

6.2 FLOOD DAMAGE PREVENTION OVERLAY DISTRICT

6.2.1 Authority

The Town is authorized to adopt the Flood Damage Prevention Overlay District pursuant to Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the N.C.G.S

6.2.2 Findings

- A) ***Flood Inundation Adversely Affects Public Health, Safety and Welfare***
The flood hazard areas of the Town are subject to periodic inundation that results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- B) ***Flood Losses Caused By Cumulative Effects Of Obstructions In Floodplains***
These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

6.2.3 Purpose

It is the purpose of the Flood Damage Prevention Overlay District to promote the public health, safety, and general welfare of the Town and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A) ***Restrict Uses that are Dangerous due to Water or Erosion Hazards***
Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B) ***Protect Uses against Flood Damage***
Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

- C) ***Control the Alteration of Natural Floodplains, Stream Channels, and Natural Protective Barriers***
Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters;
- D) ***Control Filling, Grading, Dredging***
Control filling, grading, dredging, and other development which may increase erosion or flood damage; and
- E) ***Prevent or Regulate the Construction of Flood Barriers That Will Unnaturally Divert Floodwaters***
Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

6.2.4 Objectives

The objectives of this section are:

- A) ***Protect Human Life and Health***
To protect human life and health;
- B) ***Minimize Expenditure of Public Money***
To minimize expenditure of public money for costly flood control projects;
- C) ***Minimize the Need for Rescue and Relief Efforts Associated with Flooding***
To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D) ***Minimize Prolonged Business Interruptions***
To minimize prolonged business interruptions;
- E) ***Minimize Damage to Public Facilities***
To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- F) ***Maintain a Stable Tax Base***
To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas; and,
- G) ***Notification of Homebuyers***
To ensure that potential homebuyers are notified that property is in a Special Flood Hazard Area.

6.2.5 Applicability

This Flood Damage Prevention Overlay District shall apply to all Special Flood Hazard Areas within the Town and its ETJ.

6.2.6 Basis for Establishing the Special Flood Hazard Areas

The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) for Wake County dated May 2, 2006, and its accompanying Flood Insurance Rate Map Panels (0721, 0722, 0731, 0732, 0733, 0740, 0741, 0742, 0743, 0750, 0751, 0752, 0753, to include additional ETJ panels, 0608K, 0710K, 0711K, 0712K, 0713K, 0720, 0723, & 0730) which are adopted by reference and declared to be a part of this ordinance. The "Special Flood Hazard Areas" also include those defined through standard engineering analysis for private developments or by governmental agencies, but

which have not yet been incorporated in the FIRM. This includes detailed flood information generated as a requirement of Section 6.2.17(B) *Provide Flood Data*.

6.2.7 Establishment of Floodplain Development Permit

A floodplain development permit shall be required in conformance with the provisions of this section prior to the commencement of any development activities.

6.2.8 Compliance

No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this section and other applicable regulations.

6.2.9 Abrogation and Greater Restrictions

This section is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restriction. However, where this section and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

6.2.10 Interpretation

In the interpretation and application of this section all provisions shall be:

- A) ***Minimum Requirements***
Considered as minimum requirements;
- B) ***Liberally Construed***
Liberally construed in favor of the governing body; and
- C) ***Deemed Neither to Limit nor Repeal Other Powers***
Deemed neither to limit nor repeal any other powers granted under state statutes.

6.2.11 Warning and Disclaimer of Liability

The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This section does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This section shall not create liability on the part of the Town or by any officer or employee thereof for any flood damages that result from reliance on this section or any administrative decision lawfully made hereunder.

6.2.12 Penalties for Violation

Violation of the provisions of this section or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance, shall constitute a misdemeanor. Any person who violates this section or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than 50 dollars (\$50.00) or be imprisoned for not more than 30 days, or both. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Town from taking such other lawful action as is necessary to present or remedy any violation.

6.2.13 Administration

- A) ***Designation of Local Administrator***
The Town's Public Works and Transportation Director or a designee is appointed to administer and implement the provisions of this Flood Damage Prevention Overlay District.

B) *Floodplain Development Permit and Certification Requirements*

Application for a floodplain development permit shall be made to the floodplain administrator on forms furnished by the Town prior to any development activities in the Flood Damage Prevention Overlay District. The floodplain development permit may include, but shall not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures; and the location of fill materials, storage areas, and drainage facilities. Specifically, the following information is required:

- 1) *Base flood elevation data provided.* Where base flood elevation data is provided in accordance with Section 6.2.17(B), *Provide Flood Data*, and 6.2.6, *Basis for Establishing the Special Flood Hazard Areas*, the application for a floodplain development permit shall show:
 - a) The elevation (in relation to mean sea level) of the lowest floor (including basement of all new and substantially improved structures;
 - b) If the structure has been floodproofed in accordance with Sec. 6.2.16(B)(3), *Commercial, Industrial, or Nonresidential Structure*, the elevation (in relation to mean sea level) to which the structure was floodproofed.
- 2) *Base flood elevation data not provided.* Where the base flood elevation data is not provided, requirements of Section 6.2.17 *Standards for Streams without Established Base Flood Elevations, Floodways, and/or Non-Encroachment Areas* and Section 6.2.16 *Provisions for Flood Hazard Reduction* must be met.
- 3) *Watercourse will be altered or relocated.* Where any watercourse will be altered or relocated as a result of proposed development, the application for a floodplain development permit shall include: A description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation.
- 4) *Structure floodproofed.* When a structure is floodproofed, the applicant shall provide a certificate from a registered professional engineer or architect that the nonresidential flood-proofed structure meets the floodproofing standards in Sec. 6.2.16(B)(3), *Commercial, Industrial, or Nonresidential Structure*.
- 5) *Floor elevation or floodproofing certification required.* A floor elevation or floodproofing certification is required after the lowest floor is completed. Within 21 calendar days of establishment of the lowest floor elevation, or floodproofing by whatever construction means, whichever is applicable, it shall be the duty of the permit holder to submit to the floodplain administrator a certification of the elevation of the lowest floor, or floodproofing elevations, whichever is applicable, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized for a particular building said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done

within the 21-day calendar period and prior to submission of the certification shall be at the permit holder's risk. The floodplain administrator shall review the floor elevation survey data submitted. The permit holder immediately and prior to further progressive work being permitted to proceed shall correct deficiencies detected by such review. Failure to submit the survey or failure to make said corrections required shall be cause to issue a stop-work order for the project.

C) ***Duties and Responsibilities***

The duties of the floodplain administrator shall include but are not be limited to:

- 1) *Reviewing all floodplain development permits.* Reviewing all floodplain development permits to assure that the requirements of this section have been satisfied.
- 2) *Advising permittee.* Advising the permittee that additional federal or state permits may be required, and if specific federal or state permits are known, require that copies of such permits be provided and maintained on file with the floodplain development permit.
- 3) *Notifying adjacent communities.* Notifying adjacent communities and the North Carolina Department of Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency.
- 4) *Assuring maintenance provided.* Assuring that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- 5) *Preventing encroachment within floodways and non-encroachment areas.* Preventing encroachment within *floodways* and non-encroachment areas unless the certification and flood hazard reduction provisions of Secs. 6.2.16(A), *General Standards*, through 6.2.19, *Standards for Subdivisions*, are met.
- 6) *Actual elevations.* Obtaining actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Sec. 6.2.13(B)(5), *Floor Elevation Or Floodproofing Certification Required*.
- 7) *Actual elevations.* Obtaining actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed, in accordance with Section 6.2.13(B)(5), *Floor Elevation or Floodproofing Certification Required*.
- 8) *Actual elevations.* Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with Section 6.2.13(B)(5), *Floor Elevation or Floodproofing Certification Required*.
- 9) *Certifications.* When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Sec. 6.2.16(B)(3), *Commercial, Industrial, or Nonresidential Structure*.

- 10) *Interpretations.* Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given reasonable opportunity to appeal the interpretation as provided in this section.
- 11) *Obtain flood data.* When base flood elevation data, floodway data, or non-encroachment area data has not been provided in accordance with Section 6.2.6, *Basis for Establishing the Special Flood Hazard Areas*, obtain, review, and reasonably utilize any Base Flood Elevation (BFE) data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to Section 6.2.17(B), in order to administer the provisions of this ordinance.
- 12) *Inspections.* Make on-site inspections of projects in accordance with Section 6.2.14, *Administrative Procedures*.
- 13) *Enforce.* Serve notices of violations, issue stop-work orders, revoke permits and take corrective actions in accordance with Section 6.2.14, *Administrative Procedures*.
- 14) *Maintain records.* Maintain all records pertaining to the administration of this section and make these records available for public inspection in the office of the floodplain administrator during normal business hours.
- 15) *Variance Requests.* Review, provide input, and make recommendations for variance requests.
- 16) *Maintain maps.* Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with Section 6.2.6 of this ordinance, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs.

6.2.14 Administrative Procedures

- A) ***Inspections of Work in Progress***
As the work pursuant to a permit progresses, the floodplain administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of this section and the terms of the permit. In exercising this power, floodplain administrator has a right, upon presentation of proper credentials, to enter on any premises at any reasonable hour for the purposes of inspection or other enforcement action.
- B) ***Stop-Work Orders***
Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this section, the floodplain administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

- C) **Revocation of Permits**
The floodplain administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked.
- D) **Periodic Inspections**
The floodplain administrator shall have a right, upon presentation of proper credentials, to enter on any premises at any reasonable hour for the purposes of inspection or other enforcement action.
- E) **Violations to be Corrected**
When the floodplain administrator finds violations of applicable state and local laws, it shall be the floodplain administrator's duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law on the property.
- F) **Actions in Event of Failure to Take Corrective Action**
If the owner of a building or property shall fail to take prompt corrective action, the floodplain administrator shall give the property owner written notice, by certified or registered mail to the property owner's last known address or by personal service:
- 1) *In violation.* That the building or property is in violation of this section;
 - 2) *Hearing date.* That a hearing will be held before the Town Manager at a designated place and time, not later than 10 days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and,
 - 3) *Order.* That following the hearing, the Town Manager may issue such order to alter, vacate, or demolish the building, or to remove fill as appears appropriate.
- G) **Order to Take Corrective Action**
If, upon a hearing held pursuant to the notice described above, the Town Manager shall find that the building or development is in violation of this section, the Town Manager shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than 60 days; provided that where the Town Manager finds that there is imminent danger to life or other property, the Town Manager may order that corrective action be taken in such lesser period as may be feasible.
- H) **Appeal**
Any owner who has received an order to take corrective action may appeal that order to the Board of Adjustment by giving notice of appeal in writing to the Town Manager and the town clerk within 10 days following issuance of the final order. In the absence of an appeal, the order of the Town Manager shall be final. The Board of Adjustment shall hear an appeal within a reasonable time and may affirm or revoke the order.

- l) ***Failure to Comply with Order***
If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the Board of Adjustment following an appeal, the owner shall be guilty of a misdemeanor and shall be punished at the discretion of the court.

6.2.15 Variance Procedures

The Board of Adjustment shall hear and decide requests for variances from the requirements of this section. Any person aggrieved by the decision of the Board of Adjustment or any taxpayer may appeal such decision to the court, as provided in Chapter 7A, N.C.G. S.

- A) ***Historic Structures***
Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- B) ***Factors***
In passing upon such applications, the Board of Adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other portions of this section, and:
- 1) *Danger from material.* The danger that material may be swept onto other lands to the injury of others;
 - 2) *Danger to life and property.* The danger to life and property due to flooding or erosion damage;
 - 3) *Flood damage.* The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - 4) *Importance of services to community.* The importance of the services provided by the proposed facility to the community;
 - 5) *Necessity of waterfront location.* The necessity to the facility of a waterfront location, where applicable;
 - 6) *Availability of alternative locations* The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - 7) *Compatibility* The compatibility of the proposed use with existing and anticipated development;
 - 8) *2030 Land Use Map.* The relationship of the proposed use to the 2030 Land Use Map and floodplain management program for that area;
 - 9) *Impacts.* The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and,
 - 10) *Costs of providing governmental services.* The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

11) No variance shall be issued for solid waste disposal facilities, hazardous waste management facilities, salvage yards, or chemical storage facilities that are located in Special Flood Hazard Areas.

C) ***Attach Conditions***

Upon consideration of the factors listed above and the purposes of this section, the Board of Adjustment may attach such conditions to the granting of variances, as it deems necessary to further the purposes of this section.

D) ***No Increase in Flood Levels***

Variances shall not be issued within any designated floodway or non-encroachment area if any increase in flood levels during the base flood discharge would result.

E) ***Conditions***

Conditions for variances:

1) *No violation of law.* Variances may not be issued when the variance will make the structure in violation of other federal, state or local laws, regulations, or ordinances.

2) *Minimum necessary.* Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

3) *Other.* Variances shall only be issued upon:

a) A showing of good and sufficient cause;

b) A determination that failure to grant the variance would result in exceptional hardship; and,

c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or articles.

F) ***Written Notice***

Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevations and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notification shall be maintained with a record of all variance actions.

G) ***Records***

The floodplain administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

6.2.16 Provisions for Flood Hazard Reduction

A) ***General Standards***

In all Special Flood Hazard Areas the following provisions are required:

- 1) *Anchored.* All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
- 2) *Material resistant to flood damage.* All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- 3) *Construction methods and practices minimize flood damages.* All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages;
- 4) *Prevent water from entering or accumulating within the components during conditions of flooding.* Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- 5) *Water supply systems.* All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- 6) *Sanitary sewage systems.* New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into the floodwaters;
- 7) *Waste disposal systems.* Solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted;
- 8) *New construction.* Any alteration, repair, reconstruction, or improvements to a structure that is in compliance with the provisions of this section shall meet the requirements of "new construction" as contained in this section; and
- 9) *Nonconforming buildings.* Nonconforming buildings or uses may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this section. Provided, however, nothing in this section shall prevent the repair, reconstruction, or replacement of a building or structure existing on August 1, 2000 and located totally or partially within the Special Flood Hazard Area, provided that the bulk of the building or structure below the regulatory flood protection elevation in the Special Flood Hazard Area is not increased and provided that such repair, reconstruction, or replacement meets all of the other requirements of this section.

B) ***Specific Standards***

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided and in Future Conditions Flood Hazard Areas where Future Conditions Flood Elevations data has been provided, as set forth in Section 6.2.6 or Section 6.2.17, the following provisions, in addition to the provisions of Section 6.2.16A, are required:

- 1) *Residential Construction.* No new residential structures, with the following exception:
 - a) Development shall be permitted on properties for which construction plans were approved by August 1, 2000 provided such development is authorized in accordance with Section 6.1.11 *Riparian Buffers*.
 - (i) New construction or substantial improvement of any residential structure (including manufactured homes) existing on August 1, 2000 shall have the reference floor, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Section 6.2.19 of this ordinance.

- 2) *Non-Residential Construction.* No new non-residential structures, with the following exception:
 - a) Development shall be permitted on properties for which SD Plans, PD Plans (for PUD, MEC, and TND), or Site Plans were approved by April 17, 2012 provided such development is authorized in accordance with Section 6.1.11 *Riparian Buffers*.
 - (i) New construction or substantial improvement of any commercial, industrial, or other nonresidential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Section 6.2.19 of this ordinance.
 - (ii) Structures located in AE and X (Future) Zones may be floodproofed to the Regulatory Flood Protection Elevation in-lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the Regulatory Flood Protection Elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the floodproofing standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Section 6.2.13(B)(5), along with the operational plan and the inspection and maintenance plan.

- 3) *Manufactured or mobile homes.* Manufactured or mobile homes existing on August 1, 2000.
 - a) Manufactured or mobile homes that are placed or substantially improved in sites:
 - (i) Outside a manufactured home subdivision or mobile home park;
 - (ii) In a new manufactured home subdivision or mobile home park;

- (iii) In an expansion to an existing manufactured home subdivision or mobile home park; or
 - (iv) In an existing manufactured home subdivision or mobile home park on which a manufactured or mobile home has incurred “substantial damage” as the result of a flood, must be elevated on a permanent foundation such that the lowest floor of the manufactured or mobile home is elevated no lower than two feet above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
 - b) Manufactured or mobile homes that are to be placed or substantially improved on sites in an existing manufactured home subdivision or mobile home park that are not subject to the provisions of Section 6.2.16(B)(4)(a) above must be elevated so that the lowest floor of the manufactured or mobile home is elevated no lower than two feet above the base flood elevation, and is securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement.
 - c) Manufactured and mobile homes shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured or mobile homes must be anchored to resist flotation, collapse, or lateral movement in accordance with the Regulations for Mobile Homes and Modular Housing adopted by the Commissioners of Insurance pursuant to Section 143.143.15 N.C.G.S. Additionally, when the elevation would be met by an elevation of the chassis at least 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. When the elevations of the chassis are above 36 inches in height an engineering certification is required.
 - d) An evacuation plan shall be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home subdivisions or mobile home parks located within flood prone areas. This plan shall be filed with and approved by the floodplain administrator and the local emergency management coordinator.
- 4) *Recreational vehicle.* A recreational vehicle is ready for highway use if it is on wheels or a jacking system, is attached to the site only by quick disconnect type utilities and security and devices, and has no permanently attached additions. Recreation vehicles placed on sites shall either:
 - a) Be on site for fewer than 180 consecutive days;
 - b) Be fully licensed and ready for highway use; or
 - c) Meet the requirements of Section 6.2.13(B), *Floodplain Development Permit and Certification Requirements*, Section

6.2.16(A), *General Standards*, and Section 6.2.16(B)(4),
Manufactured or Mobile Homes.

- 5) *Elevated buildings*. New construction or substantial improvements of elevated buildings that include fully enclosed areas that are usable solely for the parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to preclude finished living space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of floodwaters.
- a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following standards:
 - (i) Provide a minimum of two openings having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding;
 - (ii) The bottom of all openings shall be no higher than one foot above grade; and
 - (iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.
 - b) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).
 - c) The interior portion of such enclosed areas shall not be partitioned or finished into separate rooms, except to enclose storage areas.
- 6) *Floodways and Non-Encroachment Areas*. Located within Special Flood Hazard Areas established in Section 6.2.6, *Basis for Establishing the Special Flood Hazard Areas*, Section 6.2.17(B), *Provide Flood Data*, or Section 6.2.18(D), *Base Elevation Data or Certification of No Floodplain*, are areas designated as floodways and non-encroachment areas. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters which carry debris and potential projectiles and has erosion potential. The following provisions shall apply:
- a) No encroachments shall be permitted. Substantial improvements of structures and buildings in existence on August 1, 2000 shall be permitted if it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the floodplain administrator.

Sec. 6.2 / FLOOD DAMAGE PREVENTION OVERLAY DISTRICT**Sec. 6.2.17 / Standards for Streams without Established Base Flood Elevations, Floodways, and/or Non-Encroachment Areas**

- b) If Section 6.2.16(B)(7)(a) above is satisfied, all substantial improvements shall comply with all applicable flood hazard reduction provisions of Secs. 6.2.16(A), *General Standards*, through 6.2.18, *Standards for Subdivisions*.
- c) No manufactured or mobile homes shall be permitted, except in an existing manufactured home subdivision or mobile home park. A replacement manufactured or mobile home may be placed on a lot in an existing manufactured home subdivision or mobile home park provided the anchoring and the elevation standards of Section 6.2.16(B)(4), *Manufactured or Mobile Homes*, are met.

6.2.17 Standards for Streams without Established Base Flood Elevations, Floodways, and/or Non-Encroachment Areas

Located within the Special Flood Hazard Areas established in Section 6.2.6, *Basis for Establishing the Special Flood Hazard Areas*, are small streams where no base flood data has been provided or where no floodways or non-encroachment areas have been identified. The following provisions apply within such areas:

- A) **No Encroachment**
No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted within a distance of the stream bank equal to five times the width of the stream at the top of the bank or 20 feet each side from the top of the bank, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B) **Provide Flood Data**
A hydraulic report shall be prepared by a licensed professional engineer to define the Base Flood Elevation (BFE) for a master subdivision plan, minor subdivision plan, site plan, planned development, and other proposed development if development is greater than five (5) acres or has more than fifty (50) lots. Such Base Flood Elevation (BFE) data shall be adopted by reference per Section 6.2.6 to be utilized in implementing this ordinance.
- C) **General**
If Section 6.2.17(A), *No Encroachment*, is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable provisions of Secs. 6.2.16(A), *General Standards*, through 6.2.18, *Standards for Subdivisions*, and shall be elevated or floodproofed in accordance with elevations established in accordance with Section 6.2.17(B) *Provide Flood Data*. When base flood elevation data is not available from a federal, state, or other source, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade. No encroachment shall be permitted in an unnumbered A Zone.

6.2.18 Standards for Subdivisions

- A) **Minimize Flood Damage**
All applications for subdivision shall be consistent with the need to minimize flood damage. No residential lots shall be located within the floodplain;

- B) ***Utilities Located to Minimize Flood Damage***
All applications for subdivision shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- C) ***Adequate Drainage***
All applications for subdivision shall have adequate drainage provided to reduce exposure to flood hazards; and
- D) ***Base Elevation Data or Certification of No Floodplain***
Base flood elevation data or certification of no floodplain shall be provided for all subdivision proposals and other proposed development.

6.2.19 Terms Defined

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

“Accessory Structure (Appurtenant Structure)” means a structure located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

“Addition (to an existing building)” means an extension or increase in the floor area or height of a building or structure.

“Appeal” means a request for a review of the floodplain administrator's interpretation of any provision of this ordinance.

“Area of Special Flood Hazard” see “Special Flood Hazard Area (SFHA)”

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“Base Flood” means the flood having a one (1) percent chance of being equaled or exceeded in any given year based on current conditions hydrology.

“Base Flood Elevation (BFE)” means a determination of the water surface elevations of the base flood based on current conditions hydrology as published in the Flood Insurance Study. When the BFE has not been provided in a “Special Flood Hazard Area”, it may be obtained from engineering studies available from a Federal or State other source using FEMA approved engineering methodologies. This elevation, when combined with the “Freeboard”, establishes the “Regulatory Flood Protection Elevation” in Special Flood Hazard Areas.

“Building” see “Structure”

“Chemical Storage Facility” means a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

“Current Conditions Hydrology” means the flood discharges associated with the land-use conditions existing within the drainage area of a watercourse at the time a flood study of the watercourse was conducted. Current conditions flood discharges and historical

flood study information are published in the Flood Insurance Study.

“Development” means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

“Disposal” means, as defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

“Elevated Building” means a non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

“Encroachment” means the advance or infringement of uses, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

“Existing Manufactured Home Park or Manufactured Home Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the original effective date of the floodplain management regulations adopted by the community.

“Flood” or “Flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters; and/or
- (2) the unusual and rapid accumulation of runoff of surface waters from any source.

“Flood Boundary and Floodway Map (FBFM)” means an official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas and the floodways are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).

“Flood Hazard Boundary Map (FHBM)” means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

“Flood Insurance” means the insurance coverage provided under the National Flood Insurance Program.

“Flood Insurance Rate Map (FIRM)” means an official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas, the Future Conditions Flood Hazard Areas, and the risk premium zones applicable to the community are delineated.

“Flood Insurance Study (FIS)” means an examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), if published.

“Flood Prone Area” see “Floodplain”

“Floodplain” means any land area susceptible to being inundated by water from any source.

“Floodplain Administrator” is the individual appointed to administer and enforce the floodplain management regulations.

“Floodplain Development Permit” means any type of permit that is required in conformance with the provisions of this ordinance, prior to the commencement of any development activity.

“Floodplain Management” means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

“Floodplain Management Regulations” means this ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power which control development in flood-prone areas. This term describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

“Floodproofing” means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

“Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

“Flood Zone” means a geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

“Freeboard” means the height added to the Base Flood Elevation (BFE) or the Future Conditions Flood Elevation to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization on the watershed. The Base Flood Elevation plus the freeboard establishes the “Regulatory Flood Protection Elevation”.

“Future Conditions Flood” means the flood having a one (1) percent chance of being equaled or exceeded in any given year based on future conditions hydrology.

“Future Conditions Flood Elevation” means a determination of the water surface elevations of the one percent (1%) annual chance flood based on future conditions hydrology as published in the Flood Insurance Study. This elevation, when combined with the freeboard, establishes the “Regulatory Flood Protection Elevation” in Future Conditions Flood Hazard Areas.

“Future Conditions Flood Hazard Area” means the land area that would be inundated by the one percent (1%) annual chance flood based on future conditions hydrology as determined in Section 6.2.6 of this ordinance.

“Future Conditions Hydrology” means the flood discharges associated with projected land-use conditions based on the Wake County June 2003 Countywide Equivalent Zoning Classification data and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway such as bridge and culvert construction, fill, and excavation. Future conditions flood discharges are published in the Flood Insurance Study.

“Functionally Dependent Facility” means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair. The term does not include long-term storage, manufacture, sales, or service facilities.

“Hazardous Waste Facility” means, as defined in NCGS Article 9 of Chapter 130A, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

“Highest Adjacent Grade (HAG)” means the highest natural elevation of the ground surface, prior to construction, immediately next to the proposed walls of the structure.

“Historic Structure” means any structure that is:

- 1) *Individually listed*
Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register);
- 2) *Certified*
Certified or preliminarily determined by the Secretary of the Interior as contributing to the significance of a registered district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- 3) *Listed as a contributing structure*
Listed as a contributing structure in the National Register of Historic Places as identified in the National Register Nomination for the Apex Historic District (1994); the National Register Nomination for the Apex Historic District Boundary Increase (1995); and the National Register Nomination for the Apex Historic District Boundary Increase II (2001);
- 4) *State inventory*
Individually listed in the state inventory of historic places;
- 5) *County register*
Listed in the Wake County Register of Historic Places;
- 6) *Local inventory*
Individually listed in a local inventory of historic places in communities with historic preservation programs that have been certified:
 - a) By an approved state program as determined by the Secretary of the Interior; or
 - b) Directly by the Secretary of the Interior in states without approved programs.

(Town of Apex is not a Certified Local Government (CLG) Program; the Town is subject to the Wake County CLG Program)

“Lowest Adjacent Grade (LAG)” means the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

“Lowest Floor” means lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

“Manufactured Home” means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term “manufactured home” does not include a “recreational vehicle”.

“Manufactured Home Park or Subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“Market Value” means the building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

“Mean Sea Level” means, for purposes of this ordinance, the National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected in 1988, or other vertical control datum used as a reference for establishing varying elevations within the floodplain, to which Base Flood Elevations (BFEs) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

“New Construction” means structures for which the “start of construction” commenced on or after the effective date of the original version of the community's Flood Damage Prevention Ordinance and includes any subsequent improvements to such structures.

“Non-Encroachment Area” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the Flood Insurance Study report.

“Post-FIRM” means construction or other development for which the “start of construction” occurred on or after the effective date of the initial Flood Insurance Rate Map for the area.

“Pre-FIRM” means construction or other development for which the “start of construction” occurred before the effective date of the initial Flood Insurance Rate Map for the area.

“Principally Above Ground” means that at least 51% of the actual cash value of the structure is above ground.

“Public Safety and/or “Nuisance” means anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

“Recreational Vehicle (RV)” means a vehicle, which is:

- (1) built on a single chassis;
- (2) 400 square feet or less when measured at the largest horizontal projection;
- (3) designed to be self-propelled or permanently towable by a light duty truck;
and
- (4) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Reference Level” is the top of the lowest floor for structures within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas designated as Zone A1-A30, AE, A, A99 or Zone X (Future).

“Regulatory Flood Protection Elevation” means the elevation above mean sea level to which the reference level of all structures and other development located within Special Flood Hazard Areas and Future Conditions Flood Hazard Areas must be protected.

- (1) In “Special Flood Hazard Areas” where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus two (2) feet of freeboard.
- (2) In “Special Flood Hazard Areas” where no BFE has been established, this elevation shall be at least two (2) feet above the highest adjacent grade.
- (3) In Future Conditions Flood Hazard Areas this elevation shall be the Future Conditions Flood Elevation plus two (2) feet of freeboard.

“Remedy a Violation” means to bring the structure or other development into compliance with State and community floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

“Riverine” means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

“Salvage Yard” means any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

“Solid Waste Disposal Facility” means, as defined in NCGS 130A-290(a)(35), any facility involved in the disposal of solid waste.

“Solid Waste Disposal Site” means, as defined in (NCGS 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

“Special Flood Hazard Area (SFHA)” means the land in the floodplain subject to a one (1%) percent or greater chance of being flooded in any given year based on current conditions hydrology, and future conditions hydrology as determined in Section 6.2.6 of this ordinance.

“Start of Construction” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair,

reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

“Structure” means a walled and roofed building, a manufactured home, or a gas, liquid, or liquefied gas storage tank that is principally above ground.

“Substantial Damage” means damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of “substantial improvement”. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

“Substantial Improvement” means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

- (1) any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- (2) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

“Variance” is a grant of relief from the requirements of this ordinance.

“Violation” means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Sections 6.2.13 and 6.2.16 is presumed to be in violation until such time as that documentation is provided.

“Water Surface Elevation (WSE)” means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

“Watercourse” means a lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.