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## Chapter 6: Appendix A Kaua'i County Flood Ordinances

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ORDINANCE NO 630

BILL 1535, Draft 1

**AN ORDINANCE AMENDING THE DRAINAGE AND FLOOD CONTROL  
ORDINANCE, THE BUILDING CODE ORDINANCE, ARTICLE 15-1 AND CHAPTERS  
12, RESPECTIVELY, OF THE KAUAI COUNTY CODE, 1987 TO ADOPT SPECIAL  
FLOOD HAZARD AREA REGULATIONS IN ACCORDANCE WITH THE NATIONAL  
FLOOD INSURANCE PROGRAM**

**BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUAI, STATE OF  
HAWAII:**

SECTION 1. Legislative Findings and Purpose

The County Council enacted the Flood Plain Management Ordinance in accordance with the National Flood Insurance Program pursuant to the National Disaster Protection Act of 1968 (Pub. L. 90-440 and 91-152), as amended, and the Flood of Disaster 1973 (Pub. L. 93-234), to continue the County's participation in the Program to enable property owners in flood-prone areas of the County to obtain flood insurance and to assure future federal assistance for the County for use in such areas. The Legislature of the State of Hawaii through H.R.S. Section 46-11 authorized the various counties to participate in the National Flood Insurance Program (NFIP). Therefore, the County Council of the County of Kauai ordain as follows:

SECTION 2. That Chapter 15, Article 1, Kauai County Code 1987 relating to Flood Plain Management, is hereby amended in its entirety to read as follows:

“ARTICLE 1. FLOOD PLAIN MANAGEMENT

Sec 15-1.1 **Legislative Findings of Fact; Purpose and Objectives.**

(a) Findings of Fact. Certain areas of the County are subject to periodic flooding caused by heavy rain storms, high wave action, and tsunamis which result in the loss of life and property, health and safety factors, 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. These flood losses are caused by a cumulative set of obstructions in areas of special flood hazards which increase flood heights and velocities, and when adequately 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.

(b) Statement of Purpose. It is the purpose this Article to promote the public health, safety, and general, 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 for costly flood control projects;
- (3) To minimize expenditure 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 located in areas of special flood hazard
- (6) To help maintain a stable tax base by minimizing future flood loss;
- (7) To assist in notifying potential buyers that property is in an area of special flood hazard; and
- (8) To insure that those who occupy areas of special flood hazard assume responsibility for their actions.

(c) Methods of reducing Flood Losses. In order to accomplish its purpose, this Article includes methods and provisions for:

- (1) Requiring the facilities be protected by to minimize flood damage at the time of initial construction
- (2) Controlling filing, grading, dredging and other development which may increase flood damage;
- (3) Controlling the alteration of natural flood plains, stream channels and natural protective barriers, which help to accommodate or channel flood waters; and
- (4) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

#### **Sec. 15-1.2 General Provisions.**

(a) Statutory authority. The Article is enacted pursuant to the U.S. National Flood Insurance Act of 1968 (Public Laws 90-418 and 91-152), as amended, and the U.S. Disaster Flood Protection of 1973 (Public Law 93-234), as amended.

(b) Lands Subject to this Article. This article shall apply to all areas of special flood hazards identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for the County of Kauai,” dated March 4, 1987, with the accompanying Flood Insurance Rate Maps; and lands outside the identified special floods hazard areas encompassing and adjacent to a river, stream, storm water channel, outfall area or other inland water or drainage facility determined by the County Engineer to be subject to special flood hazards. The different special flood hazard areas are as follows:

- (1) Flood Fringe-AE and AH zones
- (2) Floodway
- (3) Coastal High Hazard (Tsunami)—VE Zones
- (4) General Flood Plain—A, X and D zones
- (5) Land Adjacent to Drainage Facility

(c) Compliance; Effective Date. No Structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this article and other applicable regulations.

This Article shall take affect on March 31, 1987.

(d) Other Laws and Regulations. All construction and improvements subject to this Article shall comply with other applicable laws and regulations including but not limited to, the Comprehensive Zoning Ordinance, Building Code, Electrical Code, Plumbing Code, Subdivision Code, and Grading Ordinance. This article, designed to reduce flood losses, shall take precedence over any less restrictive, conflicting laws, ordinances and regulations.

- (e) Interpretation. In the interpretation and application of this article shall be:
- (1) Considered as minimum requirements;
  - (2) Liberally construed in favor of the County; 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 Article 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 Article 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 Article shall not create liability on the part of the County of Kauai, any officer or employee thereof, or the Federal Insurance Administration, for any flood damage that result from reliance on this Article or any administrative decision lawfully made thereunder.

## **Sec. 15-1.3 Definitions**

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Unless plainly evident from the context that a different meaning is intended, the words and terms used herein are only applicable to this Article and defined as follows:

- (1) “Base Flood” means the flood having a one percent (1.0%) chance of being equaled or exceeded in any given year, otherwise commonly referred to as the 100-year flood.
- (2) “Base Flood Elevation” means the water surface elevation of the base flood.
- (3) “Breakaway walls” mean any type of walls, whether solid or lattice and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building material which are not part of the structural support of the building and which are not part of the structural support of the building and which are so designed as to breakaway, under abnormally high tides or wave action, without causing the elevated portion of the building or supporting foundation system.
- (4) “Coastal High Hazard Area” means the area subject to high velocity waters, including but not limited to coastal and tidal inundation or tsunamis. The area is designated on a FIRM as Zone VE.
- (5) “County Engineer” means the County Engineer of the County of Kauai or his authorized representative.
- (6) “Development” means any man-made change to improved or unimproved buildings or other structures, filing, grading or excavation operations.
- (7) “Existing Manufactured Home Park or Subdivision” means a manufactured home park or subdivision for which the construction of facilities for serving the lots on which the 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.
- (8) “Expansion to an Existing Manufacture Home Park or Subdivision” means the preparation of additional sites by the construction of facilities for serving the lots on

which the 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.

[(7)] (9) “Flood or Flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal water resulting from any source, such as tsunamis, or the usual and rapid accumulation of runoff or surface waters from any source.

[(8)] (10) “Flood Fringe Area” means the portion of the flood plain outside the floodway, designated as AE, AO, and AH Zones on the FIRM.

[(9)] (11) “Flood Insurance Rate Map (FIRM)” means the official map on which the federal insurance Administration has delineated areas of special flood hazards, risk premium zones applicable, base flood elevations and the floodway.

[(10)] (12) “Flood Insurance Study” means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, and the water surface elevation of the base flood.

[(11)] (13) “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 (1) foot).

[(12)] (14) “General flood plain Area” means the area consisting of the approximate flood plain area as delineated on the flood maps, identified as A, D, and X zones on the FIRM, where detailed engineering studies have not been conducted by the Federal Insurance Administration to delineate the flood elevations and floodway.

[(13)] “Habitable Floor” means any floor usable for living purposes, which include working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a habitable 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.]

[(14)] (15) “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 that 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-evaluation design requirements of this Ordinance.

(16) “Manufactured Home” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufacture home” does not include a “recreational vehicle”.

(17) “Manufactured Home Park or Subdivision” means a parcel (or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.

[(15)] (18) “New construction” means structures for which the start of construction commences on or after the effective date of this Article and includes subsequent improvements to such structures.

(19) “New Manufactured Home Park or Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots o which manufactured lots 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 flood plain management regulations adopted by a community.

**(20) “Recreational Vehicle” means a vehicle which is: a) built on a single chassis; b) 400 square feet or less when measured at the largest horizontal projection; c) designed to be self-propelled or permanently towable by a light duty truck; and a designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.**

[(16)] (21) “Special Flood Hazard” means an area subject to flood and flood related hazards, identified on the FIRMS or determined by the County Engineer in areas adjacent to drainage facilities not identified by the flood maps.

[(17)] (22) “Start of Construction” means the first placement of permanent construction of a structure on a site, such as the pouring of slabs or footing or any work beyond the stage of excavation. Permanent construction includes land preparation, such as clearing, grading and filling and includes excavation for a basement, footings, piers or foundations or the erection of temporary forms; it also includes installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure. For a structure without a basement or poured footings, the start of construction includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation.

[(18)] (23) “Structure “ means a walled and roofed building and include the first permanent framing or assembly of the structure or any part of thereof on its piling or foundation.

[(19)] (24) “Substantial Improvement means any repair, reconstruction, improvement to addition to a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: (a) before the improvement or repair is started, or (b) 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. The Value of any substantial improvement shall be determined by the County Engineer or his authorized representative. The term does not however, include either: a) Any project for improvement of a structure to correct existing violations of a 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 (b) any alteration of a “historic structure” provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

## **Sec. 15-1.4 Administration**

(a) Building Permit, Certificate of Occupancy, Grading Permit, Subdivision approval. This Ordinance shall be a part of the Building Code Ordinance, Chapter 12 of the Kauai County Code, 1987, as amended, and shall be inspected and enforced as part of the Building Code of the County of Kauai by the Building Division. No building permit, certificate of occupancy or grading permit shall be issued or subdivision shall be approved without the approval of the County Engineer or his authorized representative with respect to compliance with the provisions of this Article.

(b) Certificate of Occupancy Required in the Special Flood Hazard Areas. Notwithstanding Section 307 of the County Building Code, a new certificate of occupancy shall be required before any new construction or substantial improvement in the special flood hazard areas may be used or occupied.

- (c) County Engineer. The County Engineer and his authorized representative with the cooperation and assistance of other county departments shall administer the provisions of this Article.
- (d) Duties and responsibilities of the County Engineer. The duties and responsibilities of the County Engineer shall include but not be limited to:
  - (1) Permit Review
    - (A) Review all building permits, certificates of occupancy, grading permits, and subdivision proposals to determine whether the requirements of this proposal have been satisfied.
    - (B) [Review all other developmental permits refereed by other governmental departments and agencies for consistency with the requirements of this Article]. See that all other required State and Federal permits have been obtained.
    - (C) Review permits and proposals to determine that the site is reasonably safe from flooding.
    - (D) Review permits and proposals to determine [if] that the proposed construction or development [adversely affects] will not decrease the flood carrying capacity of the area of special flood hazard.
  - (2) Information to be Obtained and Maintained. Obtain and maintain for public inspection [and make available as needed for Flood Insurance Polices]
    - (A) the Flood Insurance Study and Flood Insurance Rate Maps for the County;
    - (B) the certified elevation of the lowest floor;
    - (C) the flood proofing certification for spaces below the base level in non-residential structures;
    - (D) the certified final pad elevation where the site is filled above the base flood level;
    - (E) the certification that an encroachment in the floodway will not result in any increase in flood levels during base flood discharge;
    - (F) the certification of elevational and structural support for structures in the coastal high hazard (i.e. tsunami) area.
  - (3) Interpretation of Maps. Make interpretation where needed, as to the exact location of the boundaries of the areas of special flood hazards.
  - (4) Use of Other Base Flood Data. When base flood elevation data has not been provided by the Federal Insurance Administration, the County Engineer shall obtain, review, and reasonably utilize any base flood elevation and floodway data available forma federal, state, or other sources, in order to administer this Article.

### **Sec. 15-1.5 Construction and Development Standards.**

- (a) Flood Fringe. The flood fringe areas are identification on the FIRMS as AE, AO, and AH Zones.
  - (1) Anchoring. All new construction and substantial improvements shall be anchored to [resist] prevent flotation, collapse or lateral movement of the structure.
  - (2) Constructional 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) All electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during the conditions of flooding.

### (3) Elevation and Flood proofing

- (A) Residential Structures. All new construction and substantial improvements of residential structures within the zones a1-30, AE and AH Zones on the community's FIRM shall have the lowest floor (including basements) elevated to or above the base flood level. 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, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry of flood waters.
- (B) Non-residential Structures. All new construction and substantial improvement of non-residential structures shall either:
- (i) Elevate the lowest floor, including basement, to or above the base flood elevation; or
  - (ii) Together with attendant utility and sanitary facilities be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (C) All manufactured homes, such as mobile homes, must be elevated above the base flood elevation.
- (D) No machinery or equipment which service a building such as furnaces, air conditioners, heat pumps, hot water heaters, washers, dryers, elevator lift equipment, electrical junction and circuit breakers boxes and food freezers, are permitted below the base flood elevation; and
- All interior wall, floor and ceiling materials located below the base flood elevation must be [unfurnished] unfinished and resistant to flood damage; and
- The walls of any enclosed area below the base flood elevation must be constructed in a manner to prevent flotation, collapse and lateral movement of the structure.

(E) Building Height. Notwithstanding the maximum building height limitations as stated in overall building and wall plate height, provided in Paragraph 8-3.7 (b) (1) for single- family detached and attached residential dwellings under the Comprehensive Zoning Ordinance and Paragraph 10-2.4 (e) (1) for all structures under the North Shore Development Plan Ordinance, the maximum building height in the flood fringe area shall be as follows:

- (i) Within the North Shore Planning Area. No structure shall be higher than twenty-five (25) feet from the ground level or the base flood elevation plus fifteen (15) feet, whichever is greater at the site, unless a greater height is authorized by the planning commission pursuant to use a permit after review and recommendation by the North Shore Improvement Committee.
- (ii) Single Family Dwellings Outside the North Shore Special Planning Area. No single family detached and attached dwellings outside the North Shore Special Planning area shall be higher than thirty (30) feet from the ground plus (15) feet, whichever is greater at the site unless otherwise permitted by the planning Commission.

(4) Water and Sewer.

(A) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.

(B) On- site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(5) Certification by Engineer or Architect. Building plans for new construction and substantial improvements shall be certified by a registered professional structural engineer or architect that the new construction is designed in compliance with the requirements of this Section. Prior to the issuance of the certificate of occupancy, the elevation of the lowest [habitable] floor shall be certified by a registered professional civil engineer or surveyor.

All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or the lateral movement of the structure resulting from the hydrodynamic and hydrostatic loads, including the effects of buoyancy, be constructed with materials resistant to flood damages and be constructed by methods and practices that minimize flood damages.

(b)Floodway. The floodway, identified on the FIRMS, is the watercourse reserved to discharge the base flood.

(1)Development Standard. Encroachments, including fill, new construction and substantial improvements of structures, are prohibited in the flood way unless certified by a registered professional civil engineer, with the supporting data that the encroachment will not cause any increase in the base flood elevations during the occurrence of the base flood discharge. [The following uses, not involving fill, are deemed not to adversely affect the floodway and increase base flood elevations

[(A) Public and private outdoor nonstructural recreational facilities, lawn, garden and play areas;

(B) Agricultural uses including farming, grazing, pasture and outdoor plant nurseries; and



(C) Drainage improvements, such as channels and stream crossings.]

(2) Construction Standards. If permitted pursuant to Paragraph 15- 1,5 (b)(1), all new construction and substantial improvements shall comply with all applicable requirements prescribed in subsection 15-1.5 (a) and Section 15- 1.6.

(3) Certification for Development. A registered professional civil engineer shall certify that the encroachment, including fill, new construction or substantial improvement will not result in any increase in base flood elevations during the occurrence of base flood discharges.

(C) Coastal High Hazard (Tsunami) Coastal high hazard areas more commonly known as tsunami inundation areas, are identified as VE Zones on the FIRMs.

(1) Anchoring and Structural Support.

(A) All new construction and substantial improvements shall be securely anchored on pilings or columns.

(B) Pilings or columns used as structural support shall be designed and anchored so as to [resist] prevent flotation, collapse, and lateral movement, due to the effects of wind and water loads acting simultaneously on all building components. The wind and water loading values shall each have a one percent chance to being equaled or exceeded in any given year.

(C) Fill is prohibited for structural support.

(D) Manmade alteration of sand dunes and mangrove stands is prohibited.

(E) All new construction shall be located landward of the reach of the mean of high tide.

(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.

(3) Elevation. All new construction and substantial improvements shall be elevated so that the lowest supporting member of the lowest floor, excluding pilings and columns, is at or above the base flood level elevation.

(4) Building Height. Notwithstanding the maximum building height limitations as stated in overall building height limitations as stated in overall building and wall plate height, provided in Paragraph 8-3.7 (b) (1) for single-family detached and residential dwellings under the Comprehensive Zoning Ordinance and Paragraph 10-2.4 (e) (1) for all structures under the North Shore Development Plan Ordinance, the maximum building height in the coastal area shall be as follows:

(A) Within the North Shore Planning Area. No structure shall be higher than twenty- five (25) feet from ground level or the base flood elevation level unless a greater height is authorized by the Planning Commission pursuant to a use permit after review and recommendation by the North Shore Planning Committee.

(B) Single-family dwellings Outside the North Shore Special Planning Area. No single family detached and attached dwellings outside the North Shore Planning Special Planning area shall be higher than thirty (30) feet from the ground or the base flood elevation level plus fifteen (15) feet, whichever is greater at the site unless otherwise permitted by the Planning Commission.

(5) Enclosure of Space Below the Lowest Floor with Breakaway Walls. Space below the lowest floor may be enclosed solely for parking of vehicles, building access or storage; no furnaces, air conditioners, heat pumps, hot water heaters, washers, dryers, elevator life equipment, electrical junction and circuit breaker boxes, and food freezers are permitted; however enclosure must only be achieved with 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 the supporting foundation system. A breakaway wall shall have a design safe loading resistance of 20 pounds per square foot may be permitted only if a registered professional structural engineer certifies that the design met the following conditions:

- (C) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and
- (D) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement to 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 each have a one percent chance of being equaled or exceeded in any given year) 100- year mean occurrence interval.

(6) Water and Sewer

(A) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.

(B) On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(7) Certification by Engineer or Architect. Building Plans for new construction and substantial improvements shall be certified by registered professional structural engineer to architect that the new construction or substantial improvement is designed and methods of construction that are to be used are in accordance with the accepted standards of practice for meeting the requirements of this Section. Prior to the issuance of the certificate of occupancy, the elevation of the bottom of the lowest structural member of the lowest floor shall be certified by methods and practices that minimize flood damages.

(8) The placement of mobile homes or manufactured homes in the Coastal High Hazard Flood Zone is prohibited.

(d) General Flood Plain. The general flood plain, identified as A,X and D Zones on the FIRMS, are the areas of special flood hazards for which detailed engineering studies were not done by the Federal Insurance Administration to determine the base flood elevations and the location of floodways in the general flood plain.

(1) Determination of applicability Standards. All new construction and substantial improvements shall satisfy the requirements of Subsection 15-1.5 (a), relating to the flood fringe, or Subsection 15-1.5 (b), relating to the floodway, whichever subsection is determined to be applicable by the county Engineer to the construction or the improvement. The County Engineer shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, to other source, including information requested by the applicant, to determine the base flood elevations and the location of floodways in the general flood plain.

(2) Construction and Development Standards. Construction and development standards provided in Subsections 15-1.5 (a) and 15-1.5(b) shall apply as determined by the County Engineer.

(3) Information to be provided. The following information shall be provided the County Engineer to evaluate the proposed construction to the improvement site:

- (A) Project location and site plan showing dimensions.
- (B) Relationship to floodway and flood fringe areas as determined by flood study.
- (C) Topographic data, contours, or spot elevations based on reference marks on flood maps.
- (D) Existing and proposed flood-proofing and flood control measures.
- (E) If the State of Hawaii will allow alteration and relocation of streams, the carrying capacity of the altered or relocated stream shall be maintained.

[The County may waive any or all of the above informational requirements or request further information, including detailed flood studies, to evaluate flood risks and determine the applicability of flood construction and development standards.

(e) Construction of Development Adjacent to Drainage Facility Outside Identified Special Flood Hazard Areas.

(1) Subject to Review. All new construction and substantial developments proposed adjacent to a drainage facility outside of the special flood hazard area identified on the FIRMs shall be subject to review and approval of the County Engineer. Upon request by the County Engineer further information, including flood studies, findings and opinions by a registered professional civil engineer shall be provided to evaluate potential flooding.

(2) Development and Construction Hazard.

- (A) The county Engineer shall determine the applicability of the various development and construction standards provided in this Article based upon the best information provided by the applicant.
- (B) No drainage facility shall be modified, constructed, lined or altered in any way unless approved by the County Engineer.

Sec 15-1.6 Development Standard For Subdivision Within the Special Flood Hazard Areas.

(a) Standards. All subdivisions within the special flood hazards shall:

- (1) Be consistent with the need to minimize flood damage;
- (2) Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (3) Have adequate drainage provided to reduce exposure to flood damage

(b) Identification of Special Flood Hazards and Base Flood Level Elevations.

- (1) Subdivision Applications. All subdivision applications shall identify the areas of potential flood hazards and base flood elevations on the proposed sites. If such information is not provided by FIRMs, the County Engineer may request and the applicant shall provide such information
- (2) Elevation Information on Approved Plans. All finally approved subdivision plans for subdivisions within the special flood hazards area shall provide base flood elevations within the lots.

(3) Fill Above Base Flood Elevation. If fill is used to elevate the site of any lot above the base flood elevation, the final ground elevation of the pad shall be certified by a registered professional civil engineer or surveyor.

**[Sec 15-1.7 Exemptions]**

- (1) Reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of State Historic Places;
- (2) Repairs, maintenance or improvements required by state or county officials to comply with health, sanitation, building and other codes which are solely necessary to assure safe living conditions;
- (3) Exterior improvements to existing structures;
- (4) Outdoor swimming pools (non-elevated);
- (5) Signs;
- (6) Demolition;
- (7) Fences and retaining walls except in the floodway;
- (8) Carnivals, luaus, fairs and camping tents of a temporary nature;
- (9) Storage sheds for agriculture, lawn equipment and other similar storage sheds, including garages and carports, except in the floodway;
- (10) Bathhouses, comfort stations, open park pavilions and boathouses, except in the floodway;
- (11) Seawalls, bulkheads, wharves, piers and docks;
- (12) Other structures similar to those stated above which are consistent with this Article as determined by the County Engineer.]

**[Sec. 15-1.8 Variance.**

- (a) Standards. A variance from this Article may be issued by the County Engineer only upon an applicant meeting the following standards:
  - (1) There is good and sufficient cause for requesting a variance
  - (2) The applicant will suffer exceptional hardship should the variance be denied.
  - (3) A variance is the minimum necessary, considering the flood hazard, to afford relief: and
  - (4) A variance will not increase flood heights.
- (b) Considerations Applicable to Standards. The Federal Emergency Management Agency (FEMA) has developed principles and guidelines for the approval of any variance, and the intent of such is incorporated herein. These indicate that variances should be rarely granted, and compliance to flood requirements is a necessity.

An explanation of the standards are as follows:

- (1) Good and sufficient cause for Variance. Under this criteria, the applicant must demonstrate that the variance request is for land which has physical characteristics so unusual that complying to flood requirements will create exceptional hardship to the applicant or surrounding land owners. The unique characteristics must pertain to the land itself and not the structure, its inhabitants or the property owner.

Under this criteria, only exceptional instances should arise where the physical characteristics of properties create a hardship sufficient to justify granting a variance. Even in a fairly common situation where an undeveloped lot is

surrounded by properties with structures built at grade and or below flood levels, a variance cannot be justified since an applicant can erect the concerned structure on pilings, etc.

(2) Exceptional Hardships. Under this criteria, the hardship that would result from failure to grant a requested variance must be exceptional, unusual, and particular to the property involved. Mere economic or financial hardships alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors cannot, as a rule, qualify as exceptional hardship.

As an example, a member of a household is physically handicapped and wants a variance to build the dwelling at grade or at a lower level for access purposes. A variance should not be issued because the owner can construct a ramp or elevator to meet flood requirements. Elevation will allow the infirm or handicapped person to be evacuated in the early stage of flooding, and if there is sufficient warning or help in evacuating that person, then in all likelihood he can survive the flood by simply remaining in the home safely above the levels of floodwater.

(4) Increased Flood Heights. Under this criteria, an applicant must demonstrate that flood levels will not be raised above the base flood elevations.

(5) Minimum to Afford Relief. Under this criteria, the variance that is granted should be for the minimum deviation from the flood requirements that will still alleviate the hardship.

In the case of variance to an elevation requirement, this does not mean approval to build at grade level or to whatever elevation an applicant proposes, but rather to a level that the County Engineer determines will both provide relief and preserve the integrity of the flood ordinance.

(c) Conditions for Variance. Such conditions may include:

(1) Modification of the construction or substantial improvement including the sewer and water supply facilities

(2) Limitations on periods of use and operation

(3) Imposition of operational controls, sureties and deed restrictions

(4) Requirements for construction of channels, dikes, levee and other flood-protective measures.

(5) Flood-proofing measures designed consistent with the regulatory flood elevation, flood velocities, hydrostatic and hydrodynamic forces and other factors associated with the base flood.

(6) Other conditions as may be required by the County Engineer.

(d) Application for Variance. An application for a variance shall be submitted to the County Engineer signed and stamped by a registered professional engineer or architect and shall include three (3) sets of documents with the following information as may be applicable.

(1) Plans and specifications showing the site and location; dimensions of all property lines and topographic elevation of the lot; existing and proposed structures and improvements, fill, storage area; location and elevations of existing and proposed streets and utilities; flood-proofing measures;

relationship of the site to the location of the flood boundary; floodway and the existing and proposed flood control measures and improvements.

- (2) Cross- sections and profile of the area and the regulatory flood elevations and profile based on elevation reference marks on flood maps.
- (3) Flood study and drainage report in areas where study and report have not been reviewed and accepted by the County.
- (4) Description of surrounding properties and existing structures and uses and the effect of the regulatory flood on them caused by the variance.
- (5) Evaluation and supporting information for the variance with respect to each of the four (4) factors to be considered by the County Engineer as listed in Subsection 15-1.8 (b).
- (6) An agreement that a covenant will be inserted in the deed and other conveyance documents of the property and filed with the Bureau of Conveyances of the State of Hawaii stating that the property is located in a flood hazard area subject to flooding and flood damage; that a flood hazard variance to reconstruct a structure below the base flood elevation will result in increased flood insurance premium rates and owners will not file any lawsuit or action against the Count for cost or damages or any claim; that the property owners will indemnify and hold harmless the County from liability when such loss, damage , injury or death results due to flood hazard variance and flooding of property, and that upon approval of the variance , the covenants shall be fully executed and proof filing with the Bureau of Conveyances shall be submitted to the County Engineer prior to the issuance of a building permit.
- (7) Such other information as may be relevant and requested by the County Engineer.]

**Sec. [15-1.9] 15-1.7 Nonconforming structures.**

Any non conforming structure existing on the effective date if is Article March 31, 1987, may continue subject to the following conditions:

- (1) Any repair, reconstruction, improvement or addition to a non conforming structure, if it is considered to be substantial improvement, shall comply with the applicable standards for a special flood hazard area; provided, however, that substantial improvement of a damaged, destroyed, or demolished structure located in a floodway will not be allowed unless a variance from the flood requirements is obtained.
- (2) All relocated structures shall comply with the applicable standards for the special flood hazard area.

**[Sec. 15-1.10] Appeals.**

An applicant may appeal to the Board of appeals of the County of Kauai when it is alleged that an error was made in any requirement, decision, or determination or from an adverse variance application decision by the County Engineer, by filing a notice of appeal within twenty-one (21) days after notification of the adverse decision. Such notice shall identify the provision(s) of this Article from which the appeal is taken and the reasons fro the appeal. In the review and hearing of the appeal, The Board of Appeals shall apply the standards established in this Article.]

**Sec [15-1.11] 15-1.8 Penalties and Enforcement**

(a) Any person, firm or corporation violating any provision of this Article shall be deemed guilty of a misdemeanor and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provision of this Article is committed, continued or permitted and upon conviction of any such violation such person shall be punished by a fine of not more than five hundred (\$500) or by imprisonment for not more than ninety (90) days, or by both such fine and imprisonment.

(b) Any building, structure, improvement or development constructed or maintained contrary to the provision of this Article is deemed unlawful and a public nuisance, The County may commence a civil action for the abatement, removal or enjoinder thereof in any manner provided by law.

(c) The remedies provided in this Article are cumulative and nonexclusive.:

### SECTION 3. Severability

If any provision of this Ordinance, or the application thereof to any person or circumstance is held invalid, the invalidity does not affect other provisions of applications of the Ordinance which can be given effect without the invalid provisions or application, and to this end, the provisions of this Ordinance are severable.

SECTION 4. Material to be repealed is bracketed. New material is underscored. The bracketed material and underscoring need not be included in any future publication of the Ordinance.

SECTION 5. This Ordinance shall take effect upon its approval.

INTRODUCED By:/s/ JESSE FUKUSHIMA

DATE OF INTRODUCTION:

April 28, 1993

Lihue, Kauai, Hawaii

**Ordinance No. 696**

**Bill No 1751, Draft 1**

**AN ORDINANCE AMENDING THE FLOOD PLAIN MANAGEMENT ORDINANCE, CHAPTER 15, ARTICLE 1 OF THE KAUAI COUNTY CODE, 1987, TO REVISE AND UPDATE THE FLOOD INSURANCE RATE MAPS (FIRMS) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM**

**BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUAI, STATE OF HAWAII:**

Section 1. Legislative Findings and Purpose.

The County Council enacted this Ordinance in accordance with the National Flood Insurance Program pursuant to the National Flood Insurance Act of 1968 (pub. L 90-440 and 91-152), as amended, and continue the County’s participation in the Program so as to enable property owners in the flood- prone areas of the County to obtain flood insurance and to assure future federal financial assistance for the County for use in such areas. The Legislature of the State of Hawaii has in H.R.S. Section 46-11 authorized various counties to participate in the National Flood Insurance Program (NFIP). The Flood Insurance Rate Maps (FIRMs) and the Flood Insurance Study for the County of Kauai which were last amended in 1987 needs to be updated and revised. Therefore, the County Council of the County of Kauai does ordain as follows:

Section 2. That Chapter 15, Article 1, Kauai County Code 1987 relating to Flood Plain Management, is hereby amended to read as follows:

**“Sec. 15-1.2 General Provisions.**

(f) Statutory authority. The Article is enacted pursuant to the U.S. National Flood Insurance Act of 1968 (Public Laws 90-418 and 91-152), as amended, and the U.S. Disaster Flood Protection of 1973 (Public Law 93-234), as amended.

(g) Lands Subject to this Article. This article shall apply to all areas of special flood hazards identified by the Federal Insurance Administration in a scientific and engineering report entitled “the Flood Insurance Study for the County of Kauai,” [dated March 4, 1987] December 9, 1994 and September 30, 1995, with the accompanying Flood Insurance Rate Maps; and lands outside the identified special floods hazard areas encompassing and adjacent to a river, stream, storm water channel, outfall area or other inland water or drainage facility determined by the County Engineer to be subject to special flood hazards. The different special flood hazard areas are as follows:

- (1) Flood Fringe-AE and AH zones
- (2) Floodway
- (3) Coastal High Hazard (Tsunami)—VE Zones
- (4) General Flood Plain—A,X and D zones
- (5) Land Adjacent to Drainage Facility
- (6) “The Flood Insurance Study for the County of Kauai,” dated March 4, 1987 and September 30, 1995 with the following Flood Insurance Rate



Maps that are dated March 4, 1987 with panel numbers 0030C, 0035C, 0055C, 0070C, 0135C, 0201C, 0202C, 0203C, 0204C, 0185C, 0180c, and 0100C and dated September 30, 1995 with panel numbers 0130D, 0140D, 0152D, 0156D, 0157D, 0160D, 0186D, 0190D, 0191D, 0192D and 0194D.

(h) Compliance; Effective Date. No Structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this article and other applicable regulations.

This Article shall take affect on [March 31, 1987] September 30, 1995.

(i) Other Laws and Regulations. All construction and improvements subject to this Article shall comply with other applicable laws and regulations including but not limited to, the Comprehensive Zoning Ordinance, Building Code, Electrical Code, Plumbing Code, Subdivision Code, and Grading Ordinance. This article, designed to reduce flood losses, shall take precedence over any less restrictive, conflicting laws, ordinances and regulations.

(e) Interpretation. In the interpretation and application of this article shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the County; and
- (3) Deemed neither to limit nor repeal any other powers granted under state statues.

(f) Warning and Disclaimer of Liability. The degree of flood protection required by this Article 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 Article 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 Article shall not create liability on the part of the County of Kauai, any officer or employee thereof, or the Federal Insurance Administration, for any flood damage that result from reliance on this Article or any administrative decision lawfully made thereunder.”

### SECTION 3. Severability

If any provision of this Ordinance, or the application thereof to any person or circumstance is held invalid, the invalidity does not affect other provisions of applications of the Ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this Ordinance are severable.

SECTION 4. Material to be repealed is bracketed. New material is underscored. The bracketed material and underscoring need not be included in any future publication of this Ordinance.

SECTION 5. This Ordinance shall take effect upon its approval.

INTRODUCED BY: /s/ NELSON J. SECRETARIO  
(By Request)

Date of Introduction:

**August 9, 1995**  
Lihue, Kauai, Hawaii

**ORDINANCE NO. 788**

**AN ORDINANCE AMENDING THE FLOOD PLAIN MANAGEMENT ORDINANCE, CHAPTER 15, ARTICLE 1, OF THE KAUAI COUNTY CODE, 1987, TO REVISE AND UPDATE THE FLOOD INSURANCE RATE MAPS (FIRMS) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM**

**BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUAI, STATE OF HAWAII:**

**SECTION 1. Legislative Findings and Purpose.**

The County Council enacted the Flood Plain Management Ordinance in accordance with the National Flood Insurance Program pursuant to the National Disaster Protection Act of 1968 (Pub. L. 90-440 and 91-152), as amended, and the Flood of Disaster 1973 (Pub. L. 93-234), to continue the County's participation in the Program to enable property owners in flood-prone areas of the County to obtain flood insurance and to assure future federal assistance for the County for use in such areas. The Legislature of the State of Hawaii through H.R.S. Section 46-11 authorized the various counties to participate in the National Flood Insurance Program (NFIP). The Flood Insurance Rate Maps (FIRMS) and the Flood Insurance Study for the County of Kauai must be updated and revised from time to time to satisfy the standards set forth in paragraph 60.3 (d and e) of the NFIP regulations. Therefore, the County Council of the County of Kauai ordain as follows:

**SECTION 2.** That Chapter 15, Article 1, Kauai County Code 1987 relating to Flood Plain Management, is hereby amended to read as follows:

“Sec. 15-1.2 General Provisions.

- (a) Statutory Authority. This Article is enacted pursuant to the U.S. National Flood Insurance Act of 1968 (Public Laws 90-148 and 91-152), as amended, and the U.S. Flood Disaster Protection Act of 1973 (Public Law 93-234) as amended.
- (b) Lands Subject to this Article. This Article shall apply to all areas of special flood hazards identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for the County of Kauai,” dated December 9, 1994, [and] September 30, 1995 and October 18, 2002 with accompanying Flood Insurance Rate Maps, and lands outside the identified special flood hazard areas encompassing and adjacent to a river, stream, storm water channel, outfall area, or other inland water or drainage facility determined by the County Engineer to be subject to special flood hazards. The different special flood hazards are as follows:

- (1) Flood Fringe-AE and AH zones

- (2) Floodway
- (3) Coastal High Hazard (Tsunami)—VE Zones
- (4) General Flood Plain—A,X and D zones
- (5) Land Adjacent to Drainage Facility
- (6) “The Flood Insurance Study for the County of Kauai,” dated March 4, 1987 and September 30, 1995, and October 18, 2002, with the following Flood Insurance Rate Maps that are dated March 4, 1987 with panel numbers 0030C, 0035C, 0055C, 0070C, 0135C, 0201C, 0202C, 0203C, 0204C, 0185C, 0180c, and 0100C and dated September 30, 1995 with panel numbers 0130D, 0140D, 0152D, 0156D, 0157D, 0160D, 0186D, 0190D, 0191D, 0192D and 0194D [,] and dated October 18,2002 with panel numbers 0030D,0035D, 0045D, and 0355D.

(c) Compliance; Effective Date. No Structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this article and other applicable regulations.

This Article shall take affect on [September 30,1995] October 18, 2002.

(d) Other Laws and Regulations. All construction and improvements subject to this Article shall comply with other applicable laws and regulations including but not limited to, the Comprehensive Zoning Ordinance, Building Code, Electrical Code, Plumbing Code, Subdivision Code, and Grading Ordinance. This article, designed to reduce flood losses, shall take precedence over any less restrictive, conflicting laws, ordinances and regulations.

(e) Interpretation. In the interpretation and application of this article shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the County; and
- (3) Deemed neither to limit nor repeal any other powers granted under state statues.

(f) Warning and Disclaimer of Liability. The degree of flood protection required by this Article 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 Article 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 Article shall not create liability on the part of the County of Kauai, any officer or employee thereof, or the Federal Insurance Administration, for any flood damage that result from reliance on this Article or any administrative decision lawfully made thereunder.”

SECTION 3. Severability

If any provision of this Ordinance, or the application thereof to any person or circumstance is held invalid, the invalidity does not affect other provisions of applications of the Ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this Ordinance are severable.

SECTION 4. Material to be repealed is bracketed. New material is underscored. The bracketed material and underscoring need not be included in any future publication of this Ordinance.

SECTION 5. This Ordinance shall take effect upon its approval.

INTRODUCED BY: /s/ RON KOUCHI  
(By Request)

DATE OF INTRODUCTION:  
July 11, 2002  
Lihue, Kauai, Hawaii