.* No material shall be placed or piled on any street or sidewalk without every precaution for public safety being taken by the person so using it, or without a

proper enclosure being placed around the same whenever, in the opinion and upon notice of the city engineer, such precaution for public safety shall be deemed necessary.

(3) *Lights.* During all the time building materials shall be in any street or sidewalk, the owner, proprietor or person in control of such materials shall cause a good and sufficient light fixture, to be securely hung, placed or fixed on a post, or otherwise at each of the corners of such enclosure for materials projecting into said street, and in such manner as clearly and plainly to show the place and extent occupied by such materials, and every such fixture shall be lighted by such owner, proprietor or person in control at or before dark in every evening and be kept in such condition that it will burn and shall burn until daylight.

(4) *Condition of sidewalk.* The sidewalk, or so much of the sidewalk as the permittee in question is not authorized to use, shall be kept in good passable condition.

(5) *Cleaning up.* Every such enclosure and the remaining materials, debris and rubbish shall be properly removed from the street or other places as soon as the work is finished or abandoned, or at any other time that the council may so order, by the person to whom the permit was granted, or by the owner of such building. The cleaning up and repair of any curbs, sidewalks or other items damaged shall be accomplished to the satisfaction of the city engineer.

(d) *Deposit.* All persons who may have occasion in the prosecution of their work to place material, machinery or anything else in any street or on any part of any sidewalk in the City may be required to deposit with the director of finance a certified check or cash for such sum as the city engineer may deem sufficient to cover the cost of repairing any damage to the sidewalk, before the commencement of such work. Such check or cash shall be held by the director of finance as a pledge that said contractor or other person will at once repair, or cause to be repaired, any damage to such things or both, and deduct the cost thereof from the amount of such check or cash deposit, and the residue thereof, if any, shall be paid to the person entitled to receive the same. Where the amount deposited is insufficient, the difference due shall be paid by the responsible party. Persons making deposits hereunder, having complied with the requirements hereof, shall upon the final cleaning up of the street or sidewalk area used or the repair of any items damaged, receive a release from the city engineer.

Sec. 18-703. Protection of pedestrians by persons constructing or demolishing buildings.

No person shall demolish, construct, reconstruct, alter or repair any building abutting on a public sidewalk or right-of-way without securing a permit from the city engineer. The review and issuance of such permits shall be in the manner prescribed in section 18-702 of this article for the review of permits for the use of streets during construction. As a condition to the issuance of such a permit, the city engineer may require the erection of a roofed passageway, barricades or other devices deemed necessary for the protection of pedestrians.

Sec. 18-704. Creating conditions necessitating special cleaning or repairs.

(a) No person may cause, suffer or permit any condition to be created in or upon any public street, sidewalk or storm drain that necessitates the special cleaning or repair of such street, sidewalk or storm drain. Without limiting the generality of the foregoing, the following are specifically prohibited:

(1) The hauling of dirt, debris and materials removed from the sites of construction or reconstruction of buildings or structures, or waste materials of any kind, in such manner that any portion of such dirt, debris or materials is spilled, lost, dropped or left upon the streets or sidewalks of the City.

(2) The depositing or leaving upon the streets or sidewalks of mud, dirt or any other material as a result of the use of trucks, construction equipment or machinery, regardless of whether such materials are spilled, lost or dropped in transit or are deposited upon the surface of the street or public property by the tires or wheels of such trucks, construction equipment or machinery.

(3) The grading of lots, lands or driveways at elevations higher than the street or sidewalk level or any other acts, neglect or conditions created or allowed to exist upon said lots, lands or driveways which result in mud, dirt, soil, gravel, debris or any other material being washed or otherwise deposited upon a public street or sidewalk or into a public storm drainage system.

(4) The throwing or depositing in or upon any street, sidewalk or storm drain of any glass bottle, tacks, nail, wire, cans or any other substance likely to injure or damage any person, animal or vehicle.

(5) The driving, running or operation of any tracked vehicle, or any other engine, machine or heavy vehicle of any character, in or upon any street so as to damage the permanent pavement upon any street in which permanent pavement has been or is being laid.

(6) The driving, running or operation of any machine or vehicle of any character in or upon any sidewalk so as to damage any sidewalk.

(b) For purposes of this section:

(1) Special cleaning or repair of streets, sidewalks or storm drains is necessitated when the condition of such streets, sidewalks or storm drains is such that (i) their use by the public is threatened, limited or impaired, (ii) the use and enjoyment of property abutting such streets, sidewalks or storm drains is diminished or limited or (iii) substantial damage is caused to such streets, sidewalks or storm drains or abutting property.

(2) Special cleaning or repair includes but is not limited to sweeping, flushing, removal of mud or debris, resurfacing, restoration of gravel and base, or any other extraordinary maintenance measures that are required to restore the street, sidewalk or storm drain to the condition that existed prior to the occurrence of the prohibited act.

(c) If the City Manager determines that as a result of a violation of subsection (a) conditions exist that require special cleaning or repairs, the City Manager shall notify any or all persons responsible under subsection (a) of the existence of such conditions and shall order prompt abatement thereof.

(d) If any person, having been ordered to abate such a condition requiring special cleaning or repairs, fails, neglects or refuses to abate or remove the condition within the time specified, the City Manager shall cause said condition to be corrected or otherwise remedied by having employees,

contractors, or agents of the City accomplish the work requiring special cleaning or repairs. The costs incurred by the City in accomplishing such special cleaning or repairs shall be billed by the City to the person responsible under subsection (a).

Sec. 18-705. Indemnification of city by users of public rights-of-way and property.

All persons (1) placing any encroachment, obstruction, or object, (2) undertaking any repairs or construction activity, or (3) making any excavation over, under, or upon any of the streets, sidewalks, or other public places in the City shall indemnify and hold harmless the City of Wilmington, its officers, and employees, from any loss, liability or damage, including expenses and costs, for bodily or personal injury, and for property damage sustained by any person as a result of such activities.

Secs. 18-706--18-715. Reserved.

DIVISION II. WATER AND SEWER EXTENSIONS

Sec. 18-716. Application for and approval of extensions required.

(a) Any property owner or developer desiring to have water and/or sanitary sewer services extended where no water and/or sanitary sewer main exists may request an extension of services in the following manner:

(1) If the desired extension is to and along any public street or public way, the abutting owner or developer shall make written application to the City Manager, and shall specify the names of the owners, mailing addresses, street addresses, including block and lot numbers and the type of service requested.

(2) If the desired extension is to and/or into a proposed new development and/or subdivision, the owner or developer shall make written application to the City Manager, stating the desired development and type of service requested, along with other information and plans sufficient for the City to be able to determine the owner's or developer's needs and the City's requirements for approval.

No request for the extension of service shall be considered unless submitted in writing in accordance with the requirements of this article.

(b) The City may require the applicant to submit as part of the written application such information, plans or other data as may be required to adequately determine if the requirements of this article are to be met.

(c) When an application is made for a water or sewer extension or both to serve an area or development that is planned as part of a larger development project or subdivision, all of which is not to be developed at the time application is made, the owner shall submit plans in sufficient detail in order to determine the size and type of facilities which will be necessary to serve the entire development or subdivision when completed.

(d) No extension to the water or sanitary sewer system of the City shall be made and no application shall be approved except in accordance with the requirements of this article.

Sec. 18-717. General requirements.

All extensions of either water or sanitary sewer service shall be governed by the following:

(a) The minimum distance for any extension of a water main or sanitary sewer main shall be determined by the City Manager. In general, the minimum distance for extensions shall be one (1) platted block, or in the case of water mains from main line valve to valve and in the case of sanitary sewer extension from manhole to manhole.

(b) The size of water mains and sanitary sewer mains to be installed and the other required system facilities shall be determined by the City Manager in accordance with the recognized standards and accepted engineering practices and design and in accordance with applicable system plans adopted by the council.

(c) Any development or subdivision project to which or into which the water and/or sanitary sewer system is to be extended, either within or outside the City limits, shall meet and maintain, as a necessary condition to the extension and use of water and/or sanitary sewer services, all applicable City regulations, as required by City policy, including, but not limited to zoning, subdivision and building controls.

Sec. 18-718. Procedure for approval of extensions.

(a) *Extensions ordered by Council inside City limits.* When, in the opinion of the Council, extensions of water service, sanitary sewer service or both are needed in the general public interest, the Council may adopt a resolution, with or without receipt of an application or petition from the abutting property owners, directing that the extensions be made. The resolution may further direct that owners of developed abutting improved property inside the City limits which has plumbing facilities shall connect to the installed mains within a period of time stated in said resolution that is not less than thirty (30) days nor greater than five (5) years from the date the extension is completed and accepted by the City pursuant to procedure in subsection 12-12(d) of the City Code.

(b) *Extensions following application.* When a developer or property owner applies in writing to the City Manager for the extension of water or sanitary sewer facilities inside the City limits, and the developer or property owner has provided all necessary information for the City to determine the purpose and estimated cost for the requested extension, the City Manager may approve the request, provided he shall first find the following conditions to exist:

(1) The City has the excess capacity to provide water and sewer services as requested, and there are no legal economic or other impediments to the extension of such service.

(2) The owner or developer has agreed to employ a competent engineer to prepare plans and specifications and engage a licensed and reputable utility contractor acceptable to the City to install the extensions at no cost to the City.

(3) Facilities constructed shall be located and sized in accordance with the City's plan for the extension of the system, and shall be constructed to all City technical specifications and in conformance with the provisions of this chapter.

If any of the above conditions are not satisfied, the application for extensions shall be submitted to the City Council for consideration.

(c) *Extensions following petition by property owners inside City limits.* The City shall develop and revise as necessary a system plan for water and sanitary sewer extensions, said system plan to be approved by the City Council. The plan shall establish the location and size of all proposed water and sanitary sewer extensions along existing rights-of-way inside the City limits, and shall delineate among the proposed extensions feasible segments, each segment, if constructed at a future date, to be constructed in its entirety as a single project, or part of a single project. When a sufficient number of petitions are received by the City Manager such that a majority of the property owners abutting a proposed segment or combination of segments extending from existing facilities have requested an extension, said majority also owning a majority of the front footage or total area of the property abutting a proposed segment, the City Manager shall determine the estimated cost of an extension of said segment(s) and may recommend to the City Council that said extension be constructed and financed by special assessment. City Council approval shall be made by the adoption of an assessment resolution in accordance with G.S. 160A-225.

(d) *Extensions of water lines following petition by property owners outside City limits.* Owners of developed property outside the corporate limits in the service area of Cape Fear Utilities, Inc. and Quality Water Supplies, Inc. may apply to the City for the extension of water lines to serve such property. The City Council may approve such extension if:

(1) The extension meets the minimum distance requirements set forth in section 18-717 of this chapter;

(2) All property owners along the proposed water line have applied for service;

(3) All property owners have paid a fee for the extension in accordance with the fee schedule;
and

(4) The City Council determines that the construction of the extension will not delay service to property inside the corporate limits. For the purposes of this section, "developed property" shall mean property with improved streets shown on a subdivision plat recorded prior to July 8, 1999.

Sec. 18-719. Financing of extensions.

(a) *Financing by advanced deposit from property owner or developer.* When an extension is to be financed by advanced deposit from a property owner or developer, the City Council shall consider the request for extension of lines. When the City Council has approved said extension, the City and owner or developer shall establish, by contractual agreement, the conditions for the construction of said extension, and said conditions shall include as a minimum the following:

(1) The owner or developer shall make a deposit to the City in an amount equal to at least ten (10) percent of the preliminary cost estimate to secure design and bidding for construction.

(2) Within thirty (30) days after receipt of bids for construction, the owner or developer shall make an additional deposit making the total deposit equal to an amount not less than seventy-five (75) percent of the total estimated cost of the extensions, as set forth in said contract. Said total estimated cost shall include the estimated cost of construction, plus an additional sum of ten (10) percent which shall cover additional but unforeseen contingency costs or expenses. In addition, eight (8) percent of the cost shall be added for inspection, engineering and legal fees. The council shall not award any construction contract until said funds are deposited, and failure by the owner or developer to make said deposit within thirty (30) days after receipt of bids may result in forfeiture of the actual engineering and administrative costs already spent, not to exceed the original ten (10) percent deposit.

(3) At the time construction is completed and accepted by the City, the final cost of construction, engineering, inspection, administrative and legal fees shall be determined by the City. If said final cost is less than the amount deposited by the owner or developer, the owner or developer will be refunded the difference within thirty (30) days after final costs are determined, without interest. If said cost exceeds the amount deposited by the owner, the owner may pay the balance in full within thirty (30) days after the owner is notified by the City of final costs, or the owner may pay the balance in monthly or annual installments over a maximum period of three (3) years from the date said owner is notified of final costs. Said balance shall accrue interest from and after thirty (30) days after date of said notification at the maximum legal statutory rate for the payment of ordinary debt.

(4) If any portion of the extension constructed with funds deposited by the owner or developer is for facilities larger or at greater depth than those needed by the owner or developer, the City shall subtract the additional cost for said larger facilities from the final cost for the project. If the amount deposited by the owner exceeds this revised final cost, but does not exceed the original total cost determined for the project, including the cost for said larger or deeper facilities, then the City shall reimburse the owner or developer at an annual rate equal to twenty (20) percent of the estimated user fees to be collected from the owner or developer annually as a direct result of the extension, without interest, until the City has reimbursed the owner or developer for the total proportionate cost of the larger or deeper facilities.

(5) The procedures described in subsections (a) and (c) will be followed whether the property benefited is inside or outside the City limits. Said procedures and all agreements between the owner or developer and the City shall remain in full force if the property being benefited by water and/or sanitary sewer extensions is annexed into the City while extensions are being installed.

(b) *Financing by special assessment.* When the City Council has approved the extension of water or sanitary sewer facilities in accordance with the procedures stated in subsection 18-718(a) or subsection 18-718(c), the facilities shall be installed under the supervision of the City, and all benefiting property owners shall be assessed for the improvements in accordance with all applicable provisions of G.S. 160A-216--160A-238 and Article XIX of the City Charter. Council approval of the extension of water or sanitary sewer facilities shall be further subject to the following:

(1) One hundred (100) percent of the assessable cost of the construction of the water and/or sanitary sewer extension shall ordinarily be assessed against the property owners whose property abuts the extension when the extension has been approved following a petition from the property owners. The City Council may assess property owners at a percentage of the assessable cost less than one hundred (100) when council has ordered an extension installed in the public interest without a petition from a majority of the owners, and, in the judgment of council, the water or sanitary sewer system in general has derived some benefit from the extension.

(2) Any property owner shall have the option to pay his assessment in full within thirty (30) days after the publication of the notice that the assessment roll has been confirmed, without interest, or pay his assessment fee in equal monthly or annual installments with interest accruing at the maximum statutory rate pursuant to G.S. 160A-233.

(3) Assessments may be held in abeyance without interest until improvements on the assessed property are connected to the water or sewer system from which the assessment was levied, or a date three (3) years from the date of confirmation of the assessment roll, whichever event occurs first.

(4) The City Manager may recommend which method of assessment, pursuant to G.S. 160A-218 or Section 19.11 of the City Charter, would be most equitable for an assessment project. The final determination shall be made by the City Council.

(5) When the method of assessment for an assessment roll is the front footage method, corner lots at the intersection of streets shall be assessed as follows:

a. The maximum exemption of corner lots shall be pursuant to the requirements of this chapter or G.S. 160A-219.

b. If water or sewer mains are installed on both frontages of a corner lot simultaneously, the assessment frontage shall be the entire length of the shorter side and any length in excess of the maximum exemption on the longer side.

c. If water or sewer mains are installed along one (1) frontage only, no exemption shall be permitted. If at a future time a main providing a duplicating service is installed on a second frontage, the maximum exemption shall be allowed on the second frontage, whether the frontage represents the longer side or shorter side.

(6) When the method of assessment for an assessment roll is the front footage method, and a main is installed abutting the property for which a main providing duplicating service already exists, but the lot is not a corner lot, e.g., a duplicating service main is along a public alley or public way abutting the property, or along the same side of the lot as the main being installed, then the total front footage of the main along said property shall be included in the total front footage to determine the cost per front foot for the assessment roll. However, the total front footage to said property of the main previously installed shall be subtracted from the front footage of said property of the newly installed main to determine the length of frontage to be assessed to the owners.

(7) Along rights-of-way dedicated for public use but not totally owned by the City where a single water and/or sewer main could technically service the abutting owners on both sides of the right-of-way, but the controlling interests of the owner(s) of the rights-of-way requires or causes it to be more economical for the City to construct two (2) mains, one (1) to service each side of the rights-of-way, the abutting property owners shall be assessed as follows:

a. If services were connected from a single main to properties on both sides of the right-of-way, or if owners on both sides were assessed for the construction of a single main, prior to the imposition of certain control by the owner of the public right-of-way which will not permit all abutting property owners on both sides to be serviced by sufficient future connections to that main, the City may extend additional mains as necessary and funds are available to service those property owners without any assessment against their property.

b. If the system plan provides for the future extension within a segment of two (2) separate water and/or sewer mains in the same right-of-way, each to service property owners abutting one (1) side of the right-of-way, and such plan for two (2) mains is a necessary or economical plan in order to meet controls in effect imposed by the owner of the public right-of-way, the property owners abutting each side shall ordinarily be assessed fifty (50) percent of the total assessable cost of the main extension constructed to serve that side. Property owners on one (1) side shall not be assessed for a main extension constructed to serve only the opposite side. The assessment may be less than fifty (50) percent if installed under the provisions of subsection 18-718(a).

(c) Financing and construction by owner or developer.

(1) When the City Manager has approved an extension of water or sanitary sewer facilities as authorized by subsection 18-718(b), the property owner or developer shall pay the total cost of constructing the facilities including engineering costs.

(2) When the City Council has approved a request for the extension of water and sewer facilities by a property owner or developer inside or outside the City limits to be constructed by the property owner or developer, and said extension results in the construction of facilities larger or at greater depth than those needed by the owner or developer, the City and the owner or developer shall establish by contractual agreement the conditions for City participation in said larger facilities or greater depth lines.

a. For water main extensions included in a reimbursement contract authorized under subsection 18-719(d) that are located within the existing City limits, the City will remit any financial participation in the cost of the oversized main to the developer when the extension is completed and accepted by the City.

b. For water main extensions included in a reimbursement contract authorized under subsection 18-719(d) that are located outside the existing City limits, the City will remit any financial participation in the cost of the oversized main to the developer when the extension is completed and accepted by the City and the developer's petition for annexation has been approved by the City Council. The City will only participate in the over-sizing cost attributed to that portion of the extension abutting properties in the existing City limits or annexed by the City at the time of the construction of the water main extension.

c. There shall be no financial participation by the City in the cost of over-sizing facilities that remain outside the City limits.

(3) For all extensions constructed by the property owner or developer, the City shall approve all plans and specifications, and shall have the authority to appoint inspectors to supervise construction.

(d) *Reimbursement of costs of water main extensions abutting intervening property.* The City may enter into a reimbursement contract with a property owner or developer for reimbursement of the pro-rata costs of water main extensions that abut property other than that of the developer. Reimbursement contracts may be entered into for water main extensions only and shall not be available for sanitary sewer extensions.

(1) A reimbursement contract may be requested by any developer financing a water main extension within the existing City limits.

(2) A reimbursement contract may be requested by any developer financing a water main extension outside the existing City limits only if the developer petitions for annexation of the property by the City. The City Council will examine the feasibility of annexing the property and determine whether or not to annex the property. The City Council may approve a reimbursement contract with a developer whether or not the City Council chooses to annex the property.

(3) Reimbursements will be made to the developer for the pro-rata share of eligible costs of the water main extension for each property owner abutting the extension that connects to such extension. Eligible costs shall be determined by the city engineer and shall include the costs of engineering, material and construction associated with the water main extension. The method of determining the pro-rata share of costs shall be the number of feet of property fronting the water main extension. The City Council will establish a rate per front foot to be charged to all property owners, excepting those properties determined to be exempt, abutting such water main extensions who connect to the City's water system. This charge shall be known as the "developer main extension charge" and the rate shall be set forth in the City's fee schedule. The rate will be established from time to time by the City Council. Developer main extension charges will not be charged to property owners who connect to water main extensions for which a reimbursement contract has not been executed.

(4) The maximum term of the reimbursement contract shall not exceed twelve (12) years. Reimbursements will be made annually for all developer main extension charges collected during the City's preceding fiscal year relating to the subject extension. Reimbursements must be requested, in writing, by the developer between August 1 and September 30. No reimbursement shall be made after the 12-year term or after the developer has recovered all eligible reimbursement costs of the water main extension, whichever occurs first. Developer main extension charges will not be collected by the City from property owners abutting water main extensions included in a reimbursement contract after the reimbursement contract has been terminated.

(5) The city engineer shall determine the properties liable for the developer main extension charge for each reimbursement contract executed by the City Council. The City attorney shall prepare a standard reimbursement contract for eligible water main extensions. The City finance officer shall be

responsible for the accounting and remittance of all reimbursements to developers participating in this program.

(6) The City Council will consider requests for a reimbursement contract for water main extensions on a case-by-case basis. The City Council reserves the right to deny any request for a reimbursement contract that is not in the best interest of the ongoing operation and growth of the City's water system.

Sec. 18-720. Specifications; ownership.

(a) Any water mains or sanitary sewer mains extended under the provisions of this article shall be installed and constructed in accordance with the approved plans, specifications and other requirements of the City. All facilities installed under the provisions of this article shall become the sole property of the City and under its jurisdiction and control for any and all purposes whatsoever at the time such facilities are connected to the City system. When required, the property owner or owners shall grant to the City such utility easements as the City may require.

(b) All extensions to the City's water or sanitary sewer system shall, upon acceptance of construction by the City, become the property of the City, and the City shall be responsible for all operation and maintenance of the accepted facilities. As a precondition to such acceptance, the City shall require execution of all lien of all lien waivers or other releases, assignment of the warranties and guarantees for equipment and facilities, and recordation of all proper rights-of-way transferring interest in all real or personal property incidental to the project unto the City in a form satisfactory to the City attorney.

Sec. 18-721. Additional subdivision improvement requirement.

The council may in its discretion, as a condition under which water or sewer service or both will be extended, require the owner of a proposed subdivision to enter into an agreement to improve the proposed streets therein at his own expense and in accordance with the ordinances then in force governing the acceptance of public streets for the City.

Sec. 18-722. Approval of extensions outside city.

(a) When a developer or property owner applies in writing to the City Manager for the extension of water or sanitary sewer facilities outside the City limits, and the developer or property owner has provided all necessary information for the City to determine the purpose and estimated cost for the requested extension, the City Manager may authorize said extension, provided the City Manager shall first find the following conditions to exist:

(1) The City has the excess capacity to provide water and sewer services as requested, and there are no legal, economic or other impediments to the extension of such service. In addition, the authorization of the extension will not delay service to property inside the corporate limits.

(2) The owner or developer agrees to finance the total cost of constructing facilities between the owner's property and the existing water or sanitary sewer system facilities of the City in accordance with the contractual agreement established between the City and the owner.

(3) Facilities constructed shall be located and sized in accordance with the City's plan for the extension of the system, and shall be constructed to all City technical specifications.

(4) Any development or subdivision project to which or into which the water and/or sanitary sewer system is to be extended shall meet and maintain, as a necessary condition to the extension and use of water and/or sanitary sewer services, all applicable City regulations as determined by the City Manager and agreed to under contract with the owner or developer. At a minimum, the development or subdivision project shall meet and maintain all City standards for water, sewer and stormwater. The development also shall meet City or North Carolina Department of Transportation Street Construction Standards.

(5) The owner or developer shall grant to the City the exclusive right and franchise to offer water and/or sanitary sewer services in the development or subdivision. The owner or developer shall prohibit the property in the development or subdivision from connecting to any other water and/or sanitary sewer services.

If any of the above conditions do not exist, the City Manager shall deny the extension.

(b) If, after the City Manager has approved the extension of a main outside the City limits and the main has been constructed and publicly dedicated, a property owner abutting such main requests service, the City Manager may authorize connection of an individual property owner to the mains. The owner shall be responsible for the required fees as stated in Chapter VI of the fee schedule. Where more than one (1) customer requires service from a single service connection, this shall be deemed a main extension and approval pursuant to subsection 18-722(a) will be required.

Secs. 18-723--18-730. Reserved.

Division III. COMPREHENSIVE STORMWATER ORDINANCE

PART 1. GENERAL PROVISIONS

Sec. 18-731. Title

This division of Article 14 of the Land Development Code shall be known as the "Comprehensive Stormwater Ordinance." It is referred to herein as "this ordinance."

Sec. 18-732. Authority

The city is authorized to adopt this ordinance pursuant to North Carolina law, including but not limited to: Article 14, Section 5 of the Constitution of North Carolina; Article XXIII of the Wilmington City Charter; North Carolina General Statute §§ 143-214.7, 160A-174, 160A-175, 160A-185; North Carolina General Statute §160A, Article 19; and North Carolina Session Law 2004-163.

Sec. 18-733. Findings

It is hereby determined that:

Increasing impervious surfaces alters the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;

These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment; and

These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from development sites.

Further, the Federal Water Pollution Control Act of 1972 (“Clean Water Act”) and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal Phase II requirements, compel certain urbanized areas, including this jurisdiction, to adopt minimum stormwater controls such as those included in this ordinance.

Therefore, the city establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge.

Sec. 18-734. Purpose

(a) *General.* The purpose of this ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint and point source pollution associated with new development and redevelopment. It has been determined that proper management of construction-related and post-development stormwater runoff will minimize damage to public and private property and infrastructure; safeguard the public health, safety, and general welfare; and protect water and aquatic resources.

(b) *Specific.* This ordinance seeks to meet its general purpose through the following specific objectives and means:

(1) Establish decision-making processes for development that protect the integrity of watersheds and preserve the health of water resources;

(2) Require that new development, redevelopment, and expansion maintain the pre-development hydrologic response in their post-development state as nearly as practicable for the two (2)-year, ten (10)-year, and twenty-five (25)-year design storms to reduce flooding, stream bank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;

- (3) Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
- (4) Establish design and review criteria for the construction, function, and use of structural stormwater BMPs that may be used to meet the minimum post-development stormwater management standards;
- (5) Encourage the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of green space, riparian buffers and other conservation areas to the maximum extent practicable;
- (6) Establish provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater BMPs to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;
- (7) Establish administrative procedures for the submission, review, approval, and disapproval of stormwater management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance;
- (8) Coordinate site design plans that include open space and natural areas with the intent and policies of the Future Land Use Plan, and the Wilmington-New Hanover County CAMA Plan.

Sec. 18-735. Applicability and jurisdiction

- (a) *General.* Beginning with and subsequent to its effective date, this ordinance shall be applicable to all development, redevelopment, and expansion including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to this section.
- (b) Applicability.
 - (1) Except as otherwise provided herein, the provisions of this division shall apply to each of the following:
 - a. Any non-residential development activity that creates a total of ten thousand (10,000) square feet or more of newly constructed impervious surface area irrespective of the condition of the existing surface upon which the impervious surface area is created.
 - b. All new major subdivisions as defined in Article 7 of this chapter.
 - c. Any development activity that requires a Sedimentation and Erosion Control Plan.
 - d. Any development activity that requires a Coastal Area Management Act (CAMA) Major Development Permit.
 - e. Any single family residential development within one-half mile and draining to Class SA waters, that has an impervious surface area greater than 12 percent (12%), and that will add ten thousand (10,000) square feet or more of impervious surface.

(2) A development activity or project requires a Sedimentation and Erosion Control Plan if the activity or project disturbs one acre or more of land, including an activity or project that disturbs less than one acre of land that is part of a larger common plan of development.

“Common plan of development” is interpreted as an area where construction activities may be taking place at different times, but under a single over-arching development plan. For example, a residential development project that involves subdivision of land, installation of utilities, access roads and other common facilities with the intention of selling or developing lots in the subdivision as home sites. A stormwater permit is required to cover all activities under the common plan of development including future home sites such that the stormwater system is capable of managing runoff from the entire project at complete build-out.

(3) In applying the provisions of this Article, the cumulative area of the proposed development activity and all development activity on a site within the two (2) year period immediately preceding the date of application for a stormwater discharge permit shall be considered together.

(4) Whenever an existing developed site is modified to create a total of ten thousand (10,000) square feet or more of newly constructed impervious surface area, irrespective of the condition of the existing surface upon which the new impervious surface is created, the modified portion of the site shall comply with this Article. Whenever the modification results in placement of newly constructed impervious surface over any existing surface such that the newly constructed impervious area equals or exceeds fifty (50) percent of the total impervious surface area, then the entire site shall be required to comply with this article. In determining the applicability of this section, resurfacing of existing pavement without demolition is considered maintenance and not placement of new impervious surface.

(5) Any area to be paved, or otherwise made impervious to storm water exceeding two thousand five hundred (2,500) square feet shall require an approved drainage plan in accordance with the city Technical Standards. Site drainage shall be conveyed through vegetated swales or underground pipes of sufficient size to the nearest storm drain or otherwise as provided in the city’s *Technical Standards and Design Specifications Manual*.

(c) *Exemptions.* The following shall be exempt from the requirements of this division.

(1) The installation, repair, replacement or maintenance of subsurface utilities by public or private utility operators;

(2) Single-family residential unit that does not meet the applicability standards above;

(3) Single-structure duplex residential building (one building with two units not part of a larger common plan or subdivision) unless it meets the threshold for applicability set forth in this section; and

(4) Any area to be paved, stabilized, or otherwise made impervious to stormwater that does not exceed two thousand five hundred (2,500) square feet.

(d) *Compliance and permit.* No land disturbing activity shall occur except in compliance with the provisions of this ordinance or unless exempted. No development for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

(e) *Area of applicability.* The provisions of this ordinance shall apply within the corporate limits of the city. The official map of the corporate limits being that along with any written description maintained in the office of the City Clerk as required by G.S. 160A-22.

Sec. 18-736. Interpretation

In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina General Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

Sec. 18-737. Design manual

(a) *Reference.* The City Manager shall use the policy, criteria, and information, including technical specifications and standards, in the *Wilmington Technical Standards and Specifications Manual* as the basis for decisions about stormwater permits. The *New Hanover County – Wilmington Low Impact Development (LID) Guidance Manual* and the *State of North Carolina Manual of Stormwater Best Management Practices* may be used as the basis for design, implementation, performance, and maintenance of *structural and non-structural stormwater BMPs*. When there is a conflict between these manuals, the more stringent standards shall apply.

These manuals include acceptable stormwater treatment practices, including specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the Phase II laws and regulations.

(b) *Relationship of design manuals to other laws and regulations.* If the specifications or guidelines of the design manuals are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the design manuals.

(c) *Changes to standards and specifications.* If the standards, specifications, guidelines, policies, criteria, or other information in the design manuals are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the design manual in effect at the time of submittal shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application, unless the applicant specifically requests review and permitting under the new policies, provided, however, the applicant submits all documentation required for approval within eighteen (18) months of the date of site plan acceptance in accordance with Article 3 of this Chapter. A combination of policies (old and new) shall be prohibited.

(d) *Amendments to design manual.* The design manuals may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience.

Prior to amending or updating the design manuals, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided, except where annual updates are scheduled or changes are deemed by the City Manager to be insignificant.

Sec. 18-738-- Sec. 18-745. Reserved.

PART 2. ADMINISTRATION AND PROCEDURES

Sec. 18-746. Administration

(a) *Powers and duties.* In addition to the powers and duties that may be conferred by other provisions of the Land Development Code and other laws, the City Manager shall have the following powers and duties under this ordinance:

- (1) To review and approve, approve with conditions, or disapprove applications for approval of plans pursuant to this ordinance.
- (2) To make determinations and render interpretations of this ordinance.
- (3) To establish application requirements and schedules for submittal and review of applications and appeals, to review and make recommendations to the city on applications for development or redevelopment approvals.
- (4) To enforce the provisions of this ordinance.
- (5) To maintain records, maps, forms and other official materials as related to the adoption, amendment, enforcement, and administration of this ordinance.
- (6) To provide expertise and technical assistance to the City Council, upon request.
- (7) To designate appropriate other person(s) who shall carry out the powers and duties of the City Manager.
- (8) To take any other action necessary to administer the provisions of this ordinance.

Sec. 18-747. Review Procedures

(a) *Stormwater discharge permit required.* A stormwater permit is required for all development, redevelopment, and expansion unless exempt pursuant to this Article. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section. For phased developments, each phase shall require a separate, stand-alone stormwater permit application unless the original application included sufficient detail to cover subsequent phases and there are no substantial modifications required.

No owner or developer of a site shall commence any of the development activities described in this division above without obtaining a stormwater management permit pursuant to the provisions of this ordinance unless explicitly exempted.

(1) *Issuance.* No stormwater management permit shall be issued until the following conditions are met:

- a. Approval of a stormwater management plan by the City Manager.
- b. Submission and approval of any required easements and stormwater management inspection and maintenance agreements or other documents as required by this ordinance. All documents required by this ordinance shall be fully executed by applicant prior to the recordation of the final subdivision plat or issuance of the certificate of occupancy.
- c. Payment of stormwater management contribution where off-site stormwater management is applicable.
- d. Payment of all required application fees.
- e. Compliance with all applicable laws, ordinances, and regulations.

(2) *Transferability.* Stormwater management permits shall be issued in the name of the applicant(s) and no permit shall be transferred or assigned without the written consent of the City Manager.

(b) *Existing Permit Modifications.* An existing development proposing to make modifications to an existing permit may be subject to permit revision by NC DWQ or the City according to the following scenarios.

(1) For an existing subdivision that has an existing NCDWQ permit with some of the lots not yet developed the developer of an undeveloped lot would continue to be subject to permitting through NC DWQ.

(2) For existing developed parcels with existing NCDWQ permit that are redeveloped the following permitting requirements apply:

a. Minor modifications which could mean a change to impervious surface area but no change to the BMP(s) would be processed by NCDWQ

b. Major modifications, which means there is a required change to the BMP(s), would be permitted by the City. NCDWQ will rescind their permit after the new City permit is issued.

(3) Permit renewals will be coordinated by the originating permitting agency.

(c) *Effect of permit.* A stormwater management permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including structural BMPs and elements of site design for stormwater management other than structural BMPs.

The permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of stormwater for the development or redevelopment of a site consistent with the requirements of this ordinance, whether the approach consists of structural BMPs or other techniques such as low-impact or low-density design. The permit does not continue in existence indefinitely after the completion of the project; rather, compliance after project construction is assured by the maintenance provisions of this ordinance.

(d) *Authority to file applications.* All applications required pursuant to this Code shall be submitted to the city by the land owner or the land owner's duly authorized agent. A separate application shall be required for each permit, but a permit and application therefore may cover any number of lots being developed as a single project. The application shall be filed with the city on a form approved by the City Manager, and signed by the applicant, or by the applicant's agent or representative.

(e) *Submittal of complete application.* An application shall be considered as timely submitted and complete only when it contains all elements of a complete application pursuant to the application submittal schedule and this ordinance, along with the appropriate review fee as set forth in the fee schedule. If the reviewer finds that an application is incomplete, the applicant shall be notified of the deficient elements within fifteen (15) working days from the day of submittal and shall be provided with an opportunity to submit a complete application. If the deficiencies are not corrected by the applicant within fifteen (15) working days from the time of notice of the deficiencies, the application shall be considered withdrawn. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in any submission schedule established for the review of applications. To be complete, an application shall include the appropriate fee as set forth in the fee schedule.

A complete application shall not be construed as an approved application nor shall it indicate that additional information will not be required for submission as part of the review process.

(f) *Review.* The City Manager shall review the application and determine whether the application complies with the standards of this ordinance. For a project of 100 acres or less, the City Manager shall complete the review within sixty (60) calendar days after an application is deemed complete.

(1) *Approval.* The City Manager shall approve the application if the application complies with the standards of this ordinance. The City Manager may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included as part of the approval.

(2) *Conditions of approval.* All stormwater management permits are conditioned on compliance with the approved plan and with all relevant laws, ordinances, regulations, and standards of any state or local government or agency, including any standards established by the city relating to stormwater management. Permits are also conditioned on the agreement and obligation of the applicant to save harmless the city, its officers and employees, from any expense incurred through the failure of the applicant, or the applicant's agents to complete any required stormwater management measures, or from any damages growing out of the negligence of the applicant or the applicant's agents in connection with stormwater management measures.

(3) *Failure to comply.* The City Manager shall notify the applicant if the application fails to comply with the standards of this ordinance, and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit an application with revisions. (This shall be known as a re-submittal)

(4) *Re-submittal.* If a revised application is not re-submitted within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee for a new submittal.

A complete revised application shall be reviewed by the City Manager within sixty (60) calendar days after its timely re-submittal and shall be approved, approved with conditions, or disapproved.

One timely re-submittal of an application may be submitted without payment of an additional permit review fee.

Sec. 18-748. Concept plan.

Before a stormwater management permit application is submitted, a stormwater concept plan shall accompany the TRC application. For projects not requiring TRC review, the applicant may schedule a pre-application conference. The purpose of this review is to discuss the post-construction stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to stormwater management designs before formal site design engineering is commenced. Any relevant local watershed plans, the Future Land Use Plan, the CAMA Plan, and other relevant resource protection plans should be consulted in the discussion of the concept plan.

To accomplish this goal, the following minimum information shall be included in the concept plan, which shall also be submitted as part of the application:

(a) Existing conditions and proposed site plan.

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing and proposed topography; existence of any streams or other surface waters; mapping of predominant soils from soil surveys; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.

(b) Natural resources inventory.

The applicant shall submit a written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project based on available site data and available GIS information. This description should include a discussion of soil types, forest cover, significant geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, flood plains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development and stormwater management. This information can be incorporated into the site inventory as required in Article 3.

- (c) Stormwater management system concept plan.

A written or graphic concept plan of the proposed post-development stormwater management system including: preliminary selection and location of proposed structural stormwater controls; low-impact design elements; preliminary sizing, location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of flood plain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

Sec. 18-749. Off-site stormwater management requirement.

Where a development is within the drainage of a public stormwater management facility or other improvements to the city's drainage system that have been constructed, programmed, or identified for construction in the city's capital improvement program or are reflected on the city's master drainage improvement plan, which have or will have sufficient capacity to accommodate flood attenuation requirements for run-off generated by the development, the city may require the applicant to pay to the city a fee in lieu of construction of on-site stormwater management facilities in accordance with the following formula except in the CBD or RFMU districts where fee in lieu does not apply:

$$\text{Fee} = [(0.12) (\text{Land value}) + (\text{Construction cost}) (\text{Site Acreage})] (\% \text{ impervious})$$

For the purposes of this section, the following definitions apply:

- (a) Land value shall be the most recently assessed tax value for the tract of land being developed or the most recent purchase price, whichever is the greatest.
- (b) Construction cost shall mean the dollar amount per acre of constructing on-site stormwater management facilities based on historical data. On the date of this ordinance, such amount shall be five thousand forty-seven dollars (\$5,047). Such amount shall be adjusted annually on July 1, based on the construction cost index for the prior year.
- (c) Site acreage shall be the total area of the tract of land being developed and requiring stormwater management facilities in acres, rounded to the nearest one tenth (1/10) of an acre. If partial control of runoff is controlled on site, the acreage will be adjusted on a pro-rata basis.
- (d) Percent impervious shall be the acreage on the site requiring stormwater management facilities that is impenetrable by to water divided by the total site acreage, rounded to the nearest tenth of an acre.

Sec. 18-750. Stormwater management measures in the CBD and RFMU districts

In the CBD and RFMU districts, stormwater management plans must include on-site measures that meet the performance standards of this section.

- (a) The following water quality performance standards must be met with use of approved best management practices (BMPs).

- (1) The project shall control and treat the run-off from the first one-and-one-half (1 ½) inches of rain, or.
- (2) The project shall control and treat the difference in stormwater run-off between the pre-development and post-development conditions for the one (1) year, twenty-four (24) hour storm, whichever is greater
- (b) The following is a list of BMPs deemed approved if designed and constructed according to the Technical Standards and Specifications Manual, the NC DENR BMP manual or the New Hanover County – Wilmington LID Guidance Manual, whichever is more stringent:
 - (1) Vegetative roof cover
 - (2) Permeable pavement
 - (3) Infiltration devices
 - (4) Bioretention devices
 - (5) Other devices in the City Technical Standards and Specifications Manual, NC BMP Manual, and New Hanover County – Wilmington LID Guidance Manual
- (c) The following BMPs may be considered on a case-by-case basis as approved by the City Manager:
 - (1) Proprietary devices with design flow rates that have been approved for use by the City Engineer on a case-by-case basis to meet water quality standards; and
 - (2) Cisterns with demonstrated capacity and use-assurance to meet requirements.
- (d) *Redevelopment projects exempt.* Redevelopment projects in the CBD and RFMU districts that meet all of the following criteria are exempt from the provisions of this section:
 - (1) The redevelopment creates no net increase in total site impervious surface area over existing site conditions;
 - (2) The proposed redevelopment provides stormwater controls that are equal or better than the previous development; and
 - (3) A site plan application for the redevelopment project has been accepted as complete within twelve (12) months of the issuance of any demolition permit for existing structures on the site and an approved site plan is received within twelve (12) months. The City manager may grant an extension of ninety (90) days to receive an approved permit if substantial progress has been made. If a site plan is substantially changed subsequent to the expiration of twelve (12) months from demolition permit issuance, the site plan will be reviewed as a new development application.

(e) Redevelopment projects in the CBD and RFMU districts that are part of a larger common plan of development that has previously been permitted as meeting the criteria above for redevelopment shall also be exempt from the provisions of this section.

(f) *Other considerations.* This section does not apply to projects for which a stormwater permit has been issued prior to the adoption of this ordinance (September 1, 2009). No waivers shall be made retroactive to the effective date of this section. No refunds shall be considered for fees assessed prior to the effective date of this section.

Sec. 18-751. Additional requirements for fee alternative.

Fees approved and accepted by the city for off-site stormwater management shall be used by the city for land acquisition (including easements and rights-of-way) and the study, engineering, design, purchase, construction, expansion, repair, maintenance, landscaping, and inspection of public stormwater management facilities, either existing or contained in an approved capital improvements program or reflected on the city's master drainage improvement plan. Fees collected from the development shall be applied to projects benefiting in the drainage basin from which the fee is collected.

Sec. 18-752. As-built plans and final approval

Upon completion of a project, and before a certificate of occupancy shall be granted, the applicant shall certify that the completed project is in accordance with the approved stormwater management plans and designs, and shall submit actual "as-built" plans for all stormwater management facilities or practices after final construction is completed.

The plans shall show the final design specifications for all stormwater management facilities and practices and the field location, type, size, depth, invert and planted vegetation of all measures, controls, and devices, as installed. As-built plans shall be prepared in accordance with the city Technical Standards. As-built stormwater measures, controls, and devices shall be certified, under seal, to be in compliance with the approved stormwater management plans and designs and with the requirements of this ordinance. A final inspection and approval by the City Manager shall occur before the release of any performance securities.

Sec. 18-753. Other Permits

No certificate of compliance or occupancy shall be issued by the city without final as-built plans and a final inspection and approval by the City Manager, except where multiple units are served by the stormwater practice or facilities, in which case the city may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval has occurred.

Sec. 18-754. Approvals

(a) *Effect of approval.* Approval authorizes the applicant to go forward with only the specific plans and activities authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, state, and federal authorities.

(b) *Time limit/expiration.* An approved plan shall become invalid if the applicant fails to make substantial progress on the site within eighteen (18) months after the date of approval. The City Manager may grant a single, six (6) - month extension of this time limit, for good cause shown, upon receiving a written request from the applicant before the expiration of the approved plan. In granting an extension, the City Manager may require compliance with standards adopted since the original application was submitted unless there has been substantial reliance on the original permit and the change in standards would infringe the applicant's vested rights.

(c) *Renewal.* If the stormwater management permit expires, the permittee shall make application for a new permit in accordance with this ordinance.

Sec. 18-755--18-759. Reserved.

PART 3. STANDARDS

Sec. 18-760. General Standards.

All development, redevelopment, or expansion to which this ordinance applies shall comply with the standards of this section.

(a) *Design Storm.* The city has determined regardless of density classification or location the minimum control for safety of life and property to be the control of the post-development peak discharge rate of the two (2)-year, ten (10)-year, and twenty-five (25)-year storms to not exceed the pre-development peak runoff discharge rate for the same storms. Privately owned and maintained on-site conveyance systems shall be designed at a minimum to convey the ten (10)-year storm provided the standard for the post development peak discharge rate as specified in this section is met.

(b) *Overland Flow.* Design engineers shall indicate on the project drainage plans, the location and approximate extent of the overland relief path and areas that may be affected by surface storage for the appropriate design storm.

(c) For redevelopment projects that meet the criteria laid out below and located in priority redevelopment areas as identified in the Future Land Use Plan or approved corridor plans, the project at a minimum shall treat the water quality volume specified in this section.

(1) The redevelopment creates no net increase in total site impervious surface area over existing site conditions;

(2) The proposed redevelopment provides stormwater controls that are equal or better than the previous development; and

(3) A site plan application for the redevelopment project has been accepted as complete within twelve (12) months of the issuance of any demolition permit for existing structures on the site and an approved site plan is received within twelve (12) months. The City manager may grant an extension of ninety (90) days to receive an approved permit if substantial progress has been made. If a site plan is substantially changed subsequent to the expiration of twelve (12) months from demolition permit issuance, the site plan

will be reviewed as a new development application. A project that is part of a larger common plan of development that has previously been permitted as meeting the criteria above for redevelopment shall also be deemed to meet these criteria.

(d) *Buffers from surface waters.* New development shall have a fifty (50)-foot-wide vegetative buffer and redevelopment activities shall have a thirty (30)-foot-wide vegetative buffer along all perennial or intermittent surface waters. A perennial or intermittent surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). The width of a buffer is measured horizontally from the normal pool elevation of impounded structures, from the bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline. The vegetative buffer may be cleared or graded, but must be planted with and maintained in grass or any other vegetative or plant material and may contain vegetated BMPs that otherwise meet the requirements of this article and the design manual. Vegetative buffers and filters required by this section and any other buffers or filters required by State water quality or coastal management rules or local government requirements may be met concurrently and may contain, in whole or in part, coastal, isolated, or 404 jurisdictional wetlands that are located landward of the normal waterline.

(e) *Built-upon area setbacks.* All built-upon area shall be landward of any buffer required under this section from any perennial and intermittent surface waters as defined herein.

(f) Relief from the buffer and setbacks required in this section may be granted when the applicant can provide an official letter of determination by the NC Division of Water Quality that surface waters are not present in accordance with 15A NCAC 02B .0233(3)(a).

(g) Development of boating facilities or other water dependent uses that have received or are required to secure a Coastal Area Management Act (CAMA) Major Permit are exempt from the vegetative buffer requirements to the extent allowed by the permit.

(h) The development or redevelopment of a parcel in the Urban Waterfront as defined by NC Administrative Code 15 NCAC 07H .0209(g) is exempt from the buffer and setback requirements of this section provided that it meets the following conditions:

(1) The development must be consistent with adopted plans;

(2) Impervious surfaces shall not exceed 30 percent of the AEC area of the lot. Impervious surfaces may exceed 30 percent if the applicant can effectively demonstrate, through a stormwater management system design, that the protection provided by the design would be equal to or exceed the protection by the 30 percent limitation. Redevelopment of areas exceeding the 30 percent impervious surface limitation may be permitted if impervious areas are not increased and the applicant designs the project to comply with the intent of the rule to the maximum extent feasible; and

(3) The development shall meet all stormwater management requirements of this section..

(i) *Covenant Restrictions.* The approval of the stormwater management permit shall require an enforceable restriction on property that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development, management, redevelopment, or expansion maintains the site consistent with the approved project plans, including recordation on any approved plat limits of impervious surface area on a per-lot basis, if applicable.

(j) Multiple lot developments shall be regulated through deed restrictions on the allocation of impervious surface area on a per-lot basis as identified on approved plans and preliminary plans. For exempt subdivisions, impervious limits may be required on a final plat to correspond to an approved drainage plan or stormwater plan if applicable. Per lot allocations for residential developments shall include a primary allocation for primary residences including attached garages and driveways and a secondary allocation for accessory structures with impervious surfaces.

Sec. 18-761. Other considerations in design preparation.

(a) The pre-development peak discharge rate shall be computed assuming that all land uses in the drainage area of the proposed facility are in a predevelopment state. The city considers predevelopment state to be woods in good condition for the purposes of determining runoff coefficients.

(b) The developer shall incorporate use of natural topography and land cover such as wetlands, ponds, natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

(c) Where storm drainage systems convey off-site stormwater through the property, computations reflecting the drainage area of land tributary to the site, and estimated runoff of the area served by such systems, shall be provided. In addition, a complete drainage study shall be submitted for the site. All storm drainage systems conveying off-site stormwater through property shall be public systems or private systems which shall be designed, constructed and maintained to at least the standards of a public storm drainage system as contained in the standards and specifications manual. The design and construction shall be certified by an authorized registered professional as meeting or exceeding the requirements of this division and the stormwater management technical standards and specifications.

Sec. 18-762. Development standards near Outstanding Resource Waters

Development activities within five hundred seventy-five (575) feet of the mean high waterline of areas designated by the Environmental Management Commission (“Commission”) as Outstanding Resource Waters (ORW) shall be permitted as follows:

(a) *Low-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:

(1) The development has an impervious surface area of twelve percent (12%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low-density as long as the project meets or exceeds the requirements for low-density development and locates the higher density development in

upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.

(2) Stormwater runoff from the development is transported primarily by vegetated conveyances. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(b) *High-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:

(1) The development has an impervious surface area of greater than twelve percent (12%).

(2) The development has no direct outlet channels or pipes to Class SA waters unless permitted in accordance with the design manual. Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(3) The "water quality volume" for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half (1 ½) inches of rainfall or the difference in the stormwater runoff from all surfaces from the predevelopment and post development conditions for a one-year, twenty-four (24)-hour storm, whichever is greater. Runoff volume drawdown time shall be a minimum of forty-eight (48) hours, but not more than one hundred twenty (120) hours.

(4) The development utilizes control systems that are any combination of infiltration systems, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative low impact development stormwater management systems designed in accordance with the design manual to treat the water quality volume. Wet detention ponds may be used as a stormwater control system to meet the requirements of this section, provided that the stormwater control system fully complies with the requirements of this section. If a wet detention pond is used within one-half (1/2) mile of Class SA waters, installation of a stormwater best management practice in series with the wet detention pond shall be required to treat the discharge from the wet detention pond. Secondary stormwater best management practices that are used in series with another stormwater best management practice do not require any minimum separation from the seasonal high water table.

(5) Stormwater runoff from the development that is in excess of the water quality volume must flow overland through a vegetative filter designed in accordance with design manual with a minimum length of fifty (50) feet measured from mean high water of Class SA waters.

(6) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of eighty-five percent (85%) average annual removal for total suspended solids (TSS).

(7) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.

(c) *Stormwater discharges prohibited.* All development activities, including both low- and high-density projects, shall prohibit new points of stormwater discharge to Class SA waters or an increase in

the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA waters. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. The following shall not be considered a direct point of stormwater discharge:

- (1) Infiltration of the stormwater runoff of the water quality volume as described in this section.
- (2) Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area, that is capable of providing effective infiltration of the runoff of the water quality volume as described in this section. Notwithstanding the other requirements of this section, the infiltration mandated in this section does not require a minimum separation from the seasonal high-water table however all other requirements of this article must be met.
- (3) The discharge from a wet detention pond that is treated by a secondary stormwater best management practice, provided that both the wet detention pond and the secondary stormwater best management practice meet the requirements of this section.
- (d) *Limitation on the density of development.* Development shall be limited to an impervious surface area of twenty-five percent (25%) or less.

Sec. 18-763. Development standards near Class SA waters

Development within one-half (1/2) mile of waters classified by the Commission as Class SA waters and draining to unnamed freshwater tributaries to Class SA waters shall be permitted as follows:

- (a) *Low-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:
 - (1) The development has an impervious surface area of twelve percent (12%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low-density as long as the project meets or exceeds the requirements for low-density development and locates the higher density development in upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.
 - (2) Stormwater runoff from the development is transported primarily by a vegetated conveyance system. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.
- (b) *High-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:
 - (1) The development has an impervious surface area of greater than twelve percent (12%).

- (2) The development has no direct outlet channels or pipes to Class SA waters unless permitted in accordance with the design manual. Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.
 - (3) The water quality volume for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half inches of rainfall or the difference in the stormwater runoff from all surfaces from the predevelopment and post development conditions for a one-year, twenty-four (24)-hour storm, whichever is greater. Runoff volume drawdown time shall be a minimum of forty eight (48) hours, but not more than one hundred twenty (120) hours.
 - (4) The development utilizes control systems that are any combination of infiltration systems, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative low impact development stormwater management systems designed in accordance with the design manual to treat the runoff from all surfaces generated by one and one-half (1 ½) inches of rainfall. Wet detention ponds may be used as a stormwater control system to meet the requirements of this section, provided that the stormwater control system fully complies with the requirements of this section. If a wet detention pond is used within one-half mile of Class SA waters, installation of a stormwater best management practice in series with the wet detention pond shall be required to treat the discharge from the wet detention pond. Secondary stormwater best management practices that are used in series with another stormwater best management practice do not require any minimum separation from the seasonal high water table.
 - (5) Stormwater runoff from the development that is in excess of the design volume must flow overland through a vegetative filter designed in accordance with design manual with a minimum length of fifty (50) feet measured from mean high water of Class SA waters.
 - (6) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of eighty-five percent (85%) average annual removal for total suspended solids (TSS).
 - (7) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.
- (c) *Stormwater discharges prohibited.* All development activities, including both low- and high-density projects, shall prohibit new points of stormwater discharge to Class SA waters or an increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA waters. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. The following shall not be considered a direct point of stormwater discharge:
- (1) Infiltration of the stormwater runoff from the water quality volume as described in this section.
 - (2) Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area, that is capable of providing effective infiltration of the runoff from the water quality volume as described in this section. The infiltration mandated in this section does not require a minimum separation from the seasonal high-water table, however all other requirements of this division must be met.

(3) The discharge from a wet detention pond that is treated by a secondary stormwater best management practice, provided that both the wet detention pond and the secondary stormwater best management practice meet the requirements of this section.

(d) *BMPs for use in SA Watersheds.* BMPs that result in the highest degree of fecal coliform die-off and that meet the requirements for the density of the project shall be used. Structural and non-structural BMPs shall control sources of fecal coliform to the maximum extent practicable. The City Engineer shall maintain and annually update technical standards for BMPs that are determined as effective for removing fecal coliform.

Sec. 18-764. Development standards for all other areas

Development activities within the city except those areas near ORW and SA waters as described in previous sections of this division shall meet the following requirements:

(a) *Low-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered low-density:

(1) The development has an impervious surface area of twenty-four percent (24%) or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low density as long as the project meets or exceeds the requirements for low-density development and locates the higher density in upland areas and away from surface waters and drainage ways to the maximum extent practicable taking existing site constraints into consideration.

(2) Stormwater runoff from the development is transported primarily by vegetated conveyance systems. As used in this section, "conveyance system" shall not include a stormwater collection system. Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(b) *High-density projects.* Development shall comply with all of the following standards in addition to the general standards in Section 18-760 in order to be considered high-density:

(1) The development has an impervious surface area of greater than twenty-four percent (24%).

(2) The development uses control systems that are any combination of infiltration systems, wet detention ponds, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, or rain gardens.

(3) The water quality volume for design of the stormwater system is the stormwater runoff from all surfaces generated by one and one half (1 ½) inches of rainfall. Runoff volume drawdown time shall be a minimum of forty eight (48) hours, but not more than one hundred twenty (120) hours.

(4) Control systems must be designed to treat the stormwater runoff from all surfaces generated by one and one-half (1 ½) inches of rainfall.

- (5) Stormwater runoff from impervious surface areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.
- (6) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of eighty-five percent (85%) average annual removal for total suspended solids (TSS).
- (7) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the design manual.

Sec. 18-765. Standards for stormwater control measures

- (a) *Evaluation.* All stormwater control measures and stormwater treatment practices (also referred to as best management practices, or BMPs) required under this ordinance shall be evaluated by the city according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the design manuals. The City Manager shall determine whether proposed BMPs will be adequate to meet the requirements of this ordinance.
- (b) *Determination of adequacy; presumptions and alternatives.* Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the design manuals will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the design manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The City Manager may require the applicant to provide the documentation, calculations, and examples necessary for the City Manager to determine whether such an affirmative showing is made.
- (c) Separation from seasonal high water table.
 - (1) For BMPs that require a separation from the seasonal high water table, the separation shall be provided consistent with the design manual by at least twenty-four (24) inches with at least twelve (12) inches of naturally occurring soil. No minimum separation from the seasonal high water table is required for a secondary stormwater best management practice that is used in a series with another stormwater best management practice.
 - (2) Where a separation of two feet from the seasonal high water table is not practicable, the City Manager may grant relief from the separation requirement in accordance with the design manual.
 - (3) BMPs may be sited in fill soil provided the design is in accordance with the design manual for siting a BMP in fill soil.

Sec. 18-766. Certain wetlands excluded from density calculations

For the purposes of this section, areas defined as Coastal Wetlands under 15A NCAC 07H .0205, as measured landward from the normal high waterline, shall not be included in the overall project area to calculate impervious surface density. Wetlands that are not regulated as coastal wetlands pursuant to 15A NCAC 07H .0205 and that are located landward of the normal high waterline may be included in the overall project area to calculate impervious surface density.

Sec. 18-767. Additional standards for special situations

(a) *Limitation on the density of development.* Development shall be limited to an impervious surface area of twenty-five percent (25%) or less in areas classified on the Wilmington-New Hanover County CAMA Land Classification Map as “Watershed Resource Protection” unless they are exceptionally designed according to Article 10 of this Chapter.

(b) *Requirements for limited residential development.* For residential development activities within the city that are located within one-half mile and draining to Class SA waters, that have a impervious surface area greater than twelve percent (12%), that do not require a stormwater management permit under Section 18-735 of this article, and that will add more than ten thousand (10,000) square feet of impervious surface area, a one-time, nonrenewable stormwater management permit shall be obtained. The permit shall require recorded deed restrictions or protective covenants to ensure that the plans and specifications approved in the permit are maintained. Under this permit, stormwater runoff shall be managed using any one or combination of the following practices:

(1) Install rain cisterns or rain barrels designed to collect all rooftop runoff from the first one and one-half (1 ½) inches of rain. Rain barrels and cisterns shall be installed in such a manner as to facilitate the reuse of the collected rain water on site and shall be installed in such a manner that any overflow from these devices is directed to a vegetated area in a diffuse flow. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.

(2) Direct rooftop runoff from the first one and one-half (1 ½) inches of rain to an appropriately sized and designed rain garden. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.

(3) Install any other stormwater best management practice that meets the requirements of the design manual to control and treat the stormwater runoff from all impervious surface areas of the site from the first one and one-half (1 ½) inches of rain.

Sec. 18-768-- 18-780. Reserved.

PART 4. MAINTENANCE

Sec. 18-781. General standards for maintenance

The owner of each structural BMP installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the structural BMP was designed.

Sec. 18-782. Operation and maintenance agreement

(a) *General.* Prior to the conveyance or transfer of any lot or building site to be served by a structural BMP pursuant to this ordinance, and prior to issuance of any permit for development or redevelopment

requiring a structural BMP pursuant to this ordinance, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the structural BMP. Until the transference of all property, sites, or lots served by the structural BMP, the original owner or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the structural BMP, and shall state the terms, conditions, and schedule of maintenance for the structural BMP. In addition, it shall grant to city a right of entry in the event that the City Manager or his designee has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the structural BMP; however, in no case shall the right of entry, of itself, confer an obligation on city to assume responsibility for the structural BMP.

The operation and maintenance agreement must be approved by the city prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. A copy of the recorded maintenance agreement shall be given to the City Manager within fourteen (14) days following its recordation.

Conveyance of the property shall not terminate the original developer's obligations under this article until such time as a replacement permit is approved by the City Manager. The original developer shall include in the deed conveying the property notice of the existence of the stormwater control measures and the purchaser's obligations to maintain and inspect them and to obtain a permit and otherwise comply with the terms of this article.

(b) *Special requirement for homeowner and other associations.* For all structural BMPs required pursuant to this ordinance and that are to be or are owned and maintained by a homeowner association, property owner association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

- (1) Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.
- (2) Granting to the city a right of entry to inspect, monitor, maintain, repair, and reconstruct structural BMPs.
- (3) Allowing the city to recover from the association and its members any and all costs the city expends to maintain or repair the structural BMPs or to correct any operational deficiencies. Failure to pay the city all of its expended costs, after forty-five (45) -days written notice, shall constitute a breach of the agreement. In case of a deficiency, the city shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both. Interest, collection costs, and attorney fees shall be added to the recovery.
- (4) A statement that this agreement shall not obligate the city to maintain or repair any structural BMPs, and the city shall not be liable to any person for the condition or operation of structural BMPs.

(5) A statement that this agreement shall not in any way diminish, limit, or restrict the right of the city to enforce any of its ordinances as authorized by law.

(6) A provision indemnifying and holding harmless the city for any costs and injuries arising from or related to the structural BMP, unless the city has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

Sec. 18-783. Inspection program

Inspections and inspection programs by the city may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental, zoning, or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.

If the owner or occupant of any property refuses to permit such inspection, the city shall proceed to obtain an administrative search warrant pursuant to G.S. 15-27.2 or its successor. No person shall obstruct, hamper, or interfere with the city personnel while carrying out his or her official duties.

Sec. 18-784. Notice to owners, Recordation.

The applicable operations and maintenance agreement, easements, or dedication and acceptance into public maintenance (whichever is applicable) pertaining to every structural BMP shall be referenced on the final plat and shall be recorded with the Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, easements, or dedication and acceptance into public maintenance, whichever is applicable shall be recorded with the Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching standards.

Sec. 18-785. Records of installation and maintenance activities

The owner of each structural BMP shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the City Manager.

Sec. 18-786. Nuisance

The owner of each stormwater BMP shall maintain it so as not to create or result in a nuisance condition.

Sec. 18-787. Maintenance easement

Every structural BMP installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes.

Sec. 18-788- 18-810. Reserved.