

4. the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
5. power lines, wiring, and outlets will be at least one and one-half (1 ½) feet above the 100 year flood elevation.
6. permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
7. sanitary facilities are prohibited.
8. the structure shall be adequately anchored to prevent flotation or movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. 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. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
 - b. the bottom of all openings shall be no higher than one (1) foot above grade.
 - c. openings may be equipped with screens, louvers, etc. or other coverings or devices, provided that they permit the automatic entry and exit of flood waters.

Section 4.03: Design and Construction Standards

The following minimum standards shall apply for all construction and development proposed within any identified floodplain area:

A. Fill

If fill is used, it shall:

1. extend laterally at least fifteen (15) feet beyond the building line from all points;
2. consist of soil or small rock materials only – sanitary landfills shall not be permitted;
3. be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;

4. be no steeper than one (1) vertical to two (2) horizontal feet unless substantiated data justifying steeper slopes are submitted to, and approved by the building permit officer; and,
5. be used to the extent to which it does not adversely affect adjacent properties. The provisions contained in the 2003 IBC (Sec. 1801.1 and 1803.4) shall be utilized.

B. 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 proper drainage 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. The provisions contained in the 2003 IBC (Appendix G401.5) shall be utilized.

C. Water and Sanitary Sewer Facilities and Systems

1. All new or replacement water and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of flood waters.
2. Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
3. No part of any on-site sewage system shall be located within any identified floodplain area except in strict compliance with all state and local regulations for such systems. If any such system is permitted, it shall be located so as to avoid impairment to it, or contamination from it, during a flood.
4. The design and construction provisions of the UCC and 34 PA Code (Chapters 401-405 as amended) and contained in the 2003 IBC (Appendix G. Secs. 401.3 and 401.4), the 2003 IRC (Sec. 323.1.6), the ASCE 24-98 (Sec. 8.3), FEMA #348, Protecting Building Utilities From Flood Damages and The International Private Sewage Disposal Code (Chapter 3) shall be utilized.

D. Other Utilities

All other utilities such as gas lines, electrical and telephone systems shall be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.

E. Streets

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

F. Storage

All materials that are buoyant, flammable, explosive or, in times of flooding, could be injurious to human, animal, or plant life, and not listed in Section 4.04, Development Which May Endanger Human Life, shall be stored at or above the Regulatory Flood Elevation and/or flood proofed to the maximum extent possible.

G. 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 floodwater.

H. Anchoring

1. All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
2. 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.
3. The design and construction requirements of the UCC pertaining to this subsection as referred to in 34 PA Code (Chapters 401-405 as amended) and contained in the 2003 IBC (Secs. 1605.2.2., 1605.3.1.2, 1612.4 and Appendix G501.3), the IRC (Secs. R301.1 & R323.1.1) and ASCE 24-98 (Sec. 5.6) shall be utilized.

I. Floors, Walls and Ceilings

1. 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.
2. Plywood used at or below the Regulatory Flood Elevation shall be of a "marine" or "water-resistant" variety.
3. 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.
4. Windows, doors, and other components at or below the Regulatory Flood Elevation shall be made of metal or other "water-resistant" material.

5. The provisions of the UCC pertaining to this subsection and referenced in the 34 PA Code (Chapters 401-405 as amended) and contained in the 2003 IBC (Secs. 801.1.3, 1403.2, 1403.4, 1403.6 and 1404.2), the 2003 IRC (Secs. R323.1.7 & R501.3) and ASCE 24-98 (Chapter 6).

J. Paints and Adhesives

1. Paints and other finishes used at or below the Regulatory Flood Elevation shall be of "marine" or "water-resistant" quality.
2. Adhesives used at or below the Regulatory Flood Elevation shall be of a "marine" or "water-resistant" variety.
3. All wooden components (doors, trim, cabinets, etc.) shall be finished with a "marine" or "water-resistant" paint or other finishing material.
4. The standards and specifications contained in 34 PA Code (Chapters 401-405, as amended) the 2003 IBC (Secs. 801.1.3, 1403.7 and Appendix G) and the 2003 IRC (Sec. R323.1.7.)

K. Electrical Components

1. Electrical distribution panels shall be at least three (3) feet above the one hundred (100) year flood elevation.
2. Separate electrical circuits shall serve lower levels and shall be dropped from above.
3. The provisions pertaining to the above provisions and referenced in the UCC and 34 PA Code (Chapters 401-405) as amended and contained in the 2003 IBC (Sec. 1612.4), the IRC (Sec. R323.1.5), the 2000 IFGC (Secs. R301.5 and R1601.3.8) and ASCE 24 (Chapter 8) shall be utilized.

L. Equipment

1. Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical or utility equipment or apparatus shall not be located below the Regulatory Flood Elevation.
2. The provisions pertaining to the above provision and referenced in the UCC and 34 PA Code (Chapters 401-405), as amended and contained in the 2003 IBC (Sec. 1612.4), the 2003 IRC (Secs. R323.1.5) the 2000 IFGC (Secs. R301.5 and R1601.3.8) and ASCE 24 (Chapter 8) shall be utilized.

M. Fuel Supply Systems

All gas and 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.

Section 4.03N: Uniform Construction Code Coordination

The Standards and Specifications contained 34 PA Code (Chapters 401-405), as amended and not limited to the following provisions shall apply to the above and other sections and sub-sections of this ordinance, to the extent that they are more restrictive and/or supplement the requirements of this ordinance.

International Building Code (IBC) 2003 or the latest edition thereof:
Secs. 801, 1202, 1403, 1603, 1605, 1612, 3402, and Appendix G.

International Residential Building Code (IRC) 2003 or the latest edition thereof:
Secs. R104, R105, R109, R323, Appendix AE101, Appendix E and Appendix J.

Section 4.04: Development Which May Endanger Human Life

A. In accordance with the Pennsylvania Flood Plain Management Act, and the regulations adopted by the Department of Community and Economic Development as required by the Act, any new or substantially improved structure which:

- will be used for the production or storage of any of the following dangerous materials or substances; or,

- will be used for any activity requiring the maintenance of a supply of more than 550 gallons, or other comparable volume, of any of the following dangerous materials or substances on the premises; or,

- will involve the production, storage, or use of any amount of radioactive substances;

shall be subject to the provisions of this section, in addition to all other applicable provisions. The following list of materials and substances are considered dangerous to human life:

1. Acetone
2. Ammonia
3. Benzene
4. Calcium carbide

5. Carbon disulfide
6. Celluloid
7. Chlorine
8. Hydrochloric acid
9. Hydrocyanic acid
10. Magnesium
11. Nitric acid and oxides of nitrogen
12. Petroleum products (gasoline, fuel oil, etc.)
13. Phosphorus
14. Potassium
15. Sodium
16. Sulphur and sulphur products
17. Pesticides (including insecticides, fungicides, and rodenticides)
18. Radioactive substances, insofar as such substances are not otherwise regulated.

B. Within any FW (Floodway Area), any structure of the kind described in Subsection A., above, shall be prohibited.

C. Within any FA (General Floodplain Area), any new or substantially improved structure of the kind described in Subsection A., above, shall be prohibited within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.

D. Where permitted within any floodplain area, any new or substantially improved structure of the kind described in Subsection A., above, shall be:

1. elevated or designed and constructed to remain completely dry up to at least one and one half (1 ½) feet above the one hundred (100) year flood and,
2. designed to prevent pollution from the structure or activity during the course of a one hundred (100) year flood.

Any such structure, or part thereof, that will be built below the Regulatory Flood Elevation shall be designed and constructed in accordance with the standards for completely dry flood-proofing contained in the publication "Flood-Proofing Regulations (U.S. Army Corps of Engineers, June 1972 as amended March 1992), or with some other equivalent watertight standard.

Section 4.05: Special Requirements for Manufactured Homes

A. Where permitted within any floodplain area, all manufactured homes, and any improvements thereto, shall be:

1. placed on a permanent foundation.

2. elevated so that the lowest floor of the manufactured home is one and one half (1 ½) feet or more above the elevation of the one hundred (100) year flood.
3. anchored to resist flotation, collapse, or lateral movement.
4. Installation of manufactured homes shall be done in accordance with the manufacturers' installation instructions as provided by the manufacturer. Where the applicant cannot provide the above information, the requirements of Appendix E of the 2003 International Residential Building Code or the U.S. Department of Housing and Urban Development's Permanent Foundations for Manufactured Housing, 1984 Edition, draft or latest revision thereto shall apply and 34 PA Code Chapter 401-405.
5. Consideration shall be given to the installation requirements of the 2003 IBC (Appendix G, Sec. 501.1-3) and the 2003 IRC (Sec. R323.2, R323.3, R102.7.1, and Appendix AE101, 604 and 605) or the most recent revisions thereto and 34 PA Code Chapter 401-405, as amended where appropriate and/or applicable to units where the manufacturers' standards for anchoring cannot be provided or were not established for the unit(s) proposed installation.

ARTICLE V: ACTIVITIES REQUIRING SPECIAL PERMITS

Section 5.00: General

In accordance with the administrative regulations promulgated by the Department of Community and Economic Development to implement the Pennsylvania Flood Plain Management Act, the following activities shall be prohibited within any identified floodplain area unless a Special Permit has been issued by the Township:

A. The commencement of any of the following activities; or the construction enlargement, or expansion of any structure used, or intended to be used, for any of the following activities:

1. hospitals
2. nursing homes
3. jails or prisons

B. The commencement of, or any construction of, a new manufactured home park or manufactured home subdivision, or substantial improvement to an existing manufactured home park or manufactured home subdivision.

Section 5.01: Application Requirements for Special Permits

Applicants for Special Permits shall provide five copies of the following items:

- A. A written request including a completed Building Permit Application Form.
- B. A small scale map showing the vicinity in which the proposed site is located.
- C. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred (100) feet or less, showing the following:
1. north arrow, scale and date;
 2. topography based upon the North American Vertical Datum of 1929, showing existing and proposed contours at intervals of two (2) feet;
 3. all property and lot lines including dimensions, and the size of the site expressed in acres or square feet;
 4. the location of all existing streets, drives, other access ways, and parking areas, with information concerning widths, pavement types and construction, and elevations;
 5. the location of any existing bodies of water or watercourses, buildings, structures and other public or private facilities, including railroad tracks and facilities, and any other natural and man made features affecting, or affected by, the proposed activity or development;
 6. the location of the floodplain boundary line, information and spot elevations concerning the one hundred (100) year flood elevations, and information concerning the flow of water including direction and velocities;
 7. the location of all proposed buildings, structures, utilities, and any other improvements; and
 8. any other information which the municipality considers necessary for adequate review of the application.
- D. Plans of all proposed buildings, structures and other improvements, clearly and legibly drawn at suitable scale showing the following:
1. sufficiently detailed architectural or engineering drawings, including floor plans, sections, and exterior building elevations, as appropriate;
 2. for any proposed building, the elevation of the lowest floor (including basement) and, as required, the elevation of any other floor;
 3. complete information concerning flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the one hundred (100) year flood;

4. detailed information concerning any proposed flood-proofing measures;
5. cross section drawings for all proposed streets, drives, other accessways, and parking areas, showing all rights-of-way and pavement widths;
6. profile drawings for all proposed streets, drives, and vehicular accessways including existing and proposed grades; and
7. plans and profiles of all proposed sanitary and storm sewer systems, water supply systems, and any other utilities and facilities.

E. The following data and documentation:

1. certification from the applicant that the site upon which the activity or development is proposed is an existing separate and single parcel, owned by the applicant or the client he represents;
2. certification from a registered professional engineer, architect, or landscape architect that the proposed construction has been adequately designed to protect against damage from the one hundred (100) year flood;
3. a statement, certified by a registered professional engineer, architect, landscape architect, or other qualified person which contains a complete and accurate description of the nature and extent of pollution that might possibly occur from the development during the course of a one hundred (100) year flood, including a statement concerning the effects such pollution may have on human life;
4. a statement certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the effects the proposed development will have on one hundred (100) year flood elevations and flows;
5. a statement, certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the kinds and amounts of any loose buoyant materials or debris that may possibly exist or be located on the site below the one hundred (100) year flood elevation and the effects such materials and debris may have on one hundred (100) year flood elevations and flows;
6. the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development;"

7. where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Protection to implement and maintain erosion and sedimentation control;
8. any other applicable permits such as, but not limited to, a permit for any activity regulated by the Department of Environmental Protection under Section 302 of Act 1978-166; and
9. an evacuation plan which fully explains the manner in which the site will be safely evacuated before or during the course of a one hundred (100) year flood.

Section 5.02: Application Review Procedures

Upon receipt of an application for a Special Permit by the Township the following procedures shall apply in addition to those of Article II:

- A. Within three (3) working days following receipt of the application, a complete copy of the application and all accompanying documentation shall be forwarded to the County Planning Commission by registered or certified mail for its review and recommendations. Copies of the application shall also be forwarded to the Township engineer for review and comment.
- B. If an application is received that is incomplete, the Township shall notify the applicant in writing, stating in what respect the application is deficient.
- C. If the Township decides to disapprove an application, it shall notify the applicant, in writing, of the reasons for the disapproval.
- D. If the Township approves an application, it shall file written notification, together with the application and all pertinent information, with the Department of Community and Economic Development, by registered or certified mail, within five (5) working days after the date of approval.
- E. Before issuing the Special Permit, the Township shall allow the Department of Community and Economic Development thirty (30) days, after receipt of the notification by the Department, to review the application and decision made by the Township.
- F. If the Township does not receive any communication from the Department of Community and Economic Development during the thirty (30) day review period, it may issue a Special Permit to the applicant.
- G. If the Department of Community and Economic Development should decide to disapprove an application, it shall notify the Township and the applicant, in writing, of the reasons for the disapproval, and Township shall not issue the Special Permit.

Section 5.03: Special Technical Requirements

A. In addition to the requirements of Article IV of this Ordinance, the following minimum requirements shall also apply to any proposed development requiring a Special Permit. If there is any conflict between any of the following requirements and those in Article IV of this Ordinance or in any other code, ordinance, or regulation, the more restrictive provision shall apply.

B. No application for a Special Permit shall be approved unless it can be determined that the structure or activity will be located, constructed and maintained in a manner which will:

1. Fully protect the health and safety of the general public and any occupants of the structure. At a minimum, all new structures shall be designed, located, and constructed so that:
 - a. the structure will survive inundation by water of the one (100) hundred year flood without any lateral movement or damage to either the structure itself, or to any of its equipment or contents below the one hundred (100) year flood elevation.
 - b. the lowest floor (including basement) elevation will be at least one and one half (1 ½) feet above the one hundred (100) year flood elevation.
 - c. the occupants of the structure can remain inside for an indefinite period of time and be safely evacuated at any time during the one hundred (100) year flood.
2. Prevent any significant possibility of pollution, increased flood levels or flows, or debris endangering life and property.

All hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc. shall be submitted in sufficient detail to allow a thorough technical review by the Township and the Department of Community and Economic Development.

ARTICLE VI: EXISTING STRUCTURES IN IDENTIFIED FLOODPLAIN AREAS

Section 6.00: Existing Structures

The provisions of this Ordinance do not require any changes or improvements to be made to lawfully existing structures. However, when an improvement is made to any existing structure, the provisions of Section 6.01 shall apply.

Section 6.01: Improvements

The following provisions shall apply whenever any improvement is made to an existing structure located within any identified floodplain area:

- A. No expansion or enlargement of an existing structure shall be allowed within any floodway area that would cause any increase in the elevation of the one hundred (100) year flood.
- B. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of fifty (50) percent or more of its market value, shall constitute a substantial improvement and shall be undertaken only in full compliance with the provisions of this ordinance.

The above activity shall also address the requirements of 34 PA Code Chapters 401-405, as amended and the 2003 IBC (Sec. 3402.1 and 1612.4) and the 2003 IRC (Sec. 323.1.4).

- C. The requirements of 34 PA Code Chapter 401-405, as amended and the 2003 IRC (Secs. R102.7.1, R105.3.1 and Appendices E and J) or the latest revision thereof and the 2003 IBC (Secs. 101.3, 3403.1 and Appendix G) or the latest revision thereof shall also be utilized in conjunction with the provisions of this section.

ARTICLE VII: VARIANCES

Section 7.00: General

If compliance with any of the requirements of this ordinance would result in an exceptional hardship to a prospective builder, developer or landowner, the Township may, upon request, grant relief from the strict application of the requirements.

Section 7.01: Variance Procedures and Conditions

Requests for variances shall be considered by the Township in accordance with the procedures contained in Section 2.11 and the following:

- A. No variance shall be granted for any construction, development, use, or activity within any floodway area that would cause any increase in the one hundred (100) year flood elevation.
- B. Except for a possible modification of the one and one half (1 ½) foot freeboard requirement involved, no variance shall be granted for any of the other requirements pertaining specifically to development regulated by Special Permit (Article V) or to Development Which May Endanger Human Life (Section 4.04).
- C. If granted, a variance shall involve only the least modification necessary to provide relief.

D. In granting any variance, the Township shall attach whatever reasonable conditions and safeguards it considers necessary in order to protect the public health, safety, and welfare, and to achieve the objectives of this Ordinance.

E. Whenever a variance is granted, the Township shall notify the applicant in writing that:

1. The granting of the variance may result in increased premium rates for flood insurance.
2. Such variances may increase the risks to life and property.

F. In reviewing any request for a variance, the Township shall consider, at a minimum the following:

1. That there is good and sufficient cause.
2. That failure to grant the variance would result in exceptional hardship to the applicant.
3. That the granting of the variance will (i) neither result in an unacceptable or prohibited increase in flood heights, additional threats to public safety, or extraordinary public expense, (ii) nor create nuisances, cause fraud on, or victimize the public, or conflict with any other applicable state or local ordinances and regulations.

G. A complete record of all variance requests and related actions shall be maintained by the Township. In addition, a report of all variances granted during the year shall be included in the annual report to the Federal Emergency Management Agency.

Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the one hundred (100) year flood.