

FLOOD DAMAGE PREVENTION ORDER

ARTICLE I

STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND METHODS

SECTION A. STATUTORY AUTHORIZATION

The Legislature of the State of Texas has in the Flood Control Insurance Act, Texas Water Code, Section 16.315, delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, the Commissioners Court of Grayson County, Texas does ordain as follows:

SECTION B. FINDINGS OF FACT

- (1) The flood hazard areas of Grayson County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety, and general welfare.
- (2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed, or otherwise protected from flood damage.

SECTION C. STATEMENT OF PURPOSE

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

- (1) Protect human life and health;
- (2) Minimize expenditure of public money for costly flood control projects;
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) Minimize prolonged business interruptions;
- (5) Minimize damage to public facilities and utilities such as water lines, gas mains, electric lines, telephone lines, sewers, streets, and bridges located in floodplains;

- (6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- (7) Ensure that potential buyers are notified that property is in a flood area.

SECTION D. METHODS OF REDUCING FLOOD LOSSES

To accomplish its purposes, this order uses the following methods:

- (1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;
- (4) Control filling, grading, dredging, and other developments which may increase flood damage;
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

ARTICLE 2

DEFINITIONS

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

ALLUVIAL FAN FLOODING – flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows, active processes of erosion, sediment transport, deposition, and characterized by unpredictable flow paths.

ACCESSORY STRUCTURE – A structure that is 400 square feet or less and valued at \$3,000 or less, which is on the same parcel of property as the principal structure and the use of which is incidental and subordinate to the use of the principal structure, this includes, but is not limited

to, a detached garage, storage shed, gazebo, picnic pavilion, boathouse, barn, or other similar building.

APEX – A point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

APPURTENANT STRUCTURE – A structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

AREA OF FUTURE CONDITIONS FLOOD HAZARD – The land area that would be inundated by the 1-percent-annual chance (100 year) flood based on future conditions hydrology.

AREA OF SHALLOW FLOODING – A designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where high velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

AREA OF SPECIAL FLOOD HAZARD – The land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed rate making has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE or V.

BASE FLOOD – The flood having a 1 percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION (BFE) – The elevation shown on the Flood Insurance Rate Map (FIRM) and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE that indicates the water surface elevation resulting from the flood that has a 1% chance of equaling or exceeding that level in any given year - also called the Base Flood.

BASEMENT – Any area of the building having its floor subgrade (below ground level) on all sides.

BREAKAWAY WALL – A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

CRITICAL FEATURE – An integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

DEVELOPMENT – Any man-made change to improved and 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.

ELEVATED BUILDING – For insurance purposes, a non-basement building, which has its lowest elevated floor, raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

ENCLOSURE – A fully enclosed area below the lowest floor that is usable solely for parking of vehicles, building access or storage in an area other than a basement and meets the non-elevation design requirements of Section 60.3 (see definition of lowest floor).

EXISTING CONSTRUCTION – For the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures."

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION – 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 before the effective date of the floodplain management regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION – The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured 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 – A general and temporary condition of partial or complete inundation of normally dry land areas from:

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

FLOOD ELEVATION STUDY – An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations; or an examination, evaluation, and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

FLOOD INSURANCE RATE MAP (FIRM) – An official map of a community on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY (FIS) – See *Flood Elevation Study*

FLOODPLAIN OR FLOOD-PRONE AREA – Any land area susceptible to being inundated by water from any source (see definition of flooding).

FLOODPLAIN MANAGEMENT – the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations.

FLOODPLAIN MANAGEMENT REGULATIONS – Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance, and erosion control ordinance), and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

FLOOD PROTECTION SYSTEM – Those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees, or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

FLOOD PROOFING – Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

FLOODWAY – See *Regulatory Floodway*

FUNCTIONALLY DEPENDENT USE – A use, which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. It does not include long-term storage or related manufacturing facilities.

HAZARDOUS MATERIAL – Any substance or material that, when involved in an accident or released in sufficient quantities, poses a risk to people's health, safety, and/or property. These substances and materials include explosives, radioactive materials, flammable liquids or solids, combustible liquids or solids, poisons, oxidizers, toxins, and corrosive materials.

HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

HISTORIC STRUCTURE – Any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the 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;
- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - (a) By an approved state program as determined by the Secretary of the Interior or;
 - (b) Directly by the Secretary of the Interior in states without approved programs.

LEEVE – A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water to provide protection from temporary flooding.

LEEVE SYSTEM – A flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

LOWEST FLOOR – The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, **provided** that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

MANUFACTURED HOME – A structure transportable in one or more sections, which is built on a permanent chassis and is designed for use 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 – A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

MEAN SEA LEVEL – For purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

NEW CONSTRUCTION – For the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION – 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 a community.

NON-RESIDENTIAL STRUCTURE – A structure that is used for purposes other than residential, which includes, but is not limited to: small business concerns, churches, schools, farm buildings (including grain bins and silos), pool houses, clubhouses, recreational buildings, mercantile structures, agricultural and industrial structures, warehouses, hotels, and motels with normal room rentals for less than 6 months' duration, and nursing homes.

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

REGULATORY FLOODWAY – The channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

REPETITIVE LOSS – Flood related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

RESIDENTIAL STRUCTURE – A structure that is considered to be a domicile or is used for residential purposes for 6 months or more, and include a single-family home, multiple unit apartment buildings, a residential condominium, or a manufactured or modular home.

RIVERINE – Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

SPECIAL FLOOD HAZARD AREA – See *Area of Special Flood Hazard*

START OF CONSTRUCTION – (For other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for 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 a building, whether that alteration affects the external dimensions of the building or not.

STRUCTURE – For floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT – Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before "start of construction" of the improvement. This term includes structures which have incurred "repetitive loss" or "substantial damage," regardless of the actual repair work performed. The term does not include either: (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or (2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

VARIANCE – A grant of relief by a community from the terms of a floodplain management regulation. (For full requirements see Section 60.6 of the National Flood Insurance Program regulations.)

VIOLATION – 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 Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION – The height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

ARTICLE 3

GENERAL PROVISIONS

SECTION A. LANDS TO WHICH THIS ORDER APPLIES

The order shall apply to all areas of special flood hazard within the jurisdiction of Grayson County.

SECTION B. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Grayson County, Texas and Incorporated Areas," dated September 1, 2022, with accompanying Flood Insurance Rate Maps (FIRM) dated September 1, 2022, and any revisions thereto are hereby adopted by reference and declared to be a part of this order.

SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT

A Floodplain Development Permit shall be required to ensure conformance with the provisions of this order. See Appendix A for the Flood Study Administrative Review Checklist. Flood Studies are to be signed by a licensed Texas Professional Engineer.

SECTION D. COMPLIANCE

No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this order and other applicable regulations.

SECTION E. ABROGATION AND GREATER RESTRICTIONS

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

SECTION F. INTERPRETATION

In the interpretation and application of this order, all provisions shall be (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under State statutes.

SECTION G. WARNING AND DISCLAIMER OR LIABILITY

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

ARTICLE 4

ADMINISTRATION

SECTION A. DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The County Engineer or designee is hereby appointed the Floodplain Administrator to administer and implement the provisions of this order and other appropriate sections of 44 CFR (Emergency Management and Assistance - National Flood Insurance Program Regulations) pertaining to floodplain management.

SECTION B. DUTIES & RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of this order.
- (2) Review permit application to determine whether to ensure that the proposed building site project, including the placement of manufactured homes, will be reasonably safe from flooding.

- (3) Review, approve, or deny all applications for development permits required by adoption of this order.
- (4) Review permits for proposed development to ensure that all necessary permits have been obtained from those Federal, State, or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required.
- (5) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation.
- (6) Notify, in riverine situations, adjacent communities and the State Coordinating Agency which is the Texas Water Development Board (TWDB) and the Texas Commission on Environmental Quality (TCEQ), prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
- (7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- (8) When base flood elevation data has not been provided in accordance with Article 3, Section B, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation data and floodway data available from a Federal, State, or other source, in order to administer the provisions of Article 5.
- (9) When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated 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 foot (1') at any point within the community.
- (10) Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE, AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one foot (1'), provided that the community **first** completes all the provisions required by Section 65.12.

SECTION C. PERMIT PROCEDURES

- (1) Application for a Floodplain Development Permit shall be presented to the Floodplain Administrator and shall be submitted online at <https://www.co.grayson.tx.us/page/dev.home> through the Development Certificate Portal.

All fees collected for permits and/or inspections shall be made payable to Grayson County, Texas. Permitting Fees will be set annually by the Grayson County Commissioners Court during their regular budget adoption process.

Application should include but is not limited to plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

- (a) Elevation (in relation to mean sea level), of the lowest floor (including basement) of all new and substantially improved structures;
 - (b) Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;
 - (c) A certificate from a licensed Professional Engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Article 5, Section B (2);
 - (d) Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development;
 - (e) Maintain a record of all such information in accordance with Article 4, Section B (1);
- (2) Approval or denial of a Floodplain Development Permit by the Floodplain Administrator shall be based on all the provisions of this order and the following relevant factors:
 - (a) The danger to life and property due to flooding or erosion damage;
 - (b) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

- (c) The danger that materials may be swept onto other lands to the injury of others;
- (d) The compatibility of the proposed use with existing and anticipated development;
- (e) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (f) The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical, and water systems;
- (g) 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;
- (h) The necessity to the facility of a waterfront location, where applicable;
- (i) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.

SECTION D. VARIANCE PROCEDURES

- (1) The Appeal Board, as established by the community, shall hear and render judgment on requests for variances from the requirements of this order.
- (2) The Appeal Board shall hear and render judgment on an appeal only when it is alleged that there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this order.
- (3) Any person or persons aggrieved by the decision of the Appeal Board may appeal such decision in the courts of competent jurisdiction.
- (4) The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the FEMA upon request.
- (5) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this order.

- (6) Variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Section C (2) of this Article have been fully considered. As the lot size increases beyond the 1/2 acre, the technical justification required for issuing the variance increases.
- (7) Upon consideration of the factors noted above and the intent of this order, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this order (Article 1, Section C).
- (8) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (9) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (10) Prerequisites for granting variances:
 - (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (b) Variances shall only be issued upon: (i) showing a good and sufficient cause; (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or orders.
 - (c) Any application to which a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (11) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria outlined in Article 4, Section D (1)-(9) are met, and (ii) the structure or other development is protected by methods that

minimize flood damages during the base flood and create no additional threats to public safety.

ARTICLE 5

PROVISIONS FOR FLOOD HAZARD REDUCTION

SECTION A. GENERAL STANDARDS

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements:

- (1) All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;
- (4) All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and,
- (7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- (8) All elevation requirements noted in this chapter shall be documented using the FEMA elevation certificate, shall be certified by a licensed Professional Engineer, surveyor, or

architect, and shall be reviewed and approved by the floodplain administrator prior to issuance of an E911 address, driveway permit, and/or on-site sewage facility (OSSF) permit.

- (9) A structure shall be deemed to be substantially improved or substantially damaged when the cumulative costs of the improvements or damage repairs, when combined incrementally over a five-year period, equal or exceed fifty percent (50%) of the market value of the structure. Structures located within the 0.2 percent flood zone will be excluded from this requirement.

SECTION B. SPECIFIC STANDARDS

In all areas of special flood hazards where base flood elevation data has been provided as set forth in (i) Article 3, Section B, (ii) Article 4, Section B (8), or (iii) Article 5, Section C (3), the following provisions are required:

- (1) **Residential Construction** – new construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated to a minimum of two feet (2') above the base flood elevation. A licensed Professional Engineer, architect, or land surveyor shall submit a certification to the Floodplain Administrator that the standard of this subsection, as proposed in Article 4, Section C (1) a., is satisfied.
- (2) **Nonresidential Construction** – new construction and substantial improvements of any commercial, industrial, or other nonresidential structure shall either have the lowest floor (including basement) elevated to a minimum of two feet (2') above the base flood level or together with attendant utility and sanitary facilities, be designed so that the structure is watertight to a minimum level of two feet (2') above the base flood level 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. A licensed Professional Engineer or architect shall develop and/or review structural design, specifications, and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.
- (3) **Enclosures** – new construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement

must either be certified by a licensed Professional Engineer or architect or meet or exceed the following minimum criteria:

- (a) A minimum of two openings on separate walls having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
- (b) The bottom of all openings shall be no higher than one foot (1') above grade.
- (c) Openings may be equipped with screens, louvers, valves, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

(4) Manufactured Homes –

- (a) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.
- (b) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to a minimum of two feet (2') above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- (c) Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section be elevated so that either:

- (i) the lowest floor of the manufactured home is at a minimum of two feet (2') above the base flood elevation, or
 - (ii) the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches (36") in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- (5) **Recreational Vehicles** – Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either (i) be on the site for fewer than 180 consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of Article 4, Section C (1), and the elevation and anchoring requirements for "manufactured homes" in paragraph (4) of this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions. Placement of recreational vehicles is prohibited within the boundaries of the adopted regulatory floodway.
- (6) **Accessory Structures** – Exempt from the requirements to be elevated or be designed so that the structure is watertight. Accessory Structures are prohibited within the boundaries of the adopted regulatory floodway.

SECTION C. STANDARDS FOR SUBDIVISION PROPOSALS

- (1) All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with Article 1, Sections B, C, and D of this order.
- (2) All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet Floodplain Development Permit requirements of Article 3, Section C; Article 4, Section C; and the provisions of Article 5 of this order.
- (3) Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Article 3, Section B or Article 4, Section B (8) of this order.
- (4) Base flood elevation data, with the establishment of a floodway, shall be generated by a detailed engineering study for all Zone A areas, within one hundred feet (100') of the

contour lines of Zone A areas, and other streams not mapped by FEMA, as indicated on the community's FIRM.

- (5) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
- (6) All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
- (7) Appendix B demonstrates the Floodplain Development Process.

SECTION D. STANDARDS FOR AREAS WHERE NO BASE FLOOD ELEVATIONS DETERMINED (A ZONES)

- (1) When a residential or non-residential structure is intended to be constructed in an approximate A Zone, a base flood elevation must be determined by a licensed Professional Engineer.

SECTION E. STANDARDS FOR AREAS OF SHALLOW FLOODING (AO/AH ZONES)

Located within the areas of special flood hazard established in Article 3, Section B, are areas designated as shallow flooding. These areas have special flood hazards associated with flood depths of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of **residential** structures have the lowest floor (including basement) elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet (2') if no depth number is specified).
- (2) All new construction and substantial improvements of **non-residential** structures;
 - (a) have the lowest floor (including basement) elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet (2') if no depth number is specified), or
 - (b) together with attendant utility and sanitary facilities be designed so that below the base specified flood depth in an AO Zone, or below the Base Flood Elevation in an AH Zone, level the structure is watertight with walls

substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

- (3) A licensed Professional Engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Article 4, Section C are satisfied.
- (4) Require within Zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

SECTION F. STANDARDS PROCEDURES FOR MAP CHANGES

- (1) **Letter of Map Amendment (LOMA)** - Upon the determination of an Engineer or Surveyor that the ground elevation below a structure or structures (including any basements) on a property is at an elevation greater than the base flood elevation, a property owner may apply to FEMA for letter of map amendment (LOMA) in accordance with 44 CFR Chapter 1, Section 70. Such a determination shall be based on a professional survey and/or the hydraulic, computer model (HEC-RAS) used by an Engineer to define the SFHA.
- (2) **Letter of Map Revision (LOMR)**
 - (a) **Existing structure or structures** – Upon the determination of the Floodplain Administrator that the ground elevation of a property is not in accordance with the approved FIRM, a property owner may apply to FEMA for a Letter of Map Revision (LOMR) or letter of map revision—Fill (LOMR-F) in accordance with 44 CFR Chapter 1, Section 72. Such a determination shall be based on a professional survey and the hydraulic computer model (HEC-RAS) used by an Engineer to define the SFHA. All supporting documentation shall be submitted to the Floodplain Administrator for review and approval prior to submission to FEMA for review and approval.
 - (b) **Proposed structure or structures** – Upon determination of the Floodplain Administrator that property currently indicated in a SFHA could be removed from the SFHA through modifications of the floodplain as identified on the FIRM, a property owner may apply to FEMA for a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Revision—Fill (CLOMR-F) in accordance with 44 CFR Chapter 1, Section 72. Such modifications and the determination shall be based on a professional survey and the hydraulic computer model (HEC-RAS) used by an Engineer to define the SFHA. In this instance, the property owner shall not begin construction within the existing floodplain or the area of the proposed floodplain until FEMA issues

a CLOMR or CLOMR-F. Additionally, after FEMA's issuances of a CLOMR or CLOMR-F and such modifications have been completed, the property owner shall apply to FEMA for a LOMR or LOMR-F. The LOMR or LOMR-F is required prior to filing of a plat with the County Clerk or issuance of any permits associated with building construction.

SECTION G. FLOODWAYS

Floodways - located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles and impose erosion potential, the following provisions shall apply:

- (1) Encroachments are prohibited, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
- (2) Drilling of water, gas, and/or oil wells is prohibited within the boundaries of the adopted regulatory floodway.
- (3) Storage of hazardous materials, in any form, is prohibited within the boundaries of the adopted regulatory floodway.
- (4) If Article 5, Section F (1) above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5.
- (5) Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community **first** completes all the provisions required by Section 65.12.

ARTICLE 6

SERVABILITY, PENALTIES FOR NON-COMPLIANCE, EFFECTIVE DATE

SECTION A. SEVERABILITY

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

SECTION B. PENALTIES FOR NON-COMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this court order and other applicable regulations. Violation of the provisions of this court order by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this court order or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500 for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Grayson County from taking such other lawful action as is necessary to prevent or remedy any violation.

SECTION C. EFFECTIVE DATE

This order shall be in full force and effect from and after its date of approval as required by law.

AND IT IS SO ORDERED:

PASSED AND APPROVED THIS 2 DATE OF AUGUST, 2022.



County Judge Bill Magers



Commissioner Jeff Whitmire
Precinct One



Commissioner David Whitlock
Precinct Two



Commissioner Phyllis James
Precinct Three



Commissioner Bart Lawrence
Precinct Four

Attest: 

County Clerk



Appendix A – Flood Study Administrative Review Checklist

GRAYSON COUNTY FLOOD STUDY ADMINISTRATIVE REVIEW CHECKLIST	
Project Name:	Date:
Project Location:	
Engineering Firm:	
Engineering Firm Contact:	Contact Phone Number:
Creek/Waterway Encroached:	
GENERAL	Please check or N/A
Project Description	
Project Purpose	
Table of Contents	
Conclusion/Summary	
Stamp/Seal/Firm #	
All electronic data submitted (HMS, RAS, PondPack, Excel, etc.)	
HYDROLOGY	
Hydrologic Methodology Used (Rational, Regression Equations, etc)	
Drainage Area Map	
Runoff Coefficients	
Time of Concentration	
Intensity Values for Peak Event	
Summary of Peak Discharges	
Existing/Proposed Conditions (100 yr)	
HYDRAULICS	
Hydraulic Methodology Used	
Channel Sections	
N-Values	
Contraction/Expansion coefficients	
Ineffective flow limits	
Summary of results (pre-project & post-project conditions)	
Water Surface Elevation	
Velocity	
Valley Storage	
SUPPORTING DOCUMENTS	
Location Map	
FIRM Map	
Proposed Grading Plan, include acreage of property and acreage developed	
Work Map (showing channel sections within limits of study)	
Channel Cross Sections (pre-project & post-project)	
Hydrologic & Hydraulic Models (HEC-HMS, HEC-RAS, etc)	

Appendix B – Floodplain Development Process

