

**BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF ISLAND COUNTY, WASHINGTON**

IN THE MATTER OF AMENDING THE)	
FLOOD DAMAGE PREVENTION)	ORDINANCE C-98-05
ORDINANCE, CHAPTER 14.02A ICC,)	PLG-014-05
IN CONJUNCTION WITH THE REVIEW)	
AND UPDATE OF THE CRITICAL)	
AREA REGULATIONS AS IT)	
PERTAINS TO FREQUENTLY)	
FLOODED AREAS)	

WHEREAS, pursuant to RCW 36.70A.130 Island County is required to periodically update its critical area regulations; and

WHEREAS, Chapter 36.70A RCW defines critical areas as aquifer recharge areas, frequently flooded areas, geologically hazardous areas, wetlands, and fish and wildlife habitat conservation areas; and

WHEREAS, Resolution C-15-05 was adopted by the Board of Island County Commissioners on February 28, 2005 establishing a schedule satisfying the requirements of RCW 36.70A.130; and

WHEREAS, Exhibit A of Resolution C-15-05 places frequently flooded areas under the timelines established for "Track 2"; and

WHEREAS, the proposed amendments were transmitted to state agencies for their review and 60 day comment period on May 31, 2005; and

WHEREAS, the Planning Commission conducted public hearings on June 28, 2005 on Camano Island and on July 12, 2005 in Coupeville; and

WHEREAS, a threshold determination of non-significance was issued on May 6, 2005 with a public comment period terminating on May 25, 2005 and an appeal period terminating on June 8, 2005; and

WHEREAS, the Planning Commission held a public meeting on July 26, 2005 for the purposes of deliberating on the proposed amendments and adopted a recommendation for amending the Flood Damage Prevention Ordinance, Chapter 14.02A ICC; and

WHEREAS, pursuant to RCW 36.70A.172 best available science was acquired, developed, reviewed, and incorporated into the amendments adopted under this ordinance; and

WHEREAS, pursuant to WAC 197-11-330 and WAC 197-11-340, the County SEPA official has determined that the proposed changes to the Flood Damage Prevention Ordinance, Chapter 14.02A ICC pertaining to frequently flooded areas is not likely to have a significant adverse environmental impact that was not considered in the environmental documents prepared for the Comprehensive Plan and Development Regulations; **NOW, THEREFORE**,

BE IT ORDAINED that amendments to the Flood Damage Prevention Ordinance, Chapter 14.02A ICC, attached hereto as Exhibit A, and the Planning Commission's findings of fact, attached hereto as Exhibit B, are adopted. Material stricken through is deleted and material underlined is added; and

BE IT FURTHER ORDAINED that adoption of this ordinance satisfies the requirements of RCW 36.70A.130 as it pertains to frequently flooded areas and RCW 36.70A.172 which requires that critical area regulations be based on the best available science.

APPROVED AND ADOPTED this 22nd day of August, 2005.

BOARD OF COUNTY COMMISSIONERS OF
ISLAND COUNTY, WASHINGTON

Mike Shelton, Chairman

Wm. L. McDowell, Member

William J. Byrd, Member

ATTEST:

Elaine Marlow
Clerk of the Board

APPROVED AS TO FORM:

DAVID L. JAMIESON, JR.
Deputy Prosecuting Attorney
& Island County Code Reviser

Exhibit A

14.02A.010 Statutory Authorization, Findings of Fact, Purpose and Objectives

- A. **Statutory Authorization.** The Legislature of the State of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry. Therefore, the County of Island, Washington does ordain as follows:
- B. **Findings of Fact.**
1. The flood hazard areas of Island County are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
 2. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards, which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood-proofed, elevated or otherwise protected from flood damage also contribute to the flood loss.
- C. **Statement of Purpose.** 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:
1. To protect human life and health;
 2. To minimize expenditure of public money and costly flood control projects;
 3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 4. To minimize prolonged business interruptions;
 5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
 6. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
 7. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
 8. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.
- D. **Methods of Reducing Flood Losses.** In order to accomplish its purpose, this ordinance includes methods and provisions for:

1. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controlling the alteration of natural flood plains, stream channels and natural protective barriers, which help accommodate or channel flood waters;
4. Controlling filling, grading and other development which may increase flood damage; and
5. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas. However, operation, maintenance and repair of existing dikes, ditches, reservoirs, and other structures and facilities which were created or developed as part of normal flood control activities on or prior to December 31, 1984 may continue pursuant to ICC 17.02.040.E.10.

14.02A.020 Definitions

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

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

Area of Shallow Flooding: A designated AO or AH Zone 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.

Area of Special Flood Hazard: 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.

Basement: Means any area of the building having its floor sub-grade (below ground level) on all sides.

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

Coastal High Hazard Area: The area subject to high velocity waters, including but not limited to, storm surge or tsunamis. The area is designated on the FIRM as Zone V1-V30, VE or V.

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, installations which produce, use or store hazardous materials or hazardous waste.

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.

Existing Mobile/Manufactured Home Park or Subdivision: A mobile/manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by Island County.

Expansion to an Existing Mobile/Manufactured Home Park or Subdivision: The preparation of additional sites by the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from:

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

Flood Insurance Rate Map (FIRM): 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 Island County.

Flood Insurance Study: 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.

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

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.

Lowest Floor: The bottom edge of 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 this ordinance found at Section 14.02A.050.B.1.b).

Mobile/Manufactured Home: A structure, built to federal Department of Housing and Urban Development (HUD) standards (or which bears an insignia indicating it has passed either a State systems inspection or a State alteration/fire safety inspection), on a permanent chassis and designed and constructed to be transportable in one or more sections for use as a dwelling, with or without a permanent foundation, when connected to the required utilities. A commercial coach, recreational vehicle or motor home, or a modular home (built to Uniform Building Code standards), shall not be considered a mobile/manufactured home.

Mobile/Manufactured Home Park or Subdivision: A parcel (or contiguous parcels) of land divided into two or more mobile/manufactured home lots for rent or sale. A tract of land under the ownership or management of one person, firm or corporation where two or more spaces are provided solely for the placement of mobile/manufactured homes for residential purposes. A mobile/manufactured home park shall not include mobile/manufactured home PRDs or subdivisions, recreational vehicle parks or the placement of mobile/manufactured homes as authorized through a Temporary Use Permit.

New Construction: Structures for which the start of construction commenced on or after the effective date of this ordinance, an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For flood plain management purposes, new construction means structures for which the start of construction commenced on or after the effective date of a flood plain management regulation adopted by Island County and includes any subsequent improvements to such structures.

New Mobile/Manufactured Home Park or Subdivision: A mobile/manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by Island County.

Recreational Vehicle: Any over-the-road trailer, pickup camper or other wheeled mobile unit, with or without motive power, which is designed or converted for temporary human occupancy and licensed or eligible to be licensed as either a motor home, recreational trailer, camper, or other mobile unit by the State of Washington, Department of Licensing, or similar units eligible to be licensed by another state. Recreational vehicles are not dwelling units.

Start of Construction: Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement

or other improvement was within one-hundred eighty (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 mobile/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.

Structure: In accordance with the International Building Code (IBC), that which is built or constructed, including a gas or liquid storage tank that is principally above ground.

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the assessed value of the structure before the damage occurred.

Substantial Improvement: Any repair, reconstruction, rehabilitation, addition, or other improvement of a structure where the cost of the reconstruction, rehabilitation, addition or other improvement to the structure exceeds fifty percent (50%) of the market value of the structure before the start of construction or the improvement.

The term substantial improvement can exclude:

- (1) any project for improvement of a structure to correct pre-cited existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
- (2) any alteration of a historic structure, provided that the alteration will not preclude the structures continued designation as a historic structure.

Variance: A grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

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.

14.02A.030 General Provisions

- A. **Lands to Which this Ordinance Applies.** This ordinance shall apply to all areas of special flood hazards within the jurisdiction of Island County.
- B. **Basis for Establishing the Areas of Special Flood Hazard.** The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled .The Flood Insurance Study for Island County, Washington, Unincorporated Areas., dated August 16,

1995, with accompanying Flood Insurance Maps is hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at Island County Permit Center.

- C. **Penalties for Noncompliance.** No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this ordinance and other applicable regulations. Violation of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not to exceed one thousand dollars (\$1,000) or imprisoned for not more than ninety (90) days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Island County from taking such other lawful action as is necessary to prevent or remedy any violation.
- D. **Abrogation and Greater Restrictions.** This ordinance is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. Island County does not enforce private easements, covenants, or deed restrictions.
- E. **Interpretation.** In the interpretation and application of this ordinance, all provisions shall be:
1. Considered as minimum requirements;
 2. Liberally construed in favor of the governing body; and,
 3. Deemed neither to limit nor repeal any other powers granted under State statutes.
- F. **Warning and Disclaimer of Liability.** The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Island County, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

14.02A.040 Administration

A. Establishment of Development Permit.

1. **Development Permit Required.** A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 14.02A.030.B. The permit shall be for all structures including manufactured homes, as set forth in the DEFINITIONS and for all development including fill and other activities, also as set forth in the DEFINITIONS.
2. **Application for Development Permit.** Application for a development permit shall be made on forms furnished by the Island County Permit Center 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:

- a) Elevation in relation to mean sea level, of the bottom edge of the lowest floor (including basement) of all structures;
- b) Elevation in relation to mean sea level to which any structure has been flood-proofed;
- c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the flood proofing criteria in Section 14.02A.050.B.2; and
- d) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development if applicable.

B. Designation of Authority. The Building Official and Planning Director are hereby appointed to administer and implement this ordinance by reviewing development permit applications in accordance with its provisions.

C. Duties and Responsibilities of the Building Official, Planning Director and Permit Center. Duties of the Building Official, Planning Director and Permit Center shall include, but not be limited to:

1. Permit Review.

- a) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
- b) Review all development permits to determine that all necessary permits have been obtained from those Federal, State or local governmental agencies from which prior approval is required.
- c) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of Section 14.02A.050.C are met.
- d) The fee for a development permit shall be fifty dollars (\$50.00) to defray the costs of inspection, review and the maintenance of records.

2. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 14.02A.030.B, Basis for Establishing the Areas of Special Flood Hazard, the Building Official shall 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 14.02A.050.B, Specific Standards, and 14.02A.050.C, Floodways.

3. Information to be Obtained and Maintained.

- a) Where base flood elevation data is provided through the Flood Insurance Study or required as in Section 14.02A.040.C.2, obtain and record the actual (as-built)

elevation (in relation to mean sea level) of the bottom edge of the lowest floor, including basement, of all new or substantially improved structures, and whether or not the structure contains a basement.

- b) For all new, or substantially improved, and flood-proofed non-residential structures:
 - (i) Obtain and record the actual elevation (in relation to mean sea level) to which the structure was floodproofed, and
 - (ii) Maintain the flood proofing certifications required in Section 14.02A.040.A.2.c).
- c) Maintain for public inspection all records pertaining to the provisions of this ordinance.

4. **Alteration of Watercourses.**

- a) Notify adjacent communities and the Washington State Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- b) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

5. **Interpretation of FIRM Boundaries.** The Planning Director shall 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 as provided in Section 14.02A.040.D.

D. **Variances and Appeals.**

1. **Procedures.**

- a) The Hearing Examiner shall act upon applications for variances from the requirements of this ordinance pursuant to Section 16.13.100.A.4 ICC and to the terms and conditions of this section.
- b) The Hearing Examiner shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Building Official or Planning Director in the enforcement or administration of this ordinance pursuant to Section 16.13.100.A.4 ICC.
- c) Those aggrieved by the decision of the Hearing Examiner may seek judicial review by the Island County Superior Court, as provided in Section 16.19.170 ICC.
- d) In passing upon such applications, the Hearing Examiner shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and whichever of the following are relevant:
 - (i) The danger that materials may be swept onto other lands to the injury of others;

- (ii) The danger to life and property due to flooding or erosion damage;
 - (iii) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (iv) The importance of the services provided by the proposed facility to the community;
 - (v) The necessity to the facility of a waterfront location, where applicable;
 - (vi) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (vii) The compatibility of the proposed use with existing and anticipated development;
 - (viii) The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - (ix) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (x) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 - (xi) 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 and water systems and streets and bridges.
- e) Upon consideration of the factors of Section 14.02A.040.D.1.d) and the purposes of this ordinance, the Hearing Examiner may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- f) The Hearing Examiner shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

2. **Conditions for Variances.**

- a) a) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a small or irregularly shaped lot contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (i-xi) in Section 14.02A.040.D.1.d) have been fully considered. As the lot size increases the technical justification required for issuing a variance increases.
- b) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that:
- (i) the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and
 - (ii) the variance is the minimum necessary to preserve the historic character and design of the structure.

- c) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
- d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- e) Variances shall only be issued upon:
 - (i) A showing of good and sufficient cause;
 - (ii) A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - (iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 14.02A.040.D.1.d), or conflict with existing local laws or ordinances.
- f) Variances as interpreted in the National Flood Insurance Program 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 the flood elevations should be quite rare.
- g) Variances may be issued for nonresidential and accessory buildings that don't exceed ten percent (10%) of the value of the principal structure in very limited circumstances to allow a lesser degree of flood proofing than watertight or dry-flood proofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except 14.02A.040.D.2.a), and otherwise complies with Sections 14.02A.050.A.1 and 14.02A.050.A.2 of the General Standards.
- h) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Furthermore the applicant shall, before the issuance of the development or building permit, file for record against the title of the property a disclosure statement to notify subsequent property owners of the variance.

14.02A.050 Provisions for Flood Hazard Reduction

A. **General Standards.** In all areas of special flood hazards, the following standards are required:

1. **Anchoring.**

- a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- b) 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).

2. Construction Materials and Methods.

- a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- c) 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.

3. Utilities and Utility Franchises.

- a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- b) 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
- c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

4. Subdivision Proposals.

- a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- b) All subdivision proposals shall have public or private utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
- c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
- d) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated by the applicant for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five (5) acres (whichever is less). The base flood elevation data shall be delineated on the submitted plans.

- 5. Review of Building Permits.** Where elevation data is not available either through the Flood Insurance Study or from another authoritative source (Section 14.02A.040.C.2.), 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 the highest adjacent grade in these zones may result in higher insurance rates.

B. Specific Standards. In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 14.02A.030.B., Basis for Establishing the Areas of Special Flood Hazard or Section 14.02A.040.C.2, Use of Other Base Flood Data, the following provisions are required:

1. Residential Construction.

- a) New construction and substantial improvement of any residential structure shall have the bottom edge of the lowest floor, including basement, elevated at or above the base flood elevation.
- b) Fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding 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) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (ii) The bottom of all openings shall be no higher than one (1) foot above grade.
 - (iii) Openings may be equipped with screens, louvers or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

2. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the bottom edge of 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:

- a) Be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of 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 14.02A.040.C.3.b).
- d) Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below the lowest floor as described in 14.02A.050.B.1.b).
- e) Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the flood-proofed level (e.g. a building flood-proofed to one (1) foot above the base flood level will be rated as at the base flood level).

3. **Critical Facility.** Construction of new critical facilities shall be, to the extent possible, located outside the limits of the base flood plain. Construction of new critical facilities shall be permissible within the base flood plain if no feasible alternative site is available. Critical facilities constructed within the base flood plain shall have the lowest floor elevated to three (3) feet or more above the level of the base flood elevation at the site. Flood proofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters. Access routes elevated to or above the level of the base flood plain shall be provided to all critical facilities to the extent possible.
4. **Manufactured Homes.**
 - a) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the FIRM on sites:
 - (i) outside of a manufactured home park or subdivision,
 - (ii) in a new manufactured Home Park or subdivision,
 - (iii) in an expansion to an existing manufactured home park or subdivision,
or
 - (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred .substantial damage. as the result of a flood, elevated on a permanent foundation such that the bottom edge of the lowest floor of the manufactured home is elevated to or above the Base Flood Elevation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement in accordance with the provisions of Section 14.02A.050.A.1.b).
 - a) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE on the FIRM that are not subject to the provisions of paragraph 14.02A.050.B.4 be elevated so that either:
 - (i) the bottom edge of the lowest floor of the manufactured home is at or above the base flood elevation, or
 - (ii) the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
5. **Recreational Vehicles.** Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the FIRM either:
 - a) be on the site for fewer than one-hundred-eighty (180) consecutive days,
 - b) be fully licensed and ready for highway use, or
 - c) meet the permit requirements of paragraph 14.02A.040.A.1 and the elevation and anchoring requirements for .manufactured homes. in paragraph 14.02A.050.B.4. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is

attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

- C. Floodways.** Located within areas of special flood hazard established in Section 14.02A.030.B 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:
1. Prohibit encroachments, including fill, new construction, substantial improvements and other development unless certification by a registered professional engineer, surveyor or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
 2. Construction or reconstruction of residential structures is prohibited within designated floodways, except for:
 - a) repairs, reconstruction or improvements to a structure which do not increase the ground floor area; and
 - b) repairs, reconstruction or improvements to a structure, the cost of which does not exceed fifty percent (50%) of the assessed value of the structure either,
 - (i) before the repair, reconstruction, or repair is started, or
 - (ii) 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 may be excluded in the fifty percent (50%) determination.
 3. If Section 14.02A.050.C.1 is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 14.02A.050, Provisions for Flood Hazard Reduction.
- D. Wetlands Management.** All developments shall be reviewed to determine whether the proposal would limit or disrupt the ability of a wetland to alleviate flooding impacts. The following process should be implemented:
1. Review proposals for development within base flood plains for their possible impacts on wetlands located within the flood plain.
 2. Ensure that development activities in or around wetlands do not negatively affect public safety, health and welfare by disrupting the wetlands. ability to reduce flood and storm drainage.
- E. Standards for Shallow Flooding Areas (AO Zones).** Shallow flooding areas appear on FIRM's as AO zones with depth designations. The base flood depths in these zones 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. In these areas, the following provisions apply:
1. New construction and substantial improvements of residential structures within AO zones shall have the bottom edge of the lowest floor (including basement) elevated above the highest grade

adjacent to the building, one (1) foot or more above the depth number specified on the FIRM (at least two [2] feet if no depth number is specified).

2. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - a) have the bottom edge of 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 14.02A.050.B.2.c).
3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

F. Coastal High Hazard Areas. Located within areas of special flood hazard established in Section 14.02A.030.B are Coastal High Hazard Areas, designated as Zones V1-V30, 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 of this ordinance, the following provisions shall also apply:

1. All new allowable construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:
 - a) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one (1) foot or more above the base flood level; 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 (1) percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval); water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. 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 a) and b) of this section.
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 and VE, and whether or not such structures contain a basement. The local Permit Center shall maintain a record of all such information.
3. All new construction shall be located landward of the mean high tide.

4. Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with nonsupporting 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 purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of twenty (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 designs proposed meet the following conditions:
 - a) Breakaway wall collapse shall result from a 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 nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one (1) percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards.
5. 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.
6. Require that manufactured homes placed or substantially improved within Zones V1-30, V, and VE on the 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, meet the standards of paragraphs 14.02A.050.F.1 through 9 and that 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 meet the requirements of paragraph 14.02A.050.C.4.b).
7. Require that recreational vehicles placed on sites within Zones V1-30, V, and VE on the FIRM either:
 - a) be on the site for fewer than one-hundred-eighty (180) consecutive days,
 - b) be fully licensed and ready for highway use, or
 - c) meet the requirements in paragraphs 14.02A.040.A.1 and 14.02A.050.F.1 through 9.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

8. Prohibit the use of fill for structural support of buildings.
9. Prohibit man-made alteration of sand dunes which would increase potential flood damage.