

EXHIBIT A—SeaTac Municipal Code Chapter 12.40

12.40.010 Statement of 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:

- A. To protect human life and health;
- B. To minimize expenditure of public money and costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. 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;
- F. 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;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

12.40.020 Definitions.

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

Alteration of watercourse:

Any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

A. “Area of special flood hazard:”

~~means~~ †The land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. ~~Designation on maps always includes the letters A or V.~~

It is shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AH, A1-30, AE, A99, AR (V, VO, V1-30, VE). “Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard”.

ASCE 24:

The most recently published version of ASCE 24, Flood Resistant Design and Construction, published by the American Society of Civil Engineers.

B. “Base Flood:

”means†The flood having a one percent chance of being ~~equalled~~equalled or exceeded in any given year. Also referred to as the “100-year flood.” Designation on maps always includes the letters A or V.

Base Flood Elevation (BFE):

The elevation to which floodwater is anticipated to rise during the base flood.

Basement:

Any area of the building having its floor sub-grade (below ground level) on all sides.

Critical Facility:

A facility for which even a slight chance of flooding might be too great. Critical facilities include (but are not limited to) schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.

C. “Development:”

means aAny 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 located within the area of special flood hazard.

D. “Flood” or “flooding”: means

1. ———aA general and temporary condition of partial or complete inundation of normally dry land areas from:

- a1. The overflow of inland or tidal waters; and/or
- b2. The unusual and rapid accumulation of runoff of surface waters from any source.
- c. Mudslides (i.e., mudflows) which are proximately caused by flooding as defined

in paragraph (1)(b) 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.

2. 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 (1)(a) of this definition.

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. Also known as a Flood Insurance Study (FIS).

E. “Flood Insurance Rate Map (FIRM):

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

F. “Flood Insurance Study” means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary Floodway Map, and the water surface elevation of the base flood.

Floodplain or flood-prone area:

Any land area susceptible to being inundated by water from any source. See "Flood or flooding."

Floodplain administrator:

The [City of SeaTac](#) official designated to administer and enforce the floodplain management regulations.

Flood proofing:

Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

G. “Floodway or Regulatory Floodway”:

~~means†~~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.~~ a designated height.

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.

Highest adjacent grade:

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

Historic structure:

Any structure that is:

- 1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- 2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- 3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of 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.

H. “Lowest floor”:

~~means†~~The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or 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 Section 12.40.090A of this code.

I. “Manufactured home:

~~”means a~~A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the term “manufactured home” also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance, purposes the term “manufactured home” does not include park trailers, travel trailers, and other similar vehicles.

Mean Sea Level:

For purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction:

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

~~J. “New construction” means structures for which the “start of construction” commenced on or after the effective date of this chapter.~~

Reasonably Safe from Flooding:

Development that is designed and built to be safe from flooding based on consideration of current flood elevation studies, historical data, high water marks and other reliable data known to the community. In unnumbered A zones where flood elevation information is not available and cannot be obtained by practicable means, reasonably safe from flooding means that the lowest floor is at least two feet above the Highest Adjacent Grade.

Recreational Vehicle:

A vehicle ~~that is:~~

1. Built on a single chassis; ~~and~~
2. 400 square feet or less when measured at the largest horizontal projection; ~~and~~
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.

K. “Start of construction:

I includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

L. "Structure:

"means a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

M. "Substantial improvement:

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

- 1) Any project for improvement of a structure to correct previously identified existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that 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."

~~Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:~~

- ~~1. Before the improvement or repair is started; or~~
- ~~2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.~~

Variance:

A grant of relief by a community from the terms of a floodplain management regulation.

12.40.030 Lands to which this chapter applies.

This ~~C~~chapter shall apply to all areas of special flood hazards within ~~the jurisdiction of~~ boundaries of the City of SeaTac.

12.40.040 Basis for establishing the areas of special flood hazard.

The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled “The Flood Insurance Study (FIS) for King County, Washington and Incorporated Areas” dated August 19, 2020, and any revisions thereto, with accompanying Flood Insurance Rate Maps (FIRM’s), and any revisions thereto, are hereby adopted by reference. The FIS and the FIRM are on file at SeaTac City Hall with the City of SeaTac Department of Public Works. The best available information for flood hazard area identification as outlined in Section 12.40.070 (B) shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under Section 12.40.070 (B).

~~The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for the City of SeaTac,” dated February 26, 1993, and as it may be amended or updated thereafter, with accompanying Flood Insurance Maps is adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at SeaTac City Hall, SeaTac, State of Washington.~~

12.40.050 Development permit required.

A. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 12.40.040 of this ~~code~~Chapter. The permit shall be for all structures, including manufactured homes, as ~~set forth in the “Definitions” in Section 12.40.020 of this code~~, and for all development, including fill and other activities, ~~as defined in Section 12.40.020 of this Chapter.~~also as set forth in the “Definitions”.

B. Application for a development permit shall be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

1. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures recorded on a current elevation certificate with Section B completed by the Floodplain Administrator.
2. Elevation in relation to mean sea level to which any structure has been flood proofed;
3. Where a structure is to be flood proofed, certification by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet flood proofing criteria in SMC 12.40.090(B);

4. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development;
5. Where a structure is proposed in a V, V1-30, or VE zone, a V-zone design certificate;
6. Where development is proposed in a floodway, an engineering analysis indicating no rise of the Base Flood Elevation; and
7. Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

12.40.060 Designation of the Administrator.

The City Manager or designee is appointed, as Administrator, to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

12.40.070 Duties and responsibilities of the Administrator.

Duties of the Administrator shall include, but not be limited to:

A. Permit Review.

1. Review all development permits to determine that the permit requirements of this chapter have been satisfied.
2. Review all development permits to determine that all necessary permits have been obtained from those federal, State, or local government agencies from which prior approval is required.
3. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 12.40.100(A) are met.

4. Determine that the site is reasonably safe from flooding;

5. Notify FEMA when annexations occur in the Special Flood Hazard Area.

B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 12.40.040 of this ~~code~~Chapter, ~~Basis for Establishing the Areas of Special Flood Hazard~~, obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, State or other source, in order to administer Sections 12.40.090, ~~Specific Standards~~, and 12.40.100, ~~Floodways of this Chapter~~.

C. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided through the Flood ~~Insurance-Elevation~~ Study or as required ~~as~~ in subsection B of this section, obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

2. Obtain and maintain documentation of the elevation of the bottom of the lowest horizontal structural member in V or VE zones.

~~23.~~ For all new or substantially improved flood proof nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in SMC 12.40.070 (B):

a. ~~Verify and record the actual elevation (in relation to mean sea level)~~ Obtain and maintain a record of the elevation (in relation to mean sea level) to which the structure was flood proofed; and

b. Maintain the flood proofing certifications ~~by this chapter~~ in SMC 12.40.050(B)(3).

4. Certification required by SMC 12.40.100(A).

5. Records of all variance actions, including justification for their issuance.

6. Improvement and damage calculations.

7. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the appropriate department of the State of Washington prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 60.6 of the rules and regulations of the National Flood Insurance Program (44 CFR 59-76).

G. Changes to Special Flood Hazard Area

1. If a project will alter the Base Flood Elevation (BFE) or boundaries of the Special Flood Hazard Area, then the project proponent shall provide the community with engineering documentation and analysis regarding the proposed change. If the change to the BFE or

boundaries of the **Special Flood Hazard Area** would normally require a Letter of Map Change, then the project proponent shall initiate, and receive approval of, a Conditional Letter of Map Revision (CLOMR) prior to approval of the development permit. The project shall be constructed in a manner consistent with the approved CLOMR.

2. If a CLOMR application is made, then the project proponent shall also supply the full CLOMR documentation package to the Floodplain Administrator to be attached to the floodplain development permit, including all required property owner notifications.

12.40.080 General standards for flood hazard reduction.

In all areas of special flood hazards, the following standards are required:

A. Anchoring.

1. 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.
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. 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).

B. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
3. Electrical, 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 components during conditions of flooding.

C. 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; ~~and~~

4. Water wells shall be located on high ground that is not in the floodway.

D. Subdivision Proposals and Development.

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 which contain at least 50 lots or 5 acres (whichever is less). Where subdivision proposals and other proposed developments contain greater than 50 lots or 5 acres (whichever is the lesser) base flood elevation data shall be included as part of the application.~~

E. Review of Building Permits. Where elevation data is not available either through the Flood ~~Insurance Elevation~~ Study or from another authoritative source (Section 12.40.070(B)), 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. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

12.40.090 Specific standards for flood hazard reduction.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Sections ~~12.40.040, Basis for Establishing the Areas of Special Flood Hazard or Section 12.40.070(B), Use of Other Base Flood Data,~~ the following provisions are required:

A. Residential Construction.

~~1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.~~

~~2. 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 entry and exit of floodwaters. Design 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.~~

1. In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained, new construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the BFE. Mechanical equipment and utilities shall be waterproof or elevated least one foot above the BFE.
2. New construction and substantial improvement of any residential structure in an AO zone shall meet the requirements of Appendix A.
3. New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.
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 the entry and exit of floodwaters. Designs must meet or exceed the following minimum criteria:
 - a. Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.
 - d. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

Alternatively, a registered engineer or architect may design and certify engineered openings.

B. Nonresidential Construction.

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall ~~either have the lowest floor, including basement, elevated to the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall~~ meet the requirements of subsection 1 or 2, below.

- ~~1. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;~~
- ~~2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;~~
- ~~3. 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. Such certifications shall be provided to the official as set forth in Section 12.40.070C(2) of this code;~~
- ~~4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in Section 12.40.090A(2) of this code;~~
- ~~5. Applicants floodproofing nonresidential buildings shall be notified 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).~~

1. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

a. In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained:

New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the lowest floor, including basement, elevated one foot or more above the BFE, or elevated as required by ASCE 24, whichever is greater. Mechanical equipment and utilities shall be waterproofed or elevated least one foot above the BFE, or as required by ASCE 24, whichever is greater.

b. If located in an AO zone, the structure shall meet the requirements in Appendix A.

c. If located in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained, the structure shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.

d. If located in a V, V1-30, or VE zone, the structure shall meet the requirements in Appendix B.

e. 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 the entry and exit of floodwaters. 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:

i. Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.

- ii. The bottom of all openings shall be no higher than one foot above grade.
- iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.
- iv. A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

Alternatively, a registered engineer or architect may design and certify engineered openings.

2. If the requirements of subsection 1 are not met, then new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

- a. Be dry flood proofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water or dry flood proofed to the elevation required by ASCE 24, whichever is greater;
- 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 practice 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 official as set forth in [SMC 12.40.070 \(C\)\(2\)](#);
- d. Nonresidential structures that are elevated, not flood proofed, must meet the same standards for space below the lowest floor as described in [SMC 12.40.090 \(A\)\(2\)](#);

3. Applicants flood proofing nonresidential 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).

C. Manufactured Homes. All manufactured homes to be placed or substantially improved within appropriate zones of the City shall be elevated on a permanent foundation such that the lowest floor of the manufactured homes is at or above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the provisions of Section 12.40.080A(2) of this ~~code~~Chapter.

D. Recreational Vehicles. Recreational vehicles placed on sites are required to either:

- 1) Be on the site for fewer than 180 days, or
- 2) Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

3) Meet the requirements of SMC 12.40.090 (C).

E. Enclosed Area Below the Lowest Floor. If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

F. AE and A1-30 Zones with Base Flood Elevations but No Floodways. In areas with BFE's (when 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.

12.40.100 Floodways.

Located within areas of special flood hazard established in Section 12.40.040 of this code are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer ~~or architect~~ is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for (1) repairs, reconstruction, or improvements to a structure which do not increase the ground floor areas; and (2) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either, (a) before the repair, reconstruction, or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. Work done on structures to comply with existing health, sanitary, or safety codes or to structures identified as historic places shall not be included in the 50 percent.

C. Substantially Damaged Residences in Floodway

1. For all substantially damaged residential structures, other than farmhouses, located in a designated floodway, the Floodplain Administrator may make a written request that the Department of Ecology assess the risk of harm to life and property posed by the specific conditions of the floodway. Based on analysis of depth, velocity, flood-related erosion, channel migration, debris load potential, and flood warning capability, the Department of Ecology may exercise best professional judgment in recommending to the local permitting authority repair, replacement, or relocation of a substantially damaged structure consistent with WAC 173-158-076. The property owner shall be responsible for submitting to the

local government and the Department of Ecology any information necessary to complete the assessment. Without a favorable recommendation from the department for the repair or replacement of a substantially damaged residential structure located in the regulatory floodway, no repair or replacement is allowed per WAC 173-158-070(1).

2. Before the repair, replacement, or reconstruction is started, all requirements of the NFIP, the state requirements adopted pursuant to 86.16 RCW, and all applicable local regulations must be satisfied. In addition, the following conditions must be met:
 - a. There is no potential safe building location for the replacement residential structure on the same property outside the regulatory floodway.
 - b. A replacement residential structure is a residential structure built as a substitute for a legally existing residential structure of equivalent use and size.
 - c. Repairs, reconstruction, or replacement of a residential structure shall not increase the total square footage of floodway encroachment.
 - d. The elevation of the lowest floor of the substantially damaged or replacement residential structure is a minimum of one foot higher than the BFE.
 - e. New and replacement water supply systems are designed to eliminate or minimize infiltration of floodwater into the system.
 - f. New and replacement sanitary sewerage systems are designed and located to eliminate or minimize infiltration of floodwater into the system and discharge from the system into the floodwaters.
 - g. All other utilities and connections to public utilities are designed, constructed, and located to eliminate or minimize flood damage.

C. If subsection A of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Sections 12.40.080, 12.40.090, and 12.40.100 of this ~~code~~Chapter.

12.40.110 Variances

A. The variance criteria set forth in this section is based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this Chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

It is the duty of the City of SeaTac to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below the Base Flood Elevation are so serious that variances from the flood elevation or from other requirements in the

flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

C. Requirements for Variances.

1. Variances shall only be issued:

- a. Upon a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;
- b. For the repair, rehabilitation, or restoration 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;
- c. Upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;
- d. Upon a showing of good and sufficient cause;
- e. Upon a determination that failure to grant the variance would result in exceptional hardship to the applicant;
- f. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in [Section 12.40.020](#) of this [Chapter](#) in the definition of "Functionally Dependent Use."

2. Variances shall not be issued within any floodway if any increase in flood levels during the base flood discharge would result.

3. 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 BFE, provided the procedures of [SMC 12.40.040](#) and [12.40.090](#) have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.

D. Variance Criteria.

1. In considering variance applications, the [City](#) shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
 - a. The danger that materials may be swept onto other lands to the injury of others;
 - b. The danger to life and property due to flooding or erosion damage;

- c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- d. The importance of the services provided by the proposed facility to the community;
- e. The necessity to the facility of a waterfront location, where applicable;
- f. The availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage;
- g. The compatibility of the proposed use with existing and anticipated development;
- h. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- i. The safety of access to the property in time of flood for ordinary and emergency vehicles;
- j. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site; and,
- k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical, water system, and streets and bridges.

E. Additional Requirements for the Issuance of a Variance.

1. Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

- a. The issuance of a variance to construct a structure below the BFE will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and
- b. Such construction below the BFE increases risks to life and property.

2. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance.

3. The Floodplain Administrator shall condition the variance as needed to ensure that the requirements and criteria of this chapter are met.

4. Variances as interpreted in the NFIP are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from flood elevations should be quite rare.

12.40.120 Penalties For Noncompliance

No structure or land shall hereafter be constructed, located, extended, converted, or altered

without full compliance with the terms of this Chapter and other applicable regulations. Violations of the provisions of this Chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions), shall be addressed in accordance with SMC 1.15.045 through 1.15.075 by way of correction agreement and/or notice of infraction. Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to abate any violation.

APPENDIX A
STANDARDS FOR SHALLOW FLOODING
AREAS (AO ZONES)
44 CFR 60.3(c)7, 8 and 11

Shallow flooding areas appear on FIRMs as AO zones with depth designations. The base flood depths in these zones range from one to three feet (1' to 3') 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. In addition to other provisions in this code, the following additional provisions also apply in AO zones:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement and mechanical equipment) elevated above the highest adjacent grade to the structure, one foot (1') or more above* the depth number specified in feet on the community's FIRM (at least two feet (2') above the highest adjacent grade to the structure if no depth number is specified).

2. New construction and substantial improvements of nonresidential structures within AO zones shall either:

a. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above* the depth number specified on the FIRM (at least two feet if no depth number is specified); or

b. Together with attendant utility and sanitary facilities, be completely flood proofed to or above that level 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 effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer, or architect as in section 5.2-2(3).

3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

4. Recreational vehicles placed on sites within AO zones on the community's FIRM either:

a) Be on the site for fewer than 180 consecutive days, or

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 subsections (1) and (3) above and the anchoring requirements for manufactured homes (Section 5.1-1(2)).

APPENDIX B
STANDARDS FOR COASTAL HIGH HAZARD AREAS (V ZONES)
44 CFR 60.3(e)(2-8)

Located within areas of special flood hazard established in Section 3.2 are Coastal High Hazard Areas, designated as zones V1-30, VE, and/or V. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions in this ordinance, the following provisions shall also apply:

1. All new construction and substantial improvements in zones V1-30 and VE (V if base flood elevation data is available) on the community's FIRM shall be elevated on pilings and columns so that:

a) Elevation:

i. Residential Buildings

The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level.

ii. Non-Residential Buildings

The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level or meets the elevation requirements of ASCE 24, whichever is higher; and

b) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of subsections (1)(a)(i) and (2)(a)(ii).

2. Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in zones V1-30, VE, and V on the community's FIRM and whether or not such structures contain a basement. The (Floodplain Administrator) shall maintain a record of all such information.

3. All new construction within zones V1-30, VE, and V on the community's FIRM shall be located landward of the reach of mean high tide.

4. Provide that all new construction and substantial improvements within zones V1-30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this Section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect certifies that the design proposed meets the following conditions:

- a) Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
- b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Maximum wind and water loading values to be used in this determination shall each have a one percent (1%) chance of being equaled or exceeded in any given year (100-year mean recurrence interval). If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

5. Prohibit the use of fill for structural support of buildings within zones V1-30, VE, and V on the community's FIRM.

6. Prohibit man-made alteration of sand dunes within zones V1-30, VE, and V on the community's FIRM which would increase potential flood damage.

7. All manufactured homes to be placed or substantially improved within zones V1-30, V, and VE on the community's FIRM on sites:

- a) Outside of a manufactured home park or subdivision,
- b) In a new manufactured home park or subdivision,
- c) In an expansion to an existing manufactured home park or subdivision, or
- d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood; shall meet the standards of paragraphs (1) through (6) of this Section and manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within zones V1-30, V, and VE on the FIRM shall meet the requirements of Section 5.2-3.

8. Recreational vehicles placed on sites within V or VE zones on the community's FIRM shall either:

- a) Be on the site for fewer than 180 consecutive days, or
- b) Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
- c) Meet the requirements of subsections (1) and (3) above and the anchoring requirements for manufactured homes (Section 5.1-1(2)).