CHAPTER 8

FLOOD PLAIN REGULATION

Part 4

**Technical Provisions**

 **§401. General.**

 (1) In the identified Flood-prone Area(s), the development and/or use of any land shall be permitted provided that the development and/or use adheres to the restrictions and requirements of all other applicable codes and ordinances in force in the municipality

 (2) Within any FW (Floodway Area), any new construction, development use, activity, or encroachment that would cause any increase in flood heights shall be prohibited except where the rise in flood heights caused by the proposed development is fully offset by accompanying improvements which have been approved by all appropriate local and/or state authorities.

 (Ordinance No. 93-1, adopted )

 (3) Where a flood-prone area has been identified which does not include detailed flood profiles and elevations, the following provisions apply:

 (a) Within any area designated “FA” area, new construction, and other development, uses and activities, shall be allowed, provided that they are undertaken in strict compliance with the provisions contained in this Ordinance, as well as any other applicable codes, ordinances, regulations.

 **§402. Elevation and Floodproofing Requirements.**

 (1) Residential Structures.

 (a) Within any FW, FF, or FA area, the lowest floor (including basement) of any new or improved residential structures shall be at or above the one hundred (100) year flood elevation.

 (2) Non-residential Structures.

 (a) Within any FW, FF, or FA area, the lowest floor (including basement) of any new or improved non-residential structure shall be at or above the one hundred (100) year flood elevation, or be designed and constructed so that the space enclosed by such structure shall remain either completely or essentially dry during any flood up to that height.

 (b) Any non-residential structure, or part thereof, having a lowest floor which is not elevated to at least one and one half (1½) feet above the one hundred (100) year flood elevation, shall be floodproofed in a completely or essentially dry manner in accordance with the W1 or W2 space classification standards contained in the publication entitled “Flood-Proofing Regulations” published by the U.S. Army Corps of Engineers (June 1972), or with some other equivalent standard. All plans and specifications for such floodproofing shall be accompanied by a statement certified by a registered professional engineer or architect which states that the proposed design and methods of construction are in conformance with the above referenced standards.

 (3) Enclosed space below the lowest floor (including basement) may be permitted, provided that such space shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

 (a) At least two openings shall be provided having a total net open area of at least one square inch for every square foot of enclosed space subject to flooding.

 (b) The bottom of all openings shall be no higher than one foot above grade.

 (c) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

 (4) Accessory Structures. A structure accessory to a principal building or use may be designed and constructed in a “wet” floodproofed manner provided that:

 (a) The structure shall not be designed or used for human habitation but may be used for the parking of a vehicle, storage of tools and equipment, or other such use incidental to the principal building or activity;

 (b) The floor area shall not exceed 580 square feet, nor shall the outside perimeter measure more than 100 lineal feet;

 (c) The structure will have a low damage potential;

 (d) The structure will be situated on the site so as to cause the minimum obstruction to the flow of floodwaters;

 (e) Electrical service facilities shall be elevated. Permanent utility equipment such as furnaces, oil tanks, water heaters, etc. are prohibited, as are appliances such as washers, dryers, refrigerator, etc.;

 (f) Water closets and other sanitary facilities are prohibited;

 (g) The structure shall be adequately anchored to prevent flotation or movement and shall be designed to automatically equalize hydrostatic forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

 (1) At least two openings shall be provided having a total net open area of at least one square inch for every square foot of enclosed space subject to flooding;

 (2) The bottom of all openings shall be no higher than one foot above grade;

 (3) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

 (Ordinance No. 91-1, adopted )

 **§403. Design and Construction Standards.** The following minimum standards shall apply for all construction proposed to be undertaken within any identified flood-prone area:

 (1) Fill. If fill is used, it shall:

 (a) Extend laterally at least (15) fifteen feet beyond the building line from all points;

 (b) Consist of soil or small rock materials only. Sanitary Landfills shall not be permitted;

 (c) Be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;

 (d) Be no steeper than one (1) vertical to two (2) horizontal, unless substantiated data, justifying steeper slopes are submitted to, and approved by the Building Permit Officer; and,

 (e) Be used to the extent to which it does not adversely affect adjacent properties.

 (2) Drainage Facilities. Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall insure drainage at all points along streets and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.

 (3) Sanitary Sewer Facilities. All new or replacement sanitary sewer facilities, and private package sewage treatment plants (including all pumping stations and collector systems) shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into the flood waters. In addition, they should be located and constructed to minimize or eliminate flood damage and impairment.

 (4) Water Facilities. All new or replacement water facilities shall be designed to minimize or eliminate infiltration of flood waters into the system and be located and constructed to minimize or eliminate flood damages.

 (5) Streets. The finished elevation of proposed new streets shall be no more than one (1) foot below the Regulatory Flood Elevation.

 (6) Utilities. All utilities such as gas lines, electrical and telephone systems being placed in identified flood-prone areas should be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.

 (7) Storage. No materials that are buoyant, flammable, explosive, or in times of flooding, could be injurious to human, animal, or plant life, shall be stored below the Regulatory Flood Elevation.

 (8) Placement of Buildings and Structures. All buildings and structures shall be designed, located, and constructed so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum effect upon the flow and height of flood water.

 (9) Anchoring.

 (a) All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.

 (b) All air ducts, large pipes, storage tanks, and other similar objects or components located below the Regulatory Flood Elevation shall be securely anchored or affixed to prevent flotation.

 (10) Floors, Walls and Ceilings. Where located at or below the regulatory flood elevation:

 (a) Wood flooring used at or below the Regulatory Flood Elevation shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain without causing structural damage to the building.

 (b) Plywood used at or below the Regulatory Flood Elevation shall be of a “marine” or “water-resistant” variety.

 (c) Walls and ceilings at or below the Regulatory Flood Elevation shall be designed and constructed of materials that are water-resistant and will withstand inundation.

 (d) Windows, doors, and other components at or below the Regulatory Flood Elevation shall be made of metal or other water- resistant material.

 (11) Paints and Adhesives. When used at or below regulatory flood elevation:

 (a) Paints or other finishes used at or below the Regulatory Flood Elevation shall be of a “marine” or water-resistant quality.

 (b) Adhesives used at or below the Regulatory Flood Elevation shall be of a “marine” or water-resistant quality.

 (c) All wooden components (doors, trim, cabinets, etc.) shall be finished with a “marine” or water-resistant quality.

 (12) Electrical Systems and Components.

 (a) Electric water heaters, furnaces, air conditioning and ventilating systems, and other electrical equipment or apparatus shall not be located below the Regulatory Flood Elevation.

 (b) Electrical distribution panels shall be at least three (3) feet above the one hundred (100) year flood elevation.

 (c) Separate electrical circuits shall serve lower levels and shall be dropped from above.

 (13) Plumbing.

 (a) Water heating, furnaces, and other mechanical equipment or apparatus shall not be located below the Regulatory Flood Elevation.

 (b) On-site sewage disposal systems shall be located to avoid impairment to them or contamination from them during flooding. At a minimum, all systems shall meet the requirements of Act 537, The Pennsylvania Sewage Facilities Act, as amended.

 (c) Water supply systems and sanitary sewage systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters.

 (d) All gas oil supply systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

 **§404. Special Requirements for Manufactured Homes.**

 (1) No Manufactured Home shall be placed in any floodway area.

 (2) Where permitted within any floodplain area, all Manufactured Homes, and any additions thereto, shall be:

 (a) Placed on a permanent foundation;

 (b) Elevated so that the lowest floor of the Manufactured Home is one and one-half (1½) feet or more above elevation of the one hundred (100) year flood;

 (c) Anchored to resist flotation, collapse, or lateral movement.

 (3) An evacuation plan indicating vehicular access and escape routes shall be filed with the Township for Manufactured Homes subdivision where appropriate.

 (Ordinance No. 91-1, adopted ; Ordinance No. 93-1, adopted )