

SECTION 1.0 -INTRODUCTION

1.1 Overview of Floodplain Management

Communities regulate development in the floodplain to protect people and property, to make sure that federal flood insurance and disaster assistance are available, to save tax dollars, to avoid liability and law suits, and to reduce future flood losses in their community. The federal government has fundamental interest in floodplain management, but regulating the floodplain use lies with state and local authorities.



Prior to 1940 the focus on floodplains concentrated on flood control structures, such as levees and dams, instead of floodplain management. With the National Flood Insurance Act of 1968 provisions were made to establish the National Flood Insurance Program, require mapping of flood hazard areas, make flood insurance available in communities that meet floodplain management criteria, and to set floodplain management regulations. The National Flood Insurance Program is a voluntary program based on a mutual agreement between the federal government and the local community. In exchange for the local community adopting, implementing and enforcing a floodplain management ordinance, the federal government makes federally-backed flood insurance available to property owners throughout the community.

All units of government - local, state and federal - share the responsibility for reducing flood losses with the private sector. To fulfill this responsibility, land owners and professionals planning any development activity within the floodplain should have the knowledge and skills to plan, design, and construct their project in compliance with the floodplain regulations. For purposes of floodplain management, “development” means any manmade change to improved and unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations.

Good floodplain management is essential for the protection of lives and property. A cooperative public/private partnership, combined with a effective set of regulations will work to break the destruction-rebuild cycle. The ultimate goal is to effectively promote public health, safety, and general welfare and minimize losses to life and property due to flood conditions. This should not only result in a safe and viable community, but also provide lower flood insurance premiums for policyholders.

1.2 Purpose of Floodplain Development Technical Manual

The purpose of the Floodplain Development Technical Manual is to supplement the floodplain regulations in the Guilford County Development Ordinance. This document can be used to help explain the applicability of the provisions of the regulations, specifically the Floodplain Development Permit provisions. Guidance is included on the permitting process and information is provided to help clarify the most common and/or unique requirements. In addition, this document will contain any interpretations issued by the Floodplain Administrator, and many forms and notices that may be required as part of the permitting process. While any interested

person may use this Floodplain Development Technical Manual, it is written specifically for individuals planning “development” within the floodplain.

This document is not part of the floodplain regulations, and shall be solely for illustrative and educational purposes. If there is any discrepancy between the Floodplain Development Technical Manual and the floodplain regulations, the provisions of the floodplain regulations shall control.

1.3 Process for Amending the Floodplain Development Technical Manual

The Floodplain Development Technical Manual may be updated and expanded from time to time, based on changes to the floodplain regulations, feedback from applicants, a need to update forms, or a desire to further clarify common compliance issues, etc. The Floodplain Administrator is responsible for all amendments to the Floodplain Development Technical Manual. The Floodplain Administrator shall carefully consider all comments received and modify the proposed amendments as appropriate.

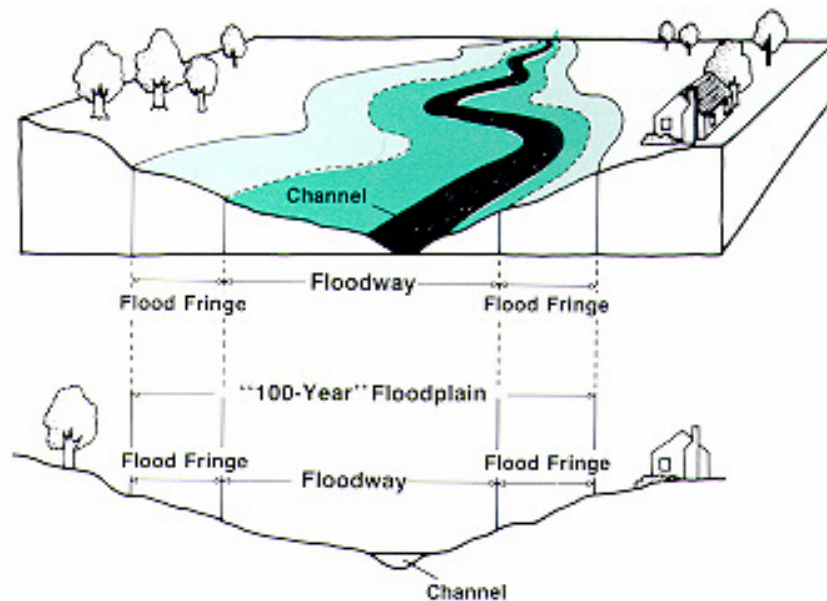
The amended Floodplain Development Technical Manual shall be made available on the Guilford County Watershed/Floodplain website at http://www.co.guilford.nc.us/watershed_cms/index.html.

SECTION 2.0 -PURPOSE AND BACKGROUND OF FLOODPLAIN REGULATIONS

2.1 Purpose of Regulations

The purpose of the floodplain regulations is to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

1. 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;
2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters;
4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and
5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.



2.2 Local Floodplain Management Jurisdictions

For the purposes of floodplain management the Guilford County Planning Department administers floodplain regulations for seven jurisdictions, including the unincorporated areas of Guilford County and the Towns of Jamestown, Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, and Whitsett. Each municipality has its own floodplain regulations to regulate floodplain development, which is applicable within its jurisdictional boundaries and extra-territorial jurisdictional areas.

2.3 Exceeding FEMA Minimum Standards

The floodplain regulations for the Guilford County and the six towns exceed the FEMA minimum floodplain management standards in order to reduce the vulnerability due to flood events that will occur in the future. Past adoption of these higher standards will reduce the risk of loss of life and decrease the amount of damage in future floods. The existence of these higher standards has also provided for reduced flood insurance premiums for all policy holders in the communities that opt to participate in FEMA's Community Rating System program.

The factors for exceeding the FEMA minimum floodplain requirements include:

- Floods may occur that are greater than the 100-year level;
- Culverts or bridges may become blocked with debris during a flood and cause flooding above the 100-year elevations;
- Sediment may accumulate in culverts and channels over time and reduce their carrying capacity; and
- Impact that future growth/development will have on flood levels;



Below is a summary of the most significant standards within the floodplain regulations which exceed the FEMA minimum. Nearly all these higher standards are described in detail in later sections of the Floodplain Development Technical Manual.

- Granting of a “Drainageway and Open Space Easement” to preserve the natural floodplain;
- Cumulative Substantial Improvement/Damage; and
- Two foot (2') “Freeboard” above the Base Flood Elevation.

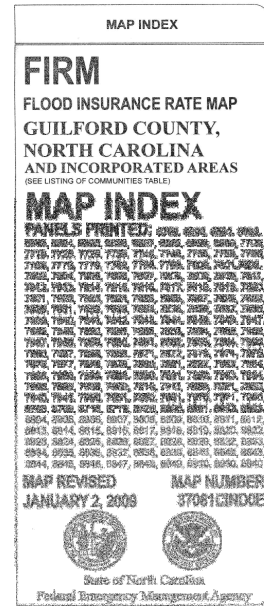
2.4 Floodway/Non-encroachment Areas

FEMA employs a “floodway” concept for detail studied streams to regulate development within a specified distance to the creek centerline. This method employs engineering modeling which sets the location of FEMA floodway encroachment lines on both sides of the stream. Filling is then allowed in the fringe area outside of these FEMA floodway encroachment lines and no fill is allowed within the lines. Theoretically, if all the floodplain (flood fringe) outside of the FEMA floodway encroachment lines is filled in, FEMA's minimum standards indicate that the flood level would increase a maximum of one (1) foot above the Base Flood Elevation (BFE).

On streams that have a Limited Detail Study a non-encroachment area is defined that is regulated the same as a floodway on a stream with a Detail Study.

2.5 Floodplain Management History

The timeline below provides a general chronology of major events to the Guilford County Floodplain Program.



January 17, 1975	Initial Flood Hazard Boundary Maps (FHBM) were identified
June 4, 1980	Initial Flood Insurance Rate Maps (FIRM) became effective.
June 4, 1980	Became participant in NFIP.
November 19, 1990	Guilford County adopted its initial Floodplain Regulations
December 3, 1992	County Commissioners adopted resolution to participate in Community Rating System (CRS).
October 1, 1993	Became CRS participant.
May 17, 2007	Guilford County Board of Commissioners adopted new state maps and supporting Floodplain regulation amendments, including two foot (2') freeboard
June 18, 2007	New Statewide DFIRM maps became effective
October 1, 2008	Guilford County achieved Level 8 CRS rating
October 9, 2008	Sedalia accepted by FEMA as participants in NFIP
_____	Pleasant Garden and Whitsett accepted by FEMA as participants in NFIP
_____	Oak Ridge and Stokesdale accepted as participants in CRS

2.5.1 Guilford County and Towns Floodplain Regulations

Guilford County's initial floodplain regulations are dated November 19, 1990. Most of the towns also used the Guilford County floodplain regulations for several years to regulate development in or near floodplains in their jurisdiction. Today, each town has its own floodplain regulations which in most cases, closely follows the Guilford County floodplain regulations and the State's Model Floodplain Ordinance.

SECTION 3.0 -FLOODPLAIN DEVELOPMENT PERMITS

3.1 Permitting Overview

FEMA requires all communities that participate in the National Flood Insurance Program (NFIP) to regulate “development” that occurs within the Special Flood Hazard Area (SFHA). FEMA defines “development” as any man-made change to improved and unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations. Very small and insignificant actions within the floodplain, such as adding mulch to a garden, basic landscaping, and farming, will not require the issuance of a floodplain development permit.



3.1.1 Exempt Activities Not Requiring a Floodplain Development Permit

Generally, any activity within the floodplain that goes beyond routine maintenance, gardening, and farming requires a Floodplain Development Permit prior to beginning the work. The intent is to allow uses or activities in the floodplain which inherently will not increase Base Flood Elevations. These activities and conditions are approved by right and may take place without prior approval.

The following section contains a list of project descriptions for activities that the Floodplain Administrator has determined will inherently not increase the Base Flood Elevations (BFE's), or would result in no technically measurable increase in the BFE's. Anyone considering a project in the floodplain that varies from those described below should contact the Floodplain Administrator and may need to submit a Floodplain Development Permit Application.

Activities Not Requiring a Floodplain Development Permit:

- a) Passive land use activities, typically on-going and routine in nature.
 - General farming that does not involve earthwork that permanently alters the topography.
 - Pasture uses and related operational activities.
 - Horticulture use.
 - Forestry involving planting and removing vegetation for maintenance and management purposes. This should not involve earthwork and/or wholesale clearing and grubbing.
 - Wildlife sanctuaries and related operational activities.
 - Gardening that does not involve earthwork that results in permanently altered topography.
 - Lawns and lawn maintenance activities.
 - Routine maintenance of easement and utility corridors.

- Landscaping that involves “softscaping” such as plantings, landscaping beds, and mulching. This should not involve “hardscaping” that permanently alters the topography such as retaining walls, terraces, and pools.

b) Construction activities, typically underground or above ground activities that are not technically measurable in hydraulic modeling.

- Underground utilities that do not permanently alter the topography. Excess soil from new pipes larger than 2 feet in diameter must be disposed of outside the floodplain.
- Sewer vent pipes no larger than 1 feet in diameter. These cannot be located within the floodway.
- Sewer manholes no larger than 5 feet in diameter and projecting no more than 3 feet tall. These cannot be located within the floodway.
- Overhead utilities and standard utility boxes constructed completely on-grade. This may also include clearing/grubbing necessary for installation. These cannot be located within the floodway.
- Poles for signs, overhead utilities, billboards, and alike that are no larger than 2 feet in diameter. These cannot be located within the floodway.
- Non-solid fences that do not block the flow of water during a flood event.

c) Construction /maintenance activities, typically above ground and known to not increase flood levels.

- Driveways constructed in the floodway fringe that are completely on-grade. This may also include clearing/grubbing necessary for project construction.
- Sidewalks constructed on-grade. This may also include clearing/grubbing necessary for project construction.
- Boardwalks that are open underneath and do not contain hand rails. This should not involve earthwork that permanently alters the topography.
- Road maintenance involving repaving or patching an existing road.
- Storm drainage system construction that involves installation of new underground pipes or below grade ditches/swales. Excess soil from new pipes larger than 2 feet in diameter must be disposed of outside the floodplain.
- Repairs and maintenance to the “FEMA” mapped streams and storm drainage system (within the creek banks). This includes planting and removing vegetation, spot repairs that armor/stabilizing the creek banks, and culvert maintenance/cleanouts. Stream restoration projects will require a Floodplain Development Permit.
- Repair and maintenance (such as armoring, stabilizing, securing, or replacing with similar) of existing infrastructure within the creek banks (such as bridge piers, sewer supports, and storm sewer outfalls/headwalls). This should not involve replacement with larger or additional above-ground infrastructure.

d) Interior renovations with a value of less than 50% of the market value, to a structure with its Lowest Floor not meeting the requirements of Sections 7-5.8(B) of the Guilford County Development Ordinance; and

e) Interior renovations of any value, to a structure with its Lowest Floor meeting the requirements of Sections 7-5.8(B) of the Guilford County Development Ordinance.

3.1.2 Floodplain Development Permits

A Floodplain Development Permit is required for all other projects that do not meet the requirements of the listing in Section 3.1.1. The application and review process for a Floodplain Development Permit is described in Section 3.5 of this document.

3.2 Floodplain Development Permit FAQ

This section contains some of the most frequently asked questions regarding the requirement of Floodplain Development Permits.

Q. Who makes the final determination if a project or activity would require a Floodplain Development Permit?

A. The Floodplain Administrator.

Q. What happens if someone begins an activity that they assume does not require a Floodplain Development Permit, but the Floodplain Administrator determines it does?

A. They will be required to stop the activity and apply for and obtain a Floodplain Development Permit. Until the permit is approved, the project is considered a violation of the Floodplain Regulations.

Q. Would all like activities never require a Floodplain Development Permit? For example, would all driveways automatically be exempt from a Floodplain Development permit?

A. No, it is not only the activity or use that must be considered, but also the impact that the proposed activity or use may have on flood elevations. For example, an at grade or excavated driveway would have no impact and would not require the Floodplain Development Permit, while a driveway that involves significant fill in certain areas or crosses a creek would require a permit.

Q. Is there a fee for a Floodplain Development Permit?

A. Yes, \$35.

Q. Will the list of activities and uses that are exempt from requiring a Floodplain Development Permit ever be updated?

A. The list may be updated by the Floodplain Administrator based on data and circumstances occurring from previous permitting experience.

3.3 Permitting Guidance

Compliance with the permitting requirements of the floodplain regulations is based not only on the type of activity or use, but also its location within the various areas of the floodplain. To aid

in determining the submittal and regulatory requirements for floodplain development for Floodplain Development Permits, several figures are included in this section. Figure 3.1 graphically depicts which areas of the Floodplain will require a flood/engineering study under the Floodplain Development Permit application. The table in Figure 3.2 summarizes the major submittal and regulatory requirements for numerous types of development in various areas within the Floodplain.

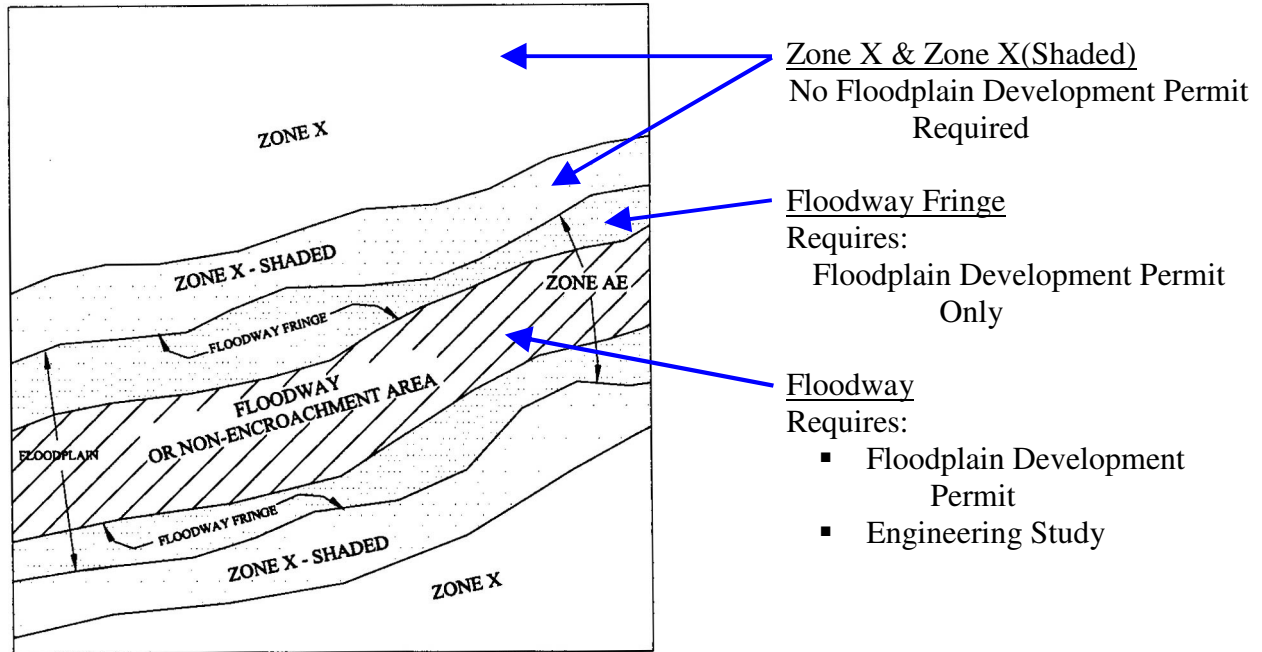


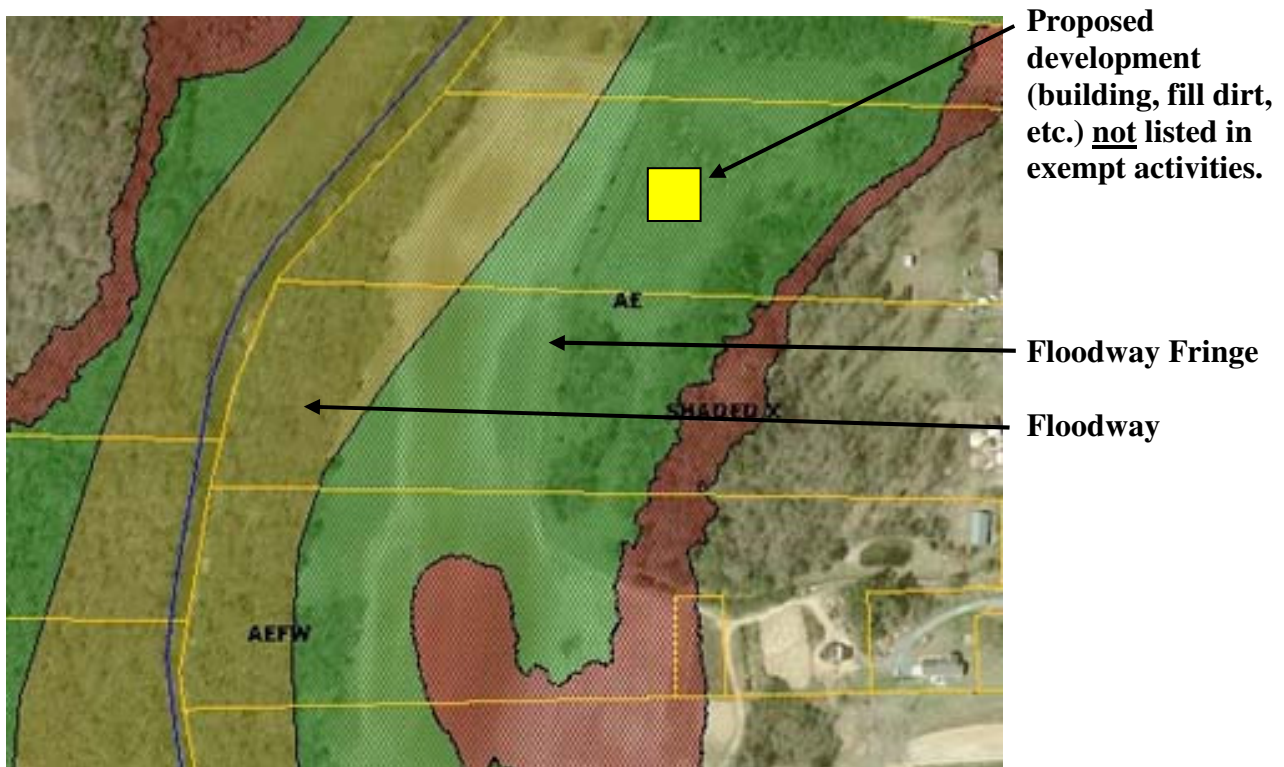
Figure 3.1
Floodplain Zones and Permitting Requirements

FLOODPLAIN DEVELOPMENT PERMITS					
Section	“DEVELOPMENT/ ACTIVITY”	AREA of FLOODPLAIN	SUBMITTAL REQUIREMENTS	FLOODPLAIN IMPACTS	REGULATORY REQUIREMENTS
7-5.8	Interior renovations greater than 50% of value of a noncompliant structure	Any area of Floodplain	<ul style="list-style-type: none"> Floodplain Development Permit Copy of Construction Contract 	None	FDP in accordance with Section 3-3.5
7-5.8	Any Development not described under the FDP exempt activities	Within the Floodplain (Zone AE), but outside the FEMA Floodway	Floodplain Development Permit	None	FDP in accordance with Section 3-3.5
7-5.8 7-5.11	Any Development and corresponding Floodplain Impacts not described under the FDP exempt activities	Within the FEMA Floodway	<ul style="list-style-type: none"> All Above Submittal Requirements Apply Flood Impact Assessment Using the FEMA Discharges 	No-rise ($\leq 0.00'$) or No-decrease ($\leq 0.10'$) in FEMA BFE Rise ($> 0.00'$) in FEMA BFE or Decrease ($> 0.10'$)	<ul style="list-style-type: none"> All Above Regulatory Requirements Apply No Impact Certification
					<ul style="list-style-type: none"> All Above Regulatory Requirements Apply Notification of the impacted property owners CLOMR Post-project LOMR

Figure 3.2 - FLOODPLAIN DEVELOPMENT PERMIT MATRIX

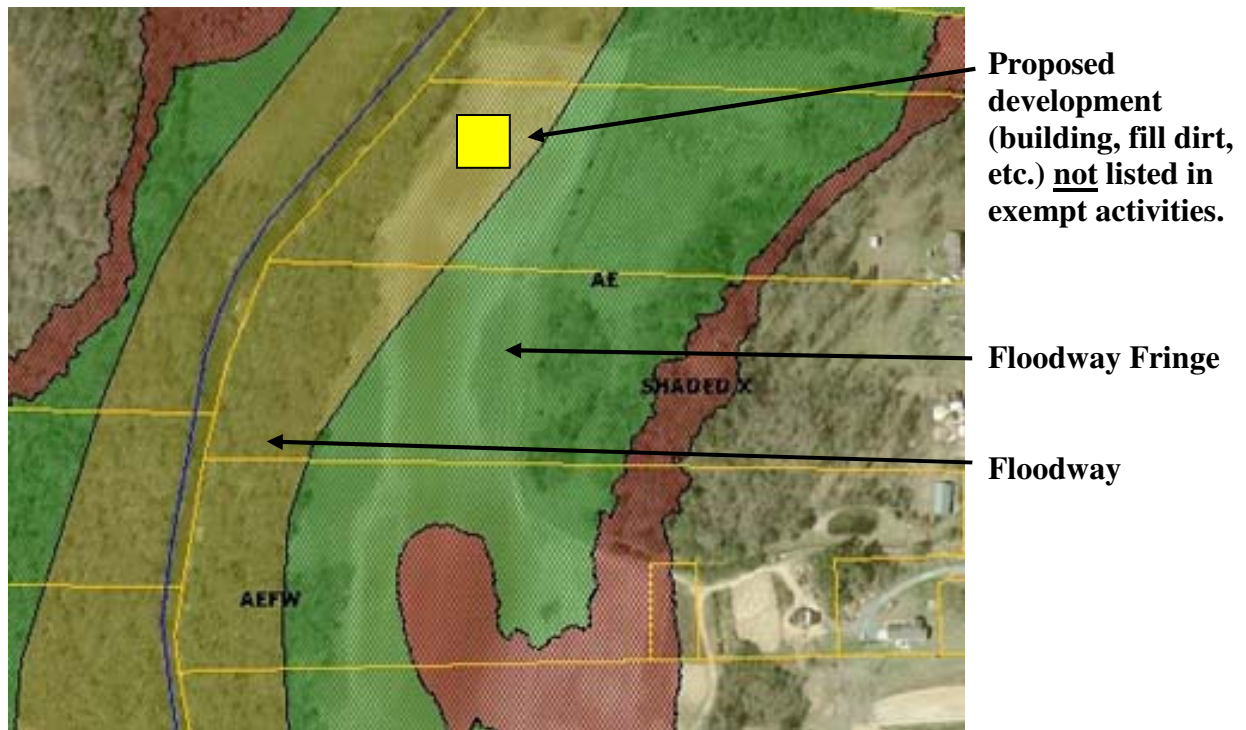
3.4 Graphical Examples of Permit Submittal Requirements

This section shows two examples (Figures 3-3 and 3-4) representing typical development scenarios that may occur in the Floodplain. The scenarios depict any type of development (building, fill, etc) and its location with respect to the various Floodplain areas on the Guilford Floodplain maps. Below each example is a list of the permitting requirements for that scenario.



- Flood Study not required
- Floodplain Development Permit required
- Final Elevation Certificate required prior to Issuance of Certificate of Occupancy

Figure 3.3
Proposed Development in the Floodway Fringe Area



- Flood Study Required
- No-Impact to Base Flood Elevation (Rise $\leq 0.00'$, Decrease $\leq 0.10'$)
No Impact Certification
- Final Elevation Certificate required prior to Issuance of Certificate of Occupancy
- CLOMR/LOMR (Rise $> 0.00'$, Decrease $> 0.10'$)
MT-2 Form & CLOMR
- As-built survey and LOMR Submittal required after construction

Figure 3.4 Proposed Development in the Floodway

3.5 Application Submission and Review Process

A Floodplain Development Permit is required for all grading or development in the floodplain. Regulations for a Floodplain Development Permit vary depending on the type of development and where development is located in the Floodplain. Figure 3-5 shows the Floodplain areas and lines as defined in the Floodplain Regulations.

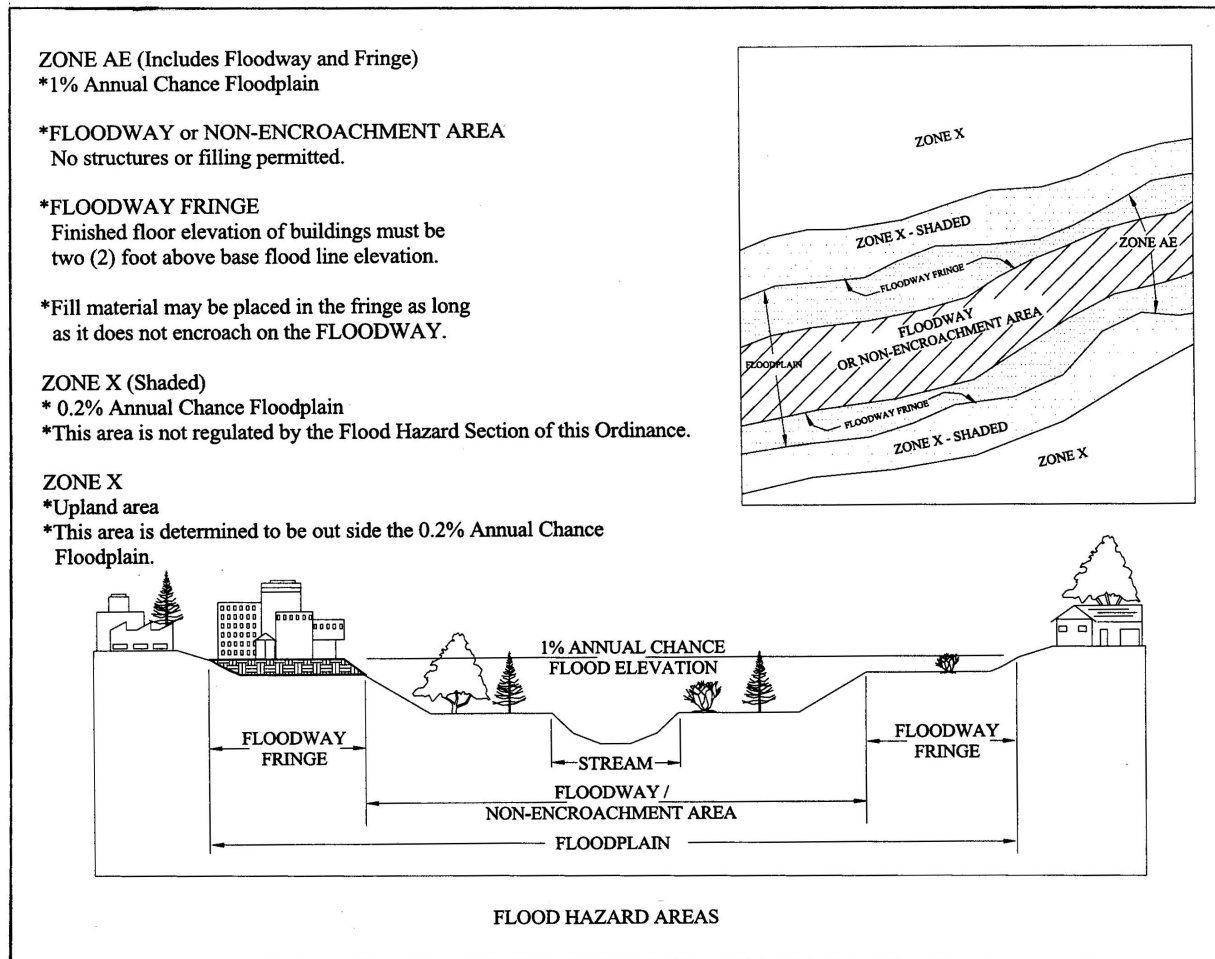


Figure 3.5
 Lines and Areas on Guilford County Floodplain Maps

Along with the permit application, the submittal must include the required supporting documentation. Check sheets for the submittal are provided in the Appendix.

These “development” activities can be proposed in the floodway fringe or the floodway. The applicant should select all types and all the areas where the proposed development is planned. If your project involves unique circumstances that are not covered by the Floodplain Development Permit Application, you should contact the Floodplain Administrator for assistance.

The applicant should submit the permit application, along with all applicable check sheet(s), and other supporting documentation, to the Floodplain Administrator in person or through the

mail at the following location:

Guilford County Planning & Development Department
P.O. Box 3427 (400 West Market Street)
Greensboro, NC 27402

Attn: Floodplain Administrator

The most common problem with permit applications is that they are incomplete. Appropriate Check Sheet(s) should be thoroughly reviewed and all the information listed should be included. Figure 3-6 shows the review and approval process for all development activities that require a Floodplain Development Permit.

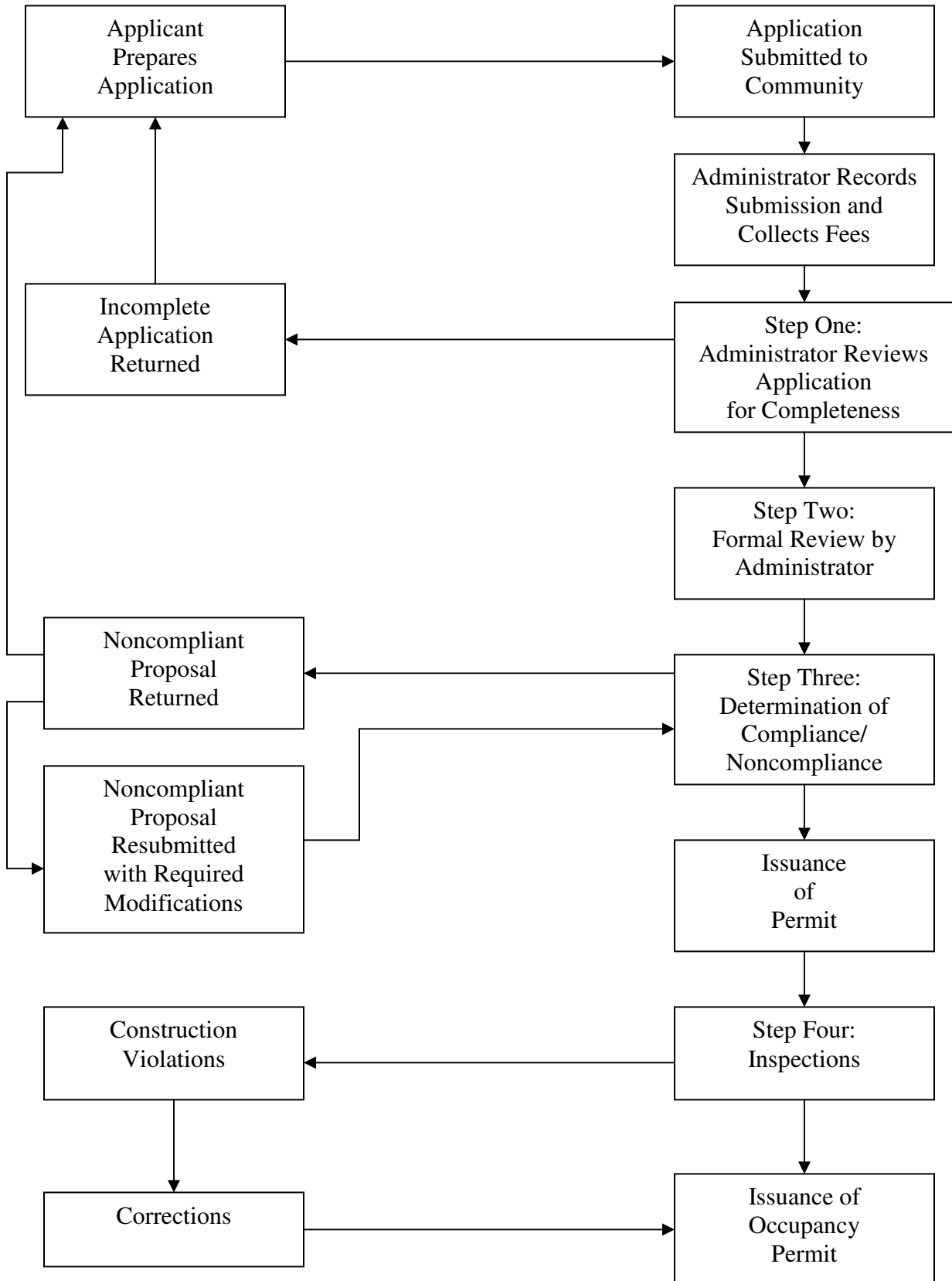
Upon receipt of the Floodplain Development Permit Application, the Floodplain Administrator will review the application for completeness. The applicant will be notified if the application package is incomplete and cannot be reviewed. All correspondence/letters are generally sent via email and/or telephone. Email addresses should be included on the application along with other contact information such as phone and fax numbers.

Once the Floodplain Administrator determines that the permit submittal includes all the necessary information, the review will begin for compliance with the applicable floodplain regulations. Due to the wide variation in the complexity of the submittal reviews, the review times will vary.

If the application is approved, the Floodplain Administrator or authorized designee will issue the Permit and send it to the applicant. The following conditions apply to all Floodplain Development Permits:

1. The Floodplain Development Permit applies to the parcel(s) of land listed on the application;
2. The Floodplain Development Permit does not change the Flood Insurance Rate Map (FIRM) Floodplain and/or floodway lines;
3. Permittee must obtain all other permits required for construction;
4. The Floodplain Development Permit expires when/if the current Effective Flood Insurance Rate Map (FIRM) applicable to the project is revised or updated;
5. The Floodplain Development Permit expires within two years unless substantial work begins, or a written extension is granted by the Floodplain Administrator; and
6. If development activities do not commence within 30 days of the Date of Issuance, the permittee must notify the Floodplain Administrator or authorized designee (in writing) prior to beginning any work.

**GUILFORD COUNTY
FLOODPLAIN DEVELOPMENT
PERMIT PROCESS
(FIGURE 3-6)**



3.6 Building Permits & Floodplain Review

Often projects involve the construction of new buildings within the floodplain. Any new building built on a lot that has floodplain on the property will automatically be reviewed for compliance with the Floodplain Regulations as part of the Building Permitting process. In most cases, additional information is not necessary and the building permit will not be delayed from being issued. In other cases, a separate Floodplain Development Permit is necessary to ensure compliance with the floodplain regulations.



The typical steps for permitting a building within the floodplain or has floodplain on the property are listed below.

1. Apply for a building permit from the Guilford County Permitting Section;
2. Guilford County Floodplain Administrator reviews the Building Permit Application and may require additional information along with a Floodplain Development Permit application and Permit Fee, if it is unclear of the building/improvement location in relation to the floodplain;
3. After reviewing additional information (if necessary) the Guilford County Floodplain Administrator may issue a Floodplain Development Permit; and
4. Most buildings will have a hold placed on the issuance of a Certificate of Occupancy that will only be removed upon submittal and review of an approved Final FEMA Elevation Certificate.

3.7 Interpretations by the Floodplain Administrator

The Floodplain Administrator may need to make an interpretation of any provision within the floodplain regulations from time to time. Interpretations or guidance are usually issued under unique and unusual circumstances. Any interpretation or guidance that is not project-specific and may affect future applicants will be published in the Appendix of the Floodplain Development Technical Manual. Any interpretation made by the Floodplain Administrator pursuant to or regarding the floodplain regulations, may be appealed to the Board of Adjustment by the aggrieved party.

3.8 Floodplain Development Permit Fees

Floodplain Development Permit Applications are subject to a permit fee of \$35 for services associated with reviewing the proposed project for compliance with floodplain regulations. The Floodplain Development Permit Fee must be paid in full prior to issuance of the Floodplain Development Permit. Projects listed in Section 3.1.1 Exempt Activities will not be charged a fee. Development activities sometimes occur prior to issuance of a permit.

SECTION 4.0 -SPECIFIC DEVELOPMENT STANDARDS & ACTIVITIES

4.1 Standards and Activities Overview

The floodplain regulations include a number of unique development standards for activities occurring in the floodplain. This section of the Floodplain Development Technical Manual is designed to further clarify and explain a few of the most common or unique regulations. The main topic detailed herein includes improvements/renovations/repairs to floodprone buildings (substantial improvement).

4.2 Pre-FIRM and Post-FIRM Buildings

Many of the requirements in the floodplain regulations have dual purposes: to regulate safe construction for compliance with local building code and floodplain management requirements and for proper rating for flood insurance purposes. One area where this is exhibited is in the definition of “new construction”.

Pre-FIRM buildings are those constructed before the adoption of the initial Flood Insurance Rate Maps (FIRM) on June 4, 1980. The flood insurance rates for Pre-FIRM buildings are subsidized and the owner does not pay actuarial rates. Post-FIRM buildings are those constructed after the date of the initial Flood Insurance Rate Maps (after June 4, 1980), and policy holders do pay actuarial flood insurance rates. For flood insurance purposes, buildings built after November 19, 1990 are considered New Construction. This definition is only for flood insurance purposes.

4.3 Improvements/Renovations/Repairs to Floodprone Buildings

4.3.1 Substantial Improvement Overview

Any improvements, renovations, or repairs to buildings in the floodplain fall under the Substantial Improvement/Substantial Damage requirements of the floodplain regulations. Generally speaking, substantial improvement occurs when the value of improvements or repairs to a building exceed 50% of the building market value on a one-time improvement/repair. The purpose of these regulations is to ensure that lives and substantial additional investment in flood hazard areas will be protected from flooding. This is accomplished by bringing non-conforming, “Pre-FIRM” structures into compliance with current NFIP rules.

The rules not only address pre-FIRM buildings—they cover all structures, including post-FIRM buildings. In most cases, a post-FIRM building will be properly elevated or otherwise compliant with regulations for new construction. However, sometimes map changes result in a higher Base Flood Elevation (BFE) or change in FIRM zone due to revisions to maps as a result of construction or other changes in the watershed. A substantial improvement to a post-FIRM building may require that the building be elevated to protect it from the new, higher, regulatory BFE.

All additions to a post-FIRM building must be elevated at least as high as the BFE in effect when the building was built (a compliant building cannot be allowed to become noncompliant by allowing additions at grade). If a new, higher BFE has been adopted since the building was built, additions that are substantial improvements must be elevated to the new BFE.

4.3.2 Determining Substantial Improvement

A substantial improvement may occur in two ways. The FEMA minimum standard for substantial improvement is when the proposed project improvement cost is greater than 50% of the market value of the building for one event. In addition, the floodplain regulations contain a higher standard to the substantial improvement definition. This also defines substantial damage as 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. In order to determine the percent improvements, both the “Project Cost(s)” and the “Market Value” must be accurately determined. The permit applicant/contractor is responsible for providing an accurate Project Cost as discussed below.

Project Cost must include all structural costs, including:

- All materials;
- Labor;
- Overhead and profit;
- Built-in appliances; and
- Repairs made to damaged parts of the building worked on at the same time.

To determine substantial improvement, a detailed cost estimate is required for the project, prepared by a licensed general contractor, or professional construction estimator. There are two possible exemptions to be aware of:

- Improvements to correct code violations do not have to be included in the cost of an improvement or repair project; and
- Historic buildings can be exempted from substantial improvement requirements.

Market value is commonly thought of as the price a willing buyer and seller agree upon. The market value of a structure reflects its original quality, subsequent improvements, physical age of building components and current condition. However, market value for property can be different than the value of the building itself. Market value of developed property varies widely due to the desirability of its location. For example, two houses of similar size, quality and condition will have far different prices if one is on the coast, or in the best school district, or closer to town than the other—but the value of the building materials and labor that went into both houses will be nearly the same.

For the purposes of determining substantial improvement, market value pertains only to the current value of the structure. It does not pertain to the land, landscaping or detached accessory structures on the property. Any value resulting from the location of the property should be attributed to the value of the land, not the building. Market value may be determined by one or more of the following means:

- An independent appraisal by a professional appraiser using the “Cost Approach Method”. This is the preferred method to be used. The appraisal must exclude the value of the land and not use the “income capitalization approach” which bases value on the use of the property, not the structure;

- Detailed estimates of the structure's actual cash value— the replacement cost for a building, minus a depreciation percentage based on age and condition.

4.3.3 Substantial Improvement FAQ

Below are some of the most frequently asked questions regarding the substantial improvement rules:

Q. In terms of NFIP regulations, if the proposed work to a structure is determined to be a substantial improvement, what must happen to that structure?

A. A substantially improved structure must be brought into compliance with Floodplain Regulations and other requirements in the local regulations for new construction; that is, the structure must be elevated (or floodproofed if it is a nonresidential structure) to or above the level of the 100-year or base flood, and meet other applicable requirements.

Q. What are some examples of the ways in which structures can be substantially improved?

A. Generally, structures are substantially improved in one of four ways:

- Rehabilitations -improvements made to an existing structure that do not affect the external dimensions of the structure;
- Additions - improvements that increase the square footage of a structure. Commonly this includes the structural attachment of a bedroom, kitchen, den, recreational room, or other type of addition to an existing structure;
- Reconstructions - cases where an entire structure is destroyed by damage or is purposefully demolished or razed and a new structure is built on the old foundation or slab;
- Substantial Damage - structures are considered to be substantially improved when they incur substantial damage. It should be noted that substantial improvement commonly occurs in non-disaster, everyday situations through the renovation, rehabilitation of, or addition to structures.

Q. What happens when a structure is damaged, but not substantially, and during the repair the owner also makes an addition, rehabilitation or other improvement to the structure?

A. It is not uncommon for a homeowner who has sustained damage to his/her structure to decide to simultaneously improve the structure while repairs are being made. For example, the owner of a building which was 30% damaged in a flood may, while repairing the damage, have an additional room (30% improvement) constructed. Under circumstances where two types of improvements (e.g., an addition and repair due to damage as given above) are made to a structure, and the combined total of these improvements is equal to or greater than 50% of the structure's pre-damage market value, the structure is considered a substantial improvement.

SECTION 5.0 -PROJECT COMPLETION AND CLOSEOUT

5.1 Letters of Map Change (LOMA, LOMR-F)

Flood Insurance is required for buildings with a federally-backed or federally-assisted mortgage and that are located within the FEMA Special Flood Hazard Area (SFHA). This mandatory flood insurance purchase requirement may be officially removed by obtaining a Letter of Map Amendment (LOMA) or a Letter of Map Revision based on Fill (LOMR-F) from FEMA. The LOMA is applicable if the natural ground elevation has not been elevated by the placement of fill. The LOMA is a method that corrects the flood determination for an individual lot or building; it does not change the map or flood elevations.

The LOMR-F is a method used to remove the mandatory flood insurance purchase requirement for a parcel of land or a building that has been elevated by the placement of fill. It too does not change the map or the flood elevations.

Instructions and forms for the LOMA and the LOMR-F can be found on FEMA's website at www.fema.gov. When Guilford County receives the actual LOMA or LOMR-F document from FEMA, a notation is placed on the master set of Flood Insurance Rate Maps. The notification letter is kept on file with the Floodplain Administrator.

5.2 Submittal of Certification of Fill Placement Within the Floodplain

The placement of fill material and the construction of new buildings in the floodplain have an impact on the accurate location of the floodplain lines. It is important that fill is actually placed in accordance with the approved plans for a project. Therefore proper certification and/or as-built topographic mapping is required prior to final approval of projects in the floodplain.

The required documentation depends on where the development activity occurred in the floodplain. For fill placed in the fringe area, completely clear of the floodway, a certification will be required. After a project is completed, a certification form must be completed by a registered Professional Land Surveyor or Professional Engineer that states that no fill material was placed within the FEMA floodway of any watercourse.

For fill placed abutting the floodway boundary line an as-built topographic map may be required by the Floodplain Administrator to further document that no fill extended into the floodway. A final as-built topographic map, sealed by either a Professional Land Surveyor or Professional Engineer, is required by the Floodplain Development Permit Application prior to issuance of a Certificate of Compliance.

5.2.1 Submittal of As-Built Plans and Approval Process

Development is sometimes permitted within the floodway. If development is proposed in these areas the requirements of Section 7-5.11 of the Guilford County Development Ordinance will apply. Specifically, the as-built topographic map prepared by a registered Professional Land Surveyor or Professional Engineer is a part of the No-Impact and CLOMR/LOMR submittal and process. The topographic map should be of sufficient scale with contour intervals no greater than two feet. The topographic map should indicate the ground elevations prior to construction and

the ground elevations after construction is complete. A properly geo-referenced digital submittal of the topographic map is required.

5.3 Elevation Certificates and Certificate of Occupancy

All projects that take place within the floodplain will have a hold placed on the Certificate of Occupancy on the project in the building permitting system. This ensures that construction in the floodplain will be completed in a compliant and safe manner.

Applicants will be notified at the beginning of the permitting process of the flood risk and the floodplain permitting requirements. Prior to project completion, A final Elevation Certificate (EC), completed by a professional land surveyor will be required. The EC must be completely filled out with no sections left blank.

New construction within the Guilford County must have the lowest floor, including any mechanical, electrical, and ductwork, elevated at least two feet above the Base Flood Elevation. The completed final Elevation Certificate must be submitted and approved by the Floodplain Administrator. Once approved, the Certificate of Occupancy will be released.

SECTION 6.0 -APPEALS AND VARIANCES

6.1 Overview

Variations and appeals to the requirements of the Floodplain Regulations are governed under Sections 8-1 through 8-3 of the Guilford County Development Ordinance. These sections provide a means for relief from provisions of these regulations for persons wishing to operate outside the requirements of the Floodplain Regulations. It also provides a means for persons to appeal orders, decisions, determinations or interpretations made by the Floodplain Administrator.

6.2 Board of Adjustment

Variations and Appeals are heard by the Guilford County Board of Adjustment (BOA). The BOA is a five-member body whose members are appointed by the County Commissioners. The BOA meets on the first Tuesday of the month. The schedule may be altered based on case load or holidays.

6.3 Variations and Appeals

The BOA can hear variance requests for almost any provision of the Floodplain Regulations.

A notice of appeal must be filed with the BOA Secretary, with a copy to the Floodplain Administrator, within fifteen (15) days of the order, decision, determination or interpretation. The appeal request must be accompanied by a nonrefundable filing fee as established by the County Commissioners. Typical appeals that may be heard by the BOA include:

- Appeals to the issuance of a Floodplain Development Permit;
- Appeals to an interpretation of a requirement of the Floodplain Regulations; and
- Appeal to a corrective action made pursuant to a violation of the Floodplain Regulations.

You may also call 336-641-3784 for administrative and procedural information about the Variance and Appeals process.

SECTION 7 - VIOLATIONS OF THE FLOODPLAIN REGULATIONS

7.1 Violation Overview

Chapter 8 of the Development Ordinance sets the parameters for correction of violations to provisions of the floodplain regulations. The following are the actions taken in response to a potential violation

7.2 Notice of Violation

The property owner or occupant is notified by certified mail that there is an alleged violation of the floodplain regulations on the property. Civil Penalties may include a fine of up to \$200 per day for each violation. Each day the violation continues shall be considered a separate offense. Items in the letter include:

- Date of inspection that revealed the violation;
- Specific sections of the floodplain regulations that are being violated;
- Instructions to immediately remedy the violation; and
- Time and date (not later than 15 calendar days from the notice) to file an appeal for a hearing to discuss the violation.

7.3 Hearing

A hearing before the Board of Adjustments will be held in the Blue Room, Old County Courthouse, 301 West Market Street in Greensboro. Actions at the hearing include:

- Hear the Appeal;
- Affirm, modify or remove the Notice of Violation;
- Make an order in writing affirming the violation and ordering compliance; and
- The property owner or occupant will be given no less than thirty (30) days to remedy the violation (if there is imminent danger to life or other property, corrective action may be required in less than thirty (30) days).

7.4 Corrective Actions Taken

If corrective actions are taken as required, the site will be deemed in compliance and the violation resolved.

7.5 Corrective Actions Not Taken – Penalties

If corrective actions are not completed within the prescribed time, the property owner or occupant may be guilty of a misdemeanor and legal proceedings will be initiated.