

[CERTIFIED TRANSLATION]

COMMONWEALTH OF PUERTO RICO
PLANNING BOARD
SAN JUAN, PUERTO RICO

SPECIAL FLOOD HAZARD AREAS REGULATION
(Planning Regulation No. 13)
EIGHTH REVISION



EFFECTIVE DATE: JANUARY 9, 2021

[CERTIFIED TRANSLATION]



**GOVERNMENT OF PUERTO RICO
OFFICE OF THE GOVERNOR
SAN JUAN, PUERTO RICO**

Administrative Bulletin Number: OE-2020-089

EXECUTIVE ORDER OF THE GOVERNOR OF PUERTO RICO, HONORABLE WANDA VÁZQUEZ GARCED, TO APPROVE THE EIGHT REVISION OF THE SPECIAL FLOOD HAZARD AREAS REGULATION, ALSO KNOWN AS PLANNING REGULATION NUMBER 13, AND REPEAL THE SEVENTH REVISION OF THE SPECIAL FLOOD HAZARD AREAS REGULATION

WHEREAS: According to Public Law No. 75 of June 24, 1975, as amended, the Planning Board has the power, among other things, to adopt territorial ordinance plans and planning regulations in Puerto Rico. Furthermore, as provided in Public Law Number 3 of September 27, 1961, as amended, also known as the Building Control in Flood-Prone Zones Act, the Planning Board is the agency authorized to adopt the regulation and maps for the control of buildings in flood-prone zones on our island.

[illegible initials]

WHEREAS: Since 1978, Puerto Rico has participated in the National Flood Insurance Program (NFIP), created by the United States Congress through the Flood Insurance Act of August 1, 1968. The NFIP is administered by the Federal Emergency Management Agency (FEMA).

[illegible initials]

WHEREAS: Pursuant to the provisions of our Building Control in Flood-Prone Zones Act and the federal Flood Insurance Act, the Planning Board was designated as the state coordinating agency of said program. The Planning Board is acknowledged and reiterated as the government agency designated with the power to adopt regulations and maps in accordance with the minimum federal requirements for the NFIP regulation.

WHEREAS: As part of the minimum compliance requirements with the NFIP regulation, the Planning Board recommended and implemented an administrative procedure conducive to amending the Seventh Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13), in order to clarify and amplify the regulatory provisions and eliminate others.

WHEREAS: The Eight Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) has been developed in accordance to the powers granted to the Puerto Rico Planning Board by its Organic Law, the Building Control in Flood-Prone Zones Act, pursuant and in accordance with the requirements of Public Law 38-2017, as amended, also known as the Puerto Rico Uniform Administrative Procedure Act, and Public Law 107-2020, also known as Puerto Rico Municipal Code; and in accordance with NFIP rules.

[illegible initials]

WHEREAS: The Eight Revision proposed by the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) was presented in public hearings on January 27, 29 and 31, 2020 in San Juan, Aguadilla and Ponce, respectively, offering ample opportunity for the public to expose their comments and feedback. After taking into consideration the statements collected from the public hearings as well as the comments received in this regard, the Planning Board incorporated those it deemed relevant into the Regulation.

[illegible initials]

WHEREAS: The Eight Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) was presented before the Office of Permit Management of the Department of Economic and Commercial Development and was certified as a “categorical exclusion” on August 25, 2020, in accordance with the provisions of Public Law 416-2004, as amended, also known as Environmental Public Policy Act.

WHEREAS: The Planning Board, in accordance with the provisions of the laws mentioned before and in accordance with their requirements, adopted the Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13), by Resolution No. JP-RP-13-8-2020 in a meeting held on August 28, 2020.

WHEREAS: I, **WANDA VÁZQUEZ GARCED**, in virtue of the powers vested in me by the Constitution and laws of the Government of Puerto Rico, hereby enact and order the following:

Section 1: The amendments to Planning Regulation No. 13 are hereby approved, including its Eighth Revision, as adopted by the Board on August 28, 2020 by Resolution JP-RP-13-8-2020.

[CERTIFIED TRANSLATION]

Section 2: The Special Flood Hazard Areas Regulation, Seventh Revision, is repealed and submitted before the Department of State with number 7797.

Section 3: The Board will enforce the provisions of Article 28 of Public Law No. 75-1975 and Public Law 38-2017, pursuant to the publication of the amendments to Planning Regulation No. 13.

Section 4: NO CREATION OF ENFORCEABLE RIGHTS. This Executive Order is not intended to create substantive or procedural rights in favor of third parties, enforceable before judicial, administrative forums, or of any other kind, against the Government of Puerto Rico, or its agencies, officials, employees or any other person.

Section 5: EFFECTIVE TERMS: This Executive Order is effective immediately.

Section 6: PUBLICATION: This Executive Order shall be presented immediately before the Secretary of State and its wide publication is ordered.

[raised gold seal:
Great Seal of the
Commonwealth
of Puerto Rico]

IN WITNESS WHEREOF, I issue this Executive Order and hereunto set my signature and great seal of the Commonwealth of Puerto Rico, in San Juan, Puerto Rico, today, December 4, 2020.

[illegible signature]
WANDA VÁZQUEZ GARCED
GOVERNOR

Enacted in accordance with the law, today, December 4, 2020.

[illegible signature]
RAÚL MÁRQUEZ HERNÁNDEZ
SECRETARY OF STATE

[CERTIFIED TRANSLATION]

**GOVERNMENT OF PUERTO RICO
PLANNING BOARD
San Juan, Puerto Rico**

August 28, 2020

Resolution No. JP-RP-13-8-2020

TO ADOPT THE EIGHTH REVISION OF THE SPECIAL FLOOD HAZARD AREAS REGULATION (PLANNING REGULATION NUMBER 13) AND REPEAL THE SEVENTH REVISION OF THE SPECIAL FLOOD HAZARD AREAS REGULATION

WHEREAS: The Puerto Rico Planning Board is the state agency authorized by Public Law No. 3 of September 27, 1961, as amended, also known as the Building Control in Flood-Prone Zones Act to prepare the regulation and maps for the control of buildings in flood-prone zones.

WHEREAS: In August 1978, Puerto Rico became a participating community of the National Flood Insurance Program (NFIP), created by the United States Congress, through the Flood Insurance Act of August 1, 1968, and administered by the Federal Emergency Management Agency (FEMA).

WHEREAS: The Board was named by the Governor of Puerto Rico as the state coordinating agency of said program, to that end, it is responsible for adopting regulations and maps in accordance with the minimum federal requirements of the NFIP regulation.

WHEREAS: As part of the minimum compliance requirements of the NFIP regulation, the amendment of the Seventh Revision of the Special Flood Hazard Areas Regulation is recommended (Planning Regulation No. 13) in order to clarify and expand the regulation provisions while eliminating others.

WHEREAS: The Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) has been developed in accordance with the powers granted to the Puerto Rico Planning Board by Public Law No. 3 of 1961, Building Control in Flood-Prone Zones Act; Public Law No. 75 of June 24, 1975, Organic Law of the Puerto Rico Planning Board; Public Law 38-2017, Puerto Rico Uniform Administrative Procedure Act and Public Law 107-2020, Puerto Rico Municipal Code; and in accordance with the rules of FEMA's National Flood Insurance Program.

WHEREAS: The amendments proposed by FEMA and the Board were incorporated to the draft of the Eighth Revision of Planning Regulation No. 13, in order to update it according to the new tendencies regarding floodplain administration. The amendments recommended are the following:

1. A section about Inspections is included, referencing Section 1612.4 of the Puerto Rico Building Code.
2. "Regulation and Permits Administrator" was replaced by "Floodplain Administrator."
3. The use of the designated form was eliminated in the exceptions and variances.

[CERTIFIED TRANSLATION]

4. The title of "Flood Elevation Registry" was modified to read "Regulatory Flood Zone Certification and Data Registry."
5. Additional definitions were included, such as "Street Vendor," among others.
6. Section 8.04 was eliminated.
7. Parameters for pools in Zones VE were included.
8. A reference was included to ASCE standard 24 and the new building codes adopted by Puerto Rico, which include National Flood Insurance Rate Program regulations.

[ink stamp: JP
GOVERNMENT OF PUERTO RICO
PLANNING BOARD]

WHEREAS: The Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) proposed draft was presented in public hearings on January 27, 29, and 31, 2020 in San Juan, Aguadilla, and Ponce, respectively, offering ample opportunity for the general public to submit comments. After taking into consideration all the feedback and comments received in the public hearings, the Board incorporated those it deemed relevant into the Regulation.

WHEREAS: The Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) was submitted before the Permit Management Office, case number 2020-323186 DEC-086936. It was certified as Categorical Exclusion on August 25, 2020, in accordance with the provisions of Public Law 416-2004, as amended, also known as Environmental Public Policy Act.

WHEREAS: The Puerto Rico Planning Board, in its role as the NFIP State Coordinating Agency, and in accordance with Public Law No. 3 of September 27, 1961, as amended, also known as the Building Control in Flood-Prone Zones Act; Public Law No. 75 of June 24, 1975, as amended, also known as the Organic Law of the Puerto Rico Planning Board; Public Law 161-2009, also known as the Puerto Rico Permit Process Reform Act; Public Law 107-2020, also known as the Puerto Rico Municipal Law; Public Law 38-2017, also known as the Uniform Administrative Procedure of the Government of Puerto Rico; and in accordance with the rules of FEMA's National Flood Insurance Program, as set forth in Title 44 of the Code Federal of Regulations part 60.3 subparagraph (d), (c) and Subpart B and its sections regarding said program, **ADOPTS** the Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation Number 13) thus becoming an integral part of this Resolution.

FIRST: The Seventh Revision of the Special Flood Hazard Areas Regulation, registered with the Department of State with number 7797 is repealed.

SECOND: It is hereby resolved that the Eighth Revision of the Special Flood Hazard Areas Regulation (Planning Regulation No. 13) will come into effect thirty (30) days after it has been filed with the Department of State, as provided in Article 2.8 of Public Law 38-2017.

ADOPTED in San Juan, Puerto Rico, today, August 28, 2020.

[signed: illegible]

MARÍA DEL C. GORDILLO PÉREZ
President

[signed: illegible]

SUHEIDY BARRETO SOTO
Associate Member

[signed: illegible]

REBECCA RIVERA TORRES
Associate Member

[signed: illegible]

PABLO COLLAZO CORTÉS
Associate Member

I HEREBY CERTIFY the above is a true and exact copy of the resolution adopted by the Planning Board, today, August 28, 2020.

[CERTIFIED TRANSLATION]

[signed: illegible]
LOIDA SOTO NOGUERAS
Secretary

[ink stamp: JP
GOVERNMENT OF PUERTO RICO
PLANNING BOARD]

SPECIAL FLOOD HAZARD AREAS REGULATION
(Planning Regulation No. 13)
EIGHTH REVISION

TABLE OF CONTENTS

ACRONYMS..... 6

TOPIC 1 – APPLICATION AND INTERPRETATION 7

SECTION 1.00 General Provisions 1

1.01 Title 7

1.02 Legal Base 7

1.03 Purpose 7

1.04 Application 7

1.05 Terms Employed 8

1.06 Provisions of Other Regulations 8

1.07 Conflicting or Contradictory Provisions 8

1.08 Sanctions 8

1.09 Public Safety 8

1.10 Release of Liability 8

1.11 Derogation Clause 9

1.12 Severability Clause 9

SECTION 2.00 Definitions 9

2.01 General Provision 9

TOPIC 2 - SPECIAL FLOOD HAZARD AREAS 22

SECTION 3.00 ADOPTION OF SPECIAL FLOOD HAZARD AREAS 22

3.01 General Provision 22

3.02 Adoption Purposes 22

3.03 Notification and Publication of the Adoption 23

3.04 Review Procedure for the Adoption 23

SECTION 4.00 FLOOD INSURANCE RATE MAPS 23

4.01 General Provision 23

4.02 Map Content 24

4.03 Prerogatives	24
4.04 Map Amendments	24
4.05 Zone Limits	26
SECTION 5.00 SPECIAL FLOOD HAZARD AREAS CLASSIFICATION	26
5.01 Classification by Zones	26
5.02 Zone Types	26
SECTION 6.00 FLOODWAY	27
6.01 Developments in the Floodway	27
6.02 Manufactured Homes and Recreational Vehicles in the Floodway	28
6.03 Land Subdivision in the Floodway	28
6.04 Floor Elevation	29
SECTION 7.00 ZONE AE, LANDS BETWEEN THE LIMIT OF THE FLOODWAY AND THE FLOODPLAIN, LANDS IN THE FLOODPLAIN, ZONE A AND ZONE AO/AH	29
7.01 General Provisions	29
7.02 Hydrologic – Hydraulic Studies (Zone A, without detailed study)	30
7.03 Developments in Zone AE Lands (where the base flood elevation is known and the floodway has been defined)	31
7.04 Developments in Zone AE Lands (where the base flood elevation is known and the floodway has not been defined)	32
7.05 Developments in Zone AO and AH Lands (where the base flood depth is between 0.30 meters (1 foot) and 0.91 meters (3 feet)	33
7.06 Manufactured Homes, Recreational Vehicles and Manufactured Structures in Zones AE and A	33
7.07 Fill in Zone A	34
SECTION 8.00 COASTAL AREAS	35
8.01 Zone VE and Coastal Zones	35
8.02 Fill in Zone VE	36
8.03 Land Subdivisions in Zone VE	37

TOPIC 3 – MANAGING THE REGULATION	38
SECTION 9.00 PERMITS	38
9.01 General Provision	38
9.02 Permit Requirement	38
9.03 Issuing Permits	38
9.04 Effective Terms for Permit Decisions	38
9.05 Submitting Permit Requests	39
9.06 Permit Request Review	40
9.07 Map Review Compliance – General Provisions	40
9.08 Design and Base Flood Elevation	41
SECTION 10.0 REGULATORY FLOOD ZONE CERTIFICATION AND DATA REGISTRY	41
10.01 General Provision	41
SECTION 11.00 EXCEPTIONS	42
11.01 General Provision	42
11.02 Developments Considered Exceptions	42
11.03 Conditions when Making Exceptions	43
11.04 Effective Term for Exception Decisions	43
11.05 Initiative	43
SECTION 12.00 VARIANCES	43
12.01 General Provision	43
12.02 Initiative	43
12.03 Public Hearings	44
12.04 Conditions to Issue Variances	44
12.05 Effective Term for Decisions on Variances	45
12.06 Registry of Variances	45
12.07 Notice	45
12.08 Considerations for Variance Evaluation	45

[CERTIFIED TRANSLATION]

SECTION 13.00 SURVEILLANCE AND INSPECTION IN FLOOD HAZARD ZONES	46
13.01 General Provision	46
13.02 Inspections	47
TOPIC 4 – OVERSIGHT PROCEEDINGS	48
SECTION 14.00 VERIFICATION OF DATA, WORKS AND PENALTIES	48
14.01 Administrative or Judicial Actions	48
14.02 Penalty	48
TOPIC 5 – ADOPTION AND EFFECTIVE DATES	49
SECTION 15.00 Adoption	49
15.01 Effective Dates	49

Acronyms

ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BFE	Base Flood Elevation
BM	Bench Mark
CFR	Code of Federal Regulations
CWA	Clean Water Act
DRNA	<i>Departamento de Recursos Naturales and Ambientales</i> (Department of Natural and Environmental Resources)
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
H-H	Hydrologic- Hydraulic Study
ICC	Increased Cost of Compliance
JP	Planning Board
LOMR	Letter of Map Revision
MSL	Mean Sea Level
MOWA	Moderate Wave Action Area
NAD83	North American Datum of 1983
NFIP	National Flood Insurance Program
NGS	National Geodetic Survey
OGPe	<i>Oficina de Gerencia de Permisos</i> (Office of Permit Management)
PRVD-02	Puerto Rico Vertical Datum of 2002
SFIP	Standard Flood Insurance Policy
ZMT	<i>Zona Marítimo Terrestre</i> (Maritime-Terrestrial Zone)

TOPIC 1 – APPLICATION AND INTERPRETATION

SECTION 1.00 General Provisions

1.01 Title

This Planning Regulation No. 13 will be known and quoted as the “Special Flood Hazard Areas Regulation.”

1.01 Legal Base

This Regulation is adopted in accordance to the provisions of Public Laws No. 3 of September 27, 1961, “Building Control in Flood-Prone Zones Act” and No. 75, “Organic Law of the Puerto Rico Planning Board”; Public Law No. 161 of December 1, 2009, as amended, “Puerto Rico Permit Process Reform Act” and “Puerto Rico Uniform Administrative Procedure Act”, Public Law No. 38 of June 30, 2017, as amended and in accordance with the regulations of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program, Part 44 CFR, Section 60.3 (d & e) and applicable sections of Subchapter B regarding the Program.

1.03 Purpose

The provisions of this Regulation establish the safety measures to regulate the construction and development of the lands in the areas declared to be susceptible to flooding and have the following purposes:

- a. Restrict or prohibit developments that are hazardous to public health, safety and property when these promote an increase of flood elevations or water velocities, which in turn increase erosion.
- b. Require that flood-prone developments, including their service facilities, be protected against flooding at the time of their original construction.
- c. Prevent or regulate the modification of natural floodplains, watercourses, natural protective barriers that accommodate or channel floodwaters or storm surges.
- d. Control the filling, grading, dredging, encroaching and any other type of development that may increase damage from flooding or storm surges.
- e. Prevent or control the construction of barriers that alter the water flow or that may increase the flood risk in other areas.
- f. Not promoting the location of new developments, encroachments or substantial improvements unless there is proof that other location alternatives have been evaluated and they are proven not to be feasible.

- g. To participate in the National Flood Insurance Program and maintain the eligibility for flood insurance and disaster assistance.

1.04 Application

The dispositions contained in this Regulation will apply and cover:

- a. The Special Flood Hazard Areas adopted by the Planning Board, and the properties in said areas.
- b. Any person, natural or legal, public or private, and any grouping thereof.
- c. The lands, which, because of their topographic nature, or location with relation to a body of water, have a history of flooding or are at risk of flooding.

1.05 Terms Employed

When its use is justified in this Regulation, any word used in singular shall also include the plural and vice versa; and the masculine shall include the feminine and vice versa.

1.06 Provisions of Other Regulations

The provisions set forth in this Regulation will be supplemented by the provisions of any other regulation in effect approved by the Planning Board, or by the Participating Community, which may be applicable to the specific zone where the property is located, as well as any other applicable federal regulation.

1.07 Conflicting or Contradictory Provisions

If a requirement established by any provision of this Regulation is more or less restrictive than a requirement established by any of its other provisions, or by any other law, regulation or rule established by any duly constituted government authority with jurisdiction, the stricter requirement shall prevail.

1.08 Sanctions

Any violation to the provisions included in this Regulation, will be penalized, in accordance with Public Law No. 3 de 1961, Public Law No. 75 of 1975 and Public Law 161-2009, as amended, and any other applicable penalty established by FEMA for the Participating Community.

1.09 Public Safety

The rules established in this Regulation constitute minimal requirements. The Planning Board or Participating Community will be able to require and provide for the compliance of the major requirements in case there is an existing condition or an unforeseen condition is anticipated in this Regulation, which presents a threat to public life or property or a serious danger to public health and safety.

1.10 Release of Liability

The degree of flood protection required by this Regulation is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Severe flooding may and will occur on rare occasions. The flood elevation can increase because of natural or man-made causes. This Regulation does not imply the lands outside of the Special Flood Hazard Areas or the uses allowed within those areas are safe from flooding. This Regulation does not create liability on the part of FEMA, the Planning Board, the OGPe or the Participating Community resulting from reliance on this Regulation or any administrative decision lawfully made hereunder.

1.11 Derogation Clause

Planning Regulation No. 13 effective January 7, 2010 is hereby repealed.

1.12 Severability Clause

If any word, sentence, subparagraph, subsection, section, topic or part of this Regulation were challenged for any reason before a Court and declared unconstitutional or void, such judgment shall not affect, undermine or invalidate the remaining provisions and parts of this Regulation, instead its effect shall be limited to the word, sentence, subparagraph, subsection, section, topic or part so declared unconstitutional or void and the nullity or invalidity of any word, sentence, subparagraph, subsection, section, topic or part of any specific case shall in no way affect or prejudice its application or validity in any other case, except when it is specifically and expressly invalidated for all cases.

SECTION 2.00 Definitions

2.01 General Provision

The terms or phrases defined below will have the meaning set forth for each one within the context established herein.

1. **Acre** – land measure equivalent to 1.0296 *cuerdas* and to 4,046.87 square meters.
2. **Addition:** An extension, enlargement or increase of the gross floor area or height of a structure. All additions will be treated as new construction.
3. **Floodplain Administrator:** the president of the Puerto Rico Planning Board or the person, entity or agency designated by him/her or the Autonomous Municipality or the Participating Community authorized to administer and implement this guide by granting or denying development permits in accordance with the provisions established thereof; according to the provisions of Public Law No. 3 of 1961, Public Law No. 75 of 1975, Public Law No. 107-2020 of the Puerto Rico Municipal Code or Public No. 161-2009, also known as the Puerto Rico Permit Process Reform Act. The Administrator will be able to designate and grant functions or tasks to one or more Floodplain Co-administrators.
4. **Federal Emergency Management Agency (FEMA):** Department of Homeland Security federal agency, which also manages the National Flood Insurance Program.
5. **Structural Modification:** Any change to the structural elements of a building or existing structure, such as: load-bearing walls, columns, beams, and roofs; or any addition, extension, enlargement or variation in size of the existing structural elements or the construction in the building of new additional structural elements, such as: roofs, beams, columns or load-bearing walls.
6. **Coastal High Hazard Areas:** Areas along the coast subject to the base flood and high water velocity, including storm surge. These areas are designated as Zone VE on the Flood Insurance Rate Maps (FIRM).
7. **Shallow Flooding Area** – An area designated AO or AH in the Flood Insurance Rate Map (FIRM) with a one percent (1%) annual chance of flooding or more, with a mean annual depth of one to three (1'- 3') feet where the floodway is not clearly defined, the flood route is unpredictable and the velocity flow can be evident. Said flooding is characterized by ponding or sheet flow.

- 8. Special Flood Hazard Area** – A high hazard area defined as any land subject to a one percent (1%) annual chance of being flooded (also called base flood). This area may be designated as: Zone A, AE, AH, AO, A1-A30, A99, V, VO, VE or V1-V30. The Flood Hazard Area standard includes a reasonable compromise between the need for building restrictions to minimize the possible loss of life and property and the financial benefits that may result from developing the floodplains. The development could be built in these Special Areas as long as it complies with state and municipal Floodplain regulations and ordinances that have to be in accordance with the minimum federal requirements.
- 9. ASCE Standard 24** – Flood-resistant design and construction standard developed by the American Society of Civil Engineers (ASCE).
- 10. Increased Cost of Compliance (ICC)** – When a structure is covered by this policy, and it sustains a loss because of a flood and has been declared substantially or repetitively (repetitive losses) damaged, the ICC helps cover the costs of elevating, flood-proofing, demolishing the structure, or any combination thereof, if the structure is eligible and complies with ICC provisions. This coverage is in addition to the Standard Flood Insurance Policy (SFIP) coverage, and all the policies issued or renewed on or after June 1997, include ICC coverage, except for the policies for structures that fall under the Group Flood Insurance Policy.

The Standard Flood Insurance Policy provides for the payment of a claim intended to help cover the cost to comply with state or municipal regulations or ordinances for floodplain management due to a flooding event where a building or structure has been declared as having substantial or repetitive damage. When an insured building sustains flood damage and the state or participating community declares the building has sustained substantial or repetitive damage, the ICC coverage will help pay the cost of elevating, floodproofing, demolishing or relocating the building up to the previously established maximum benefit. This coverage is in addition to the physical damage coverage for buildings.

- 11. Coastal Barrier:** Constitutes a declaration by the Federal Government of non-participation and discourages the development in such areas. The Coastal Barrier Coastal Barrier Resources Act (CoBRA) of 1982 prohibits providing flood insurance in all the buildings in those areas. The purpose of the Act is to minimize the loss of life, waste of federal funds and damage to wildlife and natural resources.

- 12. Barrio, barrio pueblo and sub-barríos (division, town division and subdivisions)** – The municipalities are legally divided in smaller geographical areas. The *barríos* represent the main legal division of each municipality. The *barrio pueblo* tends to be considered the urban center of the municipality. The *sub-barríos* are legal divisions of the *barrio pueblo* and some adjacent *barríos*.
- 13. Hydrodynamic Load** – Pressure per unit of weight that acts on submerged objects in a liquid due to its kinetic energy. The hydrodynamic load is proportional to the square of the liquid velocity according to the ratio $HD = V^2/2G$, where V = liquid velocity and G = gravity acceleration.
- 14. Hydrostatic Load** – Pressure per unit of weight produced by a liquid at rest on any point of contact with a structure. The static pressure increases with depth, affecting structural elements, such as floors, walls, foundation piles and roofs. The ratio is $HS = P/Y$, where P = static pressure and Y = is the specific weight of the liquid (usually water).
- 15. Manufactured Home** – a structure, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities (water, electricity, gas, etc.).
- 16. Watercourse:** A river, stream or creek channel where water usually flows.
- 17. Floodway:** the channel of a river, stream 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 of the floodplain more than 0.30 meters (one (1) foot) in current detailed studies in accordance with sections 6.01 and 7.04. In the case of a new detailed study in Zone A (Section 7.02) and the evaluation of a deposit of fill (Section 7.07), the maximum increase allowed would be 0.15 meters (half (1/2) a foot), as determined by the Hydrologic – Hydraulic Study.
- 18. Certification:** Declaration by a licensed architect, engineer or surveyor that the plans and other documents submitted comply with the specifications of this Regulation, and are in accordance with the best practices of the profession.

19. Elevation Certificate: Document or form provided by FEMA (FEMA Form 086-0-33, revised) that provides for flood insurance rate adjustment, but does not exclude the property from the Special Flood Hazard Area. It provides information about floor and land elevation, among others, in order to compare it with the base flood elevation and determine if it is necessary to adjust the flood insurance. The certificate must be signed and certified by a licensed land surveyor, or professional authorized to perform land surveys in Puerto Rico. This certificate shall be required for the evaluation and approval of a building permit.

20. Flooding Certificate: Declaration by the Planning Board or Participating Community, which states the flooding condition affecting a particular land, parcel, lot, or area issued by the Office of the Secretary of the Board or by the office designated by the Participating Community at the request of any person, organization or group.

21. Start of Construction – the date the building permit was issued, provided that the actual and effective start of construction, repair, rebuild, rehabilitation, addition, placement or other improvement took place within 180 days of the permit issue date. Permanent construction does not include preparation of the land, such as clearing, grading, and filling; the installation of streets or sidewalks; the excavation for basements, footings, foundations or piers; the erection of temporary forms, or the installation of accessory buildings, such as garages or sheds not occupied as dwelling units, which are not part of the main building.

For a substantial improvement, the actual start of construction means the first modification of any wall, roof, floor, or other structural element of a building, whether or not that modification affects the dimensions of the building.

22. Community – State, municipal government or political subdivision with the authority to adopt and enforce the National Flood Insurance Program regulations.

23. Participating Community – Community with local land use authority that adopts and enforces the provisions of this Regulation.

24. Substantial Damage – Damage of any nature sustained by a structure, whose repair cost to its pre-damage condition would equal or exceed fifty percent (50%) of the market value of the building before the

damage occurred. It also means damage related to flooding sustained by a structure during two (2) separate flooding events in a period of ten (10) years, for which the repair cost at the time of said events equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage of each of the events occurred.

25. Datum means the following:

- a) Elevation used as a reference (the other points in a map).
- b) Horizontal Datum – NAD 83, North American Datum of 1983.
- c) Vertical Datum – Level surface to which elevations are referred to by government-related entities, such as the Federal Emergency Management Agency and the National Geodetic Survey (NGS). The vertical datum most used by FEMA in Puerto Rico is MSL or PRVD-02; NGVD29 does not apply to Puerto Rico.

26. Department of Natural and Environmental Resources: Government Agency created by Public Law No. 23, June 20 of 1972, as amended.

27. Development – Start, construction, change or addition of any use or structure, on land or water; the unloading, grading or division of land in two or more lots including, but not limited to the following:

- a) Construction, rebuilding, modification or addition of a building or structure;
- b) Change in the type of use for a building, structure or land;
- c) Substantial increase in the intensity of land use, such as an increase in the number of businesses, offices, manufacturing institutions or housing units located in a building or structure;
- d) The beginning or expansion of the extraction of resources, mining, excavation, farming, horticulture or forest activities, on land or water (except to obtain soil samples);
- e) The demolition of a building or structure, the removal of trees or vegetation of a plot of land;
- f) The deposit, or disposal of trash, solid or liquid waste or fill in a plot of land;

g) The physical or chemical modification of the shore, bank or channel of an ocean shore, lake, pond, channel or other body of water, or the modification of any land subject to flooding.

28. Land Development: Man-made improvements to land, consisting of the movement of soil to fill or excavate and other urban development work, such as stamping, paving, curbs, sidewalks, including, but not limited to, utilities structures and facilities, such as: water distribution systems, storm, and sanitary drains, illumination and power distribution and telephone lines.

29. Levee: Man-made structure in the floodplain, usually an earthen berm, designed and built according to the standard engineering practices to contain, control or divert the water flow to protect against temporary flooding.

30. Design – Will be understood as that performed for flood protection works necessary for a one percent (1%) annual chance flooding (also called base flood). Flood control and flood-proofing works for the purposes of this Regulation will be designed for the base flood protection.

31. Freeboard – a safety factor consisting of a free vertical distance above the base flood elevation that must observe the minimum elevation of flood-control works and others, such as bridges and sewers in order to compensate for unknown or unforeseen factors when calculating base flood elevations. This freeboard shall be no less than 0.30 meter (1 foot) or as defined in other applicable rules and regulations, whichever is greater. Where embankments (levees) are concerned, freeboard shall be no less than 0.91 meter (3 feet). In cases of residential construction, the lowest floor elevation will have a freeboard of no less than 0.30 meters above the base flood elevation. For commercial use the floor elevation will be in accordance to the provisions established in the zone where it is located.

32. Natural Storm Drainage: A depression in the land where water runoff flows.

33. Sand dunes – naturally-occurring accumulations of sand in ridges or mounds inland from the shore.

34. Primary Frontal Dune – a continuous or nearly continuous mound of sand with relatively steep seaward and landward slopes immediately

landward and adjacent to the beach and subject to erosion from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

- 35. Building** – Structures with a roof and walls, or part of it, to be occupied permanently or temporarily by people, including: houses, temples, offices, theaters, warehouses, factories, schools, hospitals, stores or any other similar structure. See also structures.
- 36. Elevated Building** – A building with no basement built with its lowest floor above the ground by using in its perimeter fill or solid foundation walls, pilings, columns (posts and piers) or shear walls.
- 37. Erosion Caused by Flooding** – Landslide along the shores of a body of water as a result of soil removal mechanisms caused by waves or water currents exceeding their anticipated cyclic events or by an unusual rise in the water level or surge resulting in flooding.
- 38. Structures** – That which is erected, built, fixed or placed by man on, above or under the ground, including, but not limited to, buildings, towers, chimneys, air transmission lines. For the purposes of floodplain management, a building with walls and a roof, including gas or liquid storage tanks mainly above ground as well as manufactured housing.
- 39. Historic Structure** – A structure listed in the National Registry of Historic Sites or in the Inventory of Historic Sites or Places or an Eligible Property in a historic zone. Eligible Property is a property of historic value that may satisfy the eligibility criteria as a Historic Site, but has not been designated as such individually.
- 40. Hydrologic-Hydraulic Study** – Scientific technical study to determine the different water volumes for different flooding events, the analysis of the characteristics of the bodies of water and adjacent lands to provide estimates for the flood elevation for different recurring events within a hydrographic basin.
- 41. Flood Insurance Study (FIS)**: Official report provided by FEMA indicating the flood profile as well as the floodways, flooding limits, and base flood elevation.
- 42. Exception**: Authorization to utilize a property for a use admitted and

tolerated by the regulation in a zone or district, as long as it complies with the requirements or conditions established in the applicable regulation authorizing said use.

43. Flood:

- a) A general and temporary condition of partial or complete overflow/ inundation of usually dry land areas from:
 - 1. the overflow of inland or tidal waters;
 - 2. the unusual and rapid accumulation or runoff of surface waters from any source;
 - 3. mudflow; or
- b) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels resulting in a flood as defined in (a) above.
- c) For insurance purposes, a flooding event involves two (2) or more acres of usually dry land area, or two (2) or more properties.

44. Base Flood: A flood having a one percent (1%) chance of being equaled or exceeded in any given year. It is known as a flood with a recurring period of one hundred (100) years.

45. Critical Facilities: All man-made structures or improvements, which are important because of their size or service with the potential to cause or disrupt vital activities without being destroyed, damaged, or if their services are suddenly interrupted by a natural or anthropogenic phenomenon, such as:

- a) hospitals, nursing homes and housing probably occupied by people without enough mobility to prevent their death or lesions during a flooding event;
- b) police stations, fire stations, vehicle and equipment storage facilities, and emergency operation centers necessary for response activities before, during and after a flooding event;
- c) public and private utilities facilities vital to maintaining or restoring regular services in flooded areas before, during, and after a flooding event.

46. The Adjudicative Board of OGPe –

- a) The Adjudicative Board is an agency attached to the OGPe. It is responsible for evaluating and adjudicating final determinations

regarding discretionary character and have the duties and responsibilities pursuant to Public Law 161-2009, the provisions of this Regulation, as well as any other applicable OGPe internal regulation.

- b) The final determinations of the Adjudicative Board will be considered final OGPe determinations, who will:
 - 1) Notify any final determination from the Adjudicative Board to all the parts involved within a period no greater than ten (10) days from its issue date.
 - 2) The final determination notification from the Adjudicative Board shall include the findings of fact and conclusions of law.

47. Planning Board - government body created by Public Law No. 75 of June 24, 1975, as amended, also known as the Organic Law of the Puerto Rico Planning Board. It is also the State Coordinating Agency for the National Flood Insurance Program and the Floodplain Administrator.

48. Land Subdivision - refers to the division of a property into two (2) or more parts for its sale, transfer, lease, donation, usufruct, use, census, trust, division of inheritance or community, or any other transaction; as well as for the construction of one (1) or more buildings; constituting community property about a lot, plot or parcel of land, where the specific lots are assigned to the co-owners; as well as for the construction of one (1) or more buildings; and also includes urban development, as defined in the applicable regulation; it also includes a mere land segregation.

49. Map - Geographic or topographic representation of the flood hazard area.

50. Flood Insurance Rate Map (FIRM) - official map prepared and approved by FEMA, adopted by the Planning Board, which identifies the Special Flood Hazard Areas according to the following zones:

- a. Zone A - Special Flood Hazard Area with a recurring period of one hundred (100) years determined by using approximate methodologies with no base flood elevation or Floodway determined.
- b. Zone AE - Special Flood Hazard Areas with a recurring period

of one hundred (100) years determined by detailed methodologies with base flood elevations indicated. According to the scope of the study, may include the Floodway determination.

- c. Zone AO/AH – shallow Special Flood Hazard Areas with a recurring period of one hundred (100) years with a base flood depth fluctuating between 0.30 meters (one (1) foot) and 0.91 meters (three (3) feet). The average flood depths are obtained from a detailed hydraulic analysis.
- d. Zone A99 – areas prone to flooding from a flooding event with a one percent (1%) annual chance of occurring. These special areas are within a flood protection or control system where enough progress has been made in its construction, even though it has not been completed, but the specific statutory progress has been reached to complete it. This zone does not detail base flood elevations or flooding depths, so it is recommended to use, if required, the previous flood elevation for Zone 99. Mandatory flood insurance purchase requirements apply.
- e. Zone D – Flooding area that is not determined but is possible.
- f. Zone VE – Coastal high flood hazard area with a recurring period of one hundred (100) years with velocity and energy (storm surge) and a determined base flood elevation.
- g. Zone X (shaded) – flooding area with 0.2% chance of occurring each year or the one hundred (100) year flood with a water depth of less than 0.3 meters, with drainage areas of less than 2.6 square kilometers or areas protected by levees against the one hundred (100) year flood.
- h. Zone X (unshaded) - Area determined to be outside the five hundred (500) year storm flood.

51. Floodproofing Measures – refers to techniques or a combination of measures, that, when applied, prevent floodwaters from entering the structure, thus protecting its utilities and equipment or structural elements.

52. Dry Floodproofing – a combination of measures that result in a structure, including its utilities and equipment, to be waterproof, with

all its elements substantially impermeable to the entrance of water, with all structural elements being able to resist hydrostatic and hydrodynamic loads and the flotation effect.

53. Substantial Improvement - any addition, reconstruction, rehabilitation or other improvement to a structure, where the total cost of the improvement over any continuous ten-year (10) period equals or exceeds fifty percent (50%) of the current market value of the structure, or the value according to an appraisal prepared and certified by a professional appraiser before starting the construction of the improvements.

However, it does not include:

- a) Any improvement project to structures in order to correct violations to state or municipal health, sanitary or life-protection safety code specifications identified by the specific agency constituting minimum requirements to ensure safe living conditions.
- b) Any modification of a historic structure provided that the modification does not preclude the structure continues being designated as a historic structure.

54. Cumulative Substantial Improvement: Substantial improvement with a repair or improvement cost accumulated during a period of time in a way that the structure is required to comply with the floodplain regulation. It usually also refers to cumulative substantial damage.

55. Municipality: Geographical demarcation with all its barrios (divisions), which has a specific name and is governed by a local government, composed of a Legislative Branch and an Executive Branch.

56. Autonomous Municipality: Municipality with an effective Territorial Ordinance Plan that has had the Territorial Ordinance competencies transferred in accordance with the provisions of Public Law 107-2020 of the Puerto Rico Municipal Code.

57. Base Flood Elevation - anticipated maximum elevation reached by the overflowing waters of a river, stream or other watercourse during a base flood. The elevation with one percent (1%) chance to be equaled or exceeded in any given year.

- 58. Mean Sea Level (MSL)** - for the purposes of Floodplain Administration, the Puerto Rico Vertical Datum (PRVD-02) or any other datum used by the National Geodetic Survey (NGS) to reference the base elevation in the participating community's Flood Insurance Rate Map (FIRM).
- 59. Highest Adjacent Grade** - the highest natural elevation of the ground surface prior to construction and next to the exterior walls of the proposed structure.
- 60. New Construction:** structure for which the start of construction began on or after the effective date of the provisions established in this Regulation, including any subsequent improvements to such structure. For the effects of this Regulation, any addition that includes an enlargement of the gross floor area will be evaluated as new construction.
- 61. Encroachment** (obstruction, invasion or restriction) - Includes any dam, diversion, development, new construction, riprap, embankment, levee, dike, pile, abutment, projection, excavation, channel rectification, bridge, conduit, culvert, fill or any other analogous or natural structure along, across, or projected into any regulatory floodplain, which may impede, delay, or alter the water flow pattern, either by itself or by catching or collecting debris carried by water or located where the natural flow of water would carry them downstream and cause damage or loss of either life or property.
- 62. Permits Management Office (OGPe, by its Spanish acronym)** - the OGPe is created in accordance with Public Law 161-2009, known as the Puerto Rico Permit Process Reform Act. It is directed by an Assistant Secretary or the officers that replace him/her or whoever the powers and attributions have been delegated to, as provided in Public Law 161-2009, as amended.
- 63. 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 load forces, without causing damage to the elevated portion of the building or supporting foundation system.
- 64. Manufactured Home Park or Subdivision** – A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

- 65. Repetitive Loss** - Flood-related damage to a structure in two (2) separate flooding events in any ten (10) year period for which the average repair cost at the time of the events equals or exceeds twenty-five percent (25%) of the market value of the structure before the damage occurred in each event.
- 66. Person:** Any natural or legal, public or private person and any group thereof.
- 67. Lowest Floor** – the lowest floor of the lowest enclosed area (including the basement). An unfinished, flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area that is not the basement, is not considered the building's lowest floor, provided that such enclosure is not built in violation of the design elevation requirements applicable to this Regulation.
- 68. National Flood Insurance Program (NFIP):** Program created by the United States Congress in the year 1968, which makes flood insurance available to the participating communities.
- 69. Property:** Land, building, structure or any combination thereof, including historic sites.
- 70. Creek:** Watercourse, which is part of the tributary system of a river or discharges into a lake, lagoon, sea or ocean.
- 71. Real and Effective Construction** – The start of urban development and permanent construction works of an above ground structure that goes beyond the excavation stage, such as: the casting of the floor slab or foundation, driving piles, the construction of columns and any work, or placement of a manufactured home on its foundations.
- 72. Reconstruction** - The restoration or renewal of any part or parts of a structure. When dealing with properties with historic or architectonic value, it refers to the new construction that copies the materials and form of the historic structure that predates it based on proven documentation or substantiated by scientific evidence through the study of typologies.
- 73. Repair** - The replacement of existing minor work in a structure, without including additional work that constitutes a structural or façade modification, expansion in area or height, or change to the means of egress.

- 74. River** - watercourse that acts as the main drainage of a basin and discharges into another river, lake, lagoon, sea or ocean.
- 75. Flood Insurance** - insurance coverage proposed under the National Flood Insurance Program (NFIP).
- 76. Basement** - any portion of a structure that has its floor below ground level on all sides or that part of a building located below the elevation of the curb or in part above said elevation in a way that the freeboard from the curb elevation to the floor is equal or exceeds the freeboard from the level to the ceiling or roof. To regulation purposes, the height of a basement is the freeboard between its floor and the ceiling or roof.
- 77. Land** - includes the land as well as the body of water, the space above them and under them.
- 78. Functionally Dependent Use** - means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, and ship repair facilities. The term does not include long-term storage, manufacturing, sales, or service facilities.
- 79. Floodplain** - flat or semi-flat land usually dry and prone to flooding by water from a natural source. It is usually a low-lying area adjacent to a river, creek, brook, ocean or lake affected by the highest flood elevations known in history in the region or by the base flood, as illustrated in presently available studies and maps. For the purposes of this regulation, the floodplain refers to the flooding with one percent (1%) chance of happening each year, also known as the one hundred (100) year flood, and the special flood hazard areas.
- 80. Variance** – Authorization for a waiver of compliance with the Regulation requirements (see Section 12.00). Any variance will have to be requested by the owner of the property or authorized representative. The variance is not intended to alter the use, but to dispense the owner from compliance with one or more of the requirements established by this Regulation.
- 81. Recreational vehicle** - means a vehicle, which is:
- a) built on a single chassis;

- b) 37 square meters (400 square feet) or less when measured at the largest horizontal projections;
- c) designed to be self-propelled or permanently towable by a light duty truck; and
- d) not designed to be placed, situated or fixed in one location for long-term operation.

82. Street Vendor – a vehicle-mounted retail sale establishment designed to be readily movable, approved by law, and with all required business licenses and vehicle permits to travel highways and roadways in Puerto Rico and:

- a) built on a single chassis;
- b) 37 square meters (400 square feet) or less when measured at the largest horizontal projections;
- c) designed to be self-propelled or permanently towable by a light duty truck; and
- d) not designed to be placed, situated, or fixed at one location for long-term operation.

83. Violation - the failure to fully comply with the provisions of this Regulation, which includes the lack of an Elevation Certificate, among others.

84. Manufactured Home - a structure, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. For floodplain management purposes, the term "manufactured home/mobile home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for longer than 180 consecutive days. For insurance purposes, the term "manufactured home/mobile home" does not include park trailers, travel trailers, recreational vehicles, or other similar vehicles.

85. Zone: Classification of special flood hazard areas as adopted by the Planning Board, designated by FEMA and delimited in the Flood Insurance Rate Maps.

86. Coastal Zone - Strip of coastal land and adjacent waters within its

jurisdiction delimited by the Department of Natural and Environmental Resources, approved by the Planning Board and the Governor, which extends inland one thousand (1,000) lineal meters, from the coast line and other additional distances until wherever it is necessary to ensure it includes the key coastal natural systems, as well as the waters and oceanic or maritime floor extending three (3) leagues (10.35 land miles) offshore. This includes the islands of Vieques, Culebra, Mona, Monito, Desecheo and other keys and islets in the territorial waters.

87. Coastal High Hazard Zone - a Special Flood Hazard Area extending from the coast to the inland limit of a primary frontal dune along the open shore and any other area subject to high velocity wave action from storms or seismic sources, including storm surge. The area designated in a FIRM as Zone VE.

88. Maritime Terrestrial Zone - public domain asset determined by a certified demarcation by the Department of Natural and Environmental Resources. It is the space of the shores of Puerto Rico bathed by the ebb and flow of the sea, where the tides and the greater waves during storms are sensitive, where the tides are not sensitive and include the land gained from the ocean, the accretion and silting caused by it and the margins of the rivers up to the place where they are navigable or are sensitive to the tides.

TOPIC 2 - SPECIAL FLOOD HAZARD AREAS

SECTION 3.00 ADOPTION OF SPECIAL FLOOD HAZARD AREAS

3.01 General Provision

a. The Planning Board will adopt as Special Flood Hazard Areas the land affected by base flooding, in accordance with Public Law No. 3 of September 27, 1961, as amended, also known as Building Control in Flood-prone Zones Act, and in accordance with National Flood Insurance Program regulations.

b. Basis for establishing Special Flood Hazard Areas:

Special Flood Hazard Areas are identified in the Flood Insurance Rate Maps, (FIRM) and in the current Flood insurance Studies (FIS), prepared by FEMA and will include any subsequent amendments.

c. Use of Special Flood Hazard Areas information available:

The Planning Board or Participating Community will be able to adopt and reasonably use flood hazard zone and base flood elevation determination information available in order to ensure the protection of public safety and health as well as property, until the physical map review process is concluded and is in accordance with any other regulation or measure for the good administration of floodplains.

3.02 Adoption Purposes

Adoption will include the following public policy purposes:

a. To protect life, property and human health.

b. To reduce the need to use public funds for flood control works and mitigation plans.

c. To reduce the need for rescue efforts and flood assistance.

d. To reduce prolonged interruptions in business operations.

e. To reduce the damage to public use facilities and infrastructure, such as: water and sanitary main lines, electricity and telephone lines, streets, roads, and bridges.

- f. To ensure that potential land tenants, sub-tenants, occupants or titleholders are notified that the properties are at risk of flooding and storm surges and that they must comply with the requirements and provisions of this Regulation for any construction, use or development.
- g. To prevent changes to the natural floodplain hydrology in order to protect and preserve their wetlands:
 - 1) Puerto Rico Wetland Public Policy Act, (Public Law 314 of December 24, 1998) Puerto Rico Coral Reef Protection, Preservation and Management Act (Public Law No. 147 of July 15, 1999).
 - 2) Land Use Plan, as adopted by the Planning Board, on November 19, 2015.
 - 3) Puerto Rico wetland and reef protection regulation or legislation.

3.03 Notification and Publication of the Adoption

The Planning Board will notify and publish any Special Flood Hazard Area adoption in accordance with Public Law No. 3 of 1961, as amended.

3.04 Review Procedure for the Adoption

In order to invalidate the Adoption of Special Flood Hazard Areas through the adoption of Flood Insurance Rate Maps and the amendments included in this Regulation, they must be submitted in accordance with Section 2.7 of Public Law 38-2017, as amended, also known as the Uniform Administrative Procedure Act, before the Appellate Circuit Court within the next thirty (30) days from the approval of this Regulation or its Maps.

The action to begin an invalidation procedure does not cancel the validity of the Regulation.

SECTION 4.00 FLOOD INSURANCE RATE MAPS

4.01 General Provision

The Planning Board, as the state coordinating agency for the National Flood Insurance Program, (NFIP) administered by FEMA, will adopt the Flood Insurance Rate Maps (FIRM) in accordance with the Participating

Community in the NFIP. The Board, with assistance from the DRNA, will evaluate and adopt amendments to the maps mentioned above, taking into consideration, among other things, the available data for the maximum elevation reached by the different bodies of water when flooded and the studies conducted to determine the maximum flood elevations for the specific bodies of water.

The Special Flood Hazard Areas defined in the FEMA National Flood Insurance Program Flood Insurance Rate Maps, will be classified in zones as established in this Regulation.

From the respective effective date, every Flood Insurance Rate Map or amendment will become part of this regulation.

The effective date of said maps, or amendments, shall be the one determined by the current law.

4.02 Map Content

The Flood Insurance Rate Maps will include the minimum requirements of the Flood Insurance Study.

4.03 Prerogatives

When the Flood Insurance Rate Maps do not provide base flood elevation data, the Board, the OGPe Assistant Secretary, or the Participating Community, shall obtain, review and use the best information available to determine the applicable requirements.

4.04 Map Amendments

The amendments to a Flood Insurance Rate Map may be initiated by the Board out of its own initiative, at the request of the Mayor of the municipality or the owner of a damaged property, when one or more of the following conditions are met: (1) a change occurs or is proposed to the extension or limit or other characteristics of a zone declared to have flood hazard, for natural reasons, by works proposed or to be done by man, (2) other technical reasons, including the update of current studies based on new information.

Any amendment request submitted by private individuals must be submitted to the Office of the Secretary of the Board, or to the Participating Community with jurisdiction, which will refer the request to the Board together with the following information or documents:

- a. Evidence that the request is signed by the owner of the property object of the amendment.
- b. Explanatory report describing the merits and justifications for such a request.
- c. Maps drawn on a 1:10,000 scale illustrating the territorial extensions covered by the property.
- d. Hydrologic and Hydraulic Studies to support the request. The studies should be filed with the DRNA, following the Guidelines for the Preparation of Hydrologic and Hydraulic Studies provided by the Board and current FEMA and DRNA procedures.
- e. Elevation plan based on the mean sea level certified by a licensed engineer or surveyor authorized to practice surveying in Puerto Rico. The vertical elevation point of reference (bench mark - BM) as well as the elevation at said point must be identified and certified.
- f. Sworn and certified list of notification via certified mail and acknowledgement of receipt or evidence of personal notification to the owners of the land impacted by the changes proposed in the amendments and that they received an explanation about the impact of the proposed action on their respective properties, which will be evaluated as follows:
 - 1) The sworn and certified list must be included when submitting the map amendment or revision request to the Planning Board or Participating Community, as applicable.
 - 2) A copy of the current flood hazard area map identifying the affected properties or lands shall also be included with the list.
 - 3) Damaged land or properties mean the place where changes occur that would result from the request submitted including the increase or reduction of the base flood elevation and the increase or reduction of the limits of the special flood hazard areas. If no changes of this type occur, it shall be sworn and certified by the proposing party.
 - 4) If the Participating Community does not have the authority to evaluate the request in accordance with Autonomous Municipality Laws, it shall refer the request to the Planning Board.

- g. Whenever there is technical information regarding current studies, the new study shall use as a base the hydraulic model used to prepare the current studies.

The amendment request proposing party must assess if it is necessary to revise the current study hydrology estimates and document his or her opinion in that regard.

- h. The basis of the hydraulic analysis shall include as a minimum, but not limited to, a duplicate of the current conditions (current regulatory map), the model of existing conditions (including the changes or modifications not reflected on the current map) and a model of the proposed conditions.

- 1) Comply with the procedures required by FEMA, as applicable.
- 2) Submit the endorsement from the Floodplain Administrator of any other NFIP Participating Community impacted by the action proposed in the original document.
- 3) Evaluation of alternatives that do not result in an increase in the base flood elevation beyond that allowed on Sections 6.01 and 7.04, as applicable.
- 4) If an amendment is approved based on the work proposed; and once the project is built, the owner or his/her representative must submit to FEMA, the Board or Participating Community, the certification (as-built) of the finalized project condition in order to proceed with the map revision. The Board or Participating Community will only continue with the map change process under this condition. This amendment must be endorsed by FEMA. If the step to include the finished project condition in the map is omitted, the project will remain included in the Special Flood Hazard Area.
- 5) If the information in subparagraph 7a is not available, the proposing party must follow the instructions and procedures established to prepare the new study, including the guidelines from FEMA regarding the missing data.

During the review process, the Board will submit the proposal to FEMA for its final determination.

The Board will be able to waive some of the requirements before mentioned when it is shown to their satisfaction that it is not necessary to comply with them. In the amendments to the maps filed in a Participating Community, the Board must have the approval of the Community before waiving any requirement. The processing of any amendment proposal to a Flood Insurance Rate Map must follow the procedure established in this Section and those established by FEMA.

The Board will require a public hearing during the amendment process (under existing or proposed conditions) to a map, in accordance with Public Law No. 3 of 1961, as amended.

4.05 Zone Limits

When necessary, the Board or the Participating Community will be able to interpret the exact location of the limits of the zones declared Special Flood Hazard Areas identified on the Flood Insurance Rate Maps, based on the conditions observed on the land, and with the purpose of considering a modification to a flood hazard zone. The developer or owner of the property will be responsible for certifying the limit of the flood zone in the property according to the limit established in the current map. That certification is subject to revision by the Planning Board or the Participating Community.

The interpretation of the Board or Participating Community will be circumscribed to the effects of applying this Regulation so it does not force the mortgage institutions in any way to accept that interpretation or prevent any natural or legal person from requesting FEMA to reconsider establishing such limits. Said agency has established procedures to evaluate the requests.

SECTION 5.00 SPECIAL FLOOD HAZARD AREAS CLASSIFICATION

5.01 Classification by Zones

Special Flood Hazard Areas will be classified by zones, as provided below, taking into consideration their designation in the Flood Insurance Rate Maps, information about base floods and storm surges, which includes considerations of water elevations, depths and velocity, wave height, land condition, and topographical characteristics, and of its vegetation cover as well as the danger to the life and property of the people settled or to be settled in the lands.

5.02 Zone Types

For the purposes of applying this Regulation, and in accordance with FEMA's Special Flood Hazard Areas designations, the following zone types are established:

- a. FLOODWAY – Includes the regulated lands adjacent to the body of water reserved to discharge the base flood without cumulatively increasing the water surface elevation of the floodplain.

These lands are identified in the Flood Insurance Rate Maps and are designated as Floodway and Zone AE.

- b. COASTAL HIGH HAZARD ZONE VE – High flood hazard coastal area with base flood elevations (BFE) indicated. These lands are designated as Zone VE in the Flood Insurance Rate Maps.
- c. ZONE A - Special Flood Hazard Area with a recurring period of one hundred (100) years determined by using approximate methodologies with no base flood elevation identified. Mandatory flood insurance purchase requirements apply.
- d. ZONE AE - determined by using detailed methodologies with base flood elevations identified.
- e. ZONE AH - Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 0.30 meters (1 foot) to 0.91 meters (3 feet).
- f. ZONE AO – Defines the base flood depth, which ranges from 0.30 meters (1 foot) to 0.91 meters (3 feet) (usually sheet flow in sloping terrain).
- g. ZONE X, SHADED - Areas of moderate flood hazard within the floodplain with a 0.2% annual chance of flooding; or areas with a one percent (1%) annual chance of flooding where the drainage area is less than one (1) square mile, or areas protected against this flood elevation by a levee.
- h. ZONE X UNSHADED - Area of minimal flood hazard, outside of the floodplain with a one percent (1%) annual chance and the 0.2% annual chance of flooding.
- i. ZONE D -Areas with possible but undetermined flood hazards.

- j. ZONE A99 – Special flood hazard areas where enough progress has been made on the construction of protection systems, such as: dikes, dams, reservoirs, and levees. No flood elevations or depths are shown, so for the effects of permits, the previous flood zone will be used as reference (see historic map).

SECTION 6.00 FLOODWAY

6.01 Developments in the Floodway

From the effective date of the corresponding Flood Insurance Rate Maps, no new encroachments will be allowed in this zone, such as: structures, fill, substantial improvements, other developments and septic tanks, unless:

- a. There is evidence that other location alternatives outside this zone were evaluated and were not viable; and that by conducting a Hydrologic – Hydraulic Study based on current Guidelines for the Preparation of Hydrologic – Hydraulic Studies, using best engineering practices and applicable methodologies, that the encroachment proposed will not result in an increase above the regulatory floodway elevations during a base flood discharge event. If this would prove feasible, all new construction or substantial improvement shall comply with the following applicable requirements to mitigate the effects of the base floods.
- b. If the development proposed involves the deposit of fill and implies an amendment to the limit of the floodway, it must comply with the map amendment procedure, Section 4.04 and 7.07 of this regulation and the procedures established by FEMA.
- c. The Hydrologic – Hydraulic Study to be conducted must be based on the current regulatory study and must be filed with the DRNA. Only the applicable methodologies approved by regulatory state agencies and FEMA will be accepted as part of the study to evaluate the impact of the new project on the floodway.
- d. The Planning Board Guidelines for the Preparation of Hydrologic – Hydraulic Studies (H-H Guidelines) must be used.
- e. Those structures whose constructions have been legally authorized and started under the effective dates of this Regulation may be finished and occupied or used for the purposes specified in the authorization granted.

- f. The existing structures in the Floodway cannot be expanded unless they comply with the provisions on Subparagrah (1) of this Subsection. They may get repaired or rebuilt in order to preserve them or modify them structurally when those modifications are necessary to protect the life and safety of their users or to improve their safety conditions in order to resist the effects of hydrodynamic or hydrostatic loads of floodwaters. Said structural repairs or modifications will not imply creating new housing units or habilitating new sites for other uses in addition to the existing use; and will comply with the provisions of other applicable planning regulations.
- g. Reconstruction, rehabilitation or restoration will be allowed for any structure listed in the National Registry of Historic Sites or in the Inventory of Historic Sites.

6.02 Manufactured Homes and Recreational Vehicles in the Floodway

The temporary placement or storage or parking of manufactured homes or recreational vehicles will not be allowed in this zone within the floodway.

6.03 Land Subdivision in the Floodway

Starting from the effective date of the appropriate Flood Insurance Rate Map, no land subdivision will be allowed in the floodway. Exceptions to this provision will be considered in accordance with Section 11.02 of this Regulation.

6.04 Floor Elevation

The lowest floor elevation for residential use will be no less than 0.30 meters (1 foot), higher than the base flood elevation. For commercial use, the lowest floor elevation will be in accordance with Section 7.03 (b).

SECTION 7.00 ZONE AE, LANDS BETWEEN THE LIMIT OF THE FLOODWAY AND THE FLOODPLAIN, LANDS IN THE FLOODPLAIN, ZONE A AND ZONE AO/AH.

7.01 General Provisions

- a. Starting from the effective date of the appropriate Flood Insurance Rate Map, the placement of new structures, land subdivision, substantial improvements and other developments in this zone will be allowed as long as the provisions of this Section are met.

- b. Any land subdivision or urban development and drainage will be consistent with the need to reduce flood damage and all the urban development works will be designed using the best engineering practices in order to reduce flood damage to a minimum.
- c. Those structures, whose constructions have been legally authorized under this Regulation, may be finished and occupied or used for the purposes specified in the authorization granted.
- d. Any new construction and other developments must comply with the following:
 - 1) Design – Will be designed and built in such a way that they cause the least obstruction possible to the water flow, offer safety conditions, resist the effects of hydrodynamic and hydrostatic loads of floodwaters and are in accordance with any other provision of any applicable law or regulation.
 - 2) Anchoring – Any anchoring to be used must prevent flotation, collapse or lateral movement of the structure.
 - 3) Materials and Construction Methods – The materials and infrastructure will be resistant to flood damage. The construction methods and practices must reduce flood damage to a minimum.
 - 4) Infrastructure – Any new or replacement sanitary water and sewage system, electricity, ventilation, air conditioning equipment and other facilities will be designed to reduce to a minimum or eliminate floodwater infiltration into the systems and must prevent discharges of the sanitary sewage system onto floodwaters. Using septic tanks is prohibited as a method to dispose of wastewaters. Solid waste disposition systems are located in places where they do not pollute or come into contact with floodwaters and do not affect those systems. The elevation of the terrain and floor of the development must be certified at the mean sea level (MSL).
 - 5) Flood insurance Applicability – For the purposes of mandatory flood insurance applicability, FEMA shall determine if a structure is excluded or could be excluded from the Special Flood Hazard Area by comparing the elevation of the lowest terrain adjacent to the structure and the elevation of the lowest floor (including the basement) with the base flood elevation. If the whole structure

and the elevation of the adjacent lowest terrain are at or above the base flood elevation, the structure could be excluded from the Special Flood Hazard Area.

6) Freeboard:

- a) Any new construction or substantial improvement for residential use in every scenario within Zones AE, A, AO and AH will have the lowest floor elevation (including the basement) at 0.30 meters, (1 foot), above the base flood elevation.
- b) For non-residential use, the floor elevation may be designed at or above the base flood elevation or floodproofed, in case it is below the base flood elevation.

7.02 Hydrologic – Hydraulic Studies (Zone A, without a detailed study)

- a. For developments in lands located in Special Flood Hazard Areas where the base flood elevation is unknown (identified as Zone A in Flood Insurance Rate Maps), the proposing party shall submit with his/her request hydrologic and hydraulic studies (current Guidelines for the Preparation of Hydrologic and Hydraulic Studies) and specific proposals to the Floodplain Administration, the OGPe or the Participating Community, as applicable, in order to comply with Subsections 7.01(d and f) and protect the lands included in the request from the effects of flooding or storm surges. If these proposals are accepted, with the previous endorsement of the DRNA, the recommended measures or works will be included in urban development works and have to be operational before the structures to be built in these lands are occupied. In cases when there is a proposal to deposit fill in the property, the provisions established on Subsection 7.07 must also be met and all the necessary endorsements and permits shall be obtained from the appropriate government agencies, including those that may be required under the provisions of Section 404 of the Federal Water Pollution Control Act, as amended in 1972 (PL 92-500), also known as the Clean Water Act (CWA).
- b. For any land subdivision or urban development of more than fifty (50) units or five (5) acres, whichever is smaller, the base flood elevation will need to be determined. The Planning Board, OGPe or Participating Community, as applicable, may require a determination of the base flood elevation for minor land subdivisions or urban

developments when deemed necessary. Obtain, review and reasonably use any information or estimate regarding the base flood elevation or floodway from a state, federal source or any other source related to these studies.

- c. The proposing party may be exempt from preparing hydrologic and hydraulic studies for developments in lands located in basins if hydrologic and hydraulic studies have been prepared by any state, federal or private organization, and have been accepted by the DRNA, OGPe or FEMA, as applicable. However, and in accordance with the Hydrologic and Hydraulic Study prepared to protect the lands included in the request regarding the effects of flooding, the proposing party will submit the supporting technical studies together with the proposals in order to determine their applicability to the case and the map amendment procedure. In cases where the studies have been performed for an integral flood-control plan, the plan must be developed before starting the construction of the development. It will also be necessary to determine if the modifications to the flood hazard zone according to the plan include amendments to the floodway, which will require amending the map with the approval of the appropriate agencies.
- A. The Hydrologic and Hydraulic Study could also be waived for cases of construction or substantial improvement in a simple case of residential or non-residential use, where the minimum floor elevation could be at three (3) feet, or more, above the highest elevation of adjacent terrain in the plot or according to the recommendations established in FEMA literature.

The Planning Board, OGPe or Participating Community reserves the option of requesting additional studies if a cumulative effect occurs or may occur in the area or because of any other anticipated condition of structural hazard and its location in the floodplain.

- e. The Hydrologic and Hydraulic Studies shall follow all the current rules and procedures and must be done using engineering best practices as well as the methodology accepted by state regulating agencies and FEMA and based on current state or federal regulations.

7.03 Developments in Zone AE Lands (where the base flood elevation is known and the floodway has been defined)

- a. Residential Structure – Any new construction or substantial improvement shall have a minimum lowest floor elevation, including

the basement, of no less than 0.30 meters (1 foot) above the base flood elevation.

- b. Non-Residential Structure – Any new construction or substantial improvement for commercial, industrial use or any other non-residential use shall have a minimum lowest floor elevation, including the basement, at or above the base flood elevation or, together with the infrastructure and sanitary facilities:
 - 1) Could have the structure area below the base flood elevation if it is waterproof and has walls that are substantially waterproof.
 - 2) It must have structural elements able to resist hydrostatic and hydrodynamic loads and the flotation effect.
 - 3) It must be certified by a licensed engineer or architect indicating that it meets the requirements for this section. This certification must be submitted with the permit request.

- c. Elevated Structures – Any new construction or substantial improvement to elevated structures including enclosed spaces formed by foundations and other exterior walls, located below the base flood elevation, used only to park vehicles, access the building (stairs), or storage, in areas that are not basements, subject to flooding, shall be designed to automatically equalize the hydrostatic force on the exterior walls and allow the flow of floodwaters, thus complying with following requirements:
 - ii. Provide two (2) openings of a net area of no less than one (1) square inch per square foot of enclosed space subject to flooding.
 - a. The bottom part of the openings shall not be higher than 0.30 meters (1 foot) above the grade elevation.
 - b. The openings may be covered with screens, shutters, valves or any protective covering, as long as they allow the automatic flow of floodwaters in both directions.

 - iii. All electric, plumbing installations and any other utility connections are prohibited below the base flood elevation.

- iv. Accesses to the enclosed areas will be the minimum required for parking vehicles (garage doors) or limited spaces for storage, or access to the living areas (stairs).
- b. These enclosed areas will not have interior finishes nor will they be divided into separate areas.
- c. The designs to comply with these requirements will be duly certified by a licensed engineer or architect. The certification must be submitted with the permit request.

7.04 Developments in Zone AE Lands (where the base flood elevation is known and the floodway has not been defined)

- a. New constructions, substantial improvements or any other type of development (including fill) will be allowed for any use, as long as the appropriate Hydrologic – Hydraulic Study shows that the cumulative effect of the development proposed, combined with other existing or anticipated developments will not increase the shallow elevation of base flood waters more than 0.15 meters (half (1/2) a foot) in any place within the community.
- b. The corresponding study must be filed with the DRNA and comply with Section 7.01 and its Subsections.
- c. The lowest floor elevations for residential use in the previous subsections will be 0.30 meters (1 foot) above the base flood elevation.

7.05 Developments in Zones AO and AH Lands (where the base flood depth is between 0.30 meters (1 foot) and 0.91 meters (3 feet))

Any new construction and substantial improvement in these areas will comply with the following:

- a. Residential Structures – Any new construction and substantial improvement of residential structures must have the minimum lowest floor elevation (including the basement) above the highest grade elevation of the adjacent terrain, at least as high as the depth specified in feet (or meters) in the Flood Insurance Rate Maps or at least 0.91 meters, (3 feet), if the depth is not specified.
 - 1. Comply with the requirements of Section 7.01 and its Subsections.

2. Comply with adequate drainage paths to divert floodwaters around and away from the proposed structures.
- b. Non-Residential Structures – Any new construction and substantial improvement of non-residential structures must:
 - 1) Have the minimum lower floor elevation (including the basement) above the highest adjacent grade elevation, at least as high as the depth specified in meters or feet in the Puerto Rico Flood Insurance Rate Maps or at least 0.61 meters (2 feet) if the depth was not specified or next to the cleaning service facilities and sanitary facilities, designed in such a way that the area below the base flood elevation is waterproof with walls that are substantially waterproof against the flow of water and the structural elements can resist hydrostatic and hydrodynamic loads and the flotation effect.
 - 2) Comply with adequate drainage paths to divert floodwaters around and away from the proposed structures.
 - c. Be certified by a licensed engineer or architect indicating that it meets the requirements of this Section. The certification must be submitted with the permit request.

7.06 Manufactured Homes, Recreational Vehicles and Manufactured Structures in Zones AE and A

- a. Zone AE (where the base flood elevation is known and the floodway has been defined) – Any new development will be above the fill and the lowest floor will be above the base flood elevation in accordance with the provisions established in Section 7.03 of this Regulation.
- b. Zone AE (where the base flood elevation is not known and the floodway has not been defined) – Any manufactured home to be installed or that will undergo a substantial improvement will be above the fill, in such a way that its lowest floor is no less than 0.30 meters (1 foot) above the base flood elevation and in accordance with Section 7.04.
- c. Zone A (where the base flood elevation is unknown) – Prefabricated structures, manufactured homes, occasional, temporary or permanent parking of recreational vehicles will be allowed as long as they are anchored in order to resist flotation, collapse or lateral

movement by providing fasteners over the structure and frame to anchors on the ground, as described below:

- 1) A fastener will be provided from the top on each corner with two (2) additional fasteners on each side in the middle. Manufactured homes less than fifty (50) feet long will only require one additional fastener on each side.
- 2) Fasteners shall be provided to the frame on each corner with five (5) fasteners, on each side in the halfway points. For manufactured homes less than fifty (50) feet long, only four (4) additional fasteners will be provided on each side.
- 3) Each component of the anchoring system will have a capacity of resisting 4,800 pounds of force.
- 4) Any expansion of a manufactured home will be anchored as shown above.

7.07 Fill in Zone A

The Planning Board, OGPe or Participating Community, as applicable, may allow the deposit of fill in this Zone when it can prove its benefits and the amount of fill to be deposited shall not exceed the amount necessary to achieve said benefit; with the evidence from a Hydrologic – Hydraulic Study endorsed by the DRNA that the fill to be deposited will not constitute an encroachment to the free flow of the floodwaters, storm surges, or that it could harm other properties.

There must be evidence that the fill deposited will not settle below the base flood elevation and that it will be properly protected from the forces of erosion, rapid flows or differential settlement, as described in Subparagraphs 2, 3 and 4, below.

- a. The hydraulic analysis to evaluate the proposed fill will be based on the assumption that there will be an encroachment on each side of the floodplain, which will equally reduce the hydraulic capacity (equal conveyance reduction method), in such a way that the base flood elevation estimated in natural conditions does not increase more than the maximum allowed, 0.15 meters (half (1/2) a foot) anywhere in the community. After this analysis, another hydraulic analysis will be prepared with the proposed fill to show the estimated base flood elevation will not increase or modify the limit of the estimated floodway.

- b. The fill must be compacted to ninety-five percent (95%) of the maximum density attainable through the Standard Proctor Test method, issued by the American Society for Testing and Materials (ASTM Standard D-698). This requirement will only apply to fill prepared to be used as structural support.
- c. The gradient slope of the fill or embankment to be produced for granulated materials will not be greater than one and a half (1 1/2) horizontally and one (1) vertically or (1 1/2:1), (H:V), unless information is submitted to justify a greater slope.
- d. Adequate protection will be provided to the embankments exposed to base flood waters with velocity. For velocities of five (5) feet per second or less, the embankments will be protected with grass or similar vegetation. For velocities greater than five (5) feet per second, they will be protected by engineering-approved riprap (rock embankment) or any other type of similar protection.

SECTION 8.00 COASTAL AREAS

8.01 Zone VE and Coastal Zones

Starting from the effective date of the applicable Flood Insurance Rate Map, any new construction or substantial improvement in these zones, be it residential or non-residential in nature, must:

- a. Be sited landward at a minimum distance of (i) the reach of the mean sea level; or (ii) the maritime-terrestrial zone, according to the demarcation certified by the DRNA; or (iii) the Separation Zone (setback), whichever is more restrictive.
- b. The bottom part of the lowest horizontal structural member of the lowest floor (excluding piles and columns) will be elevated at least 0.30 meters (1 foot) above the base flood elevation.
- c. Will have column or pile foundations and will be anchored in order to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all the building components. The water load values used will be those associated to the base flood elevation. The wind load values used will be those required by the applicable state or local construction rules.

- d. Will have space below the lowest floor completely open, except when breakaway walls are used according to the provisions of articles (5), (6) and (7) below. If breakaway walls are used, the enclosed space will only be used for parking, storage or access to the building. The enclosed space will not be used to house people.
- e. The breakaway walls will be designed to withstand loads of no less than ten (10) and no more than twenty (20) pounds per square foot. Breakaway walls that withstand loads greater than twenty (20) pounds per square foot may be used if a licensed professional engineer or architect certifies that the proposed design meets the following conditions:
 - 1) The 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 damage due to wind or water pressure acting simultaneously on all the structural and non-structural building components.
 - 3) The breakaway walls shall be designed to automatically equalize hydrostatic flood forces on the exterior walls, allowing for the automatic entry and exit of floodwaters. The designs to comply with this requirement must meet or exceed the following criteria:
 - a. A minimum of two openings on at least two (2) different walls with a total net area of no less than 6.5 square centimeters (1 square inch) for every 0.1 square meter (1 square foot) of enclosed area subject to flooding.
 - b. The bottom part of all these openings shall not exceed 0.30 meters (1 foot) above the lowest adjacent final grade.
 - c. The openings may be covered by insect screening, louvers, valves or other coverings or devices allowed as long as they do not restrict the automatic entry and exit of floodwaters.
- d. The plans for any structure using breakaway walls will be submitted to the Assistant Secretary of the OGP or the Participating Community for their approval and issuance of the applicable permit before starting construction.

- e. A licensed professional engineer or architect must develop or review the structural design, specifications and building plans and must certify that the design and building methods to be used meet the accepted practice standards to meet the provisions of this Section.
- f. Floodproofing – This practice does not apply to Zones VE.
- g. Changes to sand dunes or wetlands (including mangroves) that may increase the potential of flood- or storm surge-related damage are prohibited.
- h. The parking or location of manufactured housing, recreational vehicles or street vendors is prohibited in Zone VE.
- i. Pools, pool decks, and walkways, must be structurally independent from buildings and structures to prevent the transfer of loads during flooding conditions, scouring or erosion due to wave velocity flow.
- j. Concrete slabs used for parking, shed floors, decks, walkways, terraces and similar uses, which are accessory to structures or located with the potential to cause structural damage to the foundations of a building shall be designed and built to be structurally independent from the foundation system of the main structure, and able to remain intact and functional under base flood conditions. The main structure must be able to withstand any flood load and the effects of erosion and scouring. The slabs must be designed according to standard ASCE 24-14.

8.02 Fill in Zone VE

Starting from the effective date of the applicable Flood Insurance Rate Maps the use of fill to support structural loads of the buildings located in this Zone or that may obstruct the free flow of floodwaters is prohibited. If fill or other structural work were proposed constituting a modification to the limit of Zone VE an amendment to the map must be requested according to Section 4.04 and the procedures established by the Board and FEMA.

8.03 Land Subdivisions in Zone VE

Starting from the effective date of the applicable Flood Insurance Rate Maps land subdivisions in this Zone will be allowed as long as it meets the

[CERTIFIED TRANSLATION]

provisions of applicable laws or regulations. The construction restrictions applicable to land subdivision approved will have to be registered in the Land Registry.

TOPIC 3 – MANAGING THE REGULATION

SECTION 9.00 PERMITS

9.01 General Provision

The Assistant Secretary of OGPe, the Participating Community or Autonomous Municipality with the appropriate hierarchy will require and issue permits pursuant to the provisions of Public Law No. 3 of 1961, also known as the Building Control in Flood-Prone Zones Act, Public Law 161-2009 and Public Law 107-2020 of the Puerto Rico Municipal Code, in accordance with the powers conferred to the authorized Municipalities included in this Regulation.

9.02 Permit Requirement

A permit shall be obtained for the development of works, as defined in this Regulation, before starting the construction or development in any Special Flood Hazard Area established in Sections 6.00, 7.00 and 8.00. The permit shall be for all structures, including manufactured homes, and for any development, including the deposit of fill, as well as other activities as set forth in Section 2, “Definitions.”

9.03 Issuing Permits

Starting from the effective date of this Regulation, permits will be issued for building, use, sign or advertisement installation, or deposit of fill only when the structure, property use, signs or advertisements, or deposit of fill for which a permit or authorization has been requested are in complete harmony and accordance with the provisions of this Regulation and an Elevation Certificate is duly completed and included. The permit for the deposit of fill shall have the endorsement of the DRNA or designated agency for such a task.

9.04 Effective Terms for Permit Decisions

- a. **Building Projects** – Any favorable decision or authorization concerning any project, draft, preliminary development, or final project issued by the Assistant Secretary of the OGPe, or by the Autonomous Municipality with the applicable hierarchy will be left without effect, if within the period of one hundred and eighty (180) days after being issued, the pertinent building permit has not been obtained, the authorized works are not started within the period of one hundred and eighty (180) days from the permit issue date; or if

said works, once started according to the foregoing provisions, are not completed within the period established in the permit issued.

- b. **Land or Structure Use** – Any decision authorizing any use permit will be without effect if within the period of one hundred and eighty (180) days after being issued, the pertinent use permit has not been obtained; or if after obtaining the pertinent use permit, the authorized use is not established within the period of one hundred and eighty (180) days from the permit issue date.
- c. **Sign and Advertisement Installation** – Any decision authorizing any permit for the installation of a sign or advertisement will be left without effect if, within the period of one hundred and eighty (180) days after being issued, the pertinent sign or advertisement permit has not been obtained; or if after obtaining the appropriate sign or advertisement permit, the authorized sign or advertisement is not installed within the period of one hundred and eighty (180) days from the permit issue date.
- d. **Deposits of Fill** – Any decision authorizing any deposit of fill will be left without effect, if, within the period of six (6) months after being issued, the approval for the building plans of the project has not been obtained, in case of a land development project; or if after obtaining the approval of said plans, the land movement has not effectively and actually begun within a period of three (3) years from the approval date.
- e. **Time Extensions for the Decisions** – The aforementioned effective terms will be considered final for all legal purposes, except when they may be extended as requested by the property owner or authorized representative provided said extension is not considered contrary to the public interest, and the extension request is submitted at least thirty (30) days before the expiration date of the decision, indicating the reasons for the request together with evidence of the progress achieved when preparing the drafts, building plans, studies and other documents required in the case.

9.05 Submitting Permit Requests

In order to file a permit request, the applicant must meet all the filing requirements established by the Floodplain Administrator, as well as any other government bodies concerned and include at least:

- a. Elevation Certificate duly completed (FEMA Form 086-0-33 (Revised)):

- 1) The elevation, with relation to the mean sea level, of the lowest floor and the floor of the basement (if any) of all the structures.
 - 2) The elevation, with relation to the mean sea level, for which the structure has been flood-proofed.
 - 3) The lowest terrain elevation adjacent to the structure, including the cases in Zones AO and AH, where the highest terrain elevation adjacent to the structure must be included.
 - 4) The certificate will be for each individual structure.
- b. Certifications – must be reviewed by a licensed engineer or architect; must be provided with each permit request in order to establish the methods used for the waterproof design of non-residential structures meet the criteria established in Section 7.03; must be provided for each proposed structure.
 - c. Watercourse – Description of the extension of any watercourse altered or relocated as a result of the proposed development and must include the DRNA endorsement and an authorization from the owner of the watercourse that will be affected. The Floodplain Administrator will ensure the permit holder has provided maintenance in the altered or relocated part of the watercourse so the flood flow capacity has not been reduced.
 - d. Cases in Zone A99 – The previous elevation to said zone shall be used as reference for the base flood elevation for the permit requirements.
 - e. Base flood elevation data for land subdivision proposals or other developments of more than fifty (50) lots or five (5) acres, whichever is smaller.

9.06 Permit Request Review

When reviewing permit requests and final determinations, the Floodplain Administrator, Participating Community or Autonomous Municipality will use the following guides:

- a. All requests for development permits will be reviewed in order to determine the requirements of this Regulation have been met.

- b. All requests for development permits will be reviewed in order to determine that all necessary permits and endorsements from other government agencies have been obtained.
- c. All requests for development permits in coastal hazard zones will be reviewed in order to determine if the development alters wetlands or dunes in such a way that it may increase the risk of flood, coastal storm surge or cyclonic storm surge damage.
- d. All requests for permits for proposed developments located in the floodway will be reviewed in order to ensure the provisions established in Subparagraph 6 of this Section are met.
- e. All building plans for breakaway walls to be used below the base flood elevation will be reviewed in order to ensure the provisions established in Subsections 7.03 (3) and 8.01 (5) of this Regulation are met.

Evaluate the request to determine if the proposed development will be reasonably protected from flooding. The reasonability test is a local decision and includes the use of historic data, watermarks, previous flooding photographs, etc., if available.

- f. Return of incomplete requests – A permit request, land use consult or variance request will not be considered and will be returned to the applicant when the information provided is not clear or is missing information, documents or plans; or if the applicant has not complied with all the provisions established in this Regulation.

9.07 Map Review Compliance - General Provisions

- a. For the purposes of flood hazard area management and flood insurance applicability, the project owner or developer must submit the Letter of Map Review (LOMR) and the as-built plans for the project, in the digital format determined by the Floodplain Administrator; in order to show they have complied with FEMA's review process.
- b. The project developer or authorized owner must submit to FEMA the as built plans to the Floodplain Administrator within the period of six (6) months after the change, following the administrative map review processes.

[CERTIFIED TRANSLATION]

- c. The proposing party must notify the changes to FEMA by sending the technical or scientific data in accordance with 44 CFR 65.3.
- d. This submittal is necessary so the flood hazard rate premiums and floodplain management requirements are based on updated data after confirming the physical changes affecting the flooding conditions.

9.08 Design and Base Flood Elevation

For design purposes, the base flood elevation shall be estimated using the hydraulic profiles provided in the Flood Insurance Studies (FIS), as available and effective.

SECTION 10.00 REGULATORY FLOOD ZONE CERTIFICATION AND DATA REGISTRY

10.01 General Provision

- a. The OGPe Assistant Secretary or the Autonomous Municipality with the corresponding hierarchy will establish and keep a elevation certificate registry; using, but without being limited to, the following information:
 - 1) Land Registry (*Catastro*) Number;
 - 2) Case/permit number;
 - 3) Base flood elevation;
 - 4) Lowest floor elevation of any new construction;
 - 5) Lowest elevation adjacent to the structure;
 - 6) Lowest elevation of the equipment or machinery in the structure;
 - 7) Lowest part of the horizontal structure (Zone VE);
 - 8) Substantial improvement or repetitive loss in zones declared as flood hazard by the Puerto Rico Floodplain Administrator.
- b. The elevations of structures built will be based on the mean sea level certified by a licensed land surveyor or professional authorized to work in land surveying in Puerto Rico, using the form designated by the Floodplain Administrator.

- 1) For structures with substantial improvements, the flood-proofing elevation will also be reviewed. The registry will include the certificates required under Subsection 9.05 of this Regulation.
 - 2) For coastal areas with high-energy due to storm surges, the registry will include Zone VE certificates required in Subsection 8.01 of this Regulation (Electronic Registry).
 - 3) Every time a DRNA endorsement is needed for any alteration or relocation of a watercourse, evidence of said endorsement will be included in the registry to be inspected by FEMA.
 - 4) All the registries related to the provisions of this Regulation will be kept available for public inspection.
- c. The designated Floodplain Administrator will be the depository of the data requested herein. The Planning Board, Participating Community or OGPE reserves the right to request additional data as necessary.

SECTION 11.00 EXCEPTIONS

11.01 General Provision

The Planning Board, by express provision of this Regulation as the case may be, will have jurisdiction on all cases warranting direct intervention in accordance with the general purposes of this Regulation and Public Law No. 75 of 1975, as amended, Public Law No. 3 of 1961, and will ensure the adequate protection of the public interest. Any exception granted shall be in accordance with applicable laws and regulations where determined that it does not present potential or imminent danger to public safety and health. Requests for exceptions must be filed in writing.

11.02 Developments Considered Exceptions

The Planning Board may consider developments proposed in Special Flood Hazard Areas as exceptions when they tend to promote a reduction in the flood risk of the area or result in a net benefit for the community. Projects may be favorably considered to develop the following activities:

- a. Land subdivisions to legalize ownership of lands occupied by structures in the Floodway, as long as the flood insurance studies

show the structures exist or existed before the determination of said zone.

- b. Proposed land subdivisions to make agricultural and recreational uses viable as well as other uses compatible with the flood hazard condition of the area. In these cases, the deed of the lot to be created by the subdivision must indicate that the lot is susceptible to flooding and that any work done in the lot must be in strict compliance with the Special Flood Hazard Area Regulation.

11.03 Conditions when Making Exceptions

Any favorable decision regarding any exception will be subject to compliance with the conditions established for it as well as any other provisions of this Regulation.

11.04 Effective Term for Exception Decisions

Any favorable decision regarding any exception related to a building, use, deposit of fill, or sign or advertisement permit will be left without effect if the appropriate permit has not been obtained within the period of one (1) year of it being issued.

This effective term will be considered final for all legal purposes, except when it can be extended as requested by the interested party (owner of the property or authorized representative) when said extension is not considered to be contrary to the public interest, as long as the extension request is submitted at least thirty (30) days prior to the expiration date of the decision, indicating the reasons for the extension together with evidence of the progress achieved in preparing the drafts, building plans, studies and documents the case may require.

11.05 Initiative

Any exception must be requested by the owner of the property or his or her authorized representative. The request must include the reasons why the exception shall be granted.

SECTION 12.00 VARIANCES

12.01 General Provision

The Planning Board or 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, their literal application would result in an unreasonable prohibition or restriction of the enjoyment of an asset or property, where it is satisfactorily shown that the variance will mitigate a clearly demonstrable damage, or that it will result in the best interests of the community and sector and that such variance will not result in an increase of floodwater elevation or velocity, additional threats to public safety, extraordinary public expense, cause a nuisance, defraud or mislead the public or is in conflict with other laws or regulations. The variances issued under this Section will not constitute amendments to this Regulation or Flood Insurance Rate Maps.

12.02 Initiative

Any variance will have to be requested by the owner of the property or authorized representative. The request must include the reasons why the variance should be granted. No variance will be considered or made if it exceeds that requested.

12.03 Public Hearings

The Planning Board or Participating Community, as the case may be, may hold public or administrative hearings as deemed necessary, so the stakeholders have the chance to express themselves and everything is done in accordance with the Law. The Planning Board or Participating Community, as applicable, will make the findings of facts and conclusions of law, based on the evidence presented in the hearing, or existing in the case, to justify their determination.

12.04 Conditions to Issue Variances

When considering variance requests, any favorable decision regarding any variance will be subject to the conditions established below and any other provisions included in this Regulation:

- a. Variances may be issued for the repair or rehabilitation of structures listed in the National Registry of Historic Sites or in the Inventory of Historic Sites or Places, or an Eligible Property within a historic zone if there is a determination that the repair or rehabilitation proposed will not prevent the structure to continue being designated as a historic structure and that the variance is the minimum required to preserve the historic character and design of the structure.
- b. No variance shall be issued within the floodway unless it is shown, through a Hydrologic - Hydraulic Study endorsed by the DRNA, that it

will not result in an increase of the flood elevations during a base flood discharge event. If this were proven to be feasible, any new construction or substantial improvement will meet the applicable requirements to mitigate the effects of the flood.

- c. The protection works will not increase the base flood elevation in the floodway beyond what is allowed.
- d. The variance will only be issued after determining the variance is the minimum necessary, after taking into consideration the flood risk, to grant relief.
- e. The variance for new construction or substantial improvement, and other developments necessary to conduct a functionally dependent use, will only be issued if it meets the provisions of Subsection 12.01 and Subsection 12.04, Subparagraphs (1) and (2).
- f. Variances may be issued for new construction or substantial improvements in contiguous lots with a capacity of half (1/2) an acre or less surrounded by lots with structures built below the base flood elevation, according to the provisions established in Subsection 12.01, and Subsection 12.04, Subparagraphs (1) and (2) and Sections 12.06 and 12.07.
- g. Requests for variances may be considered for lots larger than half (1/2) an acre, as long as the technical evidence to justify such variance is submitted.
- h. A copy of this notification will be filed with the record of the variance granted.

12.05 Effective Term for Decisions on Variances

Any favorable decision or authorization regarding any variance to the current regulation to be issued by the Board and those related to a building permit or deposit of fill issued by the OGP Assistant Secretary or the Participating Community will be left without effect if, the appropriate permit has not been obtained within the term of one (1) year from being issued.

This effective term is considered final for all legal purposes, except that it may be extended as requested by the owner of the property, or authorized representative, as long as the extension is not considered contrary to public interest, and the extension request is submitted thirty

(30) days prior to the expiration date of the decision, including the reasons for the request and evidence of the progress achieved in preparing the drafts, building plans, studies and documents the case may require.

12.06 Registry of Variances

The Assistant Secretary of OGPe, or Participating Community, as the case may be, will maintain a registry of the records of any request for variance, including the technical information; and will notify FEMA about said variances as requested.

12.07 Notice

The applicant will receive a written notice that issuing a variance to build a structure with a floor elevation lower than the base flood elevation could result in higher flood insurance premiums. The applicant will also be advised that said construction may increase the risk to life and property. A copy of this notice will be filed in the record of the variance issued. Variances will not be issued for residential structures with floor elevations lower than the base flood elevation.

12.08 Considerations for Variance Evaluation

The proposing party must consider and document the following aspects:

- a. The danger of storing materials that may be swept away to other lands and cause damage to third parties, including public property.
- b. The variance proposed shall not increase the base flood elevations. The proposing party must show through a Hydrologic - Hydraulic Study endorsed by the DRNA that the variance proposed will not increase the base flood elevations in the area.
- c. The stakeholder in the variance must show that it does not compromise public safety, common good, or life or property nor does it represent any risk to health.
- d. There must be proof that said variance will not cause undermining in:
 - 1) Personal expenses for emergency services.
 - 2) Repair and replacement of public facilities and infrastructure.

- 3) Protective measures involving public expenses such as protection barriers (sand bags) or temporary floodwalls for structures exposed to flooding as a result of authorizing the variance.
 - 4) Equipment expenses, investing rescue personnel time to evacuate or rescue personnel.
 - 5) The aspects of repairing, demolishing properties by public authorities must be evaluated when the owner cannot cover those expenses or because the property has been abandoned; as a result of authorizing the variance.
- e. A possible new owner must be advised of the existence of said variance and its possible consequences on flood insurance.
 - f. The availability of alternate locations for the proposed use not subject to flooding or erosion damage.
 - g. The compatibility of the proposed use with existing and proposed developments.
 - h. The relation of the proposed used with the integral plan and the floodplain management program for that area.
 - i. The relation of the proposed use with the municipal mitigation plan.
 - j. Property access safety during flooding periods for regular and emergency vehicles.

Land subdivisions in Flood Hazard Areas must consider the access to enter and exit from the subdivisions allowing for the effective evacuation of the residents in case of a flooding event. A safe escape route could reduce the need for emergency services.

SECTION 13.00 SURVEILLANCE AND INSPECTION IN FLOOD HAZARD ZONES

13.01 General Provision

The Floodplain Administrator or Participating Community within its jurisdiction will be responsible for monitoring the Special Flood Hazard Areas in all urban and rural zones in Puerto Rico, and for implementing and enforcing the provisions of this Regulation.

- a. Coastal Zone – In accordance with Article 10 of Public Law No. 3 of 1961, as amended, also known as Building Control in Flood-Prone Zones Act, the DRNA will collaborate with the Planning Board in monitoring the Special Flood Hazard Areas located in the coastal zones of Puerto Rico and will ensure no waste, debris or fill is deposited in river or stream floodways located inside or outside this zone.

The DRNA will notify the Floodplain Administrator or Participating Community, about the existence of circumstances that, in its opinion, justify the adoption of a Special Flood Hazard Area in the coastal zone.

- b. Other Areas – According to Article 10 of Public Law No. 3 of 1961, as amended, also known as Flood-prone Zones Act, the Department of Housing will collaborate with the Board in monitoring the Special Flood Hazard Areas, with the exception of coastal zones, and will notify the Floodplain Administrator about the existence of circumstances that, in its opinion, justify the adoption of a Special Flood Hazard Area in the urban or rural zone of any municipality.

13.02 Inspections

The elevation certificate required in Section 1612.4 of the Puerto Rico Building Code shall be submitted to the Floodplain Administrator when placing the lowest floor, including the basement, and before building any additional vertical elements in Special Flood Hazard Areas.

TOPIC 4 – OVERSIGHT PROCEEDINGS

SECTION 14.00 VERIFICATION OF DATA, WORKS AND PENALTIES

14.01 Administrative or Judicial Actions

The Planning Board Officers, OGPe Assistant Secretary or Participating Community, as the case may be, may or will take, the following administrative or judicial actions, among others:

- a. Return of requests – When a lack of clear information or missing information, documents or plans is noted when requesting a permit, location consult or variance; or the requirements of this Regulation for filing a request have not been met, said request will be returned and will not be filed.
- b. Building or Urban Development Permits – If a building or urban development permit is requested or has been obtained in violation of applicable laws and regulations, the OGPe or Participating Community, may, if the project is already in construction, issue orders to do or not do and to cease and desist, seek an injunction, mandamus, nullity or any other adequate action to prevent, prohibit, annul, remove or demolish any obstruction, building or use, made or maintained in violation of this Regulation or impose the applicable administrative penalties.
- c. For developments built, which fail to comply with this Regulation or the applicable regulation at the time of construction, appropriate action will be taken in accordance with this section.

14.02 Penalty

As provided on Public Law No. 3 of 1961, as amended, also known as Flood-Prone Zones Act, any person who violates the provisions of this Law and this Regulation will be guilty of a misdemeanor and, if convicted, will be punished with a fine of five hundred (500) dollars or imprisoned for a maximum of six (6) months or both penalties at the discretion of the Court. Whenever the infraction reported consists on erecting a building, construction, deposit of fill, obstruction, or substantial improvement to an existing building or structure or other developments located in a Special Flood Hazard Area, the sentence issued, may, in addition to the penalty indicated, provide that the part of the building, obstruction or extension or development object of the complaint, that does not meet the requirements and provisions regarding Special Flood Hazard Areas,

[CERTIFIED TRANSLATION]

shall be demolished, removed or corrected within thirty (30) days from the date the sentence is signed. The Court Order will be served by the Marshall of the Court. In those cases where the Court Order affects one or more dwellings, it shall be served by the Marshall of the Court, together with officials from the Department of Housing.

[CERTIFIED TRANSLATION]

TOPIC – ADOPTION AND EFFECTIVE DATES

SECTION 15.00 Adoption

This Regulation is adopted pursuant and in accordance with the provisions of the laws appearing in Section 1.02

15.01 Effective Dates

The Puerto Rico Planning Board **ADOPTS** this “Special Flood Hazard Areas Regulation” (Planning Regulation No. 13), Eighth Revision in its August 28, 2020 meeting, in San Juan, Puerto Rico. This Regulation will be effective thirty (30) days after it being filed in the Department of State.

[signed: illegible]
MARÍA DEL C. GORDILLO PÉREZ
President

[signed: illegible]
SUHEIDY BARRETO SOTO
Associate Member

[signed: illegible]
REBECCA RIVERA TORRES
Associate Member

[signed: illegible]
PABLO COLLAZO CORTÉS
Associate Member

I hereby certify this Regulation is adopted, today, August 28, 2020.

[signed: Loida Soto Noguerras]
LOIDA SOTO NOGUERAS
Secretary

[ink stamp: Government of Puerto Rico
Planning Board]

[CERTIFIED TRANSLATION]



[CERTIFIED TRANSLATION]

CERTIFICADO DE TRADUCCIÓN AL INGLÉS

Yo, Rebecca Morales, traductora profesional con Maestría en Traducción y miembro *bona fide* de la *American Translators Association*, por la presente certifico que, a mi mejor entender, el documento anterior es una traducción fiel y exacta al inglés del texto en español **Reglamento de Inundaciones**, realizada a petición de la parte interesada.

En San Juan, Puerto Rico, hoy, **25 de marzo de 2021**.

Rebecca Morales #22966
ATABEX TRANSLATION SPECIALISTS, Inc.
P.O. Box 195044, San Juan, PR 00919-5044

CERTIFICATE OF TRANSLATION INTO ENGLISH

I, Rebecca Morales, professional translator with an M.A. in Translation and a member in good standing of the American Translators Association, hereby certify that, to the best of my knowledge and abilities, the foregoing is a true and faithful rendering into English of the Spanish text **Reglamento de Inundaciones**, made at the request of the interested party.

In San Juan, Puerto Rico, today, **March 25, 2021**.

Rebecca Morales #22966
ATABEX TRANSLATION SPECIALISTS, Inc.
P.O. Box 195044, San Juan, PR 00919-5044

