

THE COMMONWEALTH OF PUERTO RICO
OFFICE OF THE GOVERNOR
PLANNING BOARD
SAN JUAN, PUERTO RICO

1st. DRAFT

SPECIAL FLOOD HAZARD AREAS REGULATION
(PLANNING REGULATION NO. 13)

TABLE OF CONTENTS

TOPIC NO. 1

APPLICATION AND INTERPRETATION

			Page
SECTION	1.00	GENERAL PROVISIONS	1
	1.01	Title	1
	1.02	Legal Base	1
	1.03	Purpose	1
	1.04	Applicability	2
	1.05	Terms employed	2
	1.06	Provisions in other Regulations	2
	1.07	Conflicting or Contradictory Provisions	3
	1.08	Violations	3
	1.09	Public Safety	3
	1.10	Derogative Clause, Sustitution and Adoption	3
	1.11	Saving Clause	3
SECTION	2.00	DEFINITIONS	5
	2.01	General Provisions	5-19

TOPIC NO. 2

SPECIAL FLOOD HAZARD AREAS

SECTION	3.00	SPECIAL FLOOD HAZARD AREA ADOPTION	20
	3.01	General Provision	20
	3.02	Purpose of the Adoption	20
	3.03	Notification and Publication of the Adoption	21
	3.04	Adoption Review Procedure	21
SECTION	4.00	FLOOD INSURANCE RATE MAPS	22
	4.01	General Provision	22
	4.02	Map contents	22
	4.03	Prerogatives	22
	4.04	Amendment of Maps	22
	4.05	Zone Boundaries	25
SECTION	5.00	CLASSIFICATION OF THE SPECIAL FLOOD HAZARD AREAS	27
	5.01	Zone Classification	27
	5.02	Zone Types	27
SECTION	6.00	FLOODWAY	28
	6.01	Developments	28
	6.02	Manufactured Homes and Recreational Vehicles in the Floodway	29
	6.03	Subdivisions	29
	6.04	Floor Elevation	29

SECTION	7.00	ZONE AE, LANDS BETWEEN THE FLOODWAY AND THE FLOODPLAIN, LANDS IN THE FLOODPLAIN, ZONE A, ZONE AO	30
	7.01	General Provisions	30
	7.02	Hydrologic-Hydraulic Studies	31
	7.03	Developments on land located on Zone AE with known base flood elevation and a floodway determination	34
	7.04	Developments on lands located on Zone AE where the base flood is known but the floodway has not been determined	35
	7.05	Developments on land located on Zone AO where the water depth of the base flood is 0.30 meters	36
	7.06	Manufactured Homes, Recreational Vehicles and Prefabricated Structures	37
	7.07	Fill on Zone A	38
SECTION	8.00	ZONE VE	40
	8.01	Building on Zone VE	40
	8.02	Manufactured Homes and Recreational Vehicles	41
	8.03	Subdivisions on Zone VE	42
	8.04	Fill on Zone VE	42

TOPIC NO. 3

MANAGEMENT OF REGULATION

SECTION	9.00	PERMITS	43
	9.01	General Provisions	43
	9.02	Permit Requirements	43
	9.03	Issuance of Permits	43
	9.04	Effective Terms for Permit Decisions	44
	9.05	Filing of Permit Application	45
	9.06	Permit Application Review	46
SECTION	10.00	ELEVATION AND INFORMATION REGISTRY	47
	10.01	General Provision	47
SECTION	11.00	EXCEPTIONS	48
	11.01	General Provision	48
	11.02	Developments considered as Exceptions	48
	11.03	Conditions for Exceptions	50
	11.04	Effective Terms for Decisions on Exceptions	50
SECTION	12.00	VARIANCES	51
	12.01	General Provisions	51
	12.02	Initiative	51
	12.03	Public Hearing	51
	12.04	Conditions for Granting Variances	52
	12.05	Effective Term for Decisions on Variances	53
	12.06	Registry of Variances	53
	12.07	Notice	54
SECTION	13.00	SURVEILLANCE AND INSPECTION OF FLOOD HAZARD ZONES	55
	13.01	General Provision	55

TOPIC NO. 4

CONTROL PROCEEDINGS

SECTION 14.00	VERIFICATION OF DATA AND WORKS, AND PENALTY	56
14.01	ADMINISTRATIVE OF JUDICIAL ACTION	56
14.02	PENALTY	57

TOPIC NO. 5

ADOPTION AND EFFECTIVE DATE

SECTION 15.00	ADOPTION	58
15.01	Effective Date	58

THE COMMONWEALTH OF PUERTO RICO
OFFICE OF THE GOVERNOR
PLANNING BOARD
SANTURCE, PUERTO RICO

SPECIAL FLOOD HAZARD AREAS REGULATION
(PLANNING REGULATION NUMBER 13)

TOPIC NO. 1

APPLICATION AND INTERPRETATION

SECTION 1.00 — GENERAL PROVISIONS

- 1.01 — Title — This Planning Regulation No. 13, to enforce security measures for controlling buildings and land development in zones that have been declared as susceptible to floods, will be known and cited as “Special Flood Hazard Areas Regulation.”
- 1.02 — Legal Base — This Regulation is adopted in harmony with the provisions of Act No. 3 of September 27, 1961, Law for the Building Control in Flood Zone Areas and Act No. 75 Organic Law of the Puerto Rico Planning Board and 76, Organic Law of the Regulation and Permits Administration of June 24, 1975, as amended, Law No. 170, August 12, 1988, Law No. 170, August 12, 1988, Law for the Uniform Administrative Process of the Commonwealth of Puerto Rico, as amended and in conformity with FEMA’s National Flood Insurance Program regulations, Part 44, CFR Section 60.3 (d & e) and the corresponding sections, of the Subchapter B about the National Flood Insurance Program.
- 1.03 — Purpose – The provisions of this regulation establishes the safety measures for the control of buildings and land developments in areas declared susceptible to floods has the following purposes;

- a. To restrict or prohibit developments that could be hazardous to health, safety, and property, whenever they are prone to increase the flood elevations or water velocity that could increase erosion.
- b. To require that all flood-prone developments, including their service facilities, be protected against floods from the moment they are built.
- c. To avoid alterations on natural floodplains, water courses, and natural protective barriers that accommodate or channel flood waters or surges.
- d. To control the filling, leveling, dredging, obstacles, and other types of development that could increase damages due to floods or surges.
- e. To prevent or regulate the erection of barriers that could affect water flow or that could increase the risk of floods in other areas.
- f. To discourage new developments, obstacles or substantial improvements, unless it has been shown that alternate locations have been explored and proved not viable.

1.04 — Applicability — The provisions contained in this Regulation will cover and be applicable to:

- 1. Special Flood Hazard Areas adopted by the Planning Board, and the property located thereon.
- 2. Every natural or artificial, public or private person or group thereof
- 3. Land that, because of its topographic nature, its location with regard to a body of water, or its flood history, could be flood-prone.

1.05 — Terms employed — Whenever so justified by its use in this Regulation, every word in singular will be understood to include the plural, and vice versa; all words in the feminine will be understood to include the masculine, and vice versa.

1.06 — Provisions in other Regulations – The provisions set in this Regulation shall be complemented by provisions in any other regulations in force,

approved by the Planning Board, or the Participating Community that are applicable to the specific zone where the property is located. All other pertinent federal Regulations shall also be applicable.

- 1.07 — Conflicting or Contradictory Provisions – If a requirement set in any provision hereunder is more or less restrictive than a requirement set in any other provision of this Regulation, or in any law, regulation or rule established by any duly constituted government authority with jurisdiction, the most restrictive requirement shall prevail.
- 1.08 — Violations – Any violation of the provisions of this Regulation shall be penalized according to Act No. 3 of September 27, 1961, as amended, Laws number 75 & 76 of June 24, 1975 and any other penalty from FEMA to the Participating Community.
- 1.09 - Public Safety - The rules set in this Regulation constitute minimum requirements. The Planning Board, or the Participating Community may require and provide for compliance with stricter measures whenever a condition unforeseen by this Regulation exists or may be anticipated that constitutes a threat to the life or property of the citizen, or a serious hazard to the public health and safety.
- 1.10 - Derogative Clause- The Regulation 13, effective September 5, 2005 is derogated and the Flood Zones Maps of Puerto Rico will be substituted by the new digital Flood Insurance Rate Maps (FIRM) prepared by FEMA, and adopted said maps including any subsequent revision to those maps.
- 1.11 - Saving Clause – If any word, sentence, item, section, subsection, heading, or part of this Regulation were challenged for any reason before a Court, and declared unconstitutional or void, such judgment shall not affect, weaken or invalidate the other provisions or parts of this Regulation; instead its effect will be limited to the word, sentence, item,

subsection, section, heading, or part declared unconstitutional or void, and the nullity or invalidity of any word, sentence, item, subsection, section, heading or part in any specific case will in no way affect or prejudice the application or validity thereof in any other case, except when it is specifically and expressly invalidated for all cases.

SECTION 2.00 – DEFINITIONS

2.01 — General Provisions – All words or phrases defined below, if within the pertinent context, will have the meaning set for each, according to the Technical Dictionary of the Planning Board Regulations.

1. Acre – A land measure equivalent to 1.0296 cuerdas and to 4,046.87 square meters.
2. Permits and Regulations Administration (PRA, or ARPE, its Spanish acronym) – The Permits and Regulations Administration created by Act No. 76 of June 24, 1975, as amended, known as the Organic Act of the Permits and Regulations Administration.
3. Permits and Regulations Administrator – Is the Officer in charge of the Permits and Regulations Administration, or of the officers who substitute for him or her, or to whom he or she has delegated his or her powers and duties, as provided by Act No. 76 of June 24, 1975, as amended.
4. Federal Emergency Management Agency (FEMA) – Federal Emergency Management Agency of the Homeland Security. FEMA also administer the National Flood Insurance Program
5. Structural change – Any change in the structural elements of an existing building or structure, such as: bearing walls, columns, beams, and roofs; or any addition, enlargement, increase or variation in size of such existing structural elements; or the construction, in an existing building, of new additional structural elements such as roofs, beams, columns, or bearing walls.
6. Addition – The enlargement or increase of gross floor area or height of a structure. Addition also, means a new construction.
7. High Risk Coastal Areas – Coastal areas subject to the base flood and to high-velocity waters, including cyclonic surges. These areas

are designated as Zone V and VE, in Flood Insurance Rate Maps-FIRM).

8. Special Flood Hazard Area - Equivalent to Floodplain Area. Is the land in the floodplain subject to a one (1) percent or greater chance of flooding in any given year, also known as the 100 year flood, or the floodplain.
9. Coastal Barrier – Designated areas identified in the Flood Insurance Rate Maps. It constitutes a declaration of the Federal Government of not participating and discourage the development of those areas. The Federal Law prohibits the flood insurance in the majority of the buildings located in those areas. The purpose of the Law is to minimize the loss of life, expenditures of Federal funds and to minimize threats to the wildlife and natural resources.
10. Hydrodynamic load – A force borne upon a structure by flood waters moving on the upstream face, friction along the sides, and negative pressure on the downstream face.
11. Hydrostatic load – Force or pressure resulting from containing a static water mass at any point of contact with a structure. It is the same in all directions and always acts perpendicularly to the surface whereupon it is applied. Hydrostatic loading acts vertically upon structural elements such as floors and roofs, and horizontally on structural parts such as walls, piles, and foundations.
12. Manufactured Home – A structure transportable in one or more sections, built on a permanent chassis and is designed for use with or without a permanent foundation when connected to required utilities (water, electric power, gas, etc.). [The term does not include a recreational vehicle.]

13. Water Course Channel – The bed of a river, creek or brook where water normally flows.
14. Floodway – The bed of a river, brook or natural storm drainage, plus those portions of neighboring lands that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 0.30 meters (one foot, in effective detailed studies in accordance with the sections 6.01 and 7.04) In case of a new detailed study (Zone A, section 7.02) taking into consideration fill deposit, Section 7.07, the maximum increase to be allowed will be 0.15 meters, as determined by the hydrologic-hydraulic study..
15. Certificate – A statement by a duly licensed architect, engineer or surveyor, who is a member of the pertinent professional association, indicating that the plans and other documents submitted in final form comply with the specifications of this Regulation and with the best practices of his or her profession.
16. Elevation Certificate – Document provided by FEMA for the flood insurance adjustment, but not exclude the property from the Special Flood Hazard Area. The document provides information about the grade and floor elevations and others with the purpose to compare them with the base flood elevation and determine if a flood insurance adjustment proceed. The Certificate shall be signed by a Licenced Land Surveyor or a professional authorized in surveying in Puerto Rico. It is a requisite that the Certificate should be included as part of the permit file.
17. Flood Certificate – Declaration from the Planning Board or the Participating Community which indicates the flooding condition of a parcel of land, farm or a particular area and it is issued by the

Secretary's Office or the designated office of the Community, as per request by a person, entity or group.

18. Start of Construction – Date when the construction permit was issued, provided that the construction, repair, reconstruction, rehabilitation, enlargement, installation, or any other construction is actually under way within one-hundred and eighty (180) days after such permit was issued. "Actual construction" means the start of the permanent construction of a building upon land, such as floor slab or foundation casting, pile sinking, construction of columns, or any other work beyond the excavation stage; or the placing of a manufactured home on its foundation. "Permanent construction" does not include land-preparation activities, such as clearing, leveling and filling; nor does it include the installation of roads or sidewalks; nor excavations for basements, foundations, platforms; nor the installation of forms; nor the installation, on the property, of auxiliary buildings such as garages or shacks not used as dwellings nor attached to the main structure.

In case of substantial improvements, the starting date of construction means the date when the first change on any wall, roof, floor or any other structural element in a building is performed, regardless of whether or not such change affects the dimensions of the building.

19. Community – As per the National Flood Insurance Program, any state, political subdivision, or municipality having the authority to adopt and enforce the floodplain regulation.

20. Participating community – Community that adopts and enforce the floodplain ordinances. As per the National Flood Insurance Program, known as the eligible community where the sale of flood insurance has been authorized.

21. Increased Cost of Compliance, ICC – Payment that provides for the cost of complying with floodplain management regulations, after a direct physical loss due to flood has occurred. In case of a structure covered by the Standard Flood Insurance Policy (SFIP), that sustains a loss due to flood and has been declared as substantially or repeatedly damaged (repetitive losses), the ICC helps defray the costs for the structure's elevation, floodproofing, or demolishing, or any combination thereof, if the structure is eligible and complies with ICC provisions. This coverage is additional to the SFIP coverage, and all policies issued or renewed on or after June 1, 1997, shall include the ICC coverage, save for policies for structures under the Group Flood Insurance Policy.
22. Substantial damage – Damage of any origin sustained by a structure whereby the cost of restoring the building to its before-damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term also means all flood-related damages sustained by a structure in two (2) separate flood events within a ten (10) year period, due to which the average cost of repair, at the time of such events, equals or exceeds 25 percent of the market value of the structure before the damage occurred in each of the events.
23. Department of Natural and Environmental Resources – Governmental Agency created by the Law no.23, June 20, 1970.
24. Development – Any man-made change on improved or non-improved property, including, but not limited to, buildings and other structures, mining, dredging, filling, leveling, paving, excavation, drilling or storing of equipment and materials within an special flood hazard area.

25. Land Development – Man-made improvements on land, such as earthworks for filling or excavation, and other housing development works works such as tamping, paving, and the construction of curbs and sidewalks, including, but not limited to, public utility structures and facilities for water distribution, storm and sanitary sewers, lighting, power and telephone lines, and the like.
26. Design – Will be understood as the design performed for flood-protection works necessary for the 100-year flood. For purposes of this Regulation, flood control and floodproofing works will be designed for protection against the base flood.
27. Freeboard – A safety factor consisting in an additional height above the base flood, that must be observed by the minimum level of flood-control and other works, such as bridges and sewers, in order to compensate for unknown or unforeseen factors when calculating the base flood elevation. This freeboard shall not be less than 0.30 meters (1 foot) or as defined in other applicable rules and regulations, whichever is the greater. Where embankments are concerned, freeboard shall be of no less than 0.91 meters (3 feet).
Where construction for residential use is concerned, the lowest floor elevation will have a freeboard of no less than 0.30 meters above the base flood elevation. For commercial purposes, floor elevation shall be floodproofed equal or above the base flood elevation.
28. Natural Storm Drainage – A depression on the terrain for runoff drainage.
29. Sand Dunes – Natural sand accumulation in mounds or banks inland from the beach.
30. Building – A walled and roofed, structure or part of it, to be permanently or provisionally occupied by persons, animals, or

equipment, such as dwellings, temples, offices, theaters, store houses, factories, schools, hospitals, shops, or any other structure of such nature. The term “building” shall be read as if followed by the phrase “or part thereof.” See also, structure

31. Elevated building – A non-basement building, whose lower floor has been built above ground level by means of filling or solid foundation walls in its perimeter, piles, columns (posts and piers), or breakaway walls.
32. Erosion Caused by Flood – The collapse or subsidence of land along the shores of body of water, as a result of undermining caused by the waves or currents of water exceeding anticipated cyclical levels, or by abnormal surges of water or bodies of water, or by flood-causing tides.
33. Structure – That which is erected, constructed, fixed or located by man on, below, or above ground level, and which includes, but is not limited to, buildings, towers, stacks, and aerial transmission lines. Means also, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.
34. Historic Building – A structure listed in the National Register of Historic Places or in an Inventory of Historic Sites or Places, or is an Eligible Property within a historic zone. “Eligible Property” shall be understood to mean a property with historic significance that could meet historic site eligibility criteria, but has not yet been individually designated as such.
35. Hydrologic-Hydraulic Study – Scientific technical study through which different water volumes was determined for different flood events, analyses of the water bodies hydraulic characteristics and its

adjacent lands to provide estimates of the flood elevation for different recurrence intervals within a hydrographic basin.

36. Flood Insurance Study – An official report prepared by the [Federal Insurance Administration (FIA)], Federal Emergency Management Agency (FEMA) which contains the flood profiles, as well as the Floodways and Flood Boundaries, and the water surface elevation of the base flood.
37. Flood – The action or effect by which normally dry land is covered by water due to rains, spates, tidal waters, and river or brook overflows, or to other natural forces.
38. Base Flood – A flood having a 1 percent chance of being equaled or exceeded in any given year. It is also known as a 100-year flood.
39. Board – The Puerto Rico Planning Board as a collegiate body, even though it functions in parts, as per the provisions of Act No. 75 of June 24, 1975, as amended.
40. Planning Board – A government body created by Act No. 75 of June 24, 1975, as amended, known as the “Puerto Rico Planning Board Organic Act.” It is also the National Flood Insurance Program State Coordinating Agency.
41. Subdivision – It is the subdivision of a piece or parcel of land in two (2) or more parts, for the purpose of selling, conveying, assigning, leasing, bequeathing, use, encumbrance, trust, distribution of estate or community, or for any other transaction; the constitution of joint ownership on a plot, piece or parcel of land wherein specific plots are conveyed to joint owners, as well as for the construction of one or more buildings. It also includes housing development, as it has been used in Puerto Rican legislation, and, also, a mere segregation.

42. Map – A graphic or topographic representation of the special flood hazard area.
43. Flood Insurance Rate Map - Official map prepared and approved by the Federal Emergency Management Agency (FEMA), adopted by the Planning Board, that identifies the Special Flood Hazard Areas, as per the following zones:
- a. Zone A: 100-year Special Flood Hazard Area. It is determined by approximate methods and no base flood elevation determined.
 - b. Zone AE: 100-year Special Flood Hazard Area, determined by detailed methods, and for which the base flood elevation has been identified. Also, can show the floodway determination.
 - c. Zone AO: Special Flood Hazard Area subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown within this zone.
 - d. Zone D: Areas in which flood hazards are undetermined, but possible.
 - e. Zone V: Coastal flood with velocity hazard, (wave action), for which no base flood elevation is determined.
 - f. Zone VE: Coastal flood with velocity hazard (wave action), for which a base flood elevation is determined. (100 year flood)
 - g. Zone X (shaded): Areas of 0.2% annual chance flood, Areas of 100 year flood with average depths of less than 0.3 meter or with drainage area less than 2.6 square kilometers and areas protected by levees from 100-year flood.
 - h. Zone X (no shading): Areas determined to be outside 500 year floodplain.

44. Floodproofing Measures – Any combination of structural and non-structural additions, changes or adjustment to properties and structures, which reduce or eliminate flood-related damages to land, water and sanitary facilities, structures, and their contents.

45. Substantial Improvement – Any addition, reconstruction, rehabilitation or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of the construction of the improvement.

This definition includes structures that have incurred repetitive loss or substantial damage, regardless of the repair work being performed. However, it does not include:

- a. any project for improvement of structures to correct existing state or municipal code violations with regard to health, hygiene, or safety aimed at the protection of life, identified by the concerned agency, and that constitute minimum requirements for ensuring safe living conditions.
- b. any alteration to a historic structure, provided that the alteration does not preclude the structure's continued designation as a historic structure.

46. Cumulative Substantial Improvement – A substantial improvement of which the cost of repair or improvement has accumulated during a period of time, so that the structure is required to comply with floodplain regulations. Usually refers also to cumulative substantial damage.

47. Autonomous or Authorized Municipality – Municipality that has an effective Ordinance Territorial Plan in compliance with the provisions of the Law No. 81, Municipal Autonomous Law of August 30, 1991, as amended.

48. Base Flood Elevation – The maximum elevation a river, creek or brook overflow would reach during a base flood. It is the flood having a 1 percent probability of being equaled or exceeded in any given year.
49. Highest Adjacent Grade – The highest natural elevation of the ground surface, prior to construction and next to the proposed walls of a structure.
50. Mean Sea Level, MSL – For floodplain management purposes, it is the “National Geodetic Vertical Datum” (NGVD) of the year 1929 or other, used as reference for all flood elevations.
51. Populated Cluster or Town – Developed area including 20 or more buildings or dwelling units with at least 70 percent occupancy rate of plots within the area, with the following density rates:
- a. Populated Cluster — Rural community, village or developed settlement with a gross population density of 3 or more families per *cuerda*.
 - b. Town – A developed city or town in any municipality or part thereof, with a gross population density of 6 or more families per *cuerda*.
52. New Construction – A structure started on or before the effective date of the provisions set by this Regulation, including substantial improvements to such structures. Also, any addition that includes and enlargement of the floor area will be evaluated as a new construction.
53. Encroachment – (Obstruction, Invasion, Obstacle) Includes any dam, diversion, development, new construction, wall, riprap, embankment, levee, dike, pile, abutment, projection, revetment, excavation, channel rectification, bridge, conduit, building, refuse, automobile

body, fill or other analogous structure or matter in, along, across, or projecting into any 100-year floodplain which may impede, retard, or alter the pattern of flow of water, either in itself or by catching or collecting debris carried by water or that is placed where the natural flow of water would carry the same downstream to the damage or detriment of either life or property.

54. Breakaway Wall – A wall that is not 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 the supporting foundation system.
55. Repetitive Loss – Flood-related damage to a structure in two separate flood events during a 10-year period for which the average repair cost at the time of the events equals or exceeds 25 percent of the structure's market value before the damages occurred in each event.
56. Person – Any natural or artificial, public or private person, and any group thereof.
57. Lowest floor – The lowest floor of the lowest enclosed area (including a basement). An unfinished or flood-resistant enclosure usable solely for parking of vehicles, access, or storage in an area other than the basement area, is not considered a building's lowest floor, provided that such enclosure is not built in violation of design requirements on applicable elevations.
58. National Flood Insurance Program – A Program created in 1968 by the United States Congress, which makes flood insurance available to participating communities.

59. Property – Land, building, structure or any combination thereof, including historical sites.
60. Creek – A waterway that is part of a river tributary system or that discharges into a lake, lagoon, sea, or ocean.
61. Effective and Real Construction – The beginning of urbanization and permanent construction of a structure on the land that goes beyond the excavation stage, such as, the pouring of slab, or footings, the installation of piles, the construction of columns, or any work, or the placement of a manufactured home on its foundation.
62. Reconstruction – The remaking or [renovation] of any part or parts of a structure. In case of a building with historical or architectural significance, it refers to the new construction that copies the materials and form of the previous historic structure, based on documentation corroborated or supported by scientific evidence through a typology study.
63. Repair – The replacement of an existing minor work in a structure, not including the additional work, that constitutes a change in the structure or [that constitutes an enlargement whether in area or height; or that could affect or change exits, or a fundamental part of an elevator, plumbing, gas installation, or other.] the façade, and enlargement in area or height, or a change in the means of exit.
64. River – A watercourse that serves as main drainage to a basin, and which discharges into another river, lake, lagoon, or ocean.
65. Flood Insurance – An insurance coverage proposed under the National Flood Insurance Program.
66. Basement – Any area of the building having its floor subgrade (below ground level) on all sides or that part of a building that is located beneath the curb level or partly above that level in such a way that

the vertical distance between the curb level and the floor equals or exceeds the vertical distance between said level and the ceiling. For regulatory purposes, the height of a basement is equal to the vertical distance between its floor and ceiling.

67. Land – Includes the soil and the bodies of water, as well as the space above and beneath them.
68. Floodplain – Usually dry, low- or semi-low lands susceptible to being inundated by waters from any natural source. These low areas usually lie next to a river, creek, brook, ocean or lake affected by the highest flood elevations known in the history of the region, or by the base flood, as illustrated in presently available studies and maps. Floodplain also means the Flood having a one percent (1%) chance of being equaled or exceeded in any given year, the 100 year recurrence, the Special Flood Hazard Areas.
69. Variance – A grant of relief from compliance with the requirements of the Special Flood Hazard Areas.
70. Recreational Vehicle – A vehicle of 400 square feet or less when measured at the largest horizontal projections, built on a single chassis, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily for recreational, camping, travel or seasonal use.
71. Violation – Noncompliance with the requisites of this regulation. Also included the absence of the Elevation Certificate or other such Certificate.
72. Zone – A classification of flood hazard areas, as adopted by the Board designated by FEMA and delineated in the Flood Insurance Rate Maps.

73. Coastal Zone – Coastal strip of land and its adjacent waters within its jurisdiction delineated by the Department of Natural and Environmental Resources, approved by the Planning Board and the Governor of Puerto Rico, which is extended 1,000 meters landward from the coastal line and including additional distances necessary to include natural systems as well as the waters and the ocean or maritime bottom which extends three (3) marine leagues (10.35 terrestrial miles) seaward.

TOPIC NO. 2

SPECIAL FLOOD HAZARD AREAS

SECTION 3.00 — FLOOD HAZARD AREAS ADOPTION

3.01 — General Provision — Land affected by the base flood will be declared as Special Flood Hazard Area by the Board, as per the provisions of Act No. 3 of September 27, 1961, as amended, and in conformity with the National Flood Insurance Program regulation.

a. Base to establish the Special Flood Hazard Areas

The Special Flood Hazard Areas are identified in the Flood Insurance Rate Maps and the Flood Insurance Studies prepared by FEMA, including any amendment, later on.

b. Use of available information about the Special Flood Hazard Areas

The Planning Board or the Participating Community will adopt and reasonably use the available information about the flood hazard zones and base flood elevations determinations to assure that the human health and safety be protected, until the physical map revision be finished, in agreement with any other regulation or measures about a sound floodplain management.

3.02 — Purpose of the adoption - Flood hazard area adoption will promote the following public policy purposes:

1. To protect human life and health.
2. To reduce expenditure of public money in costly flood control projects and mitigation plans.
3. To reduce the need for rescue and relief efforts associated with flooding.
4. To reduce prolonged business interruptions;

5. To reduce damage to public facilities and infrastructure such as water and gas mains; electric, telephone and sewer lines; streets, and bridges.
 6. To ensure that lessees, sublessees, occupants or potential title holders to land be advised that their property is located on flood and tide hazard zones, and that they must comply with the provisions and requirements of this Regulation for any construction, use or development thereupon.
 7. To avoid changes to the natural hydrology of the floodplains for the protection and conservation of the wetlands.
 - a. Public Law of Wetlands in Puerto Rico (Law No. 314 of December 24, 1998)
 - b. Objectives and Public Policies of the Land Use Plan, as adopted by the Planning Board.
 - c. Regulations and Legislation about the protection of the wetlands of Puerto Rico.
- 3.03 – Notification and Publication of the Adoption - The Board will notify and publish all special flood hazard area adoption, subject to the provisions of Act No. 3 of September 27, 1961, as amended.
- 3.04 – Adoption Review Procedure
- a. Pursuant to Section 2.7 of Act No. 170 of August 12, 1988, as amended, any action to challenge the validity of this Regulation, including the maps that form a part hereof, for noncompliance of the provisions of the said Act must be initiated before the Superior Court with venue, within 30 days from the effective date of this Regulation.
 - b. The action initiated to challenge the procedure followed for adopting this Regulation or the maps hereunder, will not stay effectiveness of the Regulation.

SECTION 4.00 – FLOOD INSURANCE RATE MAPS

- 4.01 – General Provision – The Planning Board, as the State Coordinating Agency of the National Flood Insurance Program (NFIP) administered by FEMA, will adopt the corresponding the Flood Insurance Rate Maps, in accordance with the agreement, as a participating community under the NFIP. The Planning Board, also, with the advice of the Department of Natural and Environmental Resources, will evaluate and adopt map amendments, taking into account, among other things, the available data on maximum elevations reached by the different bodies of water whenever flooding occurs, as well as the studies made for determining the maximum flood elevations for particular bodies of water.

The Special Flood Hazard Areas delineated as such in the Flood Insurance Rate Maps, of the Federal Emergency Management Agency, National Flood Insurance Program, will be classified as provided in this Regulation.

From the effective date, all Flood Insurance Rate Map or amendment to it, will be part of this regulation. The effective date of said maps, or amendments thereof, will be determined in accordance with the effective law.

- 4.02 – Map contents - The Flood Insurance Rate Maps will contain the minimum requirements set by the Flood Insurance Study.
- 4.03 — Prerogatives – Absent base flood elevation data on the Flood Insurance Rate Maps, the Board, the Regulations and Permits Administrator or the Participating Community will obtain, review, and use the best available information in order to determine the applicable requirements.

- 4.04 — Amendment of Maps – The Board may request amendments to a Flood Insurance Rate Map at its own initiative or at the request of the Mayor of the Municipality or of the owner of the property affected, whenever there are proposed or occur changes in the area, boundaries, or other characteristics of a zone susceptible to inundation due to natural causes or to works proposed or performed by man, or for other technical reasons, including the updating of current studies based on new data.
- All applications for amendment filed by private individuals must be presented to the Office of the Secretary of the Board, or in the corresponding Participating Community, which will refer the request to the Board, together with the following information or documents:
- a. Evidence indicating that the application is signed by the owner of the property for which the amendment is sought.
 - b. An explanatory memorandum setting forth the merits and justification for such application.
 - c. Maps drawn on a 1:10,000 scale, illustrating the area covered by the property in question.
 - d. Hydrologic and hydraulic studies in support of the application. The applicant must complete the pertinent filing form. The study to be performed must follow, at least, the Guidelines for the Preparation of Hydrologic-Hydraulic Studies of the Planning Board and the effective proceedings of FEMA..
 - e. Topographic plan based on the mean sea level, certified by a duly licensed engineer or surveyor who is a member of the pertinent professional association. The vertical elevation reference point (B.M, bench mark) must be identified and certified, as well as the elevation of said point.

- f. The applicant must submit a certified list of property owners affected by the changes proposed in the amendments, who have been served with notice of the application, and must explain the impact of the proposed action upon said properties, which will be evaluated as follow, .
 - 1. Submit notification and acceptance of the proposed map changes from all affected property owners or,
 - 2. Submit notification of, but not acceptance by, all property owners affected by the map changes or,
 - 3. Submit neither notification or non acceptance by property owners affected by the map changes.
- g. Whenever technical information on the current studies is available, the new study must be based thereupon.
 - 1. The applicant must assess whether it is necessary to revise the hydrology estimates of the current study, and must document his or her opinion as to them.
 - 2. The basis of the hydraulic analysis must at least include, but is not limited to, duplicate the assessment of the current conditions (current regulatory map), the existing conditions (including any changes or modifications not shown on the current map), and the proposed conditions.
- h. The applicant must fulfill FEMA's requirements during the technical review process.
- i. If the amendment is approved based on proposed works, and once the project has been built, the owner thereof, or his representative, will file with FEMA, with the Board or the Participating Community, a certificate describing as-built conditions of the project, in order that the map be physically revised. Only under this condition, the

Planning Board or the Participating Community will continue the process for the map change. The map change should be approved by FEMA. If this step is omitted, the project will remain within a Special Flood Hazard Zone.

- j. Absent the information requested in item g above, the applicant must follow the instructions and procedures established for the preparation of a new study.

During the revision process, the Board will file the application with the Federal Emergency Management Agency for recommendations.

The Board may grant relief of some of the aforesaid requirements, except those required by FEMA, if shown to its satisfaction that compliance therewith is not necessary. For the amendments submitted in a Participating Community, the Board must have the Community's approval before grant a requirement.

All applications for amending a Flood Insurance Rate Map must comply with the procedures of this Section and the FEMA's requirements.

A public hearing must be held before a map can be amended, or proposed to be amended, as required by the Law No. 3 of Sept. 27, 1961, as amended.

- 4.05 – Zone Boundaries – The Board, or the Participating Community whenever necessary, may interpret the exact location of the boundaries of the zones declared to be special flood hazard areas, which are shown on the Flood Insurance Rate Maps, based on the conditions revealed in a on-site inspection. It will be the developer's responsibility to certify the flood zone limit within its property according to the effective flood zone limit. The certificate is subject to be revised by the Board, or the Participating Community.

The Board's interpretation as well as the Participating Communities will be restricted to the effects of the Regulation's application; thus, lending companies are in no way bound to accept this interpretation, and no natural or artificial person will be barred from seeking reconsideration of such boundaries from the Federal Emergency Management Agency (FEMA). Said agency has established procedures for evaluating such applications.

SECTION 5.00 — CLASSIFICATION OF THE SPECIAL FLOOD HAZARD AREAS

5.01 — Zone Classification – Flood hazard areas will be classified per zone, as provided below, taking into account their designation on the Flood Insurance Rate Maps, or any other data on base flood and surges, including considerations as to water depth and velocity, wave height, the condition and topographic characteristics of the terrain and vegetation cover, and the risk to the life and property of the persons settled or to be settled thereon.

5.02 – Zone Types – For the purposes of applying this Regulation and in accordance with the Special Flood Hazard Areas designation of FEMA, the following zone types are established:

- Floodway – Includes lands located within the floodway boundaries. These lands are also designated as Zone AE on the Flood Insurance Rate Map.
- Coastal High Hazard Area Zone VE – Includes land located on coastal high hazard areas. These lands are designated as VE on the Flood Insurance Rate Maps (FIRM).
- Zone AE – Includes land susceptible to inundation by the base flood, located between the floodway and floodplain limits. This zone can also include the floodplain, floodway limits and coastal area. Absent the base flood and the Floodway determination, this zone shall be equal to the area comprised within the floodplain, equivalent to Zone A. In general terms, these lands are designated as Zone A, Zone AE and Zone AO in the Flood Insurance Rate Maps.

SECTION 6.00 – FLOODWAY

6.01 – Floodway Developments

- a. Starting on the effective date of the Flood Insurance Rate Maps, no permits will be issued to locate new encroachments on the Floodway, such as structures, filling, substantial improvements, and other developments, including septic tanks, unless it is shown, that alternate locations out of the floodway have been evaluated and proved not viable and by means of a hydrologic-hydraulic study performed in accordance with standard engineering practice, that the proposed encroachments will not increase floodway elevations during the base flood discharge event. If feasible, all new construction or substantial improvements must comply with applicable flood mitigation requirements.
 1. If the proposed development proposes fill deposit and implies an amendment to the Floodway limit, all map amendment procedures set in Section 4.04 must be complied with, including FEMA's procedures.
 2. The hydrologic-hydraulic study to be performed must be based on the current regulatory study. The Board will also accept, as part of the study, applicable methods approved by the regulatory and state agencies and FEMA for assessing the impact on the Floodway.
- b. Legally authorized structures actually started as of the effective date of this Regulation may be completed and occupied or used for the purpose stated on the authorization granted.
- c. Existing structures on the floodway may not be enlarged, unless they comply with the provisions of Item (1) of this Subsection. However, structures may be repaired or rebuilt for preservation purposes, and

also may be altered, provided that these alterations are necessary for protecting the life and safety of its occupants, or for improving their safety conditions against flood water hydrodynamic or hydrostatic loadings. Such repairs or structural alterations will not entail the creation of new dwelling units or the habilitation of new premises for uses additional to the current use, and must comply with the provisions of other applicable planning regulations.

d. Permits will be granted for the construction, rehabilitation, or restoration of any structure listed on the National Register of Historic Sites or Inventory of Historic Places.

- 6.02 – Manufactured Homes and Recreational Vehicles in the Floodway – The location, temporary storage, or parking of manufactured homes or recreational vehicles will not be permitted on this zone.
- 6.03 – Floodway Subdivisions – No subdivisions of land will be permitted in the floodway from the effective date of the Flood Insurance Rate Map. Exceptions to this provision may be entertained if compliant with Section 11.02 of this Regulation.
- 6.04 – Floor Elevation – The lowest floor elevation for residential use will be at least 0.30 meters above the base flood elevation. For commercial use, the lowest floor elevation will comply with Section 7.03(2).

SECTION 7.00 – ZONE AE, LANDS BETWEEN THE FLOODWAY AND THE FLOODPLAIN LIMITS, LANDS IN THE FLOODPLAIN, ZONE A AND ZONE AO.

7.01 – General Provisions

- a. Permits will be issued for new structures, subdivisions, substantial improvements, and other developments in the floodway fringe from the effective date of the Flood Insurance Rate Map and the requirements of this Section are met.
- b. All subdivisions and housing developments will take into account the need to reduce flood-related damages, and all housing development works will be designed as to minimize flood related damages.
- c. Legally authorized structures actually started as of the effective date of this Regulation may be completed and occupied or used for the purpose stated on the authorization granted.
- d. New construction works and other developments will comply with the following:
 1. Design – Will be designed and built in such a way as to pose the least possible obstruction to the flow of the water, meet safety conditions, resist the effects of hydrodynamic and hydrostatic loadings of flood waters, and comply with any other provisions of applicable laws and regulations.
 2. Anchorage – Structures must be anchored as to prevent flotation, collapse or lateral movement.
 3. Construction materials and methods – Materials and infrastructure will be flood-resistant. Construction methods and practices must minimize flood-related damages.
 4. Infrastructure – All storm and sanitary sewer, electric power, or ventilation systems, air conditioning equipment, and other new or

replacement facilities will be designed for minimizing or eliminating flood water infiltration into them, and must prevent flood water discharges into the sanitary system.

Solid waste disposal systems will be located in places where they do not contaminate or come in contact with flood waters, and where flood waters may not affect them. Septic tank is not allowed as a method of sanitary water disposal.

5. Land and floor elevations of the development must be certified for mean sea level (MSL).
- e. Flood Insurance Applicability – For the purposes of mandatory flood insurance, the Federal Emergency Management Agency shall determine whether a structure is excluded or could be excluded from the special flood hazard area, by comparing the elevation of the lowest adjacent grade of the structure and the elevation of the highest adjacent grade (including basement), to the base flood elevation. If the entire structure and the lowest adjacent grade are at or above the base flood elevation, the structure may be excluded from the special flood hazard area.
- f. Freeboard – All new construction or substantial improvement for residential use located in the Zones AE, AO and A will have the lowest floor elevation (including basement) 0.30 meters above the base flood elevation.
 1. For commercial or industrial use, the floor elevation can be designed equal or above the base flood elevation or floodproofed with the floor elevation below the base flood elevation.

7.02 – Hydrologic-Hydraulic Studies (Zone A, undetailed study)

- a. In case of developments on land located on flood hazard zones whose base flood elevation is unknown (identified as Zone A on the

Flood Insurance Rate Maps), the proponent will include hydrologic/hydraulic studies with his or her application, as well as specific proposals, to the Regulations and Permits Administration the Board, or the Participating Community in order to comply with the corresponding Subsection 7.01 (d,f), and protect the land object of the petition from floods or surges. If the proposals are accepted, and endorsement by the Department of Natural and Environmental Resources has been obtained, the recommended measures or works will be included in the housing development works and must be operating before the structures built on this land are occupied. If the proposal contemplates the deposit of fill on the property, the provisions of Section 7.07 must be complied with and the proponent must obtain all the necessary endorsements and permits from the pertinent government agencies, including those that might be required under the provisions of Section 404 of the Federal Water Pollution Control Act, as amended in 1972 (PL 92-500).

- b. Subdivisions and housing developments larger than 50 units or 5 acres, whichever is the lesser, require a determination of the base flood elevation. The Board or the Regulations and Permits Administration, or the Participating Community as the case may be, may require a determination of the base flood elevation in smaller subdivisions or housing developments, when deemed necessary.

To obtain, review, and reasonably utilize any base flood elevation and floodway data from a state, federal, or other sources related to these studies.

- c. The proponent may be released from his obligation to prepare hydrologic-hydraulic studies for developments located on basins for which such studies have already been performed by state or federal

bodies, or by a private entity, if the studies in question have been accepted by the Department of Natural and Environmental Resources, the Regulations and Permits Administration, FEMA, or the Board, as the case may be. However, in pursuance of the hydrologic-hydraulic study prepared for flood protection of the land object of the petition, the proponent shall accompany the supporting technical studies to determine its applicability related to the case and the map amendment process. If studies towards an integral flood management plan have been performed, such plan must be already completed before the start of the project construction. It will be also necessary to determine if the modification to the flood prone areas based in the plan, requires a floodway revision which needs the corresponding agencies approval.

The proponent may also be exempt from preparing the hydrologic-hydraulic study for cases of residential or non-residential construction in a simple case when the lowest floor will be at least 2 feet above the existing highest adjacent grade in the lot and/or following the recommendations of FEMA's available technical literature.

1. The Planning Board, the Regulations and Permits Administration or the Participating Community will reserve the option of requiring additional studies in case of a cumulative effect occurs or other conditions that can occur in the area, or it is anticipate related to the structure risk and its location in the floodplain.
- d. Hydrologic-hydraulic studies will follow current rules and procedures, and will be prepared according to engineering models accepted by state and federal agencies.

- 7.03 – Developments on land located on the Floodway Fringe (Zone AE) with known base flood elevation and a floodway determination.
- a. Residential structure – All new construction or substantial improvement shall have a lowest floor elevation, including basement, of at least 0.30 meters above the base flood elevation.
 - 1. An exception shall be requested if the floor elevation of the basement is below the base flood elevation, as per Seccion 11.02(c).
 - b. Non-residential structure – All new construction or substantial improvement for commercial, industrial, or other non-residential use shall have a lowest floor elevation, including basement, of up to or above the base flood elevation, or, including the infrastructure and sanitary facilities:
 - 1. It may be below the base flood elevation if it is a flood-proof structure with substantially impermeable walls.
 - 2. It must have structural components capable of withstanding hydrostatic and hydrodynamic loads and flotation effect; and
 - 3. It must be certified by an engineer or architect who is a member of the pertinent professional association. This certificate must be filed with the permit application.
 - c. Elevated structure – All new construction or substantial improvement to an elevated building containing enclosed areas formed by foundation and other exterior walls, located below the base flood elevation, usable only for parking vehicles, building access (stairs), or storage, in non-basement areas, that are susceptible to inundation, shall be designed to automatically equalize hydrostatic load on the exterior walls by allowing for the entry and exit of flood waters, complying with the following requirements:

1. Provide two openings with a net area of no less than one square inch per square foot of enclosed area subject to flooding.
 - (i) The bottom of all openings will not be higher than 0.30 meters (1 foot) above the grade, and
 - (ii) The openings will be covered by screens, shutters, valves, or any protective cover; provided that they permit the automatic flow of floodwaters in both directions [in and out the structure].
 2. No public utility connection for electricity, plumbing, and the like, will be permitted under the base flood elevation.
 3. Access to enclosed areas will be the minimum required for parking vehicles (garage doors), or spaces restricted to storage, or access to the dwelling areas.
- d. These enclosed areas will have no interior finishing, nor will be divided into separate areas.
- e. The designs that meet these requirements must be duly certified by an engineer or architect who is a member of the pertinent professional association. The certificate must be filed with the permit application.
- 7.04 – Developments on Zone AE lands where the base flood elevation is known but the floodway has not been determined.
- a. No new construction, substantial improvements or any other types of development (including filling), will be permitted unless it is shown, by the pertinent study, that the cumulative effect of the proposed development, combined with other existing or anticipated developments, will not increase the base flood elevation by more than 0.15 meters (half a foot) anywhere within the community.

- b. After performing the pertinent study, the development must comply with Section 7.01.
- c. For those lands classified as Zone AE and located downstream of the lands described in Section 7.03 and/or located between the detailed study and the Zone VE the corresponding revision to extend the detailed study should be performed. Once the flood hazard zone has been determined, the corresponding regulation must be applied.
- d. For those lands classified as Zone AE and located landward, adjacent to Zone VE and where a defined body of water does not exist (i.e., river, creeks, brooks or other) and where a base flood elevation has been determined, and no impact on other base flood elevation, was demonstrated, it is required to comply with Section 7.01.
- e. The lowest floor elevations for residential use, under the previous sections, will be 0.30 meters above the base flood elevation.

7.05 — Developments on lands located on Zone AO where the water depth of the base flood oscillates between 0.30 meters (1 foot) and 0.91 meters (3 feet) — All new construction or substantial improvements in these areas will comply with the following:

- a. Residential structures – All new construction and substantial improvement of residential structures shall have the lowest floor (including basement) elevated over the highest adjacent grade, at least as high as the depth, specified in feet (or meters) on the Flood Insurance Rate Maps, or at least three feet (0.91 meters) if depth were not specified.
 - 1. Comply with the requisites of Section 7.01 and its subsections.
- b. Non-residential structures – Any new construction and substantial improvement of non-residential structures shall:

- 1 Have the lowest floor (including basement) elevated above the highest adjacent grade elevation, at least as high as the depth, specified in feet (or meters) on the Flood Insurance Rate Map or at least two feet (0.61mts.)if depth were not specified, or, together with attendand utility and sanitary facilities, be designed so that the area below the base flood elevation is waterproof with walls substantially impermeable to water, and in such a manner that the structural elements may withstand hydrostatic and hydrodynamic loads and the flotation effect.
2. Be certified by a licenced engineer or architect who is a member of the pertinent professional association, as compliant with the requirements of this section. This certificate must be submitted with the permit application.

7.06 — Manufactured Homes, Recreational Vehicles and Prefabricated Structures

- a. Zone AE where the Base Flood Elevation is known and the Floodway has been delineated – Any new development will be placed over fill and the lowest floor shall be above the base flood elevation, thus complying with the provisions set in Section 7.03 of this Regulation.
- b. Zone AE where the Base Flood Elevation is known and the Floodway has not been delineated – Every manufactured home to be installed or substantially improved will be placed on fill, in such a manner that its lowest floor will be at least 0.30 meters over the base flood elevation and complies with Section 7.04.
- c. Zone A where the Base Flood Elevation is unknown – Permits will be granted to prefabricated structures, manufactured homes, and for occasional, temporary, or permanent parking or recreational vehicles

whenever anchored to prevent flotation, collapse, or lateral movement by providing tie-downs from the structure and chassis to moorings on land, as described below:

1. One tie-down from the top of each corner, with two additional tie-downs on the middle of each side. Manufactures homes less than 50-feet long will require only one additional tie-down on each side.
2. Tie-downs to the chassis on each corner, plus five tie-downs at intermediate points will be provided. Manufactured homes less than 50-feet long will have only four additional tie-down on each side.
3. Each component of the anchorage system will have the capacity to withstand a 4,800-pound load.
4. Any enlargement to a manufactured home will be anchored as described above.

7.07 — Fill on Zone A — The Board, the Regulations and Permits Administration, or the Participating Communities as the case may be, may permit the deposit of fill on this zone provided it is shown, by means of a hydrologic-hydraulic study, that the fill to be deposited is beneficial and that the amount to be deposited will not exceed that which is necessary for obtaining such benefit, nor will it constitute an obstacle against the free flow of flood waters or surges, or a prejudice to other property.

It must be shown that the fill deposited will not settle below the base flood elevation and that it is duly protected from erosion, high-velocity flow, or differential settlement, as described below:

- a. The hydraulic analysis for assessing the proposed fill will be based on a presumption that there will be an obstacle on each side of the

floodplain, which will reduce the hydraulic capacity in such a manner that the base flood elevation estimated for natural conditions will not increase beyond the maximum set: 0.15 meters in urban areas; 0.30 meters in rural areas.

The hydrologic-hydraulic study will not be required if it is shown that the fill deposit complies with Section 7.02 (b) and (c).

- b. Fill must be compacted to 95% of the maximum density obtainable by the Standard Proctor Test method set by the American Society for Testing and Materials (ASTM) Standard D-698).

This requirement will apply only to fill prepared for structural support.

- c. The fill slope for granulated material will not be steeper than 1 1/2 horizontally and 1 vertically (1 1/2: 1, H:V), unless information is submitted for warranting steeper slopes.
- d. Adequate protection will be provided for slopes exposed to [high] velocity base flood waters. For speeds of five-feet per second or less, slopes will be protected by grass or a similar vegetation cover. For speeds greater than 5-feet per second, slopes will be protected by the appropriate revetment product approved in the practice of engineering.

SECTION 8.00 — ZONE VE

8.01 – Building on Zone VE

- a. From the effective date of the Flood Insurance Rate Map, all structures on this zone will be located landward at a minimum distance from the maritime terrestrial zone to be determined by the Department of Natural and Environmental Resources.
- b. Any new construction and substantial improvement on this zone will be elevated in such a manner that the lowest part of the horizontal structural elements of the lowest floor is located at least 0.30 meters above the base flood elevation, and the space below the structural element supporting the lowest floor will be entirely open, save when a breakaway wall is used as per the provisions of items (e), (f), and (g) hereunder.
 - 1) If breakaway walls are used, the enclosed space will be used for parking, storage, or access to the building.
- c. Any new construction or substantial improvement on this zone will be anchored by piles or columns. Bearing piles or columns will be designed and anchored to withstand all applicable loads of the base flood.
- d. All applications for buildings on this zone will include a certificate by an engineer or architect who is a member of the pertinent professional association.
- e. Any alteration, change, reconstruction, or substantial improvement on a structure located on this zone, started on or after the effective date of the pertinent Flood Insurance Rate Map, will have the space below the lowest floor free from any obstruction or built with breakaway walls that are not bearing walls, or lattices, shutters, or screens that may collapse under wind or water pressure caused by

extraordinarily high water or by surges, without causing the collapse or other structural damage to the elevated part of the building or supporting foundation system. Breakaway walls will be designed to withstand loads of no less than 10 and no more than 20 pounds per square foot. Breakaway walls withstanding loads greater than 20 pounds per square foot may be used if an engineer or architect who is a member of the pertinent professional association, certifies that the proposed design complies with the following conditions:

1. Breakaway walls must collapse under water pressures below those that may occur during a base flood event;
 2. The elevated part of the building, and its supporting foundation system, will not be subject to collapse, displacement, or other structural damages due to wind or water pressure acting simultaneously on all the structural and non-structural components of the building.
- f. If breakaway walls are used, the enclosed space will not be used to house persons.
- g. Plans for any structure that will use breakaway walls will be submitted to the Regulations and Permits Administration or the Participating Community for approval and for the issuance of the corresponding permit before construction may start.
- h. Changes to sand dunes or wetlands (including mangroves) that may increase flood- or surge-related damage potential will not be permitted.

8.02 – Manufactured Homes and Recreational Vehicles – The parking or location of manufactured homes or recreational vehicles will not be permitted on this zone.

- 8.03 – Subdivisions on Zone VE – From the effective date of the Flood Insurance Rate Maps, permission will be granted for subdivisions on this zone, provided they comply with the applicable statutory or regulatory provisions. Building restrictions applicable to the subdivisions approved must be annotated on the Property Registry.
- 8.04 – Fill on Zone VE - From the effective date of the Flood Insurance Rate Maps, permission will not be granted for using fill to support the structural loads of buildings located on this zone, nor fill that could present an obstacle to the free flow of flood waters.
 - a. If fill deposit or a structural work are proposed, and the same promotes to modify the VE limits, an amendment should be requested in accordance to Section 4.04 and FEMA's related process.

TOPIC NO. 3

MANAGEMENT OF REGULATION

SECTION 9.00 – PERMITS

- 9.01 – General Provisions – The Administrator of the Regulations and Permits Administration, the Participating Community or the Autonomous Municipality with the corresponding hierarchy, will require and issue permits pursuant to the provisions of Act No. 3 of September 27, 1961, and Act No. 75 of June 24, 1975, and the Law No. 81, Municipal Autonomous Law of August 30, 1991 in accordance with the power conferred to the authorized Municipalities, as amended, and of this Regulation.
- 9.02 – Permit Requirements – From the effective date of this Regulation, on all special flood hazard areas, a permit of use will be required for occupying or using any property or structure; or a construction permit for building, constructing, reconstructing, altering, enlarging or moving any structure; or a sign or advertisement permit for the installation, construction, reconstruction, location, placement building, relocation, alteration, modification, enlargement or moving of any sign or advertisement; or a permit for fill deposit.
- 9.03 – Issuance of Permits — From the effective date of this Regulation, permits will be issued for construction, use, for the installation of signs or advertisements, or for fill deposit, only when the structure, or property use, or the sign or advertisement, or the fill deposit for which a permit or authorization is requested, fully complies with the provisions of this Regulation and a Elevation Certificate, duly fulfilled, has been submitted. The permit for fill deposit will have the endorsement of the Department of Natural and Environmental Resources.

9.04 – Effective Terms for Permit Decisions

- a. Construction projects – Any favorable decision or authorization concerning any project, preliminary development, or final project issued by the Regulations and Permits Administration, the Autonomous Municipality or the Participating Community, will be left without effect if, within one year after issuance thereof, the pertinent construction permit has not been obtained; or if after the pertinent construction permit has been obtained, the works authorized therein are not started within one year after the date of issuance of the permit, or if said works, once started as per the foregoing provisions, were not completed within the term set in the permit issued.
- b. Land or structure use – Any decision authorizing any permit of use will be left without effect if within one year of issuance thereof, the pertinent permit of use has not been obtained; or if after obtaining the pertinent permit of use, the authorized use is not established within one year after the permit was issued.
- c. Installation of signs and notices – Any decision authorizing a permit for the installation of a sign or advertisement will be left without effect if, within one year after issuance thereof, the pertinent permit for the installation of a sign or advertisement has not been obtained; or if after the pertinent permit for the installation of a sign or advertisement has been obtained, the sign or advertisement authorized therein is not installed within one year after the date of issuance of the permit.
- d. Fill Deposit – All decisions authorizing any fill deposit will be left without effect if, within six months after the issuance thereof, the applicant fails to obtain approval for the project's construction plans, in case of land development projects, or if after obtaining approval of

the aforesaid plans, earthworks are not actually begun within three years from the date of the approval.

- e. Extensions of Time – The aforesaid effective terms will be final for all legal purposes, except that the same may be extended at the request of the property owner, or his or her authorized representative, provided that this extension is not contrary to the public interest and the application for extension is filed at least 30 days prior to the expiration date of the decision. The application for extension must indicate the reasons therefore, and must include evidence of the progress reached in the preparation of the preliminary plans, construction plans, studies, and other documents required.

9.05 – Filing of Permit Application – In order to file a permit application, the applicant must meet all filing requirements set by the Regulations and Permits Administration, the Autonomous Municipality, or the Participating Community as well as the requirements set by the other government bodies concerned. The applicant must include:

- a. The lowest floor elevation of all the structures, referred to the mean sea level.
- b. The structure's floodproofing elevation, referred to the mean sea level.
- c. The structure's lowest adjacent grade.
- d. The filing form, duly completed and certified of the Elevation Certificate provided by FEMA, for such purpose.
- e. A certificate by a licenced engineer or architect who is a member of the pertinent professional association, indicating that the methods used for the floodproofing design of the non-residential structures meet the criteria set in Section 7.03(2).

- f. Description of the reach length of any water course that will be changed or relocated as a result of the proposed project, including the owners authorization of the water course.
- 9.06 – Permit Application Review – When reviewing permit applications, the Administrator of the Regulations and Permits Administration, the Participating Community or the Autonomous Municipality will observe the following procedures:
- a. All development permit applications will be reviewed to determine compliance with the requirements of this regulation.
 - b. All development permit applications will be reviewed to determine compliance with all permits and endorsements required by other government bodies.
 - c. All development permit applications concerning coastal high hazard zones will be reviewed to determine whether the development affects wetlands or sand dunes in such a manner as to increase the risk of flood-related damages.
 - d. All permit applications for developments to be located on the floodway will be reviewed to ensure compliance with all the provisions of Subsection 6.01 of this Regulation.
 - e. All construction plans will be reviewed for breakaway walls to be used below the base flood elevation in order to ensure compliance with the provisions of Subsections 7.03(c) and 8.01 of this Regulation.

SECTION 10.00 – ELEVATION AND INFORMATION REGISTRY

10.01 – General Provision – The Administrator of the Regulations and Permits Administration, the Participating Community or the Autonomous Municipality will set up and keep an elevation and information registry, organized by property number, of the lowest floor elevation of every new construction, substantial improvement, or repetitive losses located on flood hazard zones or identified as per Section 1.04. Structure elevations will be based on the mean sea level as certified by a licenced engineer or surveyor who is a member of the pertinent professional association, using the form devised for such purpose.

- a. For structures with substantial improvements, the flood protection elevation will be verified. The registry will record the certificates required in Subsection 9.05(3) of this Regulation.
- b. For coastal high hazard areas, the registry will record the certificates required in Subsection 8.01(4) of this Regulation.
- c. Insofar as any watercourse change or relocation requires an endorsement by the Department of Natural and Environmental Resources, the registry will keep proof of said endorsement for inspection by the Federal Emergency Management Agency (FEMA).
- d. All registries hereunder shall be available for public inspection.

SECTION 11.00 – EXCEPTIONS

11.01 – General Provision – The Board or the Administrator of the Regulations and Permits Administration, or the Participating Community as the case may be, will have jurisdiction on all cases warranting direct intervention by the Board as per express provision of this Regulation. The acts of the Board of the Administrator of the Regulations and Permits Administration or the Participating Community will be consonant with the general purposes of this Regulation, of Acts No. 75 and 76 of June 24, 1975, and of Act No. 3 of September 27, 1961, as amended, and due protection of the public interest will be ensured.

11.02 – Developments considered as exceptions - The Board, or the Administrator of the Regulations and Permits Administration, or the Participating Community as the case may be, may evaluate proposed developments on flood hazard zones as exceptions, provided they tend to minimize flood hazard or may result in a net benefit for the community. The following project activities may be favorably considered:

- a. Subdivisions for legalizing landholdings occupied by structures on the Floodway. Applicants must show that the structures exist or have existed prior to the determination of the floodway in the flood insurance studies.
- b. Proposed subdivisions to viabilize agricultural, recreational, and other uses compatible with the area's flood hazard condition. In these cases, the deed of the lot to be created by subdivision must indicate that the lot is susceptible to inundation and that any work to be carried out thereupon must strictly comply with the Flood Hazard Zone Regulation.
- c. Exceptions can be considered for residential and non-residential structures with the basement floor elevation below the base flood

elevations in Zones AE, AO, designed and built so that any basement area, together with attendant utilities and sanitary facilities below the floodproofed design level, is watertight with walls that are impermeable to the passage of water without human intervention.

1. Have the top of the floor any basement area no lower than five feet below the elevation of the base flood.

d. Proposed developments within the floodway, within the temporary floodway, or within a floodplain whose floodway has not been delineated, which result in a higher increase of the base flood elevation indicated in Subsections 6.01 and 7.04(1), provided that they comply with the provisions of any applicable regulation and the applicant requests a conditional approval that includes the following documents:

1. Application for a conditional approval to an amendment to the Floodway on the Flood Insurance Rate Map (FIRM), to comply with Subsection 4.04 requirements.
2. An evaluation showing that other development alternatives that do not increase the base flood elevation are not viable.
3. Proof of the notice sent to the owners of the affected properties, wherein the impact of the proposed action on the properties is explained.
4. Certificate indicating that there are no structures located on the area that could be impacted by an increase in the base flood elevation.
5. An application seeking review of the base flood elevation determination, based on the engineering standards applicable to hydrologic-hydraulic studies and the current procedures for reviewing flood insurance studies.

An application seeking review of the designated floodway, as per current procedures for reviewing flood insurance studies.

6. During the review process, the Board will submit the proposal to the Federal Emergency Management Agency for recommendations.
7. Once the project has been built and having proof of a conditional approval, the project owner, or his or her representative will file with FEMA, the Board or Participating Community, a certificate stating how the project was built, so that steps can be taken for physically revising the map.

11.03 — Conditions for Exceptions – Any favorable decision on any exception will be subject to the conditions set for it, and to the other provisions of this Regulation.

11.04 — Effective Terms for Decisions on Exceptions – Any favorable decision on any exception related to a construction permit, fill deposit permit, permit of use, or permit to install a sign or advertising, will be left without effect if within one year of the issuance thereof the pertinent permit has not been obtained.

The aforesaid effective terms will be final for all legal purposes, except that the same may be extended at the request of the interested party (property owner, or his or her authorized representative), provided that this extension is not considered contrary to the public interest and the application for extension of time is filed at least 30 days prior to the expiration date of the decision. The application for extension of time must indicate the reasons therefore, and must include evidence of the progress reached in the preparation of the preliminary plans, construction plans, studies, and other documents required.

SECTION 12.00 — VARIANCES

- 12.01 – General Provisions — The Board the Administrator of the Regulations and Permits Administration, or the Participating Community as the case may be, may issue variances to the requirements of this Regulation in cases where, due to exceptional or extraordinary circumstances, a literal application of the aforesaid provisions may result in an unreasonable prohibition or restriction to the enjoyment of property, failure to grant the variance would result in exceptional hardship to the applicant, and where it is satisfactorily shown that the variance will mitigate a clearly demonstrable prejudice, or that the same will further the best interests of the community and of the area, and that such variance will not result in an increase of floodwater elevation or velocity, in additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or be in conflict with other laws or regulations. Variances issued under this Section will not constitute amendments to this Regulation or to the Flood Insurance Rate Map.
- 12.02 – Initiative – Any variance must be applied for by the owner of the property for which the same is sought, or by his authorized representative, using the form devised for this purpose. No variance in excess to that applied for in the form will be considered or granted.
- 12.03 – Public Hearing - The Board the Administrator of the Regulations and Permits Administration, or the Participating Community as the case may be, may hold public hearings, as deemed necessary, so that the interested parties may have the opportunity to state their case and to comply with the due process of law. The Board or the Administrator of the Regulations and Permits Administration will make the findings of fact and conclusions of law based on evidence presented at the hearing, or existing in the case, which justifies the decision.

12.04 – Conditions for Granting Variances – Any favorable decision on any variance will be subject to the conditions set below, and to the other provisions of this Regulation:

- a. A variance may be granted for the repair or rehabilitation of structures listed on the National Registry of Historic Sites or Inventory of Historic Places, or of an Eligible Property within a historic zone, if it is determined that the proposed repair or rehabilitation will not prevent the structure from keeping its designation as historic structure, and that the variance is the minimum required for preserving the historic character or design of the structure.
- b. No variance will be granted [for a structure] within the floodway, unless it is shown, by performing a hydrologic-hydraulic study, that it will not result in an increase of the flood elevation during a base flood discharge event. If proved to be feasible, any new construction or substantial improvement will meet the applicable requirements for the mitigation of flood-related effects.
- c. The flood protection works will not increase the base flood beyond the maximum allowed. If not possible, the designer will include a certification stating that no structures would be impacted by the proposed works.
- d. A variance will be granted only after a determination that the variance is the minimum necessary to grant relief, considering the flood hazard.
- e. A variance for a new construction or substantial improvement, and for other developments necessary for conducting a functionally dependent use, will be granted only if it complies with the provisions of Subsection 12.01 and of Items (a) and (b) of this Subsection.

- f. A variance may be granted for a new construction or substantial improvement on lots equal to or smaller than 1/2 acre that are contiguous to and surrounded by lots with structures built below the base flood elevation, as per the provisions established in Subsection 12.01 and in Items (a) and (b) of this Subsection, and Sections 12.06 and 12.07.
- g. Variance applications may be considered for lots larger than 1/2 acre, provided that technical proof to justify such variance is submitted.

12.05 – Effective Term for Decisions on Variances — Any favorable decision or authorization concerning any variance to the current regulations to be issued by the Board, and those related to construction permits or permits for fill deposit issued by the Regulations and Permits Administration, or the Participating Community, will be left without effect if, within one year after issuance thereof, the pertinent permit has not been obtained.

This effective term will be deemed final for all legal purposes, except that the same may be extended at the request of the property owner, or his or her authorized representative, provided that this extension is not considered contrary to the public interest and the application for extension of time is filed at least 30 days prior to the expiration date of the decision. The application for extension of time must indicate the reasons therefore, and must include evidence of the progress reached in the preparation of the preliminary plans, construction plans, studies, and other documents required by the case.

12.06 – Registry of Variances — The Board the Administrator of the Regulations and Permits Administration or the Participating Community, as the case may be, will keep a registry of the files of every application for variance, including technical information, and will notify the Federal Emergency

Management Agency (FEMA), of such variances, upon the latter's request.

- 12.07 – Notice – The applicant will be notified in writing that a variance granted for building a structure with the lowest floor below the base flood elevation will result in up to 25% higher flood insurance premium. The applicant will also be notified that such a construction increases the risk to life and property. A copy of this notice will be kept in the file of the variance granted.

No variance will be granted for residential structures with a lowest floor elevation below than the base flood elevation.

SECTION 13.00 – SURVEILLANCE AND INSPECTION OF THE FLOOD HAZARD ZONES

13.01 – General Provision – The Regulations and Permits Administration or the Participating Community within its jurisdiction will be responsible for the vigilance of all flood hazard zones on all urban and rural zones in Puerto Rico, and for enforcing the provisions of this Regulation.

1. Coastal Zone – According to Section 10 of Act No. 3 of September 27, 1961, as amended, the Department of Natural and Environmental Resources will collaborate with the Regulations and Permits Administration in the vigilance of the flood hazard zones located on the Coastal Zone of Puerto Rico, and will see to it that no waste, debris or fill is deposited on the floodway of rivers and brooks located within or without this zone.

The Department of Natural and Environmental Resources will denounce before the Board or the Participating Community the existence of whatever circumstances justify, in its judgment, the adoption of a Special Flood Hazard Area on the Coastal Zone.

2. Other Areas – According to Section 10 of Act No. 3 of September 27, 1961, as amended, the Department of Housing will collaborate with the Regulations and Permits Administration in the vigilance of flood hazard zones, excepting the coastal zones, and will denounce before the Board the existence of circumstances that, in its judgment, justify the adoption of a Special Flood Hazard Area on an urban or rural zone in any municipality.

TOPIC NO. 4

CONTROL PROCEEDINGS

SECTION 14.00 — VERIFICATION OF DATA AND WORKS, AND PENALTY

14.01 — Administrative or Judicial Action – The officials of the Board, the Regulations and Permits Administration, or the Participating Community as the case may be, may or will take the following administrative or judicial actions, among others:

- a. Return of applications – An application for a permit or a land use consultation or an application for variance will not be taken under advisement and will be returned to the applicant when it is not clearly stated or omits information, documents or plans, or if the applicant has not complied with the provisions of this Regulation.
- b. Construction or Urban Development Permit – If a construction permit or a permit for urban development has been, or has attempted to be, obtained in violation of the applicable laws and regulations, the Regulations and Permits Administration or Participating Community may, if the work is under construction, issue an order to do or to cease and desist, seek an injunction, mandamus, nullity, or take any other adequate action to prevent, prohibit, annul, vacate, remove or demolish any obstacle building or use, made or kept in violation of this Regulation, or impose administrative penalties as per the provisions of Sections 25, 26, and 29 of the Regulations and Permits Administration Organic Act.
- c. In case of developments built in disagreement with this Regulation or with the applicable regulation when construction was performed, action will be taken in pursuance of this Section.

14.02 – Penalty – As per the provisions of Act No. 3 of September 27, 1961, as amended, any person who violates the provisions of this Act and this Regulation will be guilty of a misdemeanor and, if convicted, will be punished with a maximum penalty of \$500, or a maximum prison term of six months, or both, at the discretion of the Court. If the violation consists of having performed a building, construction, fill deposit, an obstacle, or substantial improvement in an existing building or structure, or other developments located on a Special Flood Hazard Area, the sentence that is issued besides the penalty aforementioned, setsforth that the part of the building, obstacle, or enlargement or development object to the accusation, that does not comply with the requirements of the Flood Hazard Zone Regulation shall be demolished, removed or corrected within 30 days after the date the sentence is signed. The Court Order will be served by the Marshal of the Court. In the event the order of the Court affects one or more dwellings, the same will be served by the Marshal of the Court, together with the Department of Housing officials.

TOPIC 5

ADOPTION AND EFFECTIVE DATE

SECTION 15.0 ADOPTION

This Regulation about the Special Flood Hazard Areas (Planning Regulation No. 13) was duly revised and is **Adopted** in harmony with the dispositions of the Laws No. 3, Septiembre 27, 1961, known as the “Ley para el Control de Edificaciones en Zonas Susceptibles a Inundación”, No. 75, “Ley Orgánica de la Junta de Planificación” and no. 76, June 24, 1975, “Ley Orgánica de la Administración de Reglamentos y Permisos” and “Ley de Procedimiento Administrativo Uniforme del Estado Libre Asociado de Puerto Rico” as amended, and in agreement with the Part 44, CFR Section 60.3 (d & e) and the Subchapter B of the Federal Emergency Management Agency regulations.

15.01 Effective Date – The Regulation will be effective fifteen (15) days after the Governor’s approval.

This Planning Board of Puerto Rico, **Adopted** this Special Flood Hazard Areas Regulation (Planning Regulation No. 13) in the meeting of April 8, 2005, in San Juan, Puerto Rico

Ángel D. Rodríguez
Chairman

Wanda Capó Rivera
Vicepresident

Iris Cuadrado Gómez
Associate Member

Wanda Marrero Velázquez
Associate Member

Excused
Frederick Muhlach Santos
Associate Member

I, Carmen Torres Meléndez, Secretary of the Puerto Rico Planning Board, Certify that this Planning Regulation No. 13 is true and accurate and **ADOPTED** by this Board, in its meeting of April 8, 2005, today

Carmen Torres Meléndez
Secretary