



**City of Boiling Spring Lakes
Planning Board
August 11, 2026
City Hall – 6:30 P.M.**

AGENDA

- Call to Order
- Pledge of Allegiance
- Roll Call
- Approval of Agenda
- Potential Conflict of Interest/Association Disclosure
If any Board member knows of any conflict of interest or association with any item on this agenda, please so state at this time.
- Approval of Minutes
 - July 14, 2026
- Public Comment
- Old Business
 - Text Amendment (TX-2026-01) – UDO Article 7, Part IV – Landscaping, Buffers and Tree Protection
 - Staff Report & Plan Consistency
 - Text Amendment (TX-2026-02) – UDO Article 9, Section 9-2-1 – Plot Plan Requirements
 - Staff Report & Plan Consistency
- New Business
 - Text Amendment (TX-2026-03) – UDO Article 11 – Flood Damage Prevention Ordinance
 - Staff Report & Plan Consistency
- Discussion
- Announcements
- Adjourn



Planning Board Meeting Minutes
July 14, 2026
City Hall – 6:30 PM.

1. Call to Order

The meeting was called to order by Chair Launderville at 6:30 PM.

2. Pledge of Allegiance

The Pledge of Allegiance was recited.

Attendance

Lucille Launderville
Stephanie Hanson
Sharon Zakszeski
Chris Sekula
Carrie Moffett (late)

Absent

David Van der Vossen (excused)

Nicole Morgan, Development Services Director
Suzanne Price, Zoning Technician
Tanya Shannon, City Clerk
Commissioner Sherwood, Board Liaison
Commissioner Ausborn

3. Approval of Agenda

Chair Launderville requested amendments to the agenda: to remove the Final Draft of the Imagine 2040 Comprehensive Plan from the agenda until the August meeting and to add an update on the Highway 87 100-acre project under New Business. Ms. Zakszeski moved to approve the amended agenda, and Ms. Hanson seconded.
Vote 4-0; Motion Carried.

4. Potential Conflict of Interest/Association Disclosure

No member indicated any conflict or association with any item on this evening's agenda.

5. Public Comment

1. Judith Jeffries – Spoke on the need to protect red-cockaded woodpecker habitat, urged updating habitat maps collaboratively, and volunteered to assist.

2. Dana Whitt (on behalf of Kendall Fincher, YMD Builders) – Submitted a prepared statement strongly supporting a text amendment to remove the U.S. Fish & Wildlife Service (USFWS) approval requirement for residential tree-clearing permits. Cited lost revenue, impacts on property taxes, job creation, and alignment with neighboring municipalities.
3. Travis Cruse – Supported a text amendment, emphasized the need for clear answers for builders and investors, and noted economic impacts after 30 years in the community.
4. Tony Witt – Supported streamlining the process and using local staff instead of federal delays.
5. Ashley Turner – Spoke in favor of a text amendment, challenged claims of widespread tree devastation on single lots, highlighted builders' efforts to preserve trees, and urged alignment with county practices.
6. Guy Mastroianni – Commented on the 2040 Comprehensive Plan, suggested the need for a formal town vision statement, and asked about public input.
7. Chris Berlin – Local builder supporting the staff-recommended amendment and reliance on local staff expertise.

6. Approval of the Minutes

Ms. Sekula moved to approve the May 14, 2026, minutes, and Ms. Hanson seconded. **Vote 4-0; Motion Carried.**

7. Old Business

~~Final Draft: Imagine 2040 Comprehensive Plan~~

A. 100- acres Development on Highway 87

Ms. Morgan reported:

- No major site plan submitted (only a concept sketch).
- Properties subdivided; clearing permits were issued for green lots.
- Two-year deadline to submit master site plan ends August 22, 2026.
- Potential fines: \$2 per sq. ft. of disturbed area (max \$30,000).
- Tree permits were obtained; other agency permits (DEQ, stormwater, etc.) would be required for full development.
- Enforcement history and collection challenges discussed.

8. New Business

A. Text Amendment (TX-2026-01) - UDO Article 7, Part IV – Landscaping, Buffers, and Tree Protection

Ms. Morgan presented a text amendment to remove the City as intermediary between property owners and USFWS for tree-clearing approvals on residential lots.

Key Background:

- Long-standing process (since 2017) involving color-coded parcels (green/blue/red) and basal area calculations.

- Recent USFWS staffing changes, communication breakdowns, and shift to the IPaC (Information for Planning and Consultation) system caused major delays and a current halt on clearing permits.
- Builders and residents reported significant impacts on construction, jobs, and the local economy.

Proposed Changes (Summary):

- Exempt single-family, two-family residential construction and accessory structures (subject to plot plans) from city-issued clearing permits.
- Retain city tree ordinance requirements for significant trees on development applications.
- Require location, size, and species of significant trees on plot plans.
- Maintain compliance with all federal/state regulations (including Endangered Species Act and Migratory Bird Treaty Act).
- In-house policy: Add notifications on zoning permits regarding potential USFWS requirements for pine trees ≥8 inches DBH.

Discussion: Extensive debate on balancing environmental protection, tree preservation, economic impacts, builder practices, stormwater/flooding benefits, and liability. Suggestions included adjusting significant tree definitions, mitigation ratios, and notifications.

Ms. Sekula moved to approve Text Amendment (TX-2026-01), UDO Article 7, Part IV – Landscaping, Buffers, and Tree Protection, as presented with the included in-house permit notifications. Ms. Zakszeski seconded the motion. **Vote 5-0; Motion Carried.**

A motion was made by Ms. Hanson to approve Option A for the Plan Consistency and Reasonableness Determination, with a recommendation for approval to the Board of Commissioners. Seconded by Ms. Zakszeski. **Vote 5-0; Motion Carried.**

B. 2-1 – Plot Plan Requirements

A second text amendment was proposed to revise plot plan requirements, mandating that surveyors identify significant trees and their locations for single-family homes and accessory structures, with the potential for mitigation payments to a tree management fund. Ms. Morgan explained that a corresponding update would require surveyors to show significant trees on plot plans for new residential construction (with exceptions for accessory structures).

Proposed Language:

~~(1) Table containing the size, and species of all trees >7.9 inches DBH. Location, size, and species of all significant trees (all trees at least 24" DBH & dogwoods, American hollies, & live oaks at least 8" DBH)~~

1. *Proposals for accessory structures may, in lieu of ~~including the table on the plot plan~~ requiring that the plot plan include the location, size, and species of all significant trees, include a separate hand-drawn sketch of the size and species of all significant trees >7.9 inches DBH proposed for removal in relation to the location of the proposed structure.*

A motion was made by Ms. Hanson to approve the Text Amendment (TX-2026-02) – UDO Article 9, Section 9-2-1 – Plot Plan Requirements, and seconded by Ms. Sekula. **Vote 5-0; Motion Carried.**

A motion was made by Ms. Hanson to approve Option A for the Plan Consistency and Reasonableness Determination, with a recommendation for approval to the Board of Commissioners. Seconded by Ms. Sekula. **Vote 5-0; Motion Carried.**

With no further comments, Chair Launderville requested a motion to adjourn. The motion was made by Ms. Zakszeski to adjourn and seconded by Ms. Hanson. ***Vote 5-0; Motion Carried.***

Adjournment – 8:38 p.m.

Respectfully submitted by Tanya Shannon, City Clerk



City of Boiling Spring Lakes

9 East Boiling Spring Road
Southport, NC 28461

STAFF REPORT

Agenda Date:

August 11, 2026

Title:

TX-2026-01 – UDO Amendment: Article 7, Part IV, Sections 7-26 through 7-29

Department:

Development Services – Planning & Zoning

Background Information:

For many years, the City has administered its tree protection regulations in coordination with the U.S. Fish and Wildlife Service (USFWS) to ensure compliance with federal protections for the endangered red-cockaded woodpecker (RCW). The USFWS developed a process that mapped properties throughout the City based on the presence and habitat of the RCW and assigned parcels to one of three categories: Green, Blue, or Red.

- **Green Lots:** Tree removal activities did not require review or approval from USFWS. Property owners only needed to comply with the City's Tree Ordinance.
- **Blue Lots:** These properties were identified as RCW foraging habitat. Applicants were required to identify and map the large pine trees on the property and specify which trees they proposed to remove. City staff entered this information into a basal area spreadsheet, which was forwarded to USFWS for review. Once USFWS issued its approval letter, the City could issue a clearing permit, provided the application also complied with the City's Tree Ordinance.
- **Red Lots:** These properties contained known cavity trees or other highly sensitive RCW habitat. Applications were referred directly to USFWS for review and approval before the City could issue a clearing permit.

This coordinated review process remained in place for many years and generally functioned efficiently. Then, in May 2026 the City was informed that as of May 1 the USFWS has changed its review procedures. Shortly thereafter, representatives from the USFWS met with City officials and advised that the Service would no longer recognize the City's historical Green, Blue, and Red parcel classifications. Instead, every parcel within the City would now require review by the USFWS before clearing could occur, and all applicants would need to submit their requests through the Service's IPaC system.

The changes in the Service's review process has created significant challenges for the City, and has stalled issuance of nearly all development permits. Because the timing and outcome of the federal review are outside the City's control, staff are unable to provide applicants with estimated review timeframes or definitive answers regarding the status of their applications. As a result, City staff have experienced a significant increase in phone calls, emails, and in-person inquiries from property owners, contractors, and developers seeking updates on applications that remain pending with USFWS. Staff routinely serves as the intermediary between applicants and the federal agency, despite having no authority over the federal review process or its timelines.

Due to the significant challenges created by this new review process, staff was directed to draft an amendment to the City's Tree Preservation Ordinance to remove the City's position as intermediary in the federal review process.

The proposed ordinance amends the City's land clearing regulations by eliminating the requirement for the City to review and process land clearing permit applications, thereby removing the City from serving as an intermediary between property owners and the USFWS. Property owners will remain responsible for obtaining any required federal authorizations directly from the USFWS.

The amendment maintains land clearing protections by requiring that land clearing occur only in conjunction with an approved development plan and strengthens land clearing protections by prohibiting the clearing of property in anticipation of future development. The ordinance continues to prohibit the removal of significant trees without City authorization and retains the existing mitigation requirements for approved removals.

Because new single-family residential construction, two-family residential construction, and accessory structures are reviewed through the City's plot plan process rather than through development plan approval, these activities are exempt from the requirement that land clearing occur in conjunction with an approved development plan. This exemption is limited to that procedural requirement and does not exempt such projects from the City's significant tree protection standards. Any removal of significant trees associated with these projects must still receive the required authorization and comply with all applicable mitigation requirements.

Additionally, the ordinance clarifies that nothing in its provisions shall be construed to authorize any activity prohibited by federal, state, or local law, including the requirements of the Endangered Species Act and other laws protecting threatened or endangered species and their habitats.

At their duly held meeting on July 14, 2026 the Planning Board voted unanimously to recommend approval of the proposed amendment.

As required by N.C. Gen. Stat. § 160D-601(a), a legislative public hearing was held on August 4, 2026. Following the public hearing, the Board of Commissioners reviewed and deliberated on the proposed text amendment. Discussion included potential revisions to reduce the significant tree size threshold and increase mitigation requirements. At the conclusion of its deliberations, the Board of Commissioners voted 3-1 to refer the proposed amendment back to the Planning Board for further review and consideration.

Financial Impact:

Cost to advertise for required public hearing.

Recommendation:

Staff recommends approval of the proposed amendment based upon research, current uses, the surrounding area, and the City of Boiling Spring Lakes' Comprehensive Land Use Plan (LUP).

Attachments:

Proposal: TX-2026-01 – UDO Amendment: Article 7, Sections 7-26 through 7-29
Plan Consistency & Reasonableness Determination

Proposed Amendment: TX-2026-01 – UDO Article 7, Part IV, Sections 7-26 through 7-29

Proposed language is identified by underlined text and language to be deleted is shown as strikethrough text.

Sec. 7-26—Objective

~~The governing body and the advisory boards of the city of Boiling Spring Lakes recognize the importance of the contribution made to the community by the abundance of trees and vegetation. In fact, the present character of Boiling Spring Lakes is dependent largely upon the existing trees and plantings in both publicly and privately owned properties. It is this vegetation that gives the city the aesthetic appeal that contributes to its growth and economic prosperity. As economic growth occurs, the removal of this valued vegetation sometimes results, contributing to a depletion of a most valuable resource. The city feels it is necessary to both conserve and restore those valuable assets and declares the objective of this ordinance to be as follows:~~

- ~~(A) To encourage the conservation of existing trees and vegetation, when practicable;~~
- ~~(B) To provide visual and spatial buffering between adjoining and competing uses;~~
- ~~(C) To enhance the beautification of the city;~~
- ~~(D) To enhance property values and protect public and private investment;~~
- ~~(E) To preserve the identity and environment of the city;~~
- ~~(F) To provide a habitat for living things that might not otherwise occur in an urban environment;~~
- ~~(G) To ensure that planting areas are distributed within developing sites in a manner which will provide buffer noise and filter glare;~~
- ~~(H) To comply with the requirements of the Red Cockaded Woodpecker habitat conservation plan.~~

Sec. 7-26 - Purpose

The purpose of this section is to preserve significant trees, maintain the City's natural character, protect environmental resources, minimize unnecessary land disturbance, and ensure that land clearing associated with development occurs only in conjunction with approved development plans. Preservation of existing Significant Trees is encouraged and shall take precedence over removal whenever reasonably practicable. Development shall be designed to preserve existing Significant Trees to the maximum extent feasible while accommodating the reasonable use of the property.

Sec. 7-27—Applicability

- ~~(A) Tree preservation is required for all land, developed or undeveloped within the city of Boiling Spring Lakes as specified in section 7-29. No tree shall be removed, regardless of size, except for in compliance with this ordinance.~~
- ~~(B) Landscape plans and installation is required for all new development within the city of Boiling Spring Lakes except for the following:~~
 - ~~1. Single family and two family dwellings~~
 - ~~2. Accessory structures~~

- ~~3. Any enlargement of a principal building of less than twenty (20) percent of its existing size provided such enlargement will not result in parking improvements~~
- ~~4. A change in principal use where such change would not result in a change in lot coverage, parking, or other site characteristics~~
- ~~5. The following site areas are required to be addressed in accordance with the provisions of this section for all non-residential and multi-family uses:~~
 - ~~a. Street yards~~
 - ~~b. Foundation planting~~
 - ~~c. Vehicular surface areas (parking lots)~~
 - ~~d. Buffer yards~~
 - ~~e. Screening for dumpsters and outdoor storage areas~~

Sec. 7-27 - Applicability

- (A) Except as otherwise provided herein, no person shall remove, clear, grub, or otherwise disturb vegetation except in accordance with all applicable provisions of the Ordinance. The removal of Significant Trees shall be subject to the provisions of the Ordinance regardless of zoning district or land use.
- (B) The following activities are exempt from the land clearing authorization requirements of the Ordinance, provided they otherwise comply with the Significant Tree mitigation requirements:
 1. Construction of a single-family or two-family dwelling on an individual lot, excluding lots within a major subdivision.
 2. Construction of accessory structures serving an existing single-family or two-family dwelling.
 3. Enlargement of an existing principal building by less than twenty percent (20%) of the existing gross floor area.
 4. A change in principal use where site plan approval is not otherwise required by this Ordinance.
 5. Removal of dead, diseased, or hazardous trees.
 6. Forestry activities conducted on forestland taxed on the basis of its present-use value pursuant to Article 12 of Chapter 105 of the North Carolina General Statutes.
 7. Forestry activities conducted in accordance with a forest management plan prepared or approved by a forester registered pursuant to Chapter 89B of the North Carolina General Statutes.

Sec. 7-28 – General provisions

- ~~(A) Whenever the landscaping requirements of this ordinance are applicable, no site shall be cleared or graded for the purpose of pending construction until a landscape plan and/or tree removal permit has been submitted and approved by the city.~~ Except for activities exempted under 7-27(B), no land clearing, grubbing, tree removal, or other disturbance of existing vegetation shall occur unless authorized through an approved development application.

- (B) The owners and their agents shall be responsible for protecting and maintaining all landscape materials in accordance with the landscape plan approved by the city.
- (C) Provision for other uses. Up to fifteen (15) percent of the area to be landscaped may be covered with surfaces specifically intended to afford intensive use and enjoyment by employees or the public (such as walking paths, bench and table pads, etc.).
- (D) It is encouraged that stormwater management systems be integrated into the landscape plan.
- (E) The ~~following~~ approved landscaping list shall be used as a guide in identifying and categorizing approved landscaping. Although the list may be expanded, as approved by the UDO Administrator, and recommended by the NC Cooperative Extension, applicants must show that plant materials meet the standards of the ordinance and are appropriate for the area. In no case shall invasive plants be permitted. Minimum height and diameter at breast height (DBH=four and five tenths (4.5) feet above ground) at planting for the following planting categories/list shall be as follows:
1. Canopy trees. At the time of planting, the tree shall have a minimum three (3) inch DBH with a height of eight (8) to ten (10) feet. Canopy trees shall be of a species having an average minimum height of thirty (30) feet and a minimum mature crown spread of twenty (20) feet.
 2. Understory trees. At the time of planting, the tree shall have a minimum two (2) inch DBH. Understory trees shall be of a species having an average minimum height of ten (10) feet and a minimum mature crown spread of twelve (12) feet.
 3. Shrubs. Shrubs shall have a minimum mature height of twenty-four (24) inches and a minimum planting height of eighteen (18) inches.
- (F) The city of Boiling Spring Lakes prefers to maintain existing trees in order to satisfy requirements and credit may be given for existing trees located between the proposed principal building and the street right-of-way. The retention of viable natural vegetation is encouraged when practicable. No credit shall be given for any tree which is unhealthy. Credit shall be given on a “tree-per-tree basis” or “one (1) to one (1) ratio.”
- (G) Notwithstanding the provisions of this section, nothing shall be planted adjacent to an approved driveway and street connection which would impede vision between a height of two and half (2 ½) and ten (10) feet in a triangular area formed by a diagonal line between a point on the driveway perimeter and the curb line or pavement edge of the street twenty-five (25) feet from where they intersect.
- (H) Trees and shrubbery in or along streets and sidewalks.
1. Citizens may plant trees in front of their lots and along the sidewalks adjacent to their property under the supervision of the UDO Administrator, but no trees shall be planted in the streets, gutters, or ditches of the city. The UDO Administrator shall notify all persons having trees in front of their lots to have them properly trimmed either by a company engaged in the business of tree trimming or by the property owners

themselves following acceptable pruning standards. During normal street right-of-way maintenance by the city, all city employees involved in trimming of trees shall operate under the direction of the UDO Administrator and in accordance with acceptable pruning standards. In addition, all other public service or utility companies shall also follow the guidelines for acceptable pruning standards and shall notify the city prior to maintenance within their jurisdiction.

2. The cutting, trimming, destruction, lopping of branches or mutilation in any manner of trees or shrubbery standing along, in or extending over the street right-of-way of any municipal or state maintained street by any person is hereby prohibited, except when done under the supervision and according to the direction of the UDO Administrator.
- (I) Nothing in this ordinance shall be construed to authorize any activity prohibited by federal, state, or local law. Property owners and other persons conducting tree removal or land-disturbing activities are solely responsible for complying with all applicable federal, state, and local laws, regulations, permits, and approvals, including, where applicable, the requirements of the Endangered Species Act and other laws protecting threatened or endangered species and their habitats.
- (J) The absence of a permit or authorization requirement under this ordinance shall not be construed as authorization to remove trees or conduct land-disturbing activities in violation of any applicable federal, state, or local law.

Sec. 7-29 Tree preservation

- ~~(A) The purpose of this section is to protect, preserve, and enhance the forested character and natural resources of the city. The city finds that the presence of trees improves air quality, conserves energy, provides wildlife habitat, reduces soil erosion, enhances storm water retention and drainage, and preserves and enhances property values. The policy of the City is to balance the private property rights of landowners with the public health, safety, and welfare that is promoted by the existence and maintenance of all trees in the city.~~
- ~~(B) U.S. Fish and Wildlife Service restrictions. All applications for cutting or clearing will first be reviewed by the UDO administrator or his/her designee, to determine if the subject parcel includes any lands identified by USFWS as required habitat for the Red Cockaded Woodpecker. If the property does fall within the designated woodpecker area, the owner/applicant must contact USFWS to obtain authorization to cut any trees or to clear the property.~~
- ~~(C) No tree containing a Red Cockaded Woodpecker nest, regardless of diameter, may be cut without the express written consent of the U.S. Fish and Wildlife Service.~~
- ~~(D) For those properties not located in designated Red Cockaded Woodpecker habitat, and for properties within the woodpecker area that have secured written authorization from USFWS to proceed with tree removal, the following provisions of this section shall apply:~~
- ~~1. Undeveloped parcels. A parcel of land that does not contain a principal structure or dwelling. Any tree of up to and including 7.9 inches may be removed without a permit.~~

a. ~~On parcels of twenty-five (25) acres or greater zoned C-1, where development is not yet subject to an approved site plan, a permit shall be issued for the removal of trees >7.9 inches DBH upon a finding of the following:~~

i. ~~If significant trees are proposed to be removed, the applicant shall submit with the application, a survey indicating the species, size, and condition of the significant tree(s). Removal of significant trees shall be mitigated in accordance with section 7.29(E), unless the tree(s) is/are shown to be dead, dying, or severely damaged or diseased. Tree mitigation may occur at a future date, no later than twenty-four (24) months following issuance of a tree removal permit, and may be addressed and/or incorporated into a future site plan for the property to be submitted no less than twenty-four (24) months following issuance of a tree removal permit.~~

1. ~~Tree protection for any retained tree(s) shall be in accordance with section 7.36.~~

ii. ~~No trees proposed for removal are located within required street yards or required bufferyards, unless the property owner agrees to submit a site plan for development of the property within twenty-four (24) months.~~

3. ~~*Significant trees.* Any tree at least twenty-four (24) inches in DBH, and dogwoods, live oaks, and American Hollies at least eight (8) inches DBH, anywhere on the site shall be considered protected, and must be preserved or their removal mitigated as in accordance with section 7.29(E), regardless of location on the site, unless the trees are shown to be dead, dying or severely damaged or diseased as a result of natural factors.~~

4. ~~*New construction.*~~

a. ~~Clearing, fill, grade, and driveway permits must be obtained from the UDO administrator before any land-disturbing activity commences.~~

b. ~~Before a zoning permit is issued, an up-to-date tree survey, plot plan, or site plan must be submitted and approved by the UDO administrator or appropriate approval authority (planning board, board of adjustment, and/or board of commissioners). The plan must show the footprint for the principal structure, septic systems, detached buildings (sheds, garages) driveways, and all trees identified by species greater than eight (8) inches DBH. Any tree not being used as a Red Cockaded Woodpecker nest may be removed within fifteen (15) feet of the principal structure or the septic system and within five (5) feet of detached buildings (sheds, accessory structures, garages) and driveways subject to the provisions of this section. Significant trees, as defined herein, will require mitigation.~~

~~5. Existing development. A parcel of land containing a principal structure or dwelling. Any tree with a DBH of up to and including 7.9 inches may be removed without a permit.~~

~~a. Prior to issuance of a tree removal permit, a plot plan (hand sketched if necessary) must be submitted showing the footprint for the principal structure, septic system, detached buildings, pools, driveways, and trees proposed for removal. Any tree not being used as a Red Cockaded Woodpecker nest may be removed within fifteen (15) feet of principal structures, septic systems, and pools and within five (5) feet of detached buildings and driveways subject to the provisions of this section. Significant trees, as defined herein, and trees removed within 5.1 feet and fifteen (15) feet of a pool will require mitigation.~~

~~i. On residential parcels with a principal structure, the UDO Administrator may approve the removal of trees outside of these parameters upon submittal of documentation from the applicant's insurance company that the tree(s) pose a risk to the structure, and the policy is in jeopardy of cancellation, and for usable open area upon a finding that a minimum of one (1) inch DBH per two hundred twenty (220) square feet of lot area will be preserved. Only trees 7.9 inches and larger shall be used in calculating the preserved DBH, and all trees 7.9 inches and larger located within the distance parameters in (D)(4)(a) shall not count towards the preserved DBH.~~

~~(E) Mitigation. The removal of any "significant tree" as defined by this ordinance must be mitigated in accordance with the following standards:~~

~~1. The total diameter at breast height (DBH) of all significant trees proposed for removal shall be totaled. The resultant number of DBH inches to be removed must be planted back on the site with an appropriate number of the significant tree species type removed to replace the DBH of those trees removed. Lots with one and two family dwellings (or proposed for such not as part of a major subdivision) shall only be required to mitigate twenty five (25) percent of the total DBH of significant trees removed. A minimum of one (1) significant tree of the same species removed shall be installed through mitigation.~~

~~2. Any mitigation trees required as a result of the removal of significant tree(s) shall not be counted to meet the requirements of the street yard, buffers or interior parking requirements. These trees must be provided in addition to any tree required by this ordinance.~~

- ~~3. In situations where site features make it impractical to plant trees back on the site, payment may be made to the tree management fund, upon approval of the UDO Administrator, in an amount sufficient to cover the cost of the required replanting.~~

~~(F) Exceptions. The requirement to obtain a clearing permit shall not apply to the activities listed below:~~

- ~~1. The removal of dead, severely damaged, or diseased trees, and trees which are injurious to sanitary sewers, electrical power lines, gas lines, water lines, streams or conveyance channels. The UDO Administrator may require determination be made by a certified arborist in cases of dead, damaged, and/or diseased trees.~~
- ~~2. Parcels with an approved site plan, provided such approval has not expired, and all clearing is done in strict accordance with the approved plan.~~
- ~~3. Forestry activity on forestland that is taxed on the basis of its present use value as forestland under Article 12 of Chapter 105 of the General Statutes, or forestry activity that is conducted in accordance with a forest management plan that is prepared or approved by a forester registered in accordance with Chapter 89B of the General Statutes.~~

Sec. 7-29 Tree preservation

(A) Land clearing shall be authorized only through approval of one of the following, as applicable:

1. Minor Site Plan;
2. Major Site Plan;
3. Subdivision Plan;
4. Special Use Permit;
5. Planned Development; or
6. Any other development approval requiring site plan approval under this Ordinance.

(B) Applications for Minor Site Plans, Major Site Plans, Subdivision Plans, Special Use Permits, Planned Developments, and any other development requiring site plan approval shall include a Landscape Plan.

(C) Landscape Plans shall contain the information required in Appendix B – Submittal Requirements.

(D) Landscape Plans shall address, as applicable:

1. Street yards;
2. Foundation landscaping;
3. Vehicular surface areas, including parking lots;
4. Buffer yards;
5. Screening of dumpsters and outdoor storage areas.

(E) Authorization to clear shall be limited to those areas shown on the approved plans.

(F) No property shall be cleared in anticipation of future development prior to approval of the applicable development plan.

Sec. 7-29-1 Significant Trees

(A) Regardless of zoning district or land use, Significant Trees shall be preserved whenever reasonably practicable. When the removal of a Significant Tree cannot reasonably be avoided, the tree may be removed provided the mitigation requirements of the ordinance are satisfied.

(B) For purposes of this section, Significant Tree means:

1. Any Flowering Dogwood (*Cornus florida*) having a diameter at breast height (DBH) of eight (8) inches or greater;
2. Any American Holly (*Ilex opaca*) having a DBH of eight (8) inches or greater;
3. Any Live Oak (*Quercus virginiana*) having a DBH of eight (8) inches or greater;
or
4. Any tree of any species having a DBH of twenty-four (24) inches or greater.

Sec. 7-29-2 Mitigation

(A) For construction of an individual single-family or two-family dwelling, and associated accessory structures, mitigation shall be required at twenty-five percent (25%) of the mitigation otherwise required by the ordinance. For the removal of all other Significant Trees, mitigation shall be provided at one hundred percent (100%) of the mitigation required by the ordinance.

(B) Where application of the twenty-five percent (25%) standard results in a fractional tree, the requirement shall be rounded up to the next whole tree.

(C) Mitigation shall be calculated individually for each Significant Tree removed and then totaled. For Mitigation shall be based upon the diameter at breast height (DBH) of each Significant Tree removed and shall comply with the following table:

<u>DBH of Tree Removed</u>	<u>Minimum Replacement Required</u>
<u>8" to 12"</u>	<u>One (1) 3-inch caliper tree</u>
<u>Greater than 12" to 24"</u>	<u>Two (2) 3-inch caliper trees</u>
<u>Greater than 24" to 36"</u>	<u>Three (3) 3-inch caliper trees</u>
<u>Greater than 36" to 48"</u>	<u>Four (4) 3-inch caliper trees</u>
<u>Greater than 48"</u>	<u>Five (5) 3-inch caliper trees, plus one (1) additional 3-inch caliper tree for each additional twelve (12) inches, or fraction thereof</u>

Sec. 7-29-3 Credit Toward Required Landscaping

- (A) Trees planted to satisfy Significant Tree mitigation requirements shall not be credited toward the minimum landscaping requirements of this Ordinance, including, but not limited to:
1. Street yard landscaping;
 2. Foundation landscaping;
 3. Parking lot landscaping;
 4. Buffer yards;
 5. Screening requirements;
 6. Any other required landscaping.
- (B) Mitigation trees shall be provided in addition to all landscaping otherwise required by this Ordinance.

Sec. 7-29-4 Alternative Compliance

Where the UDO Administrator determines that site constraints, utilities, easements, environmental features, or other practical considerations make on-site replacement impractical, the applicant may satisfy all or a portion of the mitigation requirement through payment into the City's Tree Management Fund.

The payment amount shall be sufficient to cover the purchase, installation, and establishment of the required replacement trees.

The applicant shall submit a cost estimate prepared by one of the following:

1. An ISA Certified Arborist;
2. A North Carolina Registered Forester;
3. A North Carolina Licensed Landscape Architect; or
4. A qualified landscape contractor or nursery professional acceptable to the UDO Administrator.

Replacement trees shall be installed prior to the issuance of a Certificate of Occupancy unless an alternative installation schedule is approved by the UDO Administrator due to seasonal planting conditions or other practical considerations.

PLAN CONSISTENCY & REASONABLENESS DETERMINATION

In accordance with NCGS, zoning regulations shall be made in accordance with a comprehensive plan and shall be designed to promote the public health, safety, and general welfare. Prior to adopting or rejecting any zoning amendment, a statement regarding plan consistency shall be adopted.

(A) _____ The Planning Board hereby approves the proposed amendments to the Unified Development Ordinance and finds that it (i) is consistent with the City's comprehensive plan (2017 Land Use Plan), which states the City shall encourage and facilitate high quality commercial development along NC 87, expand the range of goods and services available to City residents, encourage both the development and preservation of a variety of housing types to meet the needs and desires of current and future citizens, and update the Unified Development Ordinance to address site plan review standards, subdivision regulations, dimensional standards, and other items as deemed necessary by the Planning Board, Board of Commissioners, and City staff and; (ii) that it is in the public best interest because it promotes public health, safety, and general welfare by supporting timely development, facilitating the availability of housing, and allowing the City to efficiently administer permits within its authority.

(B) _____ The Planning Board hereby denies the proposed amendments to the Unified Development Ordinance and finds that (i) it is not consistent with the City's comprehensive plan (2017 Land Use Plan) and all other applicable plans and policies adopted by the City for the following reasons: _____ and/or (ii) it is not in the public interest for the following reasons: _____.



City of Boiling Spring Lakes

9 East Boiling Spring Road
Southport, NC 28461

STAFF REPORT

Agenda Date:

August 11, 2026

Title:

TX-2026-02 – Text Amendment: Article 9, Section 9-2-1 - Plot Plan Requirements

Department:

Development Services – Planning & Zoning

Background Information:

Article 9, Section 9-2-1 of the Unified Development Ordinance (UDO) currently requires plot plans to include a table of all existing trees >7.9" in diameter at breast height (DBH). This requirement was established to assist with the administration of the City's Tree Ordinance (Article 7, Part IV) and the review of tree-clearing permit applications.

The Board recently directed staff to draft amendments to Article 7, Part IV of the UDO to remove the City as intermediary between the U.S. Fish & Wildlife Service and private property owners. The proposed changes would create new provisions for land clearing on properties subject to plot plan approval (single-family & two-family residential development). If adopted, plot plans would no longer be required to include a table of all trees >7.9" DBH, but would require that the location, size, and species of all significant trees be shown.

The proposed amendment to Article 9, Section 9-2-1 revises the plot plan requirements to remove the requirement to include a list of all existing trees >7.9" DBH while including a requirement to identify the location of all significant trees on the site. This amendment maintains the City's ability to review site design and preserve significant natural features where applicable, while ensuring the land development regulations in the UDO remain consistent with the proposed changes to the Tree Ordinance.

Financial Impact:

Cost to advertise for required public hearing.

Recommendation:

Staff recommends approval of the proposed amendment based upon research, current uses, the surrounding area, and the City of Boiling Spring Lakes' Comprehensive Land Use Plan (LUP).

Attachments:

Proposed Amendment TX-2026-02 – UDO Article 9, Section 9-2-1 – Plot Plan Requirements
Plan Consistency & Reasonableness

Proposed Amendment: TX-2026-02 – UDO Article 9, Section 9-2-1 – Plot Plan Requirements

Sec. 9-2-1 Plot Plan Requirements

All proposed plot plans shall be based upon a recent boundary survey (less than two (2) years old). The survey and plot plan shall be prepared by a licensed surveyor and shall include the following as a minimum requirement:

- (A) Property owner information.
- (B) Total square footage/acreage of the lot and lot lines with dimensions.
- (C) All existing and proposed buildings, including porches, decks, patios, roof overhangs, etc. with overall dimensions and setbacks (required and proposed) from all property lines.
- (D) Existing and proposed driveways with distance to side property line, dimensions, and surface material described.
- (E) Total percentage of existing and proposed impervious coverage.
- (F) Location of all utilities, including well and septic drainage fields.
- (G) Location of easements (width and type listed).
- (H) Location and description of environmental features (streams, buffers, flood zone boundaries and designation, etc.).

~~(I) Table containing the size, and species of all trees >7.9 inches DBH.~~ Location, size, and species of all significant trees (all trees at least 24" DBH & dogwoods, American hollies, & live oaks at least 8" DBH)

1. Proposals for accessory structures may, in lieu of ~~including the table on the plot plan~~ requiring that the plot plan include the location, size, and species of all significant trees, include a separate hand-drawn sketch of the size and species of all significant trees ~~>7.9 inches DBH~~ proposed for removal in relation to the location of the proposed structure.

PLAN CONSISTENCY & REASONABLENESS DETERMINATION

In accordance with NCGS, zoning regulations shall be made in accordance with a comprehensive plan and shall be designed to promote the public health, safety, and general welfare. Prior to adopting or rejecting any zoning amendment, a statement regarding plan consistency shall be adopted.

(A) _____ The Planning Board hereby recommends approval of the proposed amendments to the Unified Development Ordinance and finds that it (i) is consistent with the City's comprehensive plan (2017 Land Use Plan), which states the City shall update the Unified Development Ordinance to address site plan review standards, subdivision regulations, dimensional standards, and other items as deemed necessary by the Planning Board, Board of Commissioners, and City staff and; (ii) that it is in the public best interest because it promotes public health, safety, and general welfare by maintaining consistent development regulations and eliminating unnecessary submittal requirements.

(B) _____ The Planning Board hereby recommends denial of the proposed amendments to the Unified Development Ordinance and finds that (i) it is not consistent with the City's comprehensive plan (2017 Land Use Plan) and all other applicable plans and policies adopted by the City for the following reasons: _____ and/or (ii) it is not in the public interests for the following reasons: _____



City of Boiling Spring Lakes

**9 East Boiling Spring Road
Southport, NC 28461**

STAFF REPORT

Agenda Date:

August 11, 2026

Title:

TX-2026-03 – UDO Amendment: Article 11 – Flood Damage Prevention Ordinance

Department:

Development Services: Planning & Zoning

Background Information:

The City of Boiling Spring Lakes participates in the National Flood Insurance Program (NFIP), a federal program administered by FEMA that makes federally backed flood insurance available to property owners in participating communities. As a condition of participation, the City is required to adopt and enforce a Flood Damage Prevention Ordinance (FDPO) that meets FEMA's minimum floodplain management standards. The City's current FDPO regulates development within FEMA-designated Special Flood Hazard Areas (SFHAs), which are areas shown on the effective Flood Insurance Rate Maps (FIRMs) as having a 1% annual chance of flooding. These SFHAs are FEMA's official regulatory flood hazard areas and serve as the basis for the City's floodplain management regulations and the federal mandatory flood insurance purchase requirement for structures securing federally backed mortgages.

The State of North Carolina has released the 2026 Model Flood Damage Prevention Ordinance to incorporate several updated revisions necessary to maintain consistency with current regulations. Staff has reviewed the 2026 Model Flood Damage Prevention Ordinance and compared it to the City's existing FDPO regulations. The proposed amendments incorporate the required revisions identified by the State to ensure the City's ordinance remains consistent with FEMA's minimum floodplain management standards and to maintain the City's continued participation in the NFIP.

In addition to required updates, the 2026 Model Flood Damage Prevention Ordinance includes optional provisions that local governments may elect to adopt in order to address local flooding conditions or establish flood protection standards that exceed the minimum requirements of the National Flood Insurance Program (NFIP). While FEMA Flood Insurance Rate Maps provide the regulatory basis for NFIP requirements, they do not identify every area that may experience flooding. Areas outside of the FEMA-designated Special Flood Hazard Areas may still experience flooding due to localized drainage conditions, rainfall events, topography, groundwater conditions, or other factors.

Staff was previously directed by the Board of Commissioners to prepare an amendment to the City's Unified Development Ordinance requiring finished floor elevations for all new construction to be elevated. This direction was based on the Board's desire to better address flood risk in areas that have experienced flooding that are not currently regulated under the City's Flood Damage Prevention Ordinance. Staff presented a proposed amendment that incorporated this requirement as part of a broader lot drainage plan requirement. Following the required public hearing, the Board of Commissioners reviewed and deliberated on the proposed amendment and directed staff to remove the finished floor elevation requirement from the lot drainage plan requirement. The Board further directed staff to conduct additional research and develop an approach that would target only those areas with known flooding concerns located outside of the FEMA-designated Special Flood Hazard Areas, rather than applying the requirement citywide.

Based on this direction, staff evaluated available options for identifying and addressing areas subject to flooding outside of the FEMA-designated Special Flood Hazard Areas. Staff determined that the optional provisions contained within the 2026 Model Flood Damage Prevention Ordinance provide an appropriate framework for accomplishing the Board's direction. Incorporating these optional provisions will allow the City to utilize Advisory Flood studies data and other available flood hazard information to regulate development in areas where additional flood risk information is available.

The North Carolina Floodplain Mapping Program (NCFMP) has initiated the "Advisory Flood" studies approach to provide non-regulatory flood hazard information for previously unmapped areas and areas beyond the traditional regulatory floodplain mapping extents. This additional flood hazard information is intended to assist communities and property owners in understanding and mitigating flood risks that may exist outside of FEMA's regulatory floodplain boundaries.

As an optional provision within the 2026 Model Flood Damage Prevention Ordinance, the Advisory Flood Studies data provided by the NCFMP will be adopted by reference, and declared a part of the ordinance. Areas identified through this data will be regulated similarly to properties located within FEMA-designated Special Flood Hazard Areas. For new construction and substantial improvements within these areas, finished floor elevations will be required to meet or exceed the applicable Base Flood Elevation (BFE), where a BFE has been established for the 1% annual chance flood event. In addition, the City will apply a two (2) foot freeboard

requirement above the applicable elevation to provide additional protection from flood risks and future uncertainty. Where Advisory Flood mapping identifies an area subject to the 1% annual chance flood event but does not provide a Base Flood Elevation, the proposed ordinance will require the finished floor elevation of structures to be elevated a minimum of two (2) feet above the highest adjacent grade. This requirement provides a consistent standard for addressing areas where flood risk has been identified but detailed elevation information is not available.

The proposed amendments will also establish regulatory requirements for Shaded Zone X areas identified on FEMA Flood Insurance Rate Maps. Development within these areas would be regulated in the same manner as development within FEMA-designated Special Flood Hazard Areas, using the City's established floodplain development standards.

By incorporating these optional provisions, the City will expand its ability to use available flood hazard data to regulate development in areas with documented or anticipated flood risks while avoiding the application of additional requirements to properties without identified flood concerns. The optional provisions proposed in this amendment are intended solely for local land use and floodplain management purposes. Adoption of these provisions would not revise FEMA's effective Flood Insurance Rate Maps (FIRMs), change FEMA-designated Special Flood Hazard Area boundaries, or alter the federal mandatory flood insurance purchase requirements.

Financial Impact:

Cost to advertise required public hearing.

Recommendation:

Staff recommends approval of the proposed amendment based upon research, current uses, the surrounding area, and the City of Boiling Spring Lakes' Comprehensive Land Use Plan (LUP).

Attachments:

TX 2026-03 – UDO Amendment: Article 11 – Flood Damage Prevention Ordinance
Plan Consistency & Reasonableness

Proposed Amendment: TX-2026-03 – UDO Amendment: Article 11 – Flood Damage Prevention Ordinance

The proposed ordinance amendments include color-coded revisions consistent with the format of the 2026 North Carolina Model Flood Damage Prevention Ordinance. Green text identifies required revisions, while blue text identifies optional provisions that the City is proposing to adopt.

PLAN CONSISTENCY & REASONABLENESS DETERMINATION

In accordance with NCGS, zoning regulations shall be made in accordance with a comprehensive plan and shall be designed to promote the public health, safety, and general welfare. Prior to adopting or rejecting any zoning amendment, a statement regarding plan consistency shall be adopted.

- (A) _____ The Planning Board hereby recommends approval of the proposed amendments to the Unified Development Ordinance and finds that it (i) is consistent with the City's comprehensive plan (2017 Land Use Plan), which states "Boiling Spring Lakes shall remain an active participant in the National Flood Insurance Program (NFIP) and is supportive of its hazard mitigation elements. Boiling Spring Lakes shall continue to enforce a Flood Damage Prevention Ordinance in accordance with the NFIP, including a two-foot free board requirement" and "The City shall retain the option of adopting additional local stormwater related standards if it is deemed necessary to further protect surface water quality and limit localized flooding" and; (ii) that it is in the public interest because it will advance the public health, safety, and welfare of the City of Boiling Spring Lakes by helping to reduce flood risk and future flood damages.
- (B) _____ The Planning Board hereby recommends denial of the proposed amendments to the Unified Development Ordinance and finds that (i) it is not consistent with the City's comprehensive plan (2017 Land Use Plan) and all other applicable plans and policies adopted by the City for the following reasons: _____ and/or (ii) it is not in the public interests for the following reasons:
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Motion to Recommend Approval (A) _____ Motion to Recommend Denial (B) _____

Sec. 11-1. Statutory authorization, findings of fact, purpose and objectives.

11-1-1 Statutory authorization.

The legislature of the State of North Carolina has in part 6, article 21 of chapter 143; article 8 of chapter 160A, and articles 7, 9, 11 and 13 of chapter 160D 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.

11-1-2 Findings of fact.

- (A) The flood prone areas within the jurisdiction of Boiling Spring Lakes 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.
- (B) These flood losses are caused by the cumulative effect of obstructions, both inside and outside the identified Special Flood Hazard Areas, causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards. These obstructions and occupancy by uses vulnerable to floods may be hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

11-1-3 Statement of purpose.

It is the purpose of this article 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:

- (A) 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.
- (B) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction.
- (C) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters.
- (D) Control filling, grading, dredging, and all other development that may increase erosion or flood damage.
- (E) Prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards to other lands.

11-1-4 Objectives.

The objectives of this article are:

- (A) To protect human life and health.
- (B) To minimize expenditure of public money for costly flood control projects.
- (C) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- (D) To minimize prolonged business losses and interruptions.

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- (E) To 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.
 - (F) To help maintain a stable tax base by providing for the sound use and development of flood prone areas.
 - (G) To ensure that potential buyers are aware that property is in a special flood hazard area.

Sec. 11-2. General provisions.

11-2-1 Lands to which this article applies.

The standards in this section shall apply to all Special Flood Hazard Areas.

11-2-2 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 FIS dated August 28, 2018, for Brunswick County and associated DFIRM panels, including any digital data developed as part of the FIS, which are adopted by reference and declared a part of this ordinance.

When Advisory Flood Studies have been provided by the North Carolina Floodplain Mapping Program:

1. The data, which are adopted by reference and declared a part of this ordinance, shall be utilized where no base flood elevations or floodway areas exist, or where the Advisory Flood Studies exceed the base flood elevations and/or floodway widths in the effective flood hazard data provided by FEMA, or
2. The applicant shall provide a more detailed analysis of the flood hazards for the site for floodplain management purposes.
3. Where adopted regulatory standards conflict, the more stringent base flood elevation shall prevail.

11-2-3 Establishment of floodplain development permit.

A floodplain development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities within special flood hazard areas determined in accordance with section 11-2-2 of this ordinance.

11-2-4 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 article and other applicable regulations.

11-2-5 Abrogation and greater restrictions.

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

11-2-6 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.

11-2-7Warning and disclaimer of liability.

The degree of flood protection required by this article 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 article 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 article shall not create liability on the part of the city of Boiling Spring Lakes or by any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made hereunder.

11-2-8Penalties 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 Class 1 misdemeanor pursuant to North Carolina General Statute 143-2115.58. Any person who violates this ordinance or fails to comply with any of its requirements shall be fined not more than fifty dollars (\$50.00). Civil penalties are due and payable within three (3) business days after service of a civil citation is complete. Each day that any violation continues after notification that such a violation exists shall be considered a separate offense. Each day's penalty for a continuing offense shall be due and payable within three (3) business days of the day of the offense without further notice or services. Civil penalties are payable at city hall during regular business hours. Nothing herein contained shall prevent Boiling Spring Lakes from taking such other lawful action as is necessary to prevent or remedy any violation.

Sec. 11-3. Administration.

11-3-1Designation of floodplain administrator.

The UDO administrator or his or her designee, hereinafter referred to as the "floodplain administrator", is hereby appointed to administer and implement the provisions of this ordinance. In instances where the floodplain administrator receives assistance from others to complete tasks to administer and implement this ordinance, the floodplain administrator shall be responsible for the coordination and community's overall compliance with the National Flood Insurance Program and the provisions of this ordinance.

11-3-2Floodplain development application, permit and certification requirements.

- (A) *Application requirements.* Application for a floodplain development permit shall be made to the floodplain administrator prior to any development activities located within special flood hazard areas. The following items shall be presented to the floodplain administrator to apply for a floodplain development permit:
- (1) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - (a) 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;
 - (b) The boundary of the special flood hazard area as delineated on the FIRM, or other flood map as determined in section 11-2-2 or a statement that the entire lot is within the special flood hazard area;
 - (c) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in section 11-2-2;
 - (d) The boundary of the floodway(s) or non-encroachment area(s) as determined in section 11-2-2;

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- (e) The base flood elevation (BFE) where provided as set forth in section 11-2-2; section 11-3-3 (K), (L); or section 11-4-4;
 - (f) The old and new location of any watercourse that will be altered or relocated as a result of proposed development;
 - (g) The certification of the plot plan by a registered land surveyor or professional engineer.
- (2) Proposed elevation, and method thereof, of all development within a special flood hazard area including, but not limited to:
- (a) Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;
 - (b) Elevation in relation to NAVD 1988 to which any non-residential structure in zone AE, A or AO will be flood-proofed;
 - (c) Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed.
- (3) If floodproofing, a floodproofing certificate (FEMA Form 086-0-34) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.
- (4) A foundation plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this article are met. These details include but are not limited to:
- (a) 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);
 - (b) Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with section 11-4-2 (D)(3), when solid foundation perimeter walls are used in zones A, AO, AE, AH, or A99.
- (5) Usage details of any enclosed areas below the regulatory flood protection elevation.
- (6) 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.
- (7) Copies of all other local, state and federal permits required prior to floodplain development permit issuance (wetlands, endangered species, erosion and sedimentation control, riparian buffers, mining, etc.).
- (8) Documentation for placement of recreational vehicles and/or temporary structures, when applicable, to ensure section 11-4-2 (F) & (G) of this article are met.
- (9) 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.
- (B) *Permit requirements.* The floodplain development permit shall include, but not be limited to:
- (1) A description of the development to be permitted under the floodplain development permit;
 - (2) The special flood hazard area determination for the proposed development per available data specified in section 11-2-2;

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- (3) The regulatory flood protection elevation required for the reference level and all attendant utilities;
 - (4) The regulatory flood protection elevation required for the protection of all public utilities;
 - (5) All certification submittal requirements with timelines;
 - (6) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable;
 - (7) The flood openings requirements, if in zones A, AO, AE, AH, or A99;
 - (8) Limitations of below BFE enclosure uses (if applicable). (i.e., parking, building access and limited storage only).
- (C) *Certification requirements.*
- (1) *Elevation certificates.*
 - (a) An elevation certificate (FEMA Form 086-0-33) 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 NAVD 1988. 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.
 - (b) An elevation certificate (FEMA Form 086-0-33) 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 NAVD 1988. 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.
 - (c) A final finished construction elevation certificate (FEMA Form 086-0-33) 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. The finished construction elevation certificate certifier shall provide at least 2 photographs showing the front and rear of the building taken within 90 days from the date of certification. The photographs must be taken with views confirming the building description and diagram number provided in section A of the form. To the extent possible, these photographs should show the entire building including foundation. If the building has split-level or multi-level areas, provide at least 2 additional photographs showing side views of the building. In addition, when applicable, provide a photograph of the foundation showing a representative example of

the flood openings or vents. All photographs must be in color and measure at least 3 inches × 3 inches. Digital photographs are acceptable.

(2) *Floodproofing certificate.*

- (a) If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a floodproofing certificate (FEMA Form 086-0-34), 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 NAVD 1988. 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.
 - (b) A final finished construction floodproofing certificate (FEMA Form 086-0-34), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a certificate of compliance/occupancy. 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 NAVD 1988. Floodproofing certificate 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 certificate of occupancy. 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 deny a certificate of compliance/occupancy.
- (3) If a manufactured home is placed within zone A, AE, AH, AO, or A99 and the elevation of the chassis is more than thirty-six (36) inches in height above grade, an engineered foundation certification is required per section 11-4-2 (C).
- (4) 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.
- (5) *Certification exemptions.* The following structures, if located within zone A, AE, AH, AO, A99, are exempt from the elevation/floodproofing certification requirements specified in section 11-3-2 (C)(1) & (2):
- (a) Recreational vehicles meeting requirements of section 11-4-2 (F)(1);
 - (b) Temporary structures meeting requirements of section 11-4-2 (G);
 - (c) Accessory structures less than one hundred fifty (150) square feet meeting requirements of section 11-4-2 (H).

(D) *Determinations for existing buildings and structures.*

- (1) For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the floodplain administrator, in coordination with the appropriate building official, shall:
 - (a) Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;
 - (b) Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
 - (c) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
 - (d) Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC building code and this article is required.

11-3-3Duties and responsibilities of the floodplain administrator.

The floodplain administrator shall perform, but not be limited to, the following duties:

- (A) Review all floodplain development applications and issue permits for all proposed development within special flood hazard areas to assure that the requirements of this article have been satisfied.
- (B) Review all proposed development within special flood hazard areas to assure that all necessary local, state and federal permits have been received, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.
- (C) 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).
- (D) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (E) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of section 11-4-5 are met.
- (F) Obtain actual elevation (in relation to NAVD 1988) of the reference level (including basement) and all attendant utilities of all new or substantially improved structures, in accordance with section 11-3-2 (C).
- (G) Obtain actual elevation (in relation to NAVD 1988) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with section 11-3-2(C).
- (H) Obtain actual elevation (in relation to NAVD 1988) of all public utilities in accordance with section 11-3-2 (C).
- (I) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with section 11-3-2 (C) and section 11-4-2 (B).

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- (J) Where interpretation is needed as to the exact location of boundaries of the special flood hazard areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
 - (K) When base flood elevation (BFE) data has not been provided in accordance with section 11-2-2 obtain, review, and reasonably utilize any base flood elevation (BFE) data, along with floodway data or non-encroachment area data available from a federal, state, or other source, including data developed pursuant to section 11-4-3 (B)(2), in order to administer the provisions of this ordinance.
 - (L) When base flood elevation (BFE) data is provided but no floodway nor non-encroachment area data has been provided in accordance with section 11-2-2, 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.
 - (M) 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 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.
 - (N) Permanently maintain all records that pertain to the administration of this article and make these records available for public inspection.
 - (O) 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 article 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.
 - (P) 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 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.
 - (Q) 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, or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable state or local law may also be revoked.
 - (R) Make periodic inspections throughout all 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.
 - (S) Follow through with corrective procedures of section 11-3-4.
 - (T) Review, provide input, and make recommendations for variance requests.

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- (U) Maintain a current map repository to include, but not limited to, the FIS report, FIRM and other official flood maps and studies adopted in accordance with section 11-2-2 of this ordinance, including any revisions thereto including letters of map change, issued by FEMA. Notify state and FEMA of mapping needs.
 - (V) Coordinate revisions to FIS reports and FIRMs, including letters of map revision based on fill (LOMR-F) and letters of map revision (LOMR).
 - (W) Make substantial improvement and post event damage assessments and determinations:
 - a. Conduct damage assessments for damaged structures located within the special flood hazard area.
 - b. Complete substantial improvement/damage determinations in accordance with the provisions of 11-3-2(D).

11-3-4 Corrective procedures.

- (1) Stop Work Order: The City of Boiling Spring Lakes may issue a stop work order, which shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant or other responsible person has taken remedial measures set forth in the notice of violation or has otherwise remedied the violation or violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to remedy such violation or violations.
- (2) Notice of Violation. If the community determines that an owner, occupant, applicant or other responsible person has failed to comply with the terms and conditions of a permit, or the provisions of this ordinance, it shall issue a written notice of violation, by certified return receipt mail, to such applicant or other responsible person. Where the person is engaged in activity covered by this ordinance without having first secured a permit, the notice shall be served on the owner or the responsible person in charge of the activity being conducted on the site. The notice of violation shall contain:
 - a. The name and address of the owner or the applicant or the responsible person;
 - b. The address or other description of the site upon which the violation is occurring;
 - c. A statement specifying the nature of the violation;
 - d. A description of the remedial measures necessary to bring the action or inaction into compliance with the permit or this ordinance and the date for the completion of such remedial action;
 - e. A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed, and;
 - f. A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed, and;
- (3) Additional Enforcement Actions. If the remedial measures described in the Notice of Violation have not been completed by the date set forth for such completion in the Notice of Violation, any one or more of the following enforcement actions may be enacted against the person to whom the Notice of Violation was directed. Before taking any of the following actions or imposing any of the following penalties, the City of Boiling Spring Lakes shall first notify the owner, applicant or other responsible person in writing of its intended action. The City of Boiling Spring Lakes shall provide reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24-hour notice shall be sufficient) to remedy such violation. In the event the applicant or other responsible person fails to remedy such violation after such notice and remedial period, the City of Boiling Spring Lakes may take or impose any one or more of the following enforcement actions or penalties:

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- a. Termination of utility service and/or withhold or revoke Certificate of Occupancy: The community may terminate utilities and/or refuse to issue and/or revoke a certificate of occupancy for the building or other improvements and/or repairs conducted or being conducted on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise remedy the violation or violations described therein.
 - b. Suspension, revocation, or modifications of permit: The community may suspend, revoke, or modify the permit authorizing the development project. A suspended, revoked, or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise remedy the violations described therein, provided such permit may be reinstated (upon such conditions as the community may deem necessary) to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
 - c. Civil penalties: 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 Class 1 misdemeanor pursuant to North Carolina General Statute § 143-215.58.
 - i. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than fifty dollars (\$50.00). Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Boiling Spring Lakes from taking such other lawful actions, pursuant to North Carolina General Statute § 153A, 160A, and 160D, as is necessary to prevent or remedy any violation.
 - ii. Enforcement by an appropriate equitable remedy issuing from a court of competent jurisdiction may be pursued if the offender fails to remedy the violation, pays assessed fines, and/or fails to file an appeal within the prescribed period of time. In such case, the general court of justice shall have jurisdiction to issue such orders as may be appropriate.
- (4) Administrative appeal; judicial review. Any person receiving a Notice of Violation may appeal the determination of the community, including but not limited to the issuance of a stop work order, the assessment of an administratively-imposed monetary penalty, the suspension, revocation, modification, or grant with condition of a permit by the community upon finding that the holder is in violation of permit conditions, or that the holder is in violation of any applicable ordinance or any of the community's rules and regulations, or the issuance of a notice of bond forfeiture.
- a. Any person receiving a Notice of Violation may appeal the determination of the floodplain administrator to the local elected governing body. The Notice of Appeal must be in writing and be received by the floodplain administrator and the clerk within thirty (30) days of the date of the Notice of Violation. In the absence of an appeal, the determination of the floodplain administrator shall be final.
 - b. All appeals shall be heard and decided by the Board of Adjustment. The Board of Adjustment shall hear an appeal within a reasonable time and shall have the power to affirm, modify, or reject the original penalty, including the right to increase or decrease the amount of any monetary penalty and the right to add or delete remedial actions required for correction of the violation and compliance with the community's flood damage prevention ordinance, and any other applicable local, state, or federal requirements. In the absence of a petition for review of a quasi-judicial decision, the decision of the Board of Adjustment shall be final.

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- c. A petition for review of a quasi-judicial decision can be requested by any person with standing aggrieved by a decision or order of the community, after exhausting his/her administrative remedies. The petition shall be received by the clerk of superior court within 30 days of the date of the local governing body decision.
- (5) Section 1316 Declaration: Section 1316 of the National Flood Insurance Act authorizes FEMA to deny flood insurance to a property declared by the State, County, or Municipal government to be in violation of the local floodplain management ordinance. A Section 1316 declaration shall be used when all other legal means to remedy a violation have been exhausted and the structure remains noncompliant. The community must coordinate a request for Section 1316 declaration to the FEMA Regional Office through the State NFIP Coordinator.

Once invoked, the property's flood insurance coverage will be terminated and no new or renewal policy can be issued; no flood insurance claim can be paid on any policy on the property, and disaster assistance will be denied. If a structure that has received a Section 1316 declaration is made compliant with the community's floodplain management ordinance, then the Section 1316 declaration can be rescinded by FEMA and flood insurance eligibility restored.

11-3-5Variance procedures.

- (A) The board of adjustment as established by the city of Boiling Spring Lakes shall hear and decide requests for variances from the requirements of this ordinance.
- (B) Variances may be issued for:
- (1) 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.
 - (2) Functionally dependent facilities if determined to meet the definition as stated in section 11-6 of this ordinance, provided provisions of section 11-3-5 (1)(2), (3), and (5) have been satisfied, and such facilities are protected by methods that minimize flood damages.
 - (3) Any other type of development, provided it meets the requirements stated in this section.
- (C) In passing upon variances, the board of adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
- (1) The danger that materials may be swept onto other lands to the injury of others;
 - (2) The danger to life and property due to flooding or erosion damage;
 - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (4) The importance of the services provided by the proposed facility to the community;
 - (5) The necessity to the facility of a waterfront location as defined under section 11-6 of this article as a functionally dependent facility, where applicable;
 - (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (7) The compatibility of the proposed use with existing and anticipated development;
 - (8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;

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- (10) 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
 - (11) 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.
- (D) A written report addressing each of the above factors shall be submitted with the application for a variance.
- (E) Upon consideration of the factors listed above and the purposes of this ordinance, the board of adjustment may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- (F) 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 base flood elevation increases risks to life and property, and that the issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance up to twenty-five dollars (\$25.00) per one hundred dollars (\$100.00) of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.
- (G) 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.
- (H) *Conditions for variances.*
- (1) Variances shall not be issued when the variance will make the structure in violation of other federal, state, or local laws, regulations, or ordinances.
 - (2) 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.
 - (3) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (4) Variances shall only be issued prior to floodplain development permit approval.
 - (5) Variances shall only be issued upon:
 - (a) A showing of good and sufficient cause;
 - (b) A determination that failure to grant the variance would result in exceptional hardship; and
 - (c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- (I) A variance may be issued for solid waste disposal facilities, 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.
- (1) The use serves a critical need in the community.
 - (2) No feasible location exists for the use outside the special flood hazard area.
 - (3) The reference level of any structure is elevated or floodproofed to at least the regulatory flood protection elevation.
 - (4) The use complies with all other applicable federal, state and local laws.

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- (5) The city of Boiling Spring Lakes has notified the secretary of the North Carolina Department of Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance, in accordance with North Carolina General Statutes §143-215.54A(b).

Sec. 11-4. Provisions for flood hazard reduction.

11-4-1 General standards.

In all special flood hazard areas the following provisions are required:

- (A) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- (B) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage in accordance with the FEMA technical bulletin 2, flood damage-resistant materials requirements.
- (C) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (D) All new electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall be located at or above the RFPE or designed and installed to prevent water from entering or accumulating within the components during the occurrence of the base flood. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, water heaters, and electric outlets/switches.
 - (1) Replacements part of a substantial improvement, electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall also meet the above provisions.
 - (2) Replacements that are for maintenance and not part of a substantial improvement, may be installed at the original location provided the addition and/or improvements only comply with the standards for new construction consistent with the code and requirements for the original structure.
- (E) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (F) 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.
- (G) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (H) Nothing in this article shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this article 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.
- (I) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, and variances as specified in section 11-3-5(J) are not permitted. 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 section 11-3-2(C).

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- (J) All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.
 - (K) 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.
 - (L) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
 - (M) 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.
 - (O) 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.
 - (P) 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 BFE shall apply.
 - (Q) Structural fill shall not be used unless design and construction of the structural fill accounts for the following:
 - (1) consolidation of the underlying soil under the weight of the fill and the structure;
 - (2) differential settlement due to variations in fill composition and characteristics; and
 - (3) slope stability and erosion control during conditions of the base flood.

11-4-2 Specific standards.

In all special flood hazard areas, as set forth in section 11-2-2, or section 11-3-3 (K) & (L), the following provisions, in addition to Section 11-4-1, are required:

- (A) *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 in this ordinance.
- (B) *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 this ordinance. Structures located in A, AE, AH, AO, A99 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.

For AO zones, the floodproofing elevation shall be in accordance with section 11-4-6(B). A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the floodplain administrator as set forth in section 11-3-2(C), along with the operational and maintenance plans.

- (C) *Manufactured homes.*
 - (1) New or 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 this ordinance.

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- (2) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by engineer certification, 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.
 - (3) All enclosures or skirting below the lowest floor shall meet the requirements of section 11-4-2(D)(1), (2), and (3).
 - (4) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks 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.
- (D) *Elevated buildings.* Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:
- (1) 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.
 - (2) Shall be constructed entirely of flood resistant materials at least to the regulatory flood protection elevation and shall not be temperature-controlled or conditioned.
 - (3) Shall include, in zones A, AE, AH, AO, A99, 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:
 - (a) A minimum of two (2) flood openings on different sides of each enclosed area subject to flooding;
 - (b) 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;
 - (c) If a building has more than one (1) enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - (d) The bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;
 - (e) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions;
 - (f) 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.
 - (4) Property owners shall be required to execute and record a non-conversion agreement prior to issuance of a building permit declaring that the area below the lowest floor shall not be

improved, finished or otherwise converted to habitable space; The city of Boiling Spring Lakes will have the right to inspect the enclosed area. This agreement shall be recorded with the Brunswick County register of deeds and shall transfer with the property in perpetuity.

- (5) Release of restrictive covenant. If a property which is bound by a non-conversion agreement is modified to remove enclosed areas below BFE, then the owner may request release of restrictive covenant after staff inspection and submittal of confirming documentation.

(E) *Additions/improvements.*

- (1) 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:
- (a) 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;
 - (b) A substantial improvement, with modifications/rehabilitations/improvements to the existing structure or the common wall is structurally modified more than installing a doorway, both the existing structure and the addition must comply with the standards for new construction.
- (2) 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.
- (3) 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:
- (a) Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction;
 - (b) A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- (4) Any combination of repair, reconstruction, rehabilitation, addition or improvement of a building or structure taking place during a five year period, the cumulative cost of which equals or exceeds ~~fifty (50)~~ **forty (40)** percent of the market value of the structure before the improvement or repair is started must comply with the standards for new construction. For each building or structure, the five (5) year period begins on the date of the first improvement or repair of that building or structure subsequent to the effective date of this ordinance. Substantial damage also means flood-related damage sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damage occurred. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The requirement does not, however, include either.

(F) *Recreational vehicles.* Recreational vehicles shall **meet the following:**

- (1) **Placement of a Recreational Vehicle in the Regulatory Floodway or Non-Encroachment Area is prohibited. This includes both temporary and permanent placement.**
- (2) Meet all the requirements for new construction.

(G) *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:

- (1) 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;
 - (2) The name, address, and phone number of the individual responsible for the removal of the temporary structure;
 - (3) The time frame prior to the event at which a structure will be removed (i.e., minimum of seventy-two (72) hours before landfall of a hurricane or immediately upon flood warning notification);
 - (4) A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure;
 - (5) Designation, accompanied by documentation, of a location outside the special flood hazard area, to which the temporary structure will be moved.
- (H) *Accessory structures.* When accessory structures (sheds, detached garages, etc.) with a footprint of no more than 600 square feet are placed within A, AO, AH, AE and A99 flood zones, wet floodproofing may be permitted when the following criteria are met:
- (1) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
 - (2) Accessory structures shall not be temperature-controlled;
 - (3) Accessory structures shall be designed to have low flood damage potential;
 - (4) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
 - (5) Accessory structures shall be firmly anchored in accordance with section 11-4-1(A);
 - (6) All service facilities such as electrical shall be installed in accordance with section 11-4-1(D);
 - (7) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with section 11-4-2(D)(3).

An accessory structure with a footprint less than one hundred fifty (150) square feet or less in A, AO, AH, AE and A99 zones 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 section 11-3-2(C).

- (I) *Tanks.* When gas and liquid storage tanks are to be placed within a special flood hazard area, the following criteria shall be met:
- (1) *Underground tanks.* Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty;
 - (2) *Above-ground tanks, elevated.* Above-ground tanks in flood hazard areas shall be elevated to or above the regulatory flood protection elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;
 - (3) *Above-ground tanks, not elevated.* Above-ground tanks that do not meet the elevation requirements of section 11-4-2.B of this article shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other

loads, including the effects of buoyancy, during conditions of the design flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions.

- (4) *Tank inlets and vents.* Tank inlets, fill openings, outlets and vents shall be:
- (a) At or above the regulatory flood protection elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and
 - (b) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.
- (J) *Other development.*
- (a) Fences in regulated floodways and NEAs that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of section 11-4-5 of this ordinance; and
 - (b) Retaining walls, sidewalks and driveways in regulated floodways and NEAs. Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of section 11-4-5 of this ordinance.
 - (c) Roads and watercourse crossings in regulated floodways and NEAs. Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of section 11-4-5 of this ordinance.
 - (d) Commercial storage facilities are not considered “limited storage” as noted in this ordinance and shall be protected to the Regulatory Flood Protection Elevation as required for non-residential structures.

11-4-3 Standards of floodplains without established base flood elevations.

Within the special flood hazard areas designated as approximate zone A and established in section 11-2-2, where no base flood elevation (BFE) data has been provided by FEMA, the following provisions, in addition to section 11-4-1 and 11-4-2, shall apply:

- (A) 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 (5) 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.
- (B) The BFE used in determining the regulatory flood protection elevation shall be determined based on one (1) of the following criteria set in priority order:
 - (1) If 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 article and shall be elevated or floodproofed in accordance with standards in section 11-3-3(K), (L).
 - (2) All subdivision, manufactured home park and other development proposals shall provide base flood elevation (BFE) data if development is greater than five acres or has more than fifty (50) lots/manufactured home sites. Such base flood elevation (BFE) data shall be adopted by reference per section 11-2-2 to be utilized in implementing this ordinance.

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- (3) 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 to or above the regulatory flood protection elevation, as defined in this ordinance.
 - (4) 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 section 11-4-3 and section 11-4-5.

11-4-4 Standards for riverine floodplains with BFE but without established floodways or non-encroachment areas.

Along rivers and streams where BFE data is provided 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:

- (A) Standards outlined in section 11-4-1 and 11-4-2; and
- (B) 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.

11-4-5 Floodways and non-encroachment areas.

Areas designated as floodways or non-encroachment areas are located within the special flood hazard areas established in section 11-2-2. 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 section 11-4-1 and 11-4-2, shall apply to all development within such areas:

- (A) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated that:
 - (1) 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
 - (2) A conditional letter of map revision (CLOMR) has been issued by FEMA for proposed encroachments resulting in increases in the flood levels during the occurrence of the base flood discharge. A letter of map revision (LOMR) must also be obtained within six (6) months of completion of the proposed encroachment.
 - (3) A Letter of Map Revision (LOMR) must be obtained within six months of completion of the proposed encroachment if the encroachment results in changes to the floodway/non-encroachment area widths, and/or changes to the stream location.
- (B) If section 11-4-5(A) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
- (C) No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision, provided the following provisions are met:
 - (1) The anchoring and the elevation standards of section 11-4-2(C); and
 - (2) The no encroachment standard of section 11-4-5(A).

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- (3) Placement of recreational vehicles in the regulatory floodway or non-encroachment area is prohibited.

11-4-6 Standards for areas of shallow flooding(zone AO).

Located within the special flood hazard areas established in section 11-2-2, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to section 11-4-1 and section 11-4-2, all new construction and substantial improvements shall meet the following requirements:

- (A) The reference level shall be elevated at least as high as the depth number specified on the flood insurance rate map (FIRM), in feet, plus a freeboard of two (2) feet, above the highest adjacent grade; or at least two (2) feet above the highest adjacent grade plus a freeboard of two (2) feet if no depth number is specified.
- (B) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in section 11.4.6 (A) so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as per section 11-3-2(C) and section 11-4-2(B).
- (C) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

11-4-7 Standards for areas of shallow flooding(zone AH).

Located within the special flood hazard areas established in section 11-2-2, are areas designated as shallow flooding areas. These areas are subject to inundation by one (1) percent annual-chance shallow flooding (usually areas of ponding) where average depths are one (1) to three (3) feet. Base flood elevations are derived from detailed hydraulic analyses are shown in this zone. In addition to section 11-4-1 and section 11-4-2, all new construction and substantial improvements shall meet the following requirements:

- (A) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

11-4-8 Standards for areas outside the special flood hazard area/Shaded X zones

Areas designated as Shaded X on the FIRM or in the FIS report established in 11-2-2 are areas determined to be low to moderate risk flood zones but are not immune to inundation by flood waters. The following provisions, in addition to the provisions of 11-4-1 and 11-4-2 shall apply to all development within such areas.

- 1. Where 0.2 percent annual chance water surface elevations are provided, the reference level in Shaded Zone X shall be elevated or floodproofed to at least the 0.2 percent annual chance water surface elevation or the Regulatory Flood Protection Elevation, whichever is higher.
- 2. Where no flood hazard data is available or provided per 11-2-2;
 - a. The reference level shall be elevated or floodproofed to at least 2' above the highest adjacent grade
- 3. Where Advisory Flood Studies provide base flood elevations, the reference level shall be elevated or floodproofed to at least the advisory BFE plus a freeboard of 2'.

11-5-1 Effect on rights and liabilities under the existing flood damage prevention ordinance.

This article in part comes forward by re-enactment of some of the provisions of the flood damage prevention article enacted February 6, 1989, 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 article shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention article of the city of Boiling Spring Lakes enacted on February 6, 1989, as amended, which are not reenacted herein are repealed.

11-5-2Effect 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.

11-5-3Effective date.

This article shall become effective upon adoption.

Sec. 11-6. Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted so as to give them the meaning they have in common usage and to give this article it's most reasonable application. These provisions shall apply to the damage prevention ordinance. Definitions contained in appendix A may supplement those contained herein. Where a conflict exists, the UDO administrator shall determine the appropriate definition to be used for the situation to which it applies.

A Zone is the Special Flood Hazard Area subject to inundation by the 1% annual chance flood where base flood elevations have NOT been determined.

AE Zone is the Special Flood Hazard Area subject to inundation by the 1% annual chance flood where base flood elevations have been determined by detailed or limited detailed methods.

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.

AH Zone is the Special Flood Hazard Area with a 1% annual chance of shallow flooding (usually areas of ponding), where average depths are between one (1) and three (3) feet. Base flood elevations derived from detailed hydraulic analyses are shown in this zone.

Alteration of a watercourse means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

AO Zone is the Special Flood Hazard Area with a 1% annual chance of shallow flooding (usually sheet flow on sloping terrain) where average depths are between one (1) and three (3) feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone.

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 or AH 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.

Community means any State or area of political subdivision thereof, or any Indian tribe or authorized tribal organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

Community Rating System (CRS) means a program developed by the Federal Insurance Administration to provide incentives for those communities in the Regular Program that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.

Critical Facility (also called critical action) means facilities for which the effects of even a slight chance of flooding would be too great. The minimum floodplain of concern for critical facilities is the 0.2 percent chance flood level. Critical facilities include, but are not limited to facilities critical to the health and safety of the public such as: emergency operations centers, designated public shelters, schools, nursing homes, hospitals, police, fire and emergency response installations, vital data storage centers, power generation and water and other utilities (including related infrastructure such as principal points of utility systems) and installations which produce, use, or store hazardous materials or hazardous waste.

Design flood: see *Regulatory flood protection elevation*.

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.

Development activity means any activity defined as development which will necessitate a floodplain development permit. This includes buildings, structures, and non-structural items, including (but not limited to) fill, bulkheads, piers, pools, docks, landings, ramps, and erosion control/stabilization measures.

Digital flood insurance rate map (DFIRM) means the digital official map of a community, issued by the federal emergency management agency (FEMA), on which both the special flood hazard areas and the risk premium zones applicable to the community are delineated.

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.

Dry Floodproofing means a combination of measures that make a building and attendant utilities and equipment watertight and substantially impermeable to floodwater, with structural components having the

capacity to resist flood loads. Please refer to Technical Bulletin 3, *Requirements for the Design and Certification of Dry Floodproofed Non-Residential and Mixed Use Buildings*, and available from the FEMA.

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 special flood hazard area, which may impede or alter the flow capacity of a floodplain.

Existing building and existing structure means any building and/or structure for which the "start of construction" commenced before the date of the first floodplain management article was adopted.

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

Expansion to an Existing Manufactured Home Park or Subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood or Flooding means

(a) 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 or runoff of surface waters from any source.
- (3) *Mudslides (i.e. mudflows)* which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

Flood boundary and floodway map (FBFM) means an official map of a community, issued by the FEMA, 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 FEMA, 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 FEMA, on which both the special flood hazard areas and the risk premium zones applicable to the community are delineated. (see also DFIRM)

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 FEMA. 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 article 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.

Flood-resistant material means any building product [material, component or system] capable of withstanding direct and prolonged contact (minimum seventy-two (72) hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. Pressure-treated lumber or naturally decay-resistant lumbers are acceptable flooring materials. Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. Materials that absorb or retain water excessively after submergence are not flood-resistant. Please refer to technical bulletin 2, flood damage-resistant materials requirements, and available from the FEMA. Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

Floodway means the channel of a river or other watercourse, including the area above a bridge or culvert when applicable, 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.

Floodway encroachment analysis means an engineering analysis of the impact that a proposed encroachment into a floodway or non-encroachment area is expected to have on the floodway boundaries and flood levels during the occurrence of the base flood discharge. The evaluation shall be prepared by a qualified North Carolina licensed engineer using standard engineering methods and models.

Freeboard means the height added to the BFE to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, blockage of bridge or culvert openings, and the hydrological effect of urbanization of the watershed. The BFE 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 facility means, as defined in NCGS 130A, article 9, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste. Hazardous waste facility does not include a hazardous waste transfer facility that meets the requirements of 40CFR 263.12.

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.

Letter of map change (LOMC) means an official determination issued by FEMA that amends or revises an effective flood insurance rate map or flood insurance study. Letters of map change include:

- (a) *Letter of map amendment (LOMA)*: An official amendment, by letter, to an effective national flood insurance program map. A LOMA is based on technical data showing that a property had been inadvertently mapped as being in the floodplain, but is actually on natural high ground above the base flood elevation. A LOMA amends the current effective flood insurance rate map and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.
- (b) *Letter of map revision (LOMR)*: A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.
- (c) *Letter of map revision based on fill (LOMR-F)*: A determination that a structure or parcel of land has been elevated by fill above the BFE and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.
- (d) *Conditional letter of map revision (CLOMR)*: A formal review and comment as to whether a proposed project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective flood insurance rate map or flood insurance study; upon submission and approval of certified as-built documentation, a letter of map revision may be issued by FEMA to revise the effective FIRM.

Light duty truck means any motor vehicle rated at eight thousand five hundred (8,500) pounds gross vehicular weight rating or less which has a vehicular curb weight of six thousand (6,000) pounds or less and which has a basic vehicle frontal area of forty-five (45) square feet or less as defined in 40 CFR 86.082-2 and is:

- (a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle; or
- (b) Designed primarily for transportation of persons and has a capacity of more than twelve (12) persons; or
- (c) Available with special features enabling off-street or off-highway operation and use.

Lowest adjacent grade (LAG) means the lowest 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 (1) or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Map Repository means the location of the official flood hazard data to be applied for floodplain management. It is a central location in which flood data is stored and managed; in North Carolina, FEMA has recognized that the application of digital flood hazard data products has the same authority as hard copy products. Therefore, the NCEM's Floodplain Mapping Program websites house current and historical flood hazard data. For effective flood hazard data, the NC FRIS website (<https://fris.nc.gov/>) is the map repository. Repositories of historical flood hazard data are available on the Flood.NC website (<https://glood.nc.gov/ncflood/>) and the FEMA Flood Map Service Center website (<https://msc.fema.tgov/portal/home>).

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.

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.

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

Non-conversion agreement means a document stating that the owner will not convert or alter what has been constructed and approved. Violation of the agreement is considered a violation of the article and, therefore, subject to the same enforcement procedures and penalties. The agreement must be filed with the recorded deed for the property. The agreement must show the clerk's or recorder's stamps and/or notations that the filing has been completed.

Non-encroachment area (NEA) means the channel of a river or other watercourse, including the area above a bridge or culvert when applicable, 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 fifty-one (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) Four hundred (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;
- (d) Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use, and
- (e) Is fully licensed and ready for highway use.
- (f) Has no attached deck, porch, or shed, and
- (g) Has quick-disconnect sewage, water, and electrical connectors.

For the purpose of this ordinance Tiny Homes/Houses and Park Models that do not meet the items listed above are not considered Recreational Vehicles and should meet the standards of and be permitted as Residential Structures under this ordinance.

Reference level is the top of the lowest floor for structures within special flood hazard areas designated as zones A, AE, AH, AO, A99. The reference level is the bottom of the lowest horizontal structural member of the lowest floor for structures within special flood hazard areas designated as zone VE.

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 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. In areas where no base flood elevations exist from any authoritative source, the flood protection elevation may be historical flood elevations or base flood elevations determined and/or approved by the floodplain administrator plus the freeboard.

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

Repetitive Loss means flood-related damages 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.

Repetitive Loss Property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling 10-year period, since 1978. At least two of the claims must be more than ten days apart, but within ten years of each other. A RL property may or may not be currently insured by the NFIP.

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.

Section 1316 means that section of the National Flood Insurance Act of 1968, as amended, which states that no new flood insurance coverage shall be provided for any property that FEMA finds has been declared by a duly constituted state or local zoning authority or other authorized public body to be in violation of state or local laws,

regulations, or ordinances that are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

Severe Repetitive Loss Structure means any insured property that has met at least one of the following paid flood loss criteria since 1978, regardless of ownership. In either case, two of the claim payments must have occurred within ten years of each other. Multiple losses at the same location within ten days of each other are counted as one loss, with the payment amounts added together.

- (1) Four or more separate claim payments of more than \$5,000 each (including building and contents payments); or
- (2) Two or more separate claim payments (building payments only) where the total of the payments exceeds the current market value of the property.

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 (1) percent or greater chance of being flooded in any given year, as determined in section 11-2-2 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 one hundred eighty (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 (1)~~ five (5) year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed ~~fifty (50)~~ forty (40) percent of the market value of the structure before the damage occurred. See definition of "substantial improvement". Substantial damage also means flood-related damage sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damage occurred.

Substantial improvement means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any five (5) year period for which the cost equals or exceeds ~~fifty (50)~~ forty (40) 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

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- (b) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure and the alteration is approved by variance issued pursuant section 11-3-5 of this ordinance.

Technical bulletin and technical fact sheet means a FEMA publication that provides guidance concerning the building performance standards of the NFIP, which are contained in title 44 of the U.S. Code of Federal Regulations at Section 60.3. The bulletins and fact sheets are intended for use primarily by state and local officials responsible for interpreting and enforcing NFIP regulations and by members of the development community, such as design professionals and builders. New bulletins, as well as updates of existing bulletins, are issued periodically as needed. The bulletins do not create regulations; rather they provide specific guidance for complying with the minimum requirements of existing NFIP regulations.

It should be noted that Technical Bulletins and Technical Fact Sheets provide guidance on the minimum requirements of the NFIP regulations. State or community requirements that exceed those of the NFIP take precedence. Design professionals should contact the community officials to determine whether more restrictive State or local regulations apply to the building or site in question. All applicable standards of the State or local building code must also be met for any building in a flood hazard area.

Temperature controlled means having the temperature regulated by a heating and/or cooling system, built-in or appliance.

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

VE Zone is the Special Flood Hazard Area subject to inundation by the 1% annual chance of flooding and high velocity wave action from storm surges and seismic activity. Base flood elevations have been derived from detailed hydraulic analyses.

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 NAVD 1988, 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.

X Zones means areas determined to be low to moderate risk flood zones.

Shaded – is the area of moderate flood hazard and can represent:

- (1) 0.2% annual chance flood hazard area (500-year flood zone),
 - (2) Areas of 1% annual chance flood with average depth less than one (1) foot, or
 - (3) Areas of 1% annual chance flood with drainage areas of less than one (1) square mile
- (a) Unshaded – is the area of minimal flood hazard determined to be outside of the 0.2% annual chance flood (500-year flood zone).