CHAPTER 7: OPEN SPACE & ENVIRONMENTAL PROTECTION

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CHAPTER 7: OPEN SPACE & ENVIRONMENTAL PROTECTION

Section 7.1 Purpose

The purpose of this chapter is for the protection of existing environmental resources including open space, streams, wetlands, watersheds, floodplains, soils, forest stands, specimen trees and other significant vegetation and wildlife. These elements are of economic value to the Town and make it a desirable place to live and visit.

Section 7.2 Environmental Assessment & Suitability of Land

7.2.1 Preservation of Trees & Natural Features Encouraged

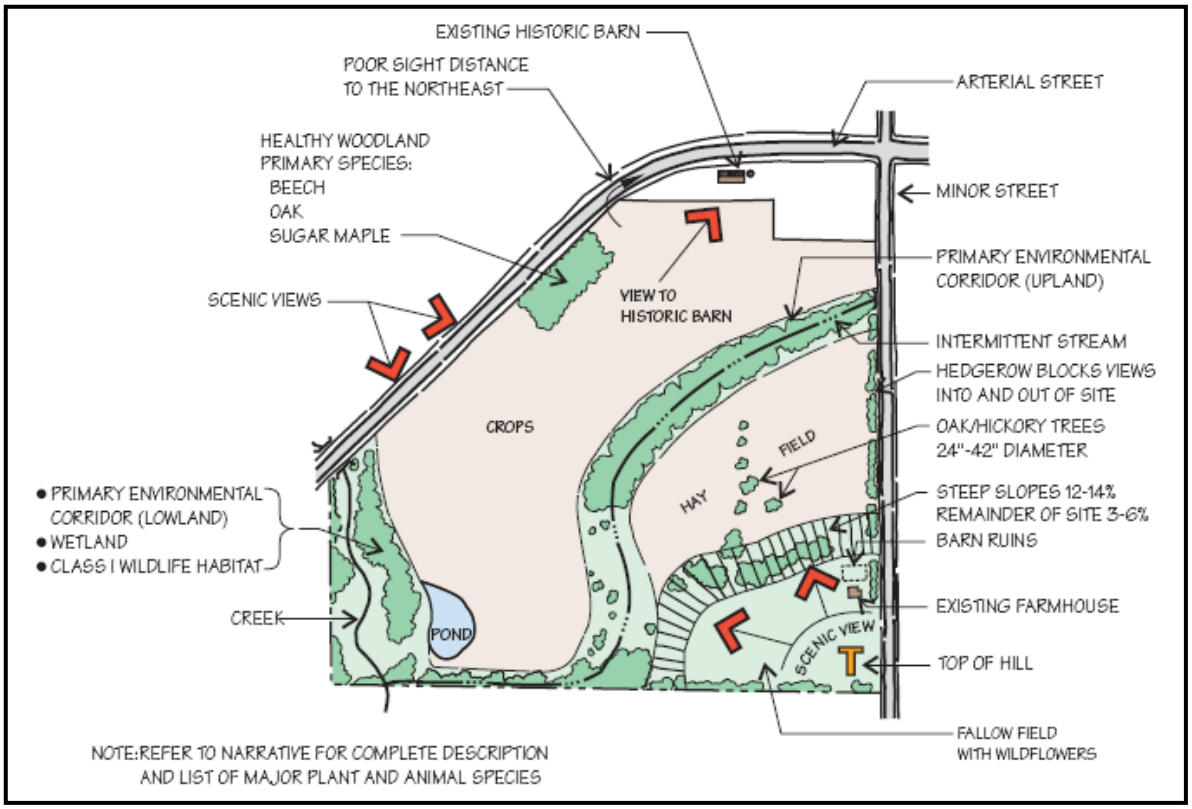
A. Significant forest stands, natural vegetation, specimen trees, severe natural topography, drainage features and water courses are encouraged to be preserved to the extent that is reasonable and practical while otherwise not reasonably prohibiting development.

B. Forested and vegetated areas whose physical site conditions render them unsuitable for development should be set aside as conservation areas or as open space. Wooded sites should be developed with careful consideration of the natural characteristics of the site. When portions of forested stands must be developed, careful consideration should be given to preserving wooded perimeters or the most desirable natural features in order to retain the aesthetic or visual character of the site. Isolated pockets of existing trees or specimen trees should be protected as a valuable asset of the property.

7.2.2 Existing Conditions Survey

Existing Conditions Surveys are required at the Preliminary Plat stage for all Major Subdivisions. Identification of existing trees, known endangered species, wetlands, streams and creeks, floodplains, and topographical features on a site prior to the advanced preparation of development plans enables the reasonable and practical planned preservation of existing vegetation while considering unique site conditions. An Existing Conditions Survey is intended to identify forest stands, distinctive tree lines or forest edges, existing watercourses, and previously documented endangered species habitats. Photographs representative of the properties features may be included.

EXAMPLE OF AN EXISTING CONDITIONS SURVEY



Source: Southeastern Wisconsin Regional Planning Commission (SEWRPC). "Conservation Subdivision Design." 2002. http://www.sewrpc.org/ca/ conservationsubdivisions/pdfs/conservation_subdivision_design_process.pdf

Section 7.3 Open Space Requirements

7.3.1 Applicability

The requirements of this Section apply to new developments with five (5) or greater residential dwelling units (major subdivisions) in which the construction of new roads is proposed. Developments in which all lots are (5) acres or more are exempt from this provision.

7.3.2 General Provisions for Open Space

A. Land designated as open space on the approved development plan shall be maintained as open space and may not be separately sold, subdivided, or developed.

B. Access from a street shall be provided to all designated open space with a minimum 15 foot wide access to the open space area. Lakes or ponds within the subdivision used as open space shall provide adequate community access.

C. Open space shall be contiguous wherever possible.

D. Town and County plans, particularly park and open space plans, shall be considered when evaluating proposals for dedication.

7.3.3 Minimum Open Space Dedication

Open space shall be dedicated in accordance with the table below. Percentages are based on total development area.

Density (Dwelling Units per Acre-DUA)	Percent Open Space*
1 unit or less per 5 acres (0.20 DUA or less)	n/a
Between 1 unit per 5 acres and 2 units per acre (0.21 DUA-2.00 DUA)	10%
Between 2 units per acre and 4 units per acre (2.01 DUA-4.00 DUA)	15%
More than 4 units per acre (4.01 DUA or more)	20%

*Conservation Development minimum open space dedication shall meet the requirements of the Section 4.2.3 and PUDs shall meet the requirements of Section 3.5.3.

How to Calculate DUA (Dwelling Units Per Acre):

$$\frac{\text{Total Number of Dwelling Units}}{\text{Total Development Area in Acres}} = \text{DUA}$$

7.3.4 Types of Open Space

All required open space shall be classified in accordance with this Section. Dedicated open space shall fit into one or more of the following categories and be classified as private common area open space or public open space. The Existing Conditions Survey should be used as a guide to determine the most appropriate open space type and location.

A. **Playground**-Playgrounds are for active recreational use and provide sunny and shaded play equipment and play areas for children as well as open shelter with benches. Playgrounds may be part of other types of open space, such as parks, or may stand alone.

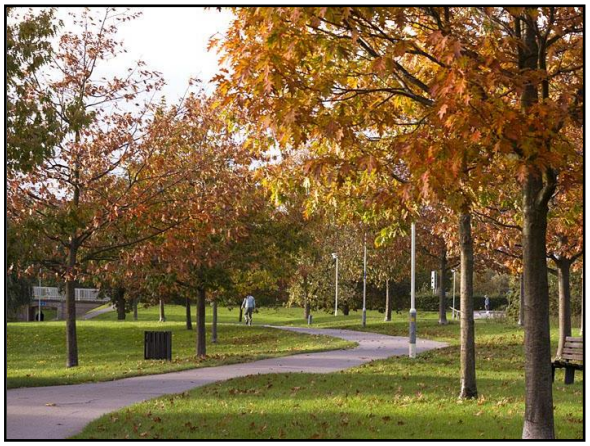
Minimum Size: 10,000 square feet
Maximum Size: 20,000 square feet

B. **Square**-Squares are areas for passive recreational use. Squares shall be bounded by streets on a minimum of 50 percent of their perimeter. Squares are encouraged to be entirely bounded by streets and/or lanes. Squares shall be planted parallel to all streets and shall contain canopy trees along street frontages.

Minimum size: 2,000 square feet
Maximum size: 1 acre

C. **Park-**Parks may be designed for passive and/or active recreational use. Parks shall be bounded by streets on a minimum of 10 percent of their perimeter. Large parks should create a central open space which services an entire neighborhood or group of neighborhoods; or incorporates physical features which are an asset to the community (i.e. lake or river frontage, high ground, significant stands of trees). Undergrowth should be limited and landscaping shall be installed in a manner that promotes attractiveness and safety. Parks may be combined with greenways and greenbelts and may include golf courses and community gardens.

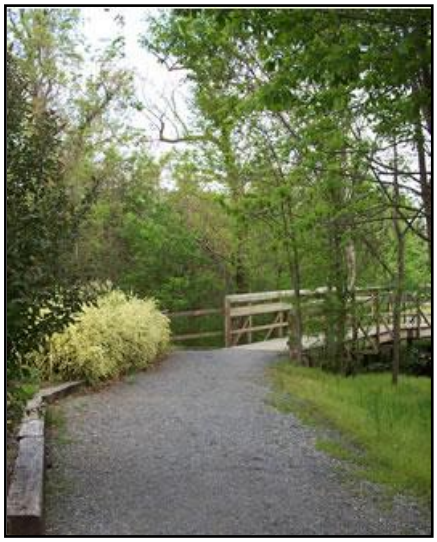
Minimum size: 1 acre



D. **Green-** The green is an open space which is more natural. Like the square, it is small and surrounded by buildings. Unlike the square, it is informally planted and may have irregular topography. Greens are usually landscaped with trees at the edges and open lawns at the center. Greens should contain no structures other than benches, pavilions, and memorials; paths are optional.

Minimum size: 20,000 square feet

E. **Greenway**-Greenways are large, irregular open spaces designed to incorporate natural settings such as creeks and significant stands of trees within and between neighborhoods. Greenways are typically more natural and may contain irregular topography. Greenways shall be used for certain active recreational uses including, at a minimum, trails for walking, jogging, and biking. Greenways shall connect points of interest in the community such as schools, parks, and other civic uses.



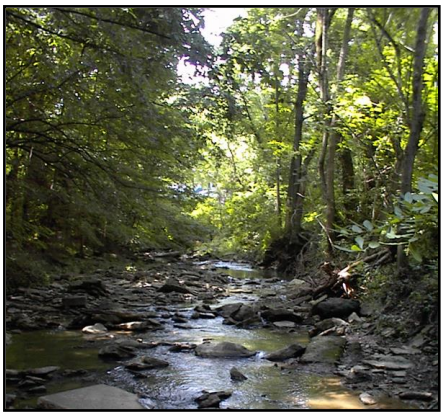
F. **Greenbelt-**Greenbelts run along the perimeter of a neighborhood, and serve to buffer a neighborhood from surrounding non-compatible uses such as a highway corridor or industrial district, or a developed area from agricultural areas or adjacent towns. Greenbelts differ from the other types of open spaces in that they are left natural, and are not intended for recreational use.

G. **Agricultural Preserve-**Open spaces designated as Agricultural Preserves shall be used for active farming in the form of crop cultivation, the keeping of livestock, or equestrian facilities. Agricultural Preserves are encouraged to protect areas of agricultural and rural heritage and promote compatible active agricultural operations.

Minimum size: 5 acres

H. **Nature Preserve-**Open spaces designated as Nature Preserves shall be left largely undisturbed except for the optional clearing of underbrush for the provision of a walking trail (mulch or other natural material only). Nature Preserve areas are encouraged to protect large stands of trees, wildlife, and natural water features. Nature Preserves are the preferred form of open space for steep slopes in excess of 25 percent grade.

Minimum size: 3 acres



Section 7.4 Open Space Ownership & Maintenance

A. Open space may be owned or administered by one or a combination of the following methods:
- Fee simple ownership by a unit of government or private non-profit land conservancy;
- Common ownership by Homeowners Association;
- Split deeded ownership by individual property owners within the subdivision;
- By individual private ownership such as a farmer, developer or other private entity that maintains the open space in accordance with the purposes of this Article. (i.e. farming, equestrian facility, etc. excluding confined livestock operations).
- Deed restricted open space easements on individual private properties.

B. The Town Board of Aldermen shall have the authority to accept or reject land dedications made as a requirement of this Section. They shall also have authority to sell land accepted pursuant to this section with the proceeds of such sale used only for the acquisition, expansion or improvement of recreation, park, or open space sites.

C. The owner of dedicated open space shall be responsible for the continuing upkeep and proper maintenance of the same.

D. In the case of common ownership by a Homeowners Association, the restrictive covenants shall provide that, in the event the Homeowners Association fails to maintain the open space according to the standards of this Ordinance, the Town may, following reasonable notice, demand that deficiency of maintenance be corrected, or enter the open space to maintain it. The cost of such maintenance shall be charged to the Homeowners Association.

E. The developer shall place in a conspicuous manner upon the Final Plat of the subdivision a notation concerning control of open space.

F. The developer will provide proof of registration of the Articles of Incorporation with the appropriate state agency for the formation of the Homeowners Association to the Subdivision Administrator.

G. Homeowners' Associations or similar legal entities that are responsible for the maintenance and control of open space areas and common areas shall be established by the developer who shall record in the Register of Deeds a declaration of covenants and restrictions that will govern the association or similar legal entity. A copy of the recorded document shall be provided to the Subdivision Administrator and such document shall include, but not be limited to, the following:

1. Provision for the establishment of the association or similar entity is required before any lot in the development is sold or any building occupied and membership shall be mandatory for each homeowner and any successive buyer.

2. The association or similar legal entity has clear legal authority to maintain and exercise control over such common open space areas.

3. The association or similar legal entity has the power to compel contributions from residents of the development to cover their proportionate shares of the costs associated with the maintenance and upkeep of such common areas. Further, assessments levied can become a lien on the property if allowed in the master deed establishing the homeowners association or similar legal entity.

4. The open space restrictions must be permanent, not just for a period of years.

5. The association or similar legal entity must be responsible for liability insurance, applicable taxes and the maintenance open space and other facilities under their control.

6. The association or similar legal entity must be able to adjust the assessment to meet changing needs.

7. The association shall be responsible for maintaining all public storm water drainage systems and easements within the subdivision not being maintained by the Town, County, State or other approved entity.

8. It shall be expressly stated within the restrictive covenants/homeowners association documents that it will be the responsibility of the developer or successors or assigns to enforce such covenants or restrictions until such time as control has been transferred to the Homeowners Association Board of Directors. It shall be the sole responsibility of the developer, successor or assigns to correct any deficiencies prior to transfer of control over to the Homeowners Association Board of Directors.

Section 7.5 Payment-in-Lieu-of Dedication

A. If open space within a development is physically impractical due to unusual conditions then the Town may accept a fee paid in lieu of dedication.

B. Fees collected in lieu of dedications and any proceeds from such transactions or sales shall be accounted for by the Town, and the funds shall be used by the Town for the purposes of acquiring and developing recreation, greenway and open space areas as shown on the land development plan or in the parks and recreation and greenway/bikeway master plans and for no other purposes. The depository for such funds may be the same as permitted other funds of the Town, pending their expenditure in accordance with the terms of this code; such funds may be invested as other funds of the Town. The Town may, at its discretion, add additional monies to the fund for the purposes of purchasing open space and recreational land to be used for recreational purposes.

C. Refunds shall not be granted to the developer should the project not be constructed after recording of Final Plat or if a reduction in density occurs.

D. Such payment in lieu of dedication shall be the product of the current assessed market value of the land to be subdivided (as established in subsection E below) multiplied by the number of acres to be dedicated.

E. The current assessed market value of the gross land area of the development or subdivision at the time of submission of the required plan and/or plat shall be used to determine the land value. The current assessed market value shall be the appropriate value as determined by and maintained on file in the Rowan County Tax Office. The average value per gross acres shall be calculated from this total tax value and applied to the required recreational land area in order to determine the land value.

$$\frac{\text{TOTAL MARKET VALUE OF UNDEVELOPED PROPERTY}}{\text{TOTAL ACRES OF UNDEVELOPED PROPERTY}} \times \text{ACRES OF REQUIRED OPEN SPACE} = \text{PAYMENT}$$

Section 7.6 Environmental Protection

7.6.1 Stream Buffer

A 30 foot undisturbed buffer shall be provided from the stream bank of all perennial streams as shown on the latest USGS map. Such buffer may only be disturbed for the installation of a narrow greenway path.

7.6.2 Flood Damage Prevention

All property located within a Special Flood Hazard Area as identified on the latest Flood Insurance Rate Maps (FIRM) shall meet the requirements of the Granite Quarry Flood Damage Prevention Ordinance.

FLOOD DAMAGE PREVENTION ORDINANCE
TOWN OF GRANITE QUARRY, NC

ARTICLE 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES.

SECTION A. STATUTORY AUTHORIZATION.

The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3 and 4 of Article 18 of Chapter 153A; and Part 121, Article 6 of Chapter 153A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare.

Therefore, the Board of Aldermen of the Town of Granite Quarry, North Carolina, does ordain as follows:

SECTION B. FINDINGS OF FACT.

(1) The flood prone areas within the jurisdiction of **Granite Quarry** are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(2) 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 prone areas of uses vulnerable to floods or other hazards.

SECTION C. STATEMENT OF PURPOSE.

It is the purpose of this ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

(1) restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities;

(2) require that uses vulnerable to floods, including facilities that 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 floodwaters;

(4) control filling, grading, dredging, and all other development that may increase erosion or flood damage; and

(5) prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards to other lands.

SECTION D. OBJECTIVES.

The objectives of this ordinance are to:

(1) protect human life, safety, and health;

(2) minimize expenditure of public money for costly flood control projects;

(3) minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) minimize prolonged business losses and interruptions;

(5) minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;

(6) help maintain a stable tax base by providing for the sound use and development of flood prone areas; and

(7) ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

ARTICLE 2. DEFINITIONS.

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 Shallow Flooding" means a designated Zone AO on a community's Flood Insurance Rate Map (FIRM) with base flood depths determined to be from one (1) to three (3) feet. These areas are located where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

"Area of Special Flood Hazard" see "Special Flood Hazard Area (SFHA)".

"Base Flood" means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

"Base Flood Elevation (BFE)" means a determination of the water surface elevations of the base flood 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, State, or other source using FEMA approved engineering methodologies. This elevation, when combined with the "Freeboard", establishes the "Regulatory Flood Protection Elevation".
"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"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.

"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, structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

"Existing Manufactured Home Community or Manufactured Home Subdivision" means a Manufactured Home Community 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 initial 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 both the Special 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".

"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.

"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. 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.

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

"Functionally Dependent Facility" means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, limited to 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 Management Facility" means, as defined in NCGS 130A, Article 9, 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:

(a) listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register;
(b) certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
(c) individually listed on a local inventory of historic landmarks in communities with a "Certified Local Government (CLG) Program"; or
(d) certified as contributing to the historical significance of a historic district designated by a community with a "Certified Local Government (CLG) Program".

Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

"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 the 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 Community 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 initial floodplain management regulations 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.

"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.

"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:

(a) built on a single chassis;
(b) 400 square feet or less when measured at the largest horizontal projection;
(c) designed to be self-propelled or permanently towable by a light duty truck; and
(d) 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 bottom of the lowest horizontal structural member of the lowest floor for structures within all Special Flood Hazard Areas. For the purposes of this definition, the reference level for slab construction is measured from the top of the lowest floor. **(ROWAN COUNTY REVISED 2011- GRANITE QUARRY REVISED 4-2-12)**

"Regulatory Flood Protection Elevation" means the "Base Flood Elevation" plus the "Freeboard". 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. 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.

"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 any facility involved in the disposal of solid waste, as defined in NCGS 130A-290(a)(35).

"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 percent (1%) or greater chance of being flooded in any given year, as determined in Article 3, Section B 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 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:

(a) 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
(b) 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 Articles 4 and 5 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 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.

ARTICLE 3. GENERAL PROVISIONS.

SECTION A. LANDS TO WHICH THIS ORDINANCE APPLIES.

This ordinance shall apply to all Special Flood Hazard Areas within the jurisdiction of Granite Quarry, including the Extra Territorial Jurisdictions (ETJs) therein.

SECTION B. 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) and its accompanying Flood Insurance Rate Maps (FIRM), for Rowan County dated June 16, 2009, which are adopted by reference and declared to be a part of this ordinance.

The initial Flood Insurance Rate Maps are as follows for the jurisdictional areas at the initial date:
Rowan County Unincorporated Area, dated November 1, 1979
Town of Granite Quarry Incorporated Area, dated September 15, 1978

SECTION C. ESTABLISHMENT OF FLOODPLAIN DEVELOPMENT PERMIT.

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with the provisions of Article 3, Section B of this ordinance.

SECTION D. COMPLIANCE.

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

SECTION E. ABROGATION AND GREATER RESTRICTIONS.

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

SECTION F. INTERPRETATION.

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

(a) considered as minimum requirements;
(b) liberally construed in favor of the governing body; and
(c) deemed neither to limit nor repeal any other powers granted under State statutes.

SECTION G. WARNING AND DISCLAIMER OF LIABILITY.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur. Actual flood heights may be increased by man-made or natural causes. This ordinance 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 ordinance shall not create liability on the part of the Town of Granite Quarry or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

SECTION H. PENALTIES FOR VIOLATION.

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

ARTICLE 4. ADMINISTRATION.

SECTION A. DESIGNATION OF FLOODPLAIN ADMINISTRATOR.

The Town of Granite Quarry Planning and Zoning Administrator, hereinafter referred to as the "Floodplain Administrator", is hereby appointed to administer and implement the provisions of this ordinance.

SECTION B. FLOODPLAIN DEVELOPMENT APPLICATION, PERMIT AND CERTIFICATION REQUIREMENTS.

(1) Application Requirements. Application for a Floodplain Development Permit shall be made to the Floodplain Administrator prior to any development activities located within or adjacent to Special Flood Hazard Areas. The following items shall be presented to the Floodplain Administrator to apply for a floodplain development permit:

(a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:

(i) the nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;

(ii) the boundary of the Special Flood Hazard Area as delineated on the FIRM or other flood map as determined in Article 3, Section B, or a statement that the entire lot is within the Special Flood Hazard Area;

(iii) flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Article 3, Section B;

(iv) the boundary of the floodway(s) or non-encroachment area(s) as determined in Article 3, Section B;

(v) the Base Flood Elevation (BFE) where provided as set forth in Article 3, Section B; Article 4, Section C; or Article 5, Section D;

(vi) the old and new location of any watercourse that will be altered or relocated as a result of proposed development; and

(vii)the certification of the plot plan by a professional land surveyor or professional engineer. In lieu of this requirement, the Floodplain Administrator may provide necessary certifications for development adjacent to but not within the Special Flood Hazard Area.

(b) Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area including but not limited to:

(i) Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;

(ii)Elevation in relation to mean sea level to which any non-residential structure in Zone AE or A will be flood-proofed; and

(iii)Elevation in relation to mean sea level to which any proposed utility systems will be elevated or flood-proofed.

(c) If floodproofing, a Floodproofing Certificate (FEMA Form 81-65) with supporting data an operational plan, and an inspection and maintenance plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.

(d) A Foundation Plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:

(i)The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls); and

(ii)Openings to facilitate automatic equalization of hydrostatic flood forces on walls in accordance with Article 5, Section B (4)(c) when solid foundation perimeter walls are used in Zones A, AE, and A1-30.

(e) Usage details of any enclosed areas below the lowest floor.

(f) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage.

(g) Certification that all other Local, State and Federal permits required prior to floodplain development permit issuance have been received.

(h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure that the provisions of Article 5, Section B, subsections (6) and (7) of this ordinance are met.

(i) A description of proposed watercourse alteration or relocation, when applicable, including 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 (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

(2) Permit Requirements. The Floodplain Development Permit shall include, but not be limited to:

(a) A description of the development to be permitted under the floodplain development permit.

(b) The Special Flood Hazard Area determination for the proposed development in accordance with available data specified in Article 3, Section B.

(c) The Regulatory Flood Protection Elevation required for the reference level and all attendant utilities.

(d) The Regulatory Flood Protection Elevation required for the protection of all public utilities.

(e) All certification submittal requirements with timelines.

(f) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable.

(g) The flood openings requirements, if in Zones A, AE or A1-30.

(h) Limitations of below Base Flood Elevation (BFE) enclosure uses (if applicable). (i.e., parking, building access and limited storage only).

(3) <u>Certification Requirements.</u>

(a) Elevation Certificates

(i)An Elevation Certificate (FEMA Form 81-31) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.

(ii)An Elevation Certificate (FEMA Form 81-31) is required after the reference level is established. Within seven (7) calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to mean sea level. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

(iii)A final as-built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be

required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(b) Floodproofing Certificate
If non-residential floodproofing is used to meet the Regulatory Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(c) If a manufactured home is placed within Zone A, AE, or A1-30 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required in accordance with the provisions of Article 5, Section B (3)(b).

(d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified 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 shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

(e) Certification Exemptions. The following structures, if located within Zone A, AE or A1-30, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:

(i)Recreational Vehicles meeting requirements of Article 5, Section B(6)(a);

(ii)Temporary Structures meeting requirements of Article 5, Section B(7); and

(iii)Accessory Structures less than 150 square feet meeting requirements of Article 5, Section B(8).

SECTION C. <u>DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR:</u>

The Floodplain Administrator shall perform, but not be limited to, the following duties:

(1) Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of this ordinance have been satisfied.

(2) Review all proposed development within Special Flood Hazard Areas to assure that all necessary Local, State and Federal permits have been received.

(3) Notify adjacent communities and the North Carolina Department of Crime Control and 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 (FEMA).

(4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained.

(5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Article 5, Section F are met.

(6) Obtain actual elevation (in relation to mean sea level) of the reference level (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with the provisions of Article 4, Section B(3).

(7) Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with the provisions of Article 4, Section B(3).

(8) Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with the provisions of Article 4, Section B(3).

(9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the provisions of Article 4, Section B(3) and Article 5, Section B(2).

(10) Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas, floodways, or non-encroachment 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 a reasonable opportunity to appeal the interpretation as provided in this article.

(11) When Base Flood Elevation (BFE) data has not been provided in accordance with the provisions of Article 3, Section B, obtain, review, and reasonably utilize any BFE data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to Article 5, Section D(2)(b), in order to administer the provisions of this ordinance.

(12) When Base Flood Elevation (BFE) data is provided but no floodway or non-encroachment area data has been provided in accordance with the provisions of Article 3, Section B, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this ordinance.

(13) When the lowest floor and the lowest adjacent grade of a structure or the lowest ground elevation of a parcel in a Special Flood Hazard Area is above the Base Flood Elevation (BFE), advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the (LOMA) issued by FEMA in the floodplain development permit file.

(14) Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended.

(15) Make on-site inspections of work in progress. As the work pursuant to a floodplain development 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 the local ordinance and the terms of the permit. In exercising this power, the Floodplain Administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.

(16) Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, 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 or in charge of the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

(17) Revoke floodplain development permits as required. The Floodplain Administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, and 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 floodplain development permit mistakenly issued in violation of an applicable State or local law may also be revoked.

(18) Make periodic inspections throughout the Special Flood Hazard Areas within the jurisdiction of the community. The Floodplain Administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.

(19) Follow through with corrective procedures of Article 4, Section D.

(20) Review, provide input, and make recommendations for variance requests.

(21) 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 the provisions of Article 3, Section B of this ordinance, including any revisions thereto including Letters of Map Change, which include Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Conditional Letters of Map Revision (CLOMRs), and Letters of Map Revision (LOMRs), issued by FEMA. Notify State and FEMA of mapping needs.

(22) Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-Fs) and Letters of Map Revision (LOMRs).

SECTION D. <u>CORRECTIVE PROCEDURES.</u>

(1) Violations to be Corrected: When the Floodplain Administrator finds violations of applicable State and local laws, it shall be his or her 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 cited in such notification.

(2) 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 owner written notice, by certified or registered mail to the owner's last known address or by personal service, stating:

(a) that the building or property is in violation of the floodplain management regulations;

(b) that a hearing will be held before the Floodplain Administrator at a designated place and time, not later than ten (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

(c) that following the hearing, the Floodplain Administrator may issue an order to alter, vacate, or demolish the building; or to remove fill as applicable.

(3) Order to Take Corrective Action: If, upon a hearing held pursuant to the notice prescribed above, the Floodplain Administrator shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, he or she shall issue an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than sixty (60) calendar days, nor more than one-hundred-eighty (180) calendar days. Where the Floodplain Administrator finds that there is imminent danger to life or other property, he or she may order that corrective action be taken in such lesser period as may be feasible.

(4) Appeal: Any owner who has received an order to take corrective action may appeal the order to the local elected governing body by giving notice of appeal in writing to the Floodplain Administrator and the clerk within ten (10) days following issuance of the final order. In the absence of an appeal, the order of the Floodplain Administrator shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.

(5) Failure to Comply with Order: If the owner of a building or property fails to comply with an order to take corrective action for which no appeal has been made or fails to comply with an order of the governing body following an appeal, the owner shall be guilty of a misdemeanor and shall be punished at the discretion of the court.

SECTION E. <u>VARIANCE PROCEDURES.</u>

(1) The Zoning Board of Adjustment as established by the Town of Granite Quarry, hereinafter referred to as the "appeal board", shall hear and decide requests for variances from the requirements of this ordinance.

(2) Any person aggrieved by the decision of the appeal board may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.

(3) Variances may be issued for:

(a) 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 that the variance is the minimum necessary to preserve the historic character and design of the structure;

(b) functionally dependent facilities if determined to meet the definition as stated in Article 2 of this ordinance, provided provisions of Article 4, Section E(9)(b), (c), and (e) have been satisfied, and such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or

(c) any other type of development, provided it meets the requirements of this Section.

(4) In passing upon variances, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

(a) the danger that materials may be swept onto other lands to the injury of others;

(b) the danger to life and property due to flooding or erosion damage;

(c) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(d) the importance of the services provided by the proposed facility to the community;

(e) the necessity to the facility of a waterfront location as defined under Article 2 of this ordinance as a functionally dependent facility, where applicable;

(f) the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

(g) the compatibility of the proposed use with existing and anticipated development;

(h) the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

(i) the safety of access to the property in times of flood for ordinary and emergency vehicles;

(j) 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

(k) 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.

(5) A written report addressing each of the above factors shall be submitted with the application for a variance.

(6) Upon consideration of the factors listed above and the purposes of this ordinance, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes and objectives of this ordinance.

(7) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the Base Flood Elevation (BFE) and the elevation to which the structure is to be built and that such construction below the BFE increases risks to life and property, and that the issuance of a variance to construct a structure below the BFE will result in increased premium rates for flood insurance up to $25 per $100 of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.

(8) The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the State of North Carolina upon request.

(9) Conditions for Variances:

(a) Variances shall not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.

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

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

(d) Variances shall only be issued prior to development permit approval.

(e) Variances shall only be issued upon:

(i)a showing of good and sufficient cause;

(ii)a determination that failure to grant the variance would result in exceptional hardship; and

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

(10) A variance may be issued for solid waste disposal facilities or sites, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in Special Flood Hazard Areas provided that all of the following conditions are met.

(a) The use serves a critical need in the community.

(b) No feasible location exists for the use outside the Special Flood Hazard Area.

(c) The reference level of any structure is elevated or floodproofed to at least the Regulatory Flood Protection Elevation.

(d) The use complies with all other applicable Federal, State and local laws.

(e) The Town of Granite Quarry has notified the Secretary of the North Carolina Department of Crime Control and Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.

ARTICLE 5. PROVISIONS FOR FLOOD HAZARD REDUCTION.

SECTION A. GENERAL STANDARDS.

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

(1) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.

(2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.

(4) 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 to the Regulatory Flood Protection Elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, hot water heaters, and electric outlets/switches.

(5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(6) 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 flood waters.

(7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

(8) Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.

(9) Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

(10) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Article 4, Section E(10). A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the Regulatory Flood Protection Elevation and certified in accordance with the provisions of Article 4, Section B(3).

(11) All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.

(12) All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(13) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.

(14) All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

(15) When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.

(16) When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest Base Flood Elevation (BFE) shall apply.

SECTION B. SPECIFIC STANDARDS.

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Article 3, Section B, or Article 5, Section D, the following provisions, in addition to the provisions of Article 5, Section A, are required:

(1) Residential Construction. New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Article 2 of this ordinance.

(2) Non-Residential Construction. New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation, as defined in Article 2 of this ordinance. Structures located in A, AE, and A1-30 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.

(3) Manufactured Homes.

(a) New and replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Regulatory Flood Protection Elevation, as defined in Article 2 of this ordinance.

(b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by certified engineered foundation system, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six (36) inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six (36) inches in height, an engineering certification is required.

(c) All enclosures or skirting below the lowest floor shall meet the requirements of Article 5, Section B(4).

(d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home community s or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.

(4) Elevated Buildings: Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

(a) shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage

door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;

(b) shall be constructed entirely of flood resistant materials at least to the Regulatory Flood Protection Elevation; and

(c) shall include, in Zones A, AE, and A1-30, flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:

(i) A minimum of two flood openings on different sides of each enclosed area subject to flooding;

(ii) The total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;

(iii) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

(iv) The bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;

(v) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and

(vi) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

(5) Additions/Improvements.

(a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:

(i) not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.

(ii) a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(b) Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction.

(c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:

(i) not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.

(ii) a substantial improvement, both the existing structure and the addition and/or improvements

must comply with the standards for new construction.

(6) Recreational Vehicles. Recreational vehicles shall either:

(a) be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions); or

(b) meet all the requirements for new construction.

(7) Temporary Non-Residential Structures. Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval:

(a) a specified time period for which the temporary use will be permitted. Time specified may not exceed three (3) months, renewable up to one (1) year;
(b) the name, address, and phone number of the individual responsible for the removal of the temporary structure;

(c) the time frame prior to the event at which a structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

(d) a copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and

(e) designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.

(8) Accessory Structures. When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

(a) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);

(b) Accessory structures shall not be temperature-controlled;

(c) Accessory structures shall be designed to have low flood damage potential;
(d) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;

(e) Accessory structures shall be firmly anchored in accordance with the provisions of Article 5, Section A(1);

(f) All service facilities such as electrical shall be installed in accordance with the provisions of Article 5, Section A(4); and

(g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below Regulatory Flood Protection Elevation in conformance with the provisions of Article 5, Section B(4)(c).

An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Article 4, Section B(3).

SECTION C. RESERVED.

SECTION D. STANDARDS FOR FLOODPLAINS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS.

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Article 3, Section B, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to the provisions of Article 5, Section A, shall apply:

(1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty (20) feet each side from top of bank or five times the width of the stream, 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.

(2) The Base Flood Elevation (BFE) used in determining the Regulatory Flood Protection Elevation shall be determined based on the following criteria:

(a) When Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with standards in Article 5, Sections A and B.

(b) When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway and non-encroachment areas shall also comply with the requirements of Article 5, Sections B and F.

(c) All subdivision, manufactured home community and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five (5) acres or has more than twenty (20) lots/manufactured home sites. Such BFE data shall be adopted by reference in accordance with Article 3, Section B and utilized in implementing this ordinance.

(d) When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or floodproofed (nonresidential) to or above the Regulatory Flood Protection Elevation, as defined in Article 2. All other applicable provisions of Article 5, Section B shall also apply.

SECTION E. STANDARDS FOR RIVERINE FLOODPLAINS WITH BASE FLOOD ELEVATIONS BUT WITHOUT ESTABLISHED FLOODWAYS OR NON-ENCROACHMENT AREAS.

Along rivers and streams where Base Flood Elevation (BFE) data is provided by FEMA or is available from another source but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

(1) Standards of Article 5, Sections A and B; and

(2) Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

SECTION F. FLOODWAYS AND NON-ENCROACHMENT AREAS.

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Article 3, Section B. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Article 5, Sections A and B, shall apply to all development within such areas:

(1) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:
(a) it is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of floodplain development permit, or
(b) a Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.

(2) If Article 5, Section F(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.

(3) No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home community or subdivision, provided the following provisions are met:

(a) the anchoring and the elevation standards of Article 5, Section B(3); and

(b) the no encroachment standard of Article 5, Section F(1).

ARTICLE 6. LEGAL STATUS PROVISIONS.

SECTION A. EFFECT ON RIGHTS AND LIABILITIES UNDER THE EXISTING FLOOD DAMAGE PREVENTION ORDINANCE.

This ordinance in part comes forward by re-enactment of some of the provisions of the Flood Damage Prevention **Ordinance enacted September 15, 1978** as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of Granite Quarry enacted on **September 15, 1978**, as amended, which are not reenacted herein are repealed.

The date of the initial flood damage prevention ordinance for each municipal jurisdiction within Rowan County is as follows:

Town of Granite Quarry Incorporated Area, **dated September 15, 1978**

SECTION B. EFFECT UPON OUTSTANDING FLOODPLAIN DEVELOPMENT PERMITS.

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the Floodplain Administrator or his or her authorized agents before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this ordinance.

SECTION C. SEVERABILITY.

If any section, clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

SECTION D. EFFECTIVE DATE.

This ordinance shall become effective June 16, 2009.

SECTION E. ADOPTION CERTIFICATION.

I hereby certify that this is a true and correct copy of the Flood Damage Prevention Ordinance as adopted by the Board of Aldermen of the Town of Granite Quarry, North Carolina, on the 4th day of May , 200 9.

WITNESS my hand and the official seal of GRANITE QUARRY, this the 11TH day of MAY , 2009.

REBECCA B. SHIVES
(Signature)