

CHAPTER 9.08 - FLOOD DAMAGE PREVENTION

9.0801 Purpose. The purpose of Chapter 9.08 is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in areas of special flood hazard by regulations designed to:

1. Protect human life, health, safety, and welfare;
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, sewer, and gas mains, electric and telephone lines, and streets, culverts and bridges located in areas of special flood hazard;
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 blight due to floods; and
7. Ensure that potential buyers are notified that property is in an area of special flood hazard.

9.0802 Findings of Fact.

- A. The areas of special flood hazard within the statutory jurisdiction of the City of Harrisburg are subject to periodic inundation which may result 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 may adversely affect the public health, safety and general welfare.
- B. These flood losses are created by the cumulative effects of added impervious surface areas in contributing watersheds and of obstructions in areas of special flood hazard which cause an increase in flood heights and velocities, and by the occupancy of areas of special flood hazard by uses vulnerable to floods and thus hazardous to other lands because they are inadequately elevated, floodproofed, or otherwise protected from flood damage.

9.0803 Policies for Reducing Flood Losses. The City Council hereby adopts the following policies in order to accomplish the purposes of Chapter 9.08:

1. To restrict or prohibit land uses that are dangerous to health, safety, or property in times of flood, or that cause damaging increases in soil erosion, flood heights, or flood velocities;
2. To require that land uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of their initial construction and throughout their intended life span;
3. To control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
4. To control filling, grading, dredging, and other development activities which may result in increased flood damage; and
5. To prevent or regulate the construction of flood barriers which will divert floodwaters onto, or which may increase flood hazards to, other lands.

9.0804 Definitions. For the purposes of Chapter 9.08, and in order to carry out the provisions and intentions as set forth herein, certain words, terms, and phrases are to be used and interpreted as defined hereafter. Words used in the present tense shall include the future tense; words in the singular number include the plural; words in the plural number include the singular; the word "person" includes a firm, partnership, or corporation as well as an individual; the term "shall" is always mandatory and not discretionary; and the word "may" is permissive. The terms "used" or "occupied" as applied to any land or building shall be construed to include the terms "intended, arranged, or designed to be used or occupied".

AREA OF SPECIAL FLOOD HAZARD: Land subject to a one percent (1%) or greater chance of flooding in any given year. For the purposes of Chapter 9.08, the term "special flood hazard area" is synonymous in meaning with the term "area of special flood hazard".

BASE FLOOD: The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION (BFE): The water surface elevation of the base flood. The height of the water surface in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in areas of special flood hazard.

BASEMENT: Any area of a structure having its floor below ground level (subgrade) on all sides.

BUILDING: See STRUCTURE.

CERTIFICATION: A certification by a registered professional engineer or other party does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Certification of "as built" conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

CITY: The City of Harrisburg, South Dakota.

CLOMR: A Conditional Letter Of Map Revision.

COUNCIL: The City Council of the City.

DEVELOPMENT: 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, drilling operations, or storage of equipment or materials.

EROSION: The process of the gradual wearing away of land masses. This peril is not per se covered under the National Flood Insurance Program.

EXISTING CONSTRUCTION: For the purposes of Chapter 9.08, structures for which the start of construction commenced before October 15, 1977. "Existing construction" may also be referred to as "existing structures".

EXISTING MANUFACTURED HOME PARK: A manufactured home park for which the construction of facilities for servicing the lots on which the factory-built 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 October 15, 1977.

EXISTING STRUCTURES: See EXISTING CONSTRUCTION.

EXPANSION OF AN EXISTING MANUFACTURED HOME PARK: The preparation of additional sites for an existing manufactured home park by the construction of facilities for servicing the lots on which the factory-built 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).

FACTORY-BUILT HOMES: Structures built off-site and designed for long-term, single-family residential use. For the purpose of these regulations, factory-built homes consist of three (3) types: manufactured homes, mobile homes, and modular homes.

FEMA: The Federal Emergency Management Agency.

FHBM: Flood Hazard Boundary Map.

FIRM: Flood Insurance Rate Map.

FIS: Flood Insurance Study.

FLOOD/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; or
3. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph 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.
4. The collapse or subsidence of land along the shore of a body of water as a result of erosion or undermining caused by waves or currents of water caused by an unusually high water level in a natural body of water, such as a flash flood, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph 1 of this definition.

FLOOD INSURANCE RATE MAP: The official map of the City prepared under the direction of FEMA upon which areas of special flood hazard and other flood-related information have been delineated.

FLOOD INSURANCE STUDY/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 under the direction of FEMA.

FLOODPLAIN: Any land area susceptible to being inundated by water from any source.

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.

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

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

FREEBOARD: A factor of safety, usually expressed in feet above a flood level, for purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effects of urbanization of the watershed.

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

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 reservation 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.

LOMC: Letter of Map Change. Authorization from FEMA for changes to the City's adopted FIRM and FIS through approval of either a Letter of Map Amendment or a Letter of Map Revision.

LOWEST FLOOR: The lowest floor of the lowest enclosed area (including a basement floor) of a structure. An unfinished or flood-resistant enclosure (including a crawlspace), usable solely for parking of vehicles, building access, or storage is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of applicable non-elevation design requirements.

MANUFACTURED HOME: A factory-built, single-family dwelling, designed to be a permanent residence, that meets the 1976 Federal Manufactured Home Construction and Safety Standards Act (42 U.S.C. Sec. 5401), commonly known as the HUD (U.S. Department of Housing and Urban Development) Code. Manufactured homes typically are not placed on a permanent foundation or basement and consist of one (1) or more transportable sections that do not have a permanently attached towing hitch.

MANUFACTURED HOME PARK (MHP): A site containing three (3) or more spaces with required improvements and utilities that are leased for the long-term placement of factory-built homes, recreational vehicles, or travel trailers.

MEAN SEA LEVEL: For the purposes of Chapter 9.08, the North American Vertical Datum of 1988 (NAVD 88) to which base flood elevations shown on the City's adopted FIRM are referenced.

MOBILE HOME: A factory-built, single-family dwelling, designed to be a permanent residence, and built prior to enactment of the 1976 Federal Manufactured Home Construction and Safety Standards Act (42 U.S.C. Sec. 5401), commonly known as the HUD (U.S. Department of Housing and Urban Development) Code. Mobile homes typically are not placed on a permanent foundation or basement and consist of one (1) or two (2) transportable sections that have a permanently attached towing hitch and chassis.

MODULAR HOME: A factory-built, single-family dwelling, designed to be a permanent residence that meets state and City building codes. Modular homes typically are placed on a permanent foundation or basement and consist of one (1) or more transportable sections that do not have a permanently attached towing hitch and chassis. For the purposes of Chapter 9.08, single-family, site-built homes that were constructed elsewhere and are now being moved to a different parcel within the City are considered to be modular homes.

NEW CONSTRUCTION: Structures for which the start of construction commenced on or after the effective date of October 15, 1977, and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK: A manufactured home park for which the construction of facilities for servicing the lots on which the factory-built 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 on or after the effective date of October 15, 1977.

REASONABLY SAFE FROM FLOODING: Base flood waters will not inundate the land or damage structures to be removed from an area of special flood hazard by a Letter of Map Change and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

RECREATIONAL VEHICLE: A vehicle which is:

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

REPETITIVE LOSS STRUCTURE: A structure covered by a contract for flood insurance that has incurred flood-related damages on two separate occasions during a ten-year period (the period ends on the date of the event for which the second claim is made) for which the cost of repairs at the time of each such flood event, on the average, equaled or exceeded 25% of the market value of the structure at the time of each such flood event.

SDDENR: The South Dakota Department of Environment and Natural Resources.

SDOEM: The South Dakota Office of Emergency Management.

SPECIAL FLOOD HAZARD AREA: See AREA OF SPECIAL FLOOD HAZARD.

START OF CONSTRUCTION: This definition includes substantial improvement and means the date the building or grading permit is issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement begins within one hundred and eighty (180) days of the permit issuance date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of a slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a factory-built home on a foundation. Construction under a grading permit includes land preparation, such as clearing, grading and filling; the installation of streets and/or walkways; the excavation for a basement, footings, piers, or foundations; or the erection of temporary forms. Construction under a building permit includes 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 or not that alteration affects the external dimensions of the building.

STRUCTURE: For the purposes of Chapter 9.08, a walled and roofed building, including a factory-built home or a gas or liquid storage tank, that is principally above ground.

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 damage also means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five percent (25%) of the market value of the structure before the damages 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 the 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. This 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 regulations which have been identified by a code enforcement or building 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 specific exception to the terms of Chapter 9.08 where such deviation will not be contrary to the public interest and will be granted due to circumstances peculiar to a property.

VIOLATION: The failure of a structure or other development to be fully compliant with the City's floodplain management regulations. A structure or other development without the

elevation certificate, no-rise certification, or other evidence of compliance required in Chapter 9.08 is presumed to be in violation until such time as that documentation is accepted and approved.

WATER SURFACE ELEVATION: The height, in relation to the North American Vertical Datum of 1988 (NAVD 88), of floods of various magnitudes and frequencies in an area of special flood hazard.

GENERAL PROVISIONS

- 9.0805 Lands to Which Chapter 9.08 Applies. Chapter 9.08 shall apply to all areas of special flood hazard within the statutory jurisdiction of the City.
- 9.0806 Areas of Special Flood Hazard. The Flood Insurance Study and Flood Insurance Rate Maps for the City of Harrisburg (Community 460114) and Lincoln County (Community 460277) with an effective date of April 2, 2008, and any revisions thereto, delineate areas of special flood hazard and are hereby adopted by reference and declared to be a part of Chapter 9.08. Said FIRMs are hereby designated as the official maps of the City for the purposes of Chapter 9.08.
- 9.0807 Compliance. No structure shall hereafter be located, constructed, or altered nor shall land hereafter have its use changed without full compliance with the terms of Chapter 9.08 and other applicable regulations.
- 9.0808 Abrogation and Greater Restrictions. Chapter 9.08 is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where Chapter 9.08 and another chapter, ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- 9.0809 Interpretation. In the interpretation and application of Chapter 9.08, all provisions shall be considered as minimum requirements, liberally construed in favor of the City, and deemed neither to limit nor repeal any other powers granted under State statutes.
- 9.0810 Warning and Disclaimer of Liability. The degree of flood protection required by Chapter 9.08 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. Chapter 9.08 does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. Chapter 9.08 shall not create liability on the part of the City or any official or employee thereof for any flood damages that result from reliance on Chapter 9.08 or any administrative decision lawfully made thereunder.

ADMINISTRATION

- 9.0811 Designation of the Floodplain Management Administrator. The Council hereby appoints the Planning and Zoning Official as the Floodplain Management Administrator to administer and implement the provisions of Chapter 9.08.

9.0812 Duties and Responsibilities of the Floodplain Management Administrator. Duties and responsibilities of the Floodplain Management Administrator shall include, but not be limited to, the following:

- A. To maintain and hold open for public inspection all records pertaining to the provisions of Chapter 9.08.
- B. To review all development permit applications to assure that the requirements of Chapter 9.07 have been met.
- C. To review permit applications to determine whether a proposed building site, including the placement site of a factory-built home, will be reasonably safe from flooding.
- D. To review each Floodplain Development Permit Application and approve, approve with conditions, or deny the Permit.
- E. To review Floodplain Development Permit Applications for proposed development to assure that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required and to ensure that such documentation is maintained on file with the Floodplain Development Permit.
- F. To interpret, as needed, the exact location of a boundary of an area of special flood hazard or floodway. In those cases where there appears to be a conflict between a mapped boundary and actual field conditions, the Floodplain Management Administrator shall make the necessary interpretation.
- G. To notify adjacent communities, SDDENR, and SDOEM prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA and assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained.
- H. To obtain, review, and reasonably utilize any base flood elevation data and floodway data available from a Federal, State, or other source when base flood elevation data or floodway data has not been provided by the adopted FIRM, in order to administer the provisions of Chapter 9.08.
- I. To review Floodplain Development Permit Applications for proposed development to assure that no new construction, substantial improvements, or other development (including fill) be permitted within areas of special flood hazard with designated base flood elevations on the adopted FIRM when a floodway has not been designated, unless it is demonstrated by the applicant's Professional Engineer 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 at any point within the City.
- J. To ensure that FEMA has approved a CLOMR before a Floodplain Development Permit for which a CLOMR will be required is reviewed and approved.
- K. To declare that a structure is a repetitive loss or is substantially damaged.

- L. To ensure that certified plans and specifications for development within areas of special flood hazard are reviewed for compliance with the requirements of Chapter 9.08.

9.0813 CLOMR and LOMR Requirements. A CLOMR is required for development projects that are located in an area of special flood hazard for which base flood elevations have been specified on the adopted FIRM and the proposed project would result in any (other than 0.0') change in the base flood elevation or alteration of any floodplain or floodway boundary. Proof that FEMA has granted a CLOMR must be provided with the Floodplain Development Permit Application for the project before work may be allowed to begin. In such cases, the Floodplain Development Permit may be approved contingent upon the applicant submitting an application to FEMA within six months of project completion for the LOMR proposed in the granted CLOMR AND eventual notification by FEMA that said LOMR has been granted.

9.0814 Establishment of the Floodplain Development Permit. A Floodplain Development Permit shall be obtained, before construction begins, for any building or structure that will be built within an area of special flood hazard. Building, grading, or moving permits shall not be issued by City Building Officials for sites within areas of special flood hazard before a Floodplain Development Permit for the site is approved. The Floodplain Development Permit shall be required to ensure conformance with the provisions of Chapter 9.08. City or public utility projects to install underground or overhead utilities that will result in no net change to ground surface elevations within areas of special flood hazard are exempt from the requirement to obtain a Floodplain Development Permit. Replacement of an existing mobile home or manufactured home by a different manufactured home in an existing manufactured home park shall be exempt from the requirement to first obtain a Floodplain Development Permit. However, an as-built Elevation Certificate shall be submitted to the Floodplain Management Administrator within thirty days of the date the replacement manufactured home is moved into the manufactured home park. Failure to provide said Elevation

Certificate within the thirty-day period shall result in immediate revocation of the certificate of occupancy for the home and may result in removal of the manufactured home from the City at the owner's expense.

9.0815 Floodplain Development Permit Procedure.

- A. Applications for Floodplain Development Permits shall be submitted, prior to the commencement of any development activities, to the Floodplain Management Administrator. The Floodplain Development Permit Application shall consist of: a Floodplain Development Permit Application form; a scaled and dimensioned site plan of the property showing existing and proposed structure locations (including the placement of factory-built homes) and elevations, location of material or equipment storage, location of wetlands and other protected areas, existing and proposed utility and street infrastructure, property boundaries, areas of special flood hazard and/or floodway boundaries, and the location, extent, and elevation of areas of excavation, fill, and grading (preparation of the site plan may be required to be produced by a Registered Land Surveyor); an elevation certificate stamped by a Registered Land Surveyor may be required; a No Rise Certification by a Professional Engineer may be required; a Floodproofing Certificate prepared and stamped by a Professional Engineer may be required; other relevant engineering data and certifications may be required; and a non-refundable Floodplain Development Permit Application Fee. All elevation information shall utilize the North American Vertical Datum of 1988 (NAVD 88). The

Floodplain Management Administrator shall maintain a record of all such information that has been submitted.

- B. The following information is required as part of the application, where pertinent:
 - 1. Elevation (in relation to mean sea level), of the lowest floor (including basement and/or crawlspace) of all new and substantially improved structures;
 - 2. Elevation (in relation to mean sea level) to which any nonresidential structure shall be floodproofed;
 - 3. A certification from a Professional Engineer or Architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of Section 9.0817; and
 - 4. A written description from a Professional Engineer of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
- C. The provisions of Chapter 9.08 and the following relevant factors shall be considered during the review of a Floodplain Development Permit Application by the Floodplain Management Administrator before he approves, approves with conditions, or denies the Floodplain Development Permit:
 - 1. The danger to life and property due to flooding or erosion damage;
 - 2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - 3. The danger that materials may be swept onto other lands to the injury of others;
 - 4. The compatibility of the proposed use with existing and anticipated development;
 - 5. The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - 6. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, public utilities, and facilities such as sewer, gas, electrical, and water systems;
 - 7. The expected height, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - 8. The necessity to the facility of a waterfront location, where applicable;
 - 9. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use; and
 - 10. The relationship of the proposed use to the comprehensive plan for that area.
- D. Upon placement of the lowest floor, or Floodproofing by whatever approved construction means, it shall be the duty of the Permit holder to submit to the Floodplain Management Administrator a certification of the elevation of the lowest floor or floodproofed elevation, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same on the current FEMA-authorized form. Any work undertaken prior to submission of the certification shall be at the permit holder's risk.
- E. Each Permit shall be valid for a period of one year from its date of issuance. A Permit shall become invalid if the proposed development is not commenced within 180 days of Permit issuance, or if the work authorized is suspended or abandoned for a period of 180 days after such work commences. Extensions shall be requested in writing and

justifiable cause demonstrated. The Floodplain Management Administrator is authorized to grant, in writing, extensions of time for the Permit to remain valid.

- F. The Floodplain Management Administrator is authorized to suspend or revoke a Permit issued under Chapter 9.08 whenever the Permit is issued in error or on the basis of incorrect, inaccurate, or incomplete information, or in violation of any ordinance or code of the City, or if the Floodplain Management Administrator determines that the work being performed does not conform to the work authorized by the Permit.
- G. In order to hear and decide appeals of orders, decisions, or determinations made by the Floodplain Management Administrator relative to the application and interpretation of Chapter 9.08, the Council hereby designates the Planning Commission to be the Board of Appeals for these regulations. All decisions and findings of the Board shall be final and shall be rendered in writing to the appellant with a duplicate copy to the Floodplain Management Administrator.

PROVISIONS FOR FLOOD HAZARD REDUCTION

9.0816 General Standards. In or near all areas of special flood hazard the following provisions for flood hazard reduction are required for all new construction and substantial improvements:

- A. 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.
- B. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- C. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.
- D. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within their components during conditions of flooding.
- E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the system into flood waters.
- G. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- H. All existing buildings or substantial improvements that are to be removed from areas of special flood hazard by Letters of Map Change (LOMA or LOMR) shall show that the lowest adjacent grade of the structure must also be equal to or higher than the base flood elevation.

9.0817 Specific Standards. In or near all areas of special flood hazard where base flood elevation data has been provided the following provisions for flood hazard reduction are required:

- A. Residential Construction: New construction or substantial improvement of any residential structure shall have the lowest floor (including the basement floor), elevated at least two feet (2') above the base flood elevation. The construction of any residential structure shall conform to the guidance provided in FEMA Technical Bulletin 10-01, Ensuring That Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe From Flooding (FEMA Publication FIA-TB-10). A Professional Engineer, Architect, or Registered Land Surveyor shall submit an elevation certificate to the Floodplain Management Administrator that certifies this elevation data both for the "per plans" application and for the post-construction "as-built" circumstances.
- B. Nonresidential Construction: New construction or substantial improvements of any commercial, industrial, or other nonresidential structure shall either have the lowest floor (including the basement floor) elevated at least two feet (2') above the base flood elevation or, together with attendant utility and sanitary facilities, be designed so that the structure below a level that is three feet (3') above the base flood elevation is 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. A 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 structure is floodproofed shall be submitted to the Floodplain Management Administrator. An exception to the two-foot-elevation requirement may be allowed for detached accessory structures, such as sheds, shops, or garages, which may have the lowest floor at or above the base flood elevation.
- C. Enclosures: New construction or substantial improvements with fully enclosed areas below the lowest floor (including a crawlspace) that are usable solely for parking of vehicles, building access, or storage 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 be certified by a Professional Engineer or Architect and meet or exceed the following minimum criteria:
 - 1. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding shall be provided;
 - 2. The bottom of all openings shall be no higher than one foot (1') above grade; and
 - 3. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- D. Crawlspace Construction: The construction of any crawlspace shall conform to the guidance provided in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas (FEMA Publication FIA-TB-11 (11/01)).
- E. Factory-built Homes:

1. All factory-built homes to be placed or substantially improved within areas of special flood hazard shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, factory-built 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 anchoring requirements for resisting wind forces.
 2. All factory-built homes to be placed or substantially improved within areas of special flood hazard shall be installed on a foundation such that the lowest floor of the factory-built home is elevated at least two feet (2') above the base flood elevation and such that the factory-built home is securely anchored to an adequately anchored foundation system that is designed to resist flotation, collapse, and lateral movement when the factory-built home site is:
 - (a) outside of a manufactured home park;
 - (b) in a new manufactured home park;
 - (c) in an expansion of an existing manufactured home park; or
 - (d) in an existing manufactured home park in which a factory-built home has incurred "substantial damage" as a result of a flood.
 3. All factory-built homes to be placed or substantially improved within areas of special flood hazard in an existing manufactured home park shall be elevated so that the lowest floor is at least two feet (2') above the base flood elevation AND the chassis of the factory-built home is supported by reinforced piers that are no less than thirty-six inches (36") in height above grade and securely anchored.
- F. Recreational Vehicles: All recreational vehicles placed on sites within areas of special flood hazard shall either:
1. be on the site for fewer than one hundred and eighty (180) consecutive days and be fully licensed and ready for highway use, or
 2. meet Floodplain Development Permit requirements and the elevation and anchoring requirements for factory-built homes.

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.

9.0818 Standards for Subdivision Proposals. In all areas of special flood hazard the following provisions for flood hazard reduction are required for all subdivision proposals, including the placement of manufactured home parks:

- A. All subdivision proposals shall be consistent with the provisions of Chapter 9.08.
- B. All subdivision proposals shall meet the Floodplain Development Permit requirements of Chapter 9.08.
- C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

- D. All subdivision proposals shall have infrastructure such as streets, sewer, gas, electrical, and water systems designed, located, and constructed to minimize or eliminate flood damage.
- E. All subdivision proposals which propose either more than fifty (50) lots or encompass more than five (5.0) acres shall provide base flood elevation contour data prepared by a Professional Engineer.

9.0819 Standards for Floodways. Areas of special flood hazard that have been designated on the adopted FIRM or FHBM as floodways are extremely hazardous areas due to the velocity of flood waters which carry debris and have extreme erosion and scour potential. In all floodways the following provisions for flood hazard reduction are required:

- A. Encroachment of the floodway, including fill, new construction, substantial improvements, and other development shall be prohibited unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice by a Professional Engineer that the proposed encroachment would not result in any increase (0.0') in base flood elevations during the occurrence of the base flood discharge. The Professional Engineer shall submit supporting calculations with his No Rise Certification.
- B. All new construction and substantial improvements in the floodway shall comply with all applicable flood hazard reduction provisions of Chapter 9.08.
- C. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Regulations, encroachments may be permitted within the floodway that would result in an increase in base flood elevations, provided that the community first receives approval of a CLOMR through FEMA and that the provisions of Section 9.0813 are followed.

9.0820 Variances.

- A. The Council shall hear and render judgment on requests for variances from the requirements of Chapter 9.08.
- B. Any person(s) aggrieved by the decision of the Council may appeal such decision to a court of competent jurisdiction.
- C. The Floodplain Management Administrator shall maintain a record of all actions involving an appeal and shall report variances to FEMA and SDOEM upon the issuance of a variance by the Council.
- D. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or smaller in size that is contiguous to and surrounded by lots with existing structures that are constructed below the base flood elevation, providing the relevant factors of Section 9.0815.C have been fully considered. As the lot size increases beyond one-half (½) acre, the technical justification required for issuing the variance increases.

- E. Upon consideration of the factors noted above and the intent of Chapter 9.08, the Council may attach such conditions to the granting of a variance as it deems necessary to further the purpose and objectives of Chapter 9.08.
- F. Variances shall not be issued within any designated floodway if any increase in base flood elevation during the base flood discharge would result.
- G. 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.
- H. The following are prerequisites for granting a variance:
 - 1. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - 2. Variances shall only be issued upon:
 - (a) the applicant showing a good and sufficient cause;
 - (b) a determination by the Council that failure to grant the variance would result in exceptional hardship to the applicant; and
 - (c) a determination by the Council 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 or victimization of the public, or conflict with existing local laws or ordinances.
 - 3. Any applicant to whom a variance is granted shall be given written notice by the Floodplain Management Administrator 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.
- I. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:
 - 1. The criteria outlined in this Chapter 9.08 are met; and
 - 2. 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.