



## City of Columbia City Development Code Text Changes Only

Proposed new language is in **red** and proposed deletions are in ~~red-strikethrough~~. Text that is already in the existing code is shown in black.

### Chapter 7.40 (R-1) LOW DENSITY RESIDENTIAL ZONE

7.40.020 Permitted Uses. In the R-1 zone, only the following uses and their accessory uses are permitted outright.

**K. Attached or detached accessory dwelling units subject to Chapter 7.112;**

### Chapter 7.45 (R-2) MODERATE DENSITY RESIDENTIAL ZONE

7.45.020 Permitted Uses. In the R-2 zone, only the following uses and their accessory uses are permitted outright.

**I. Attached or detached accessory dwelling units subject to Chapter 7.112;**

### Chapter 7.112 ACCESSORY DWELLING UNITS

7.112.020 Applicability and Administration

**B. Accessory dwelling units are reviewed through the ministerial permit process. The Planning Director shall have the authority to approve or deny applications for accessory dwelling units based on the following standards. ~~Accessory dwellings shall be approved pursuant to Chapter 7.164, Limited Land Use Decision-Making.~~**

### Chapter 7.164 Limited Land Use Decisions

7.164.060 Approval Authority Responsibilities

A. The Planning Director may refer any application for review to the Planning Commission. The Planning Director shall have the authority to approve, deny or approve with conditions the following applications:

~~**3. Accessory Dwelling Units pursuant to Chapter 7.112. Actions and decisions on accessory dwelling units shall be regarded as ministerial.**~~

### 7.106.040 Rivers and Stream Corridors

**F. In addition to compliance with the requirements of Chapter 7.75, all new boat ramps or docks on the Columbia River shall require a floodplain development permit under Chapter 7.75 Flood Hazard Overlay. The applicant may also be required to apply for Site Development Review approval under Chapter 7.120, as applicable, for associated structures or other development that is above the base flood elevation. Modifications to existing ramps or docks shall also be reviewed pursuant to Chapter 7.120.060 and 7.120.070.**

### Chapter 7.75 (FH) Flood Hazard Overlay

**7.75.010 Findings of Fact, Purpose and Objectives (second and third paragraphs of the existing code)**



It is the purpose of this ordinance 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 protect human life and health; to minimize expenditure of public money and costly flood control projects; to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; to minimize prolonged business interruptions; 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; 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; ~~to ensure that potential buyers are notified that property is in an area of special flood hazard; and to ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.~~ notify potential buyers that the property is in a special flood hazard area; notify those who occupy special flood hazard areas that they assume responsibility for their actions; and participate in and maintain eligibility for flood insurance and disaster relief.

In order to accomplish its purposes, this ordinance includes methods and provisions for restricting or prohibiting ~~uses development~~ which ~~are is~~ 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; requiring that ~~uses development~~ vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters; controlling filling, grading, dredging, and other development which may increase flood damage; ~~and~~ preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.; ~~and coordinating and supplementing the provisions of the state building code with local land use and development ordinances.~~

#### **7.75.020 Definitions**

A. Appeal: A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

A. B. Area of Shallow Flooding: ~~Area designated AO or AH on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.~~ A designated Zone AO, AH, AR/AO or AR/AH (or VO) on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three 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.

C. 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. It is shown on the Flood Insurance Rate Map (FIRM) as Zone A, AO, AH, A1-30, AE, A99, AR. "Special flood hazard area" is synonymous in meaning and definition with the phrase "area of special flood hazard".



~~D. E. Base Flood Elevation (BFE): The water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation is depicted on the FIRM to the nearest foot and in the FIS to the nearest 0.1 foot. The elevation to which floodwater is anticipated to rise during the base flood.~~

G. 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 or drilling operations or storage of equipment or materials ~~located within the area of special flood hazard.~~

H. Flood or Flooding:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters; and/or

2. The unusual and rapid accumulation of runoff of surface waters from any source.

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

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

~~I. 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.~~

~~I. Flood Insurance Rate Map (FIRM): The official map of a community, on which the Federal Insurance Administration has delineated both the areas of special flood hazards and/or the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Flood Insurance Rate Map (DFIRM).~~

~~J. Flood Insurance Study (FIS): See "Flood Elevation Study". The official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles, floodway boundaries and water surface elevations of the base flood.~~

~~K. Floodway: The channel of a river or other watercourse and those portions of the floodplain adjoining the channel required to discharge and store the floodwater or flood flows associated with the regulatory flood. the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "Regulatory Floodway."~~



L. 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, and does not include long term storage or related manufacturing facilities.

M. Highest Adjacent Grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

O. Lowest Floor: The lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of 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 requirements of this ordinance.

P. Manufactured dwelling: 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 attached to the required utilities. The term "manufactured dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

Q. Manufactured dwelling park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured dwelling lots for rent or sale.

R. Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

S. New Construction: For floodplain management purposes, "new construction" means structures for which the start of construction commenced on or after, September 16, 2010, the adoption date of this Ordinance and includes any subsequent improvements to such structures.

V. Structure: A walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above ground, as well as a manufactured dwelling.

Y. Variance: A grant of relief by Columbia City from the terms of a flood plain management regulation.

Z. 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 this ordinance is presumed to be in violation until such time as that documentation is provided.

~~Water Dependent: A structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.~~

**7.75.065 Coordination with Building Codes State of Oregon Specialty Codes.** Pursuant to the requirement established in ORS 455 that Columbia City administer and enforce the ~~Building Codes State of Oregon Specialty Codes~~, the City of Columbia City does hereby acknowledge that the ~~Building Codes Oregon Specialty Codes~~ contain certain provisions that apply to the design and construction of buildings



and structures located in Areas of Special Flood Hazard. Therefore, this ordinance is intended to be administered and enforced in conjunction with the ~~Building Codes~~ Oregon Specialty Codes.

**7.75.070 Compliance.** All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.

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

**7.75.085 Severability.** This ordinance and the various parts thereof are hereby declared to be severable. If any section clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

#### **7.75.090 Interpretation**

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

- A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

#### **~~7.75.070~~ 7.75.100 Administration.**

~~A. A flood hazard development permit shall be obtained before construction or development begins within any area of special flood hazard. The permit shall be required for all structures including manufactured homes and for all development including fill and other activities.~~

~~B. The Planning Director shall review all development applications including fill permits, subdivision and partition applications to determine if the property is subject to this Chapter. Upon determination that the property is located within an area of special flood hazard, the applicant shall be required to satisfy the requirements of this Chapter.~~

~~C. The Planning Director shall review proposed development to assure that necessary permits have been received from governmental agencies from which approval is required by federal or state law, including but not limited to section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334; the Endangered Species Act of 1973, 16 U.S.C. 1531-1544; and State of Oregon Removal-Fill permits.~~

~~D. The Planning Director shall review all development permit applications to determine if the proposed development is located in the floodway, and if so, ensure that the encroachment standards of this ordinance are satisfied.~~



~~E. The Planning Director shall make interpretations where needed as to exact location of the boundaries of the areas of flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). Interpretations shall be subject to the requirements of CCDC 7.10.070 and may be appealed to the Planning Commission.~~

~~F. The Planning Director shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other authoritative source in order to administer the provisions of this ordinance when Base Flood Elevation data or floodway data are not available. Where none exists, the Planning Director shall require the applicant to determine base flood elevation.~~

~~G. The Planning Director shall issue Floodplain Development Permits when the provisions of this ordinance have been met, or disapprove Floodplain Development Permits in the event of noncompliance.~~

~~H. The Planning Director shall coordinate with the Building Official to assure that applications for building permits comply with the requirements of this ordinance.~~

**A. Duties and Responsibilities of the Floodplain Administrator.** The Planning Director is hereby appointed to administer, implement, and enforce this ordinance by granting or denying development permits in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions.

The duties of the floodplain administrator, or their designee, shall include, but not be limited to:

1. Review all development permits to determine that:

- a. The permit requirements of this ordinance have been satisfied;
- b. All other required local, state, and federal permits have been obtained and approved.
- c. Review all development permits to determine if the proposed development is located in a floodway. If located in the floodway assure that the floodway provisions of this ordinance in 7.75.120 (U) are met; and
- d. Review all development permits to determine if the proposed development is located in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available then ensure compliance with the provisions of 7.75.120 (R); and
- e. Provide to building officials the Base Flood Elevation (BFE) applicable to any building requiring a development permit.
- f. Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined in this chapter.
- g. Review all development permits to determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in 7.75.150.



h. Review all development permits to determine if the proposed development activity includes the placement of fill or excavation.

2. The Planning Director shall make interpretations where needed as to exact location of the boundaries of the areas of flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). Interpretations shall be subject to the requirements of CCDC 7.10.070 and may be appealed to the Planning Commission.

3. The Planning Director shall issue Floodplain Development Permits when the provisions of this ordinance have been met, or disapprove Floodplain Development Permits in the event of noncompliance.

~~I. The City Engineer shall obtain, verify and record the actual elevation in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no Base Flood Elevation is available, of the lowest floor level, including basement, of all new construction or substantially improved buildings and structures.~~

~~J. The City Engineer shall obtain, verify and record the actual elevation, in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no Base Flood Elevation is available, to which any new or substantially improved buildings or structures have been flood-proofed. When flood-proofing is utilized for a structure, the Planning Director shall require the applicant to provide certification of design criteria from a registered professional engineer or architect.~~

~~K. The City Administrator shall notify all applicants flood-proofing nonresidential buildings that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level).~~

~~L. The City Administrator shall maintain for public inspection the following records:~~

~~1. Where base flood elevation data is provided through the Flood Insurance Map or by the applicant, a record of the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.~~

~~2. For all new or substantially improved flood proofed structures, a record the actual elevation (in relation to the mean sea level) and the flood proofing certifications.~~

~~3. For all new or substantially improved nonresidential structures, the certification that the flood proofing methods and elevations meet the flood proofing criteria in Section 7.75.070 (H).~~

~~M. The City Administrator shall maintain a permanent record of approved variances to the requirements of the flood hazard overlay and shall report such variances to the Federal Emergency Management Agency upon request.~~

**B. Information to be Obtained and Maintained.** The following information shall be obtained and maintained and shall be made available for public inspection as needed:



1. The Floodplain Administrator, or his or her designee shall:

- a. Obtain, record, and maintain the actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with this ordinance.
- b. Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of 7.75.120 (U) and 7.75.100(A)(1)(b) are adhered to.
- c. Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain documentation, prepared and sealed by a professional licensed surveyor or engineer, certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).
- d. Where base flood elevation data are utilized, obtain As-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection.
- e. Maintain all Elevation Certificates (EC) submitted to the City of Columbia City.
- f. Obtain, record, and maintain the elevation (in relation to mean sea level) to which the structure and all attendant utilities were floodproofed for all new or substantially improved floodproofed structures where allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtained in accordance with 7.75.120 (R).
- g. Maintain all floodproofing certificates required under this ordinance.
- h. Record and maintain all variance actions, including justification for their issuance.
- i. Obtain and maintain all hydrologic and hydraulic analyses performed as required under 7.75.120 (U).
- j. Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under 7.75.100 (D).
- k. Maintain for public inspection all records pertaining to the provisions of this ordinance.

2. The City Administrator shall notify all applicants flood-proofing nonresidential buildings that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building constructed to the base flood level will be rated as one foot below that level).

**C. Community Boundary Alterations.** The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation



or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.

**1. Watercourse Alterations.** The Floodplain Administrator shall notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification shall be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:

- a. A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or
- b. Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

The applicant shall be required to submit a Conditional Letter of Map Revision (CLOMR) when required under 7.75.100 (2). Ensure compliance with all applicable requirements in sections 7.75.100 (2) and 7.75.150.

**2. Requirement to Submit New Technical Data.** A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Section 44 of the Code of Federal Regulations (CFR), Sub-Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process.

The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:

- a. Proposed floodway encroachments that increase the base flood elevation; and
- b. Proposed development which increases the base flood elevation by more than one foot in areas where FEMA has provided base flood elevations but no floodway.

An applicant shall Notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

**D. Substantial Improvement and Substantial Damage Assessments and Determinations.** Conduct Substantial Improvement (SI) (as defined in 7.75.020) reviews for all structural development proposal



applications and maintain a record of SI calculations within permit files in accordance with 7.75.100.B. Conduct Substantial Damage (SD) (as defined in 7.75.020) assessments when structures are damaged due to a natural hazard event or other causes. Make SD determinations whenever structures within the special flood hazard area (as established in 7.75.030) are damaged to the extent that the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

#### **7.75.110 Floodplain Development Permit Required**

A floodplain development permit shall be obtained before construction or development begins within any area horizontally within the special flood hazard area established in 7.75.030. The floodplain development permit shall be required for all structures, including manufactured dwellings, and for all other development, as defined in 7.75.020 including fill and other development activities.

~~7.75.089~~ **7.75.120 Approval Standards.** Approval of applications for development in all special flood hazard areas ~~the Flood Plain Overlay Zone~~ shall be based upon the following findings.

- A. All proposed new development and subdivisions shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding.
- B. Base flood elevation data shall be generated and/or provided for subdivision proposals and all other proposed development, including manufactured home parks and subdivisions.
- C. New development and subdivisions shall have public utilities and facilities such as sewer, gas, electric and water systems located and constructed to minimize flood damage.
- D. ~~Subdivisions shall have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.~~

All new subdivision proposals and other proposed new developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, shall include within such proposals, Base Flood Elevation data. All new subdivision proposals and other proposed new developments (including proposals for manufactured home parks and subdivisions) shall:

1. Be consistent with the need to minimize flood damage.
2. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
3. Have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.

~~E. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.~~ All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from



hydrodynamic and hydrostatic loads, including the effects of buoyancy. All manufactured dwellings shall be anchored per 7.75.120 (O).

~~F. All manufactured homes must likewise be anchored to prevent floatation, collapse, or lateral movement and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over the top or frame ties to ground anchors.~~

~~G. F.~~ All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

~~H. G.~~ All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

~~I. H. Electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities shall be elevated one (1) foot above the 100-year flood plain so as to prevent water from entering or accumulating within components during conditions of flooding.~~

Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall be elevated at or above the base flood level by one (1) foot or shall be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall:

A. If replaced as part of a substantial improvement shall meet all the requirements of this section.

I. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood. Above-ground tanks shall be installed at or above the base flood level by one (1) foot or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

J. All new and replacement water supply systems shall be designed to prohibit infiltration of flood waters into the system;

K. New and replacement sanitary sewage systems shall be designed to prohibit infiltration of flood waters into the systems and discharge from the systems into flood waters. No on-site disposal systems shall be allowed.

L. In areas where a regulatory floodway has not been designated, 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 at any point within the community.

M. In special flood hazard areas with Base Flood Elevations the following additional standards shall apply to residential construction:



1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated a minimum of one (1) foot above the base flood elevation.

2. Enclosed areas below the lowest floor shall comply with the flood opening requirements in 7.75.120(W).

~~M. N. Where base flood elevation data has been provided, the following shall apply to non residential construction:~~ In special flood hazard areas with Base Flood Elevations the following additional standards shall apply to non-residential construction:

~~1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated at or above the level of the base flood elevation; or together with attendant utility and sanitary facilities, shall be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;~~

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall:

a. Have the lowest floor, including basement elevated at or above the Base Flood Elevation (BFE); or, together with attendant utility and sanitary facilities:

b. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

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

d. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Floodplain Administrator as set forth in 7.75.100(B).

~~2. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Non-residential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in 7.75.120(W).~~

3. ~~Nonresidential structures that are elevated, not flood proofed, space below the lowest floor must shall be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Applicants~~



floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one (1) foot below.

~~N. O. Where base flood elevation data has been provided, manufactured homes shall be elevated on a permanent foundation such that the finished floor of the manufactured home is elevated a minimum of 18 inches (46 cm) above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. the following standards shall apply to manufactured dwellings:~~

1. New or substantially improved manufactured dwellings supported on solid foundation walls shall be constructed with flood openings that comply with 7.75.120(W);
2. The bottom of the longitudinal chassis frame beam shall be at least 18 inches above Base Flood Elevation;
3. New or substantially improved manufactured dwellings shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques), and;
4. Electrical crossover connections shall be a minimum of twelve (12) inches above Base Flood Elevation (BFE).

~~O. P. Within the Flood Hazard Overlay, recreational vehicles are required to be fully licensed and ready for highway use, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions, or be located on the site no more than 180 days. be on the site for fewer than 180 consecutive days, be fully licensed and ready for highway use, 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; or meet the requirements of 7.75.120 (O) including the anchoring and elevation requirements for manufactured dwellings. Occupied recreational vehicles shall comply with Chapter 7.94.050.~~

~~Q. Relief from elevation or floodproofing requirements for Residential and Non-Residential structures in Riverine (Non-Coastal) flood zones may be granted for appurtenant (accessory) structures that meet the following requirements:~~

1. Appurtenant structures located partially or entirely within the floodway must comply with requirements for development within a floodway found in 7.75.120 (U).
2. Appurtenant structures must only be used for parking, access, and/or storage and shall not be used for human habitation;
3. In compliance with State of Oregon Specialty Codes, Appurtenant structures on properties that are zoned residential are limited to one-story structures less than 200 square feet, or 400



square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines. Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet.

4. The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials;
5. The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
6. The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in 7.75.120 (W);
7. Appurtenant structures shall be located and constructed to have low damage potential;
8. Appurtenant structures shall not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed in compliance with 7.75.120(I).
9. Appurtenant structures shall be constructed with electrical, mechanical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

~~R.-P. In all areas where base flood elevation data is not available, either through the Flood Insurance Study, FIRM, or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. All structures shall be elevated at least two feet above grade in these areas. When Base Flood Elevation data has not been provided in accordance with 7.75.030, the local floodplain administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer the requirements in this chapter. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of 7.75.120 (D).~~

Base Flood Elevations shall be determined for development proposals that are 5 acres or more in size or are 50 lots or more, whichever is lesser in any A zone that does not have an established base flood elevation. Development proposals located within a riverine unnumbered A Zone shall be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

S. When a structure is located in multiple or partial flood zones, the following standards shall apply in coordination with the State of Oregon Specialty Codes:



1. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.
2. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

**Q. T.** Buildings and structures, including manufactured dwellings, within the scope of the Building Codes, including repair of Substantial Damage and Substantial Improvement of such existing buildings and structures, shall be designed and constructed in accordance with the flood-resistant construction provisions of these codes, including but not limited to Section R324 of the Residential Specialty Code and Section 1612 of the Structural Specialty Code.

**R. U.** ~~Within areas of designated as floodways on the FIRM maps:~~ Located within the special flood hazard areas established in 7.75.030 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of the floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

~~1. Encroachments, including fill, new construction, substantial improvements, and other development are prohibited unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.~~

~~2. Applicants shall obtain a Conditional Letter of Map Revision (CLOMR) from FEMA before an encroachment, including fill, new construction, substantial improvement, and other development, into the floodway is permitted that will cause any increase in the base flood elevation.~~

1. Prohibit encroachments including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment shall not result in any increase in flood levels within the community during the occurrence of the base flood discharge; or

2. A community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that a Conditional Letter of Map Revision (CLOMR) is applied for and approved by the Federal Insurance Administrator, and the requirements for such revision as established under Volume 44 of the Code of Federal Regulations, section 65.12 are fulfilled.

- a. If the requirements of A above are satisfied, all new construction, substantial improvements, and other development shall comply with all other applicable flood hazard reduction provisions contained in this chapter.



**S: V.** An applicant who obtains an approved CLOMR from FEMA, or whose development modifies floodplain boundaries or base flood elevations shall obtain from FEMA a Letter of Map Revision (LOMR) reflecting the as-built changes to the FIRM.

~~T. In areas where a regulatory floodway has not been designated, 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 at any point within the community.~~

**W.** All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements. Enclosed areas below the Base Flood Elevation, including crawl spaces shall:

1. Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;
2. Be used solely for parking, storage, or building access;
3. Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:
  - a. A minimum of two openings,
  - b. The total net area of non-engineered openings shall be not less than one (1) square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls,
  - c. The bottom of all openings shall be no higher than one (1) foot above grade.
  - d. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.
  - e. All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.
4. There is an additional charge added to the basic flood insurance policy premium for a below-grade crawlspace. Below-grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas:
  - a. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Section B below.



Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

b. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

c. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

d. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.

e. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four (4) feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.

f. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.

**X. Attached garages may be constructed with the garage floor slab below the Base Flood Elevation (BFE) in riverine flood zones, if the following requirements are met:**

- 1. If located within a floodway the proposed garage must comply with the requirements of 7.75.120 (U).**
- 2. The floors are at or above grade on not less than one side;**
- 3. The garage is used solely for parking, building access, and/or storage;**



4. The garage is constructed with flood openings in compliance with 7.75.120 (W) to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.
5. The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;
6. The garage is constructed in compliance with the standards found in this chapter; and
7. The garage is constructed with electrical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

Y. Detached garages must be constructed in compliance with the standards for appurtenant structures in or nonresidential structures contained in this chapter depending on the square footage of the garage.

Z. Shallow flooding areas appear on FIRMs as AO zones with depth designations or as AH zones with Base Flood Elevations. For AO zones the base flood depths range from one (1) to three (3) feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow.

For both AO and AH zones, adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

AA. Development within AH Zones must comply with the standards in this chapter.

BB. In AO zones, the following provisions apply:

1. New construction and substantial improvement of residential structures and manufactured dwellings within AO zones shall have the lowest floor, including basement, elevated above the highest grade adjacent to the building, at minimum of 18 inches above the Base Flood Elevation. For manufactured dwellings the lowest floor is considered to be the bottom of the longitudinal chassis frame beam.
2. New construction and substantial improvements of non-nonresidential structures within AO zones shall either:
  - a. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, at minimum to one (1) foot or above the Base Flood Elevation or
  - b. Together with attendant utility and sanitary facilities, be completely floodproofed to a minimum of one (1) foot above the Base Flood Elevation, so that any space below that level 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 the effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as stated in 7.75.120 (N)(1)(d).



3. Recreational vehicles placed on sites within AO Zones on the community's Flood Insurance Rate Maps (FIRM) shall either:

- a. Be on the site for fewer than 180 consecutive days, and
- b. Be fully licensed and ready for highway use, 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; or
- c. Meet the requirements of this chapter, including the elevation and anchoring requirements for manufactured dwellings as well as comply with Chapter 7.94.050.

4. In AO zones, new and substantially improved appurtenant structures must comply with the standards in this section.

5. In AO zones, enclosed areas beneath elevated structures shall comply with the requirements in this section.

#### **~~7.75.110~~ 7.75.150 Watercourse Alterations.**

A. A water course is considered altered when any change occurs within its banks, including installation of new culverts and bridges, or size modifications to existing culverts and bridges as shown on effective FIRM.

B. Adjacent communities, the U.S. Army Corps of Engineers, Oregon Department of State Lands, and Oregon Department of Land Conservation and Development must be notified prior to any alteration or relocation of a water source. Evidence of notification must be submitted to the Planning Director and to the Federal Emergency Management Agency.

C. The applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the water course so that the flood carrying capacity will not be diminished.

D. All watercourse alterations must comply with 7.75.100 (C)(1) and 7.75.100 (2)

#### **~~7.75.120 Below grade crawl spaces.~~**

~~A. There is an additional charge added to the basic flood insurance policy premium for a below-grade crawlspace.~~

~~B. Below grade crawlspaces are allowed subject to the following standards as found in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in Special Flood Hazard Areas:~~

- ~~1. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Section B below. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered~~



architect or professional engineer. Other types of foundations are recommended for these areas.

2. The crawlspace is an enclosed area below the base flood elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood-vent opening can be no more than one (1) foot above the lowest adjacent exterior grade.

3. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

4. Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.

5. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.

6. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four (4) feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas. vii. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means.

7. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.

#### **7.75.170 Variances**

A. The issuance of a variance is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

B. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of 7.75.170 (B)(2) and



(B)(3)(d), and (C). As the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.

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 not be issued within any floodway if any increase in flood levels during the base flood discharge would result.
3. Variances shall only be issued upon:
  - a. A showing of good and sufficient cause;
  - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
  - c. 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 laws or ordinances.
  - d. 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 the criteria of 7.75.170 (1) – (3) are met, and 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.

C. Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance and that such construction below the base flood elevation increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance shall be maintained in accordance with 7.75.100.