Chapter 3.7 — Flood Plain Design Standards

Sections:

3.7.100 Purpose.

It is the purpose of this Chapter 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:

1. To protect human life and health;
2. To minimize expenditure of public money and costly flood control projects;
3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. To minimize prolonged business interruptions;
5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
6. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
7. To ensure that potential buyers are notified that property is in an area of special flood hazard; and,
8. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

3.7.200 Methods of Reducing Flood Losses.

In order to accomplish its purposes, this Chapter includes methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
4. Controlling filling, grading, dredging, and other development that may increase flood damage; and
5. Preventing or regulating the construction of flood barriers that will unnaturally divert flood waters or may increase flood hazards in other areas.

3.7.300 Penalties for Noncompliance.

A. Full Compliance Required. No structure or land within the Flood Plain District or Floodway Sub-Distirct described in Chapter 2.7 shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this Chapter and other applicable regulations.

B. Penalties for Noncompliance. Violations of the provisions of this ordinance 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 ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than _____ or imprisoned for not more than ____ days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the _____ from taking such other lawful action as is necessary to prevent or remedy any violation.

3.7.400 Abrogation and Greater Restrictions.

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

3.7.500 Interpretation.

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

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and,
3. Deemed neither to limit or repeal any other powers granted under State statutes.

3.7.600 Warning and Disclaimer of Liability.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance 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 ordinance shall not create liability on the part of the City of Stanfield , any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

3.7.700 Subdivision Proposals.

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and,
4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments that contain at least 50 lots or 5 acres (whichever is less).

3.7.800 Construction and Siting.

The construction and siting of all new structures or additions to existing ones shall comply with the following basic standards:

A. Utilities

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

B. Materials and Methods

1. Construction shall use materials and utility equipment resistant to flood damage.
2. Construction shall use methods and practices that minimize flood damage.
3. Mechanical and electrical equipment including heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be designed and /or otherwise elevated or located so as to prevent water from entering or accumulating within the component during conditions of flooding. In any case all electrical outlets shall be installed at least one (1) foot above the 100-year flood elevation.
4. Crawl spaces should not be used for storage.
5. Structures may be elevated on extended foundations, stem walls, pilings, columns or saturation-stable compacted fill. Applicants are referred to the publications "Elevated Residential Structures" and "Economic Feasibility of Flood-proofing: Analysis of a Small Commercial Building" for ideas, standards, and techniques. Both publications are available at City Hall or from the Federal Emergency Management Agency ("FEMA").

C. Location of Structures: All buildings, fences, walls, hedges, and the like shall be sited so as not to obstruct the flow of flood waters, utilizing the following principles:

1. Locate buildings as far back from the floodway or watercourse channel as possible.
2. Locate buildings on the highest part of the site, if possible.

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3. Locate buildings parallel to watercourse channels or the direction of historical flood flows if located within 2 blocks of the channel.
4. Fences shall not be built across Stage Gulch.
5. Try to avoid planting hedges across the direction of flood flows, and when planting groups of trees or shrubs, leave plenty of open space between clumps, taking into account the size and spread of shrubs at maturity so as to avoid blocking flood flows.
6. No structure shall be located within 100 feet of the edge of Stage Gulch downstream of the formally designated "floodway", in the area for which a detailed study has not been conducted (below Hoosier Road Bridge).
7. An emergency evacuation route shall be planned and designated for all principal buildings, including houses and manufactured homes, within the flood hazard areas. This plan shall be filed with the city police department and Umatilla County Emergency Services Department.

D. Landfill

1. Up to 35% of a lot or parcel may be covered by landfill to provide for the elevation of structures, driveways, patios and sidewalks.
2. The remaining 65% of the surface of a site may be graded to fill in holes and smooth out high spots, to build landscaping berms, to provide better drainage, or to improve garden plots. This activity must be largely equalizing (i.e. the amount of excavation matching the amount of filling or berming), but up to 10 cubic yards of topsoil may be brought in for such landscaping purposes.
3. All fill for building sites shall be compacted and stabilized in accordance with Uniform Building Code standards to prevent settling or failure when saturated.
4. When fill is used for elevating buildings, the fill shall extend outward as a nearly level shelf at least 3' beyond the foundation on three sides of the building for ease of maintenance, and 10' on the fourth, as an emergency evacuation route.
5. All exposed fill shall be landscaped, to prevent erosion and promote stability.

E. First Floor Elevations and Basements

1. Residential structures, including manufactured homes: New construction and substantial improvements to any residential structure, including replacement of existing mobile and manufactured homes on individual lots and in manufactured home parks, shall have the lowest floor, including the basement, elevated to:

    a. One foot or more above the 100-year flood elevation within flood hazard area "A" identified on the _____[title of document], except that mobile and manufactured homes in existing manufactured home parks need to be elevated only to or above the 100-year flood level;
    b. One foot or more above ground level in flood hazard area "B" identified on the _____[title of document], the 500-year flood plain.

2. Non-residential structures converted to residential use shall be elevated in compliance with this section.

3. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for

3.7.800 Construction and Siting. *(continued)*

the entry and exit of flood-waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

a. A minimum of two openings having a total net area of not less than one 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 above grade.

c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

4. Non-Residential Structures: New construction and substantial improvement of any commercial, industrial and other non-residential structure shall either have the lowest floor, including basement, elevated to one foot or more above the base flood elevation; or together with attendant utility and sanitary facilities, shall:

a. Be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water.

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

c. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practices for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the City.

d. Non-residential structures that are not elevated nor flood-proofed must meet the same standards for space below the lowest floor as described in Subsection 3.7.800.E.3 above.

e. Applicants flood-proofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood-proofed level (e.g., A building constructed to the base flood level will be rated as one foot below that level).

5. Non-habitable storage and accessory buildings: Buildings intended for use primarily for storage of vehicles, equipment, animals, or material need not be elevated above the 100-year flood elevation, but mechanical and electrical equipment and outlets must be elevated above the 100-year flood elevation in accordance with 3.7.800.B.3 above.

F. Anchoring

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage, in accordance with the standards of the State Building Codes Division. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors. (NOTE:

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FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook, available at City Hall, may be used for additional techniques.)

3. All manufactured homes to be placed or substantially improved within the city's "A" flood hazard zone shall be elevated on a permanent foundation, in accordance with the standards of the State Building Codes Division, such that the lowest floor of the manufactured home is at least one foot above the 100-year flood elevation and shall be securely anchored to an adequately anchored foundation system in accordance with the above provisions. All replacement manufactured homes are subject to this requirement as well, except that within existing manufactured home parks, the manufactured homes need be only elevated TO or above the 100-year flood level. (Note: "permanent foundation" does not mean "masonry perimeter foundation".)