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FLOOD PLAIN MANAGEMENT

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Part 1

Statutory Authorization

The Legislature of the Commonwealth of Pennsylvania has, by the passage of the Pennsylvania Flood Plain Management Act of 1978, delegated the responsibility to local governmental units to adopt floodplain management regulations to promote public health, safety, and the general welfare of its citizenry. Therefore, the Board of Supervisors of the Township of Spring does hereby order as follows. (Ordinance No. 391, June 11, 2012)

Part 2

General Provisions

Section 201. Intent.

The intent of this Ordinance is to:

- A. Promote the general health, welfare, and safety of the community.
- B. Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
- C. Minimize danger to public health by protecting water supply and natural drainage.
- D. Reduce financial burdens imposed on the community, its governmental units, and its residents, by preventing excessive development in areas subject to flooding.
- E. Comply with federal and state floodplain management requirements.

(Ordinance No. 391, June 11, 2012)

Section 202. Applicability.

- A. It shall be unlawful for any person, partnership, business or corporation to undertake, or cause to be undertaken, any construction or development anywhere within any identified floodplain area within the Township of Spring unless a Permit has been obtained from the Floodplain Administrator.
- B. Unless otherwise required by Township regulations, a Permit shall not be required for minor repairs to existing buildings or structures located within any identified floodplain area.

(Ordinance No. 391, June 11, 2012)

Section 203. Abrogation and Greater Restrictions. This ordinance supersedes any other conflicting provisions which may be in effect in identified floodplain areas. However, any other ordinance provisions shall remain in full force and effect to the extent that those provisions are more restrictive. If there is any conflict between any of the provisions of this Ordinance, the more restrictive shall apply. (Ordinance No. 391, June 11, 2012)

Section 204. Severability. If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance shall be declared invalid for any reason whatsoever, such a decision shall not affect the remaining portions of the Ordinance, which shall remain in full force and effect, and for this purpose the provisions of this Ordinance are hereby declared to be severable. (Ordinance No. 391, June 11, 2012)

Section 205. Warning and Disclaimer of Liability. The degree of flood protection sought by the provisions of this Ordinance is considered reasonable for regulatory purposes and is based on accepted engineering methods of study. Larger floods may occur or flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Ordinance does not imply that areas outside any identified floodplain areas or that land uses permitted within such areas will be free from flooding or flood damages. (Ordinance No. 391, June 11, 2012)

This Ordinance shall not create liability on the part of the Township of Spring or any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made there under. (Ordinance No. 391, June 11, 2012)

Part 3

Administration

Section 301. Designation of the Floodplain Administrator. The Building Code Official of the Township of Spring is hereby appointed to administer and enforce this Ordinance and is referred to herein as the Floodplain Administrator. (Ordinance No. 391, June 11, 2012)

Section 302. Permits Required. A Permit shall be required before any construction or development is undertaken within any identified floodplain area within the Township of Spring. (Ordinance No. 391, June 11, 2012)

Section 303. Duties and Responsibilities of the Floodplain Administrator.

A. The Floodplain Administrator shall issue a Permit only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and ordinances.

B. Prior to the issuance of any Permit, the Floodplain Administrator shall review the application for the Permit to determine if all other necessary government permits required by state and federal laws have been obtained, such as those required by the Pennsylvania Sewage Facilities Act (Act 1966-537, as amended); the Pennsylvania Dam Safety and Encroachments Act (Act 1978-325, as amended); the Pennsylvania Clean Streams Act (Act 1937-394, as amended); and the U.S. Clean Water Act, Section 404, 33, U.S.C. 1344. No Permit shall be issued until this determination has been made.

C. During the construction period, the Floodplain Administrator or other authorized official shall inspect the premises to determine that the work is progressing in compliance with the information provided on the permit application and with all applicable municipal laws and ordinances. He/she shall make as many inspections during and upon completion of the work as are necessary.

D. In the discharge of his/her duties, the Floodplain Administrator shall have the authority to enter any building, structure, premises or development in the identified floodplain area, upon presentation of proper credentials, at any reasonable hour to enforce the provisions of this Ordinance.

E. In the event the Floodplain Administrator discovers that the work does not comply with the permit application or any applicable laws and ordinances, or that there has been a false statement or misrepresentation by any

applicant, the Floodplain Administrator shall revoke the Permit and take such other action as deemed appropriate pursuant to the provisions of Section 309.

F. The Floodplain Administrator shall maintain all records associated with the requirements of this Ordinance including, but not limited to, permitting, inspection and enforcement.

G. The Floodplain Administrator shall consider the requirements of the 34 PA Code and the 2009 IBC and the 2009 IRC or latest revisions thereof.

(Ordinance No. 391, June 11, 2012)

Section 304. Application Procedures and Requirements.

A. Application for such a Permit shall be made, in writing, to the Floodplain Administrator on forms supplied by the Township. Such application shall contain the following:

1. Name and address of applicant.
2. Name and address of owner of land on which proposed construction is to occur.
3. Name and address of contractor.
4. Site location including address.
5. Listing of other permits required.
6. Brief description of proposed work and estimated cost, including a breakout of flood-related cost and the market value of the building before the flood damage occurred where appropriate.
7. A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings or structures.

B. If any proposed construction or development is located entirely or partially within any identified floodplain area, applicants for Permits shall provide all the necessary information in sufficient detail and clarity to enable the Floodplain Administrator to determine that:

1. All such proposals are consistent with the need to minimize flood damage and conform with the requirements of this and all other applicable codes and ordinances;
2. All utilities and facilities, such as sewer, gas, electrical and water systems, are located and constructed to minimize or eliminate flood damage;

3. Adequate drainage is provided so as to reduce exposure to flood hazards;
4. Structures will be anchored to prevent floatation, collapse, or lateral movement;
5. Building materials are flood-resistant;
6. Appropriate practices that minimize flood damage have been used;
and
7. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities have been designed and located to prevent water entry or accumulation.

C. Applicants shall file the following minimum information plus any other pertinent information as may be required by the Floodplain Administrator to make the above determination:

1. A completed Permit Application Form.
2. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred feet (100') or less, showing the following:
 - a. North arrow, scale, and date;
 - b. Topographic contour lines, if available;
 - c. The location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and development;
 - d. The location of all existing streets, drives, and other access ways; and
 - e. The location of any existing bodies of water or watercourses, identified floodplain areas, and, if available, information pertaining to the floodway, and the flow of water including direction and velocities.
3. Plans of all proposed buildings, structures and other improvements, drawn at suitable scale showing the following:
 - a. The proposed lowest floor elevation of any proposed building based upon North American Vertical Datum of 1988;
 - b. The elevation of the base flood;

c. Supplemental information as may be necessary under 34 PA Code, the 2009 IBC or the 2009 IRC.

4. The following data and documentation:

a. If available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood;

b. Detailed information concerning any proposed floodproofing measures and corresponding elevations;

c. Documentation, certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development within an AE Area/District without floodway (See Section 402 B) when combined with all other existing and anticipated development, will not increase the BFE more than one (1) foot at any point;

d. A document, certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the pressures, velocities, impact and uplift forces associated with the base flood;

Such statement shall include a description of the type and extent of flood proofing measures which have been incorporated into the design of the structure and/or the development;

e. detailed information needed to determine compliance with Section 503 F, Storage, and Section 504, Development Which May Endanger Human Life, including:

i. the amount, location and purpose of any materials or substances referred to in Sections 503 F and 504 which are intended to be used, produced, stored or otherwise maintained on site.

ii. a description of the safeguards incorporated into the design of the proposed structure to prevent leaks or spills of the dangerous materials or substances listed in Section 504 during a base flood.

f. 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.

D. Applications for Permits shall be accompanied by a fee payable to the Township of Spring, in an amount as established from time to time by resolution by the Board of Supervisors.

(Ordinance No. 391, June 11, 2012)

Section 305. Review of Application by Others. A copy of all plans and applications for any proposed construction or development in any identified floodplain area to be considered for approval may be submitted by the Floodplain Administrator to any other appropriate agencies and/or individuals (e.g. planning commission, municipal engineer, etc.) for review and comment. (Ordinance No. 391, June 11, 2012)

Section 306. Changes. After the issuance of a Permit by the Floodplain Administrator, no changes of any kind shall be made to the application, permit or any of the plans, specifications or other documents submitted with the application without the written consent or approval of the Floodplain Administrator. Requests for any such change shall be in writing, and shall be submitted by the applicant to the Floodplain Administrator for consideration. (Ordinance No. 391, June 11, 2012)

Section 307. Placards. In addition to the Permit, the Floodplain Administrator shall issue a placard which shall be displayed on the premises during the time construction is in progress. This placard shall show the number of the Permit, the date of its issuance, and be signed by the Floodplain Administrator. (Ordinance No. 391, June 11, 2012)

Section 308. Start of Construction. Work on the proposed construction or development shall begin within 180 days after the date of issuance and shall be completed within twelve (12) months after the date of issuance of the Permit or the Permit shall expire unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start of construction means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piling, the construction of columns, or any work beyond the stage of excavation; or the placement of a mobile/manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means

the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Time extensions shall be granted only if a written request is submitted by the applicant, which sets forth sufficient and reasonable cause for the Floodplain Administrator to approve such a request.

(Ordinance No. 391, June 11, 2012)

Section 309. Enforcement.

A. Notices. Whenever the Floodplain Administrator or other authorized municipal representative determines that there are reasonable grounds to believe that there has been a violation of any provisions of this Ordinance, or of any regulations adopted pursuant thereto, the Floodplain Administrator shall give notice of such alleged violation as hereinafter provided. Such notice shall:

1. be in writing;
2. include a statement of the reasons for its issuance;
3. allow a reasonable time not to exceed a period of thirty (30) days for the performance of any act it requires;
4. be served upon the property owner or his/her agent as the case may require; provided, however, that such notice or order shall be deemed to have been properly served upon such owner or agent when a copy thereof has been served with such notice by any other method authorized or required by the laws of this State;
5. contain an outline of remedial actions which, if taken, will effect compliance with the provisions of this Ordinance.

B. Penalties. Any person who fails to comply with any or all of the requirements or provisions of this Ordinance or who fails or refuses to comply with any notice, order of direction of the Floodplain Administrator or any other authorized employee of the municipality shall be guilty of a misdemeanor and upon conviction shall pay a fine to the Township of Spring of not less than One Hundred Dollars (\$100.00), nor more than One Thousand Dollars (\$1,000.00), plus costs of prosecution. In addition to the above penalties, all other actions are hereby reserved including an action in equity for the proper enforcement of this Ordinance. The imposition of a fine or penalty for any violation of, or noncompliance with, this Ordinance shall not excuse the violation or noncompliance or permit it to continue and all such persons shall be required to correct or remedy such violations and noncompliance within a reasonable time.

(Ordinance No. 391, June 11, 2012)

Section 310. Appeals.

A. Any person aggrieved by any action or decision of the Floodplain Administrator concerning the administration of the provisions of this Ordinance, may appeal to the Zoning Hearing Board. Such appeal must be filed, in writing, within thirty (30) days after the decision, determination or action of the Floodplain Administrator.

B. Upon receipt of such appeal the Zoning Hearing Board shall conduct a public hearing upon the appeal in accordance with all applicable provisions of the Pennsylvania Municipalities Planning Code (the "MPC").

C. Any person aggrieved by any decision of the Zoning Hearing Board concerning the administration of the provisions of this Ordinance may seek relief therefrom by appeal to court, as provided by the MPC.

(Ordinance No. 391, June 11, 2012)

Part 4

Identification of Floodplain Areas

Section 401. Identification.

The identified floodplain area shall be:

A. Any areas within the Township of Spring classified as special flood hazard areas (SFHAs) in the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) dated July 3, 2012 and issued by the Federal Emergency Management Agency (FEMA) or the most recent revision thereof, including all digital data developed as part of the Flood Insurance Study; and

The above referenced FIS and FIRMs, and any subsequent revisions and amendments are hereby adopted by the Township of Spring and declared to be a part of this Ordinance.

(Ordinance No. 391, June 11, 2012)

Section 402. Description and Special Requirements of Identified Floodplain Areas.

The identified floodplain area shall consist of the following specific areas:

A. The Floodway Area/District shall be those areas identified as Floodway on the FIRM as well as those floodway areas which have been identified in other available studies or sources of information for those special floodplain areas where no floodway has been identified in the FIS. The floodway represents the channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation by more than one (1) foot at any point.

1. Within any floodway area, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

2. No new construction or development shall be allowed within any floodway area, unless a Permit is obtained from the Department of Environmental Protection Regional Office.

B. The AE Area/District without floodway shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA and for which BFEs have been provided in the FIS but no floodway has been delineated.

1. In AE Area/District without floodway, no new development shall be permitted unless it can be demonstrated that the cumulative effect of all past and projected development will not increase the BFE by more than one (1) foot.

2. No permit shall be granted for any construction, development, use, or activity within any AE Area/District without floodway unless it is demonstrated that the cumulative effect of the proposed development would not, together with all other existing and anticipated development, increase the BFE by more than one (1) foot at any point.

C. The A Area/District shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by FEMA and for which no one-percent (1%) annual chance flood elevations have been provided. For these areas, elevation and floodway information from Federal, State, or other acceptable sources shall be used when available. Where other acceptable information is not available, the elevation shall be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site.

In lieu of the above, the municipality may require the applicant to determine the elevation with hydrologic and hydraulic engineering techniques. 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 municipality.

(Ordinance No. 391, June 11, 2012)

Section 403. Changes in Identification of Area. The identified floodplain area may be revised or modified by the Board of Supervisors where studies or information provided by a qualified agency or person documents the need for such revision. However, prior to any such change, approval must be obtained from FEMA. Additionally, as soon as practicable, but not later than six (6) months after the date such information becomes available, a community shall notify FEMA of the changes by submitting technical or scientific data. (Ordinance No. 391, June 11, 2012)

Section 404. Boundary Disputes. Should a dispute arise concerning the Floodplain Administrator's determination, any party aggrieved by this determination may appeal to the Zoning Hearing Board, which will conduct a hearing and render a

decision in accordance with the standards of this Ordinance and procedures of the MPC. The burden of proof shall be on the appellant. (Ordinance No. 391, June 11, 2012)

Section 405. Jurisdictional Boundary Changes. Prior to development occurring in areas where annexation or other corporate boundary changes are proposed or have occurred, the community shall review flood hazard data affecting the lands subject to boundary changes. The community shall adopt and enforce floodplain regulations in areas subject to annexation or corporate boundary changes which meet or exceed those in CFR 44 60.3. (Ordinance No. 391, June 11, 2012)

Part 5

Technical Provisions

Section 501. General.

A. Alteration or Relocation of Watercourse.

1. No encroachment, alteration, or improvement of any kind shall be made to any watercourse within an identified floodplain area until all adjacent municipalities which may be affected by such action have been notified by the municipality, and until all required permits or approvals have been first obtained from the Department of Environmental Protection Regional Office.

2. No encroachment, alteration, or improvement of any kind shall be made to any watercourse within an identified floodplain area unless it can be shown that the activity will not reduce or impede the flood carrying capacity of the watercourse in any way.

3. In addition, FEMA and Pennsylvania Department of Community and Economic Development, shall be notified prior to any alteration or relocation of any watercourse within an identified floodplain area.

B. Technical or scientific data shall be submitted by the applicant to FEMA, with copies to the Township, for a Letter of Map Revision (LOMR) as soon as practicable but within six (6) months of any new construction, development, or other activity resulting in changes in the BFE. The situations when a LOMR or a Conditional Letter of Map Revision (CLOMR) are required are:

1. Any development that causes a rise in the BFEs within the floodway; or

2. Any development occurring in Zones A1-30 and Zone AE without a designated floodway, which will cause a rise of more than one foot in the BFE; or

3. Alteration or relocation of a stream (including but not limited to installing culverts and bridges).

C. Any new construction, development, uses or activities allowed within any identified floodplain area shall be undertaken in strict compliance with the provisions contained in this Ordinance and any other applicable codes, ordinances and regulations.

D. Within any Identified Floodplain Area (See Section 402), no new construction or development shall be located within the area measured fifty (50) feet

landward from the top-of-bank of any watercourse, unless a permit is obtained from the Department of Environmental Protection Regional Office or it is demonstrated to the Floodplain Administrator that the new construction or development is located outside of the Floodway.

(Ordinance No. 391, June 11, 2012)

Section 502. Elevation and Floodproofing Requirements.

A. Residential Structures

1. In AE Zones, any new construction or substantial improvement of a residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation.

2. In A Zones, where there are no BFEs specified on the FIRM, any new construction or substantial improvement of a residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation determined in accordance with Subsection 402 C of this Ordinance.

3. The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.

B. Non-residential Structures

1. In AE Zones, any new construction or substantial improvement of a non-residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation, or be designed and constructed so that the space enclosed below the regulatory flood elevation:

a. is floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water; and,

b. has structural components with the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

2. In A Zones, where no BFEs are specified on the FIRM, any new construction or substantial improvement of a non-residential structure shall have the lowest floor (including basement) elevated or completely floodproofed up to, or above, the regulatory flood elevation determined in accordance with Subsection 402 C of this Ordinance.

3. Any non-residential structure, or part thereof, made watertight below the regulatory flood elevation shall be floodproofed in accordance with the WI or W2 space classification standards contained in the publication entitled "Flood-Proofing Regulations" published by the U.S. Army Corps of Engineers (June 1972, as amended March 1992) 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.

4. The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.

C. Space below the lowest floor

1. Fully enclosed space below the lowest floor (excluding basements) which will be used solely for the parking of a vehicle, building access, or incidental storage in an area other than a basement, shall be designed and constructed to allow for the automatic entry and exit of flood waters for the purpose of equalizing hydrostatic forces on exterior walls. The term "fully enclosed space" also includes crawl spaces.

2. 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 (2) 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 floodwaters.

D. Historic Structures. Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this Ordinance, must comply with all ordinance requirements which do not preclude the structure's continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic Places must be obtained from the

Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

E. Accessory structures. Structures accessory to a principal building need not be elevated or floodproofed to remain dry, but shall comply, at a minimum, with the following requirements:

1. the structure shall not be designed or used for human habitation, but shall be limited to the parking of vehicles, or to the storage of tools, material, and equipment related to the principal use or activity.
2. floor area shall not exceed 200 square feet.
3. The structure will have a low damage potential.
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 elevated to the regulatory 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.

(Ordinance No. 391, June 11, 2012)

Section 503. Design and Construction Standards. The following minimum standards shall apply for all construction and development proposed within any identified floodplain area:

A. Fill

1. If fill is used, it shall:

a. extend laterally at least fifteen (15) 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 feet unless substantiated data justifying steeper slopes are submitted to and approved by the Floodplain Administrator; and

e. be used to the extent to which it does not adversely affect adjacent properties.

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.

C. **Water and Sanitary Sewer Facilities and Systems.**

1. All new or replacement water supply 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 FEMA #348, Protecting Building Utilities From Flood Damages and 25 PA Code, Chapter 73.

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 lower 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 504, Development Which May Endanger Human Life, shall be stored at or above the Regulatory Flood Elevation 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 flood water.

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.

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.

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.) used at or below the regulatory flood elevation shall be finished with a "marine" or "water-resistant" paint or other finishing material.

K. Electrical Components.

1. Electrical distribution panels shall be at least three (3) feet above the BFE.

2. Separate electrical circuits shall serve lower levels and shall be dropped from above.

L. Equipment. 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.

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.

N. Uniform Construction Code Coordination. The Standards and Specifications contained in 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 supplement the requirements of this Ordinance.

International Building Code (IBC) 2009 or the latest edition thereof:
Secs. 801, 1202, 1403, 1603, 1605, 1612, 3402, and Appendix G.

International Residential Building Code (IRC) 2009 or the latest edition thereof:
Secs. R104, R105, R109, R323, Appendix AE101, Appendix E and Appendix J.

(Ordinance No. 391, June 11, 2012)

Section 504. 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:

1. will be used for the production or storage of any of the following dangerous materials or substances; or
2. 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
3. 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:

- Acetone
- Ammonia
- Benzene
- Calcium carbide
- Carbon disulfide
- Celluloid
- Chlorine
- Hydrochloric acid
- Hydrocyanic acid
- Magnesium
- Nitric acid and oxides of nitrogen
- Petroleum products (gasoline, fuel oil, etc.)
- Phosphorus
- Potassium
- Sodium
- Sulphur and sulphur products
- Pesticides (including insecticides, fungicides, and rodenticides)
- Radioactive substances, insofar as such substances are not otherwise regulated.

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

C. Where permitted within any Identified Floodplain Area, any new or substantially improved structure of the kind described in Subsection A, above, shall be:

1. elevated, or in the case of a non-residential structure elevated or designed, and constructed to remain completely dry up to at least one and one half (1 ½) feet above BFE,
2. designed to prevent pollution from the structure or activity during the course of a base 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 floodproofing 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.

(Ordinance No. 391, June 11, 2012)

Section 505. Special Requirements for Subdivisions. All subdivision proposals and development proposals containing at least 50 (fifty) lots or at least 5 (five) acres, whichever is the lesser, in Identified Floodplain Areas where BFE data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine BFEs and floodway information. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant. (Ordinance No. 391, June 11, 2012)

506. Special Requirements for Mobile/Manufactured Homes.

- A. Within any Floodway Area/District, mobile/manufactured homes shall be prohibited.
- B. Within any Identified Floodplain Areas, mobile/manufactured homes shall be prohibited within the area measured fifty (50) feet landward from the top of bank of any watercourse.
- C. Where permitted within any Identified Floodplain Area, all mobile/manufactured homes, and any improvements thereto, shall be:
 1. placed on a permanent foundation.
 2. elevated so that the lowest floor of the mobile/manufactured home is at least one and one half (1 ½) feet above BFE.
 3. anchored to resist flotation, collapse, or lateral movement.
- D. Installation of mobile/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 2009 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 revisions thereto, shall apply and 34 PA Code Chapter 401-405.

E. Consideration shall be given to the installation requirements of the 2009 IBC, and the 2009 IRC or the most recent revisions thereto and 34 PA Code, 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.

(Ordinance No. 391, June 11, 2012)

507. Special Requirements for Recreational Vehicles.

- A. Recreational vehicles in Zones A, A1-30, AH and AE must either:
1. be on the site for fewer than 180 consecutive days, and
 2. be fully licensed and ready for highway use, or
 3. meet the permit requirements for manufactured homes in Section 506.

(Ordinance No. 391, June 11, 2012; Amended by No. 395, July 9, 2012, Section 1)

Part 6

Prohibited Activities in Identified Floodplain Areas

Section 601. 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 within the Township of Spring:

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 mobile/manufactured home park or mobile/manufactured home subdivision, substantial improvement to an existing mobile/manufactured home park or mobile/manufactured home subdivision, or expansion to an existing mobile/manufactured home park subdivision.

(Ordinance No. 391, June 11, 2012)

Part 7

Existing Structures in Identified Floodplain Areas

Section 701. 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 702 shall apply. (Ordinance No. 391, June 11, 2012)

Section 702. 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/District that would cause any increase in BFE.

B. No expansion or enlargement of an existing structure shall be allowed within AE Area/District without floodway that would, together with all other existing and anticipated development, increase the BFE more than one (1) foot at any point.

C. 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.

D. The above activity shall also address the requirements of the 34 PA Code, as amended and the 2009 IBC and the 2009 IRC.

E. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of less than fifty (50) percent of its market value, shall be elevated and/or floodproofed to the greatest extent possible.

(Ordinance No. 391, June 11, 2012)

Part 8

Variations

Section 801. 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 of Spring Zoning Hearing Board may, upon request, grant relief from the strict application of those requirements. (Ordinance No. 391, June 11, 2012)

Section 802. Variance Procedures and Conditions. Requests for variances shall be considered by the Township of Spring Zoning Hearing Board in accordance with the procedures contained in Section 310 and the provisions of the MPC. The following specific criteria, as well as such other evidence and criteria as may be relevant pursuant to ARTICLE IX of the MPC shall be considered by the Zoning Hearing Board:

A. No variance shall be granted for any construction, development, use, or activity within any Floodway Area/District that would cause any increase in the BFE.

B. No variance shall be granted for any construction, development, use, or activity within any A Area/District or within any AE Area/District without floodway that would result in a new BFE more than one foot (1') greater than the BFE existing at the effective date of this Ordinance.

C. Except for a possible modification of the regulatory flood elevation requirement involved, no variance shall be granted for any of the other requirements pertaining specifically to Prohibited Activities in Identified Floodplain Areas (Part 6) or to Development Which May Endanger Human Life (Section 504).

D. If granted, a variance shall involve only the least modification necessary to provide relief.

E. In granting any variance, the Township of Spring Zoning Hearing Board 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.

F. In reviewing any request for a variance, the Township of Spring Zoning Hearing Board shall consider the provisions of the MPC pertaining to the granting of variances.

G. A complete record of all variance requests and related actions shall be maintained by the Township of Spring Zoning Hearing Board. In addition, a report of all variances granted during the year shall be included in the annual report to FEMA.

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Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the one-percent (1%) annual chance flood.

(Ordinance No. 391, June 11, 2012)

Part 9

Definitions

Section 901. General. Unless specifically defined below, words and phrases used in this Ordinance shall be interpreted so as to give this Ordinance its most reasonable application.

(Ordinance No. 391, June 11, 2012)

Section 902. Specific Definitions

1. Accessory structure - a structure serving a purpose customarily incidental to the principal building and located on the same lot as the principal building.
2. Accessory use - a use subordinate and customarily incidental to the principal use on the same lot.
3. Base flood - a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood" or one-percent (1%) annual chance flood).
4. Base flood discharge - the volume of water resulting from a Base Flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).
5. Base flood elevation (BFE) - the elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30 that indicates the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year. In areas where the BFE is not indicated on the FIRM, the BFE shall be considered the BFE as calculated in Section 402.
6. Basement - any area of the building having its floor below ground level on all sides.
7. Building - any combination of materials forming any structure which is erected on the ground and permanently affixed thereto, designed, intended or arranged for the housing, shelter, enclosure or structural support of persons, animals or property of any kind.
8. Development - any man-made change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures; the placement of mobile/manufactured homes; streets, and other paving; utilities; filling, grading and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.

9. Existing mobile/manufactured home park or subdivision - a mobile/manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

10. Expansion to an existing mobile/manufactured home park or subdivision - the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

11. Flood - a temporary inundation of normally dry land areas.

12. Flood Insurance Rate Map (FIRM) - the official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

13. Flood Insurance Study (FIS) - the official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.

14. Floodplain Administrator - the Township of Spring Building Code Official.

15. Floodplain area - a relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse; and/or any area subject to the unusual and rapid accumulation of surface waters from any source.

16. Floodproofing - any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

17. Floodway - the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

18. Highest Adjacent Grade - The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

19. Historic structures - any structure that is:

a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

c. Individually listed on a state inventory of historic places in states which have been approved by the Secretary of the Interior; or

d. Individually listed on a local inventory of historic places in communities with historic preservation that have been certified either:

i. By an approved state program as determined by the Secretary of the Interior or

ii. Directly by the Secretary of the Interior in states without approved programs.

20. Lowest floor - the lowest floor of the lowest fully enclosed area (including basement). An unfinished, flood resistant partially enclosed area, used solely for parking of vehicles, building access, or incidental storage, in an area other than a basement area, is not considered the lowest floor of a building, provided that such space is not designed and built so that the structure is in violation of the applicable non-elevation design requirements of this ordinance.

21. Mobile/manufactured home - a transportable, single-family detached dwelling designed so that it can be used for permanent occupancy, contained in one (1) unit or in two (2) units designed to be joined into one (1) integral unit capable of again being separated for repeated towing, which arrives at a site complete and ready for occupancy except for minor and incidental unpacking and assembly operations and constructed so that it may be used with or without a permanent foundation. Mobile/manufactured homes shall be constructed in accordance with the Safety and Construction Standards of the U.S. Department of Housing and Urban Development. The term "mobile/manufactured home" shall not be deemed to include "recreation vehicle" nor a "modular home" placed on a permanent perimeter foundation.

22. Mobile/manufactured home park or subdivision - a parcel of land under single ownership which has been planned and improved for the placement of two (2) or more mobile homes for nontransient residential use.

23. Minor repair - the replacement of existing materials with equivalent materials for the purpose of its routine maintenance and upkeep, but not including the

cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the exit way requirements; nor shall minor repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, oil, waste, vent, or similar piping, electric wiring or mechanical or other facilities affecting public health or general safety.

24. Municipality - The Township of Spring, Berks County, Pennsylvania.

25. New construction - structures for which the start of construction commenced on or after July 3, 2012 and includes any subsequent improvements to such structures. Any construction started after April 18, 1983 and before July 3, 2012 is subject to the ordinance in effect at the time the permit was issued, provided the start of construction was within 180 days of permit issuance.

26. New mobile/manufactured home park or subdivision - a mobile/manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the mobile/manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

27. Person - an individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever, which is recognized by law as the subject of rights and duties.

28. Post-FIRM Structure - is a structure for which construction or substantial improvement occurred after December 31, 1974 or on April 18, 1983, whichever is later, and, as such, would be required to be compliant with the regulations of the National Flood Insurance Program.

29. Pre-FIRM Structure - is a structure for which construction or substantial improvement occurred on or before December 31, 1974 or before April 18, 1983, whichever is later, and, as such, would not be required to be compliant with the regulations of the National Flood Insurance Program.

30. Recreational vehicle - a vehicle which is:

- a. built on a single chassis;
- b. not more than 400 square feet, measured at the largest horizontal projections;

c. designed to be self-propelled or permanently towable by a light-duty truck,

d. not designed for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

31. Regulatory flood elevation - the BFE or estimated one-percent (1%) annual chance flood elevation, as determined using methods acceptable to the Floodplain Administrator, plus a freeboard safety factor of one and one-half (1 ½) feet.

32. Special flood hazard area (SFHA) - means an area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. It is shown on the FIRM as Zone A, AO, A1-A30, AE, A99, or, AH.

33. Start of construction - includes substantial improvement and other proposed new development and means the date the Permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit and shall be completed within twelve (12) months after the date of issuance of the permit unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a mobile/manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first, alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

34. Structure - any manmade object having an ascertainable, stationary location on or in land or water, whether or not affixed to the land or something located on the land. The term structure shall include buildings, signs, fences, walls, towers, swimming pools, porches, gas or liquid storage tanks, as well as mobile/manufactured homes.

35. Subdivision - the division or redivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs, or devisees, transfer of ownership or building or lot development: Provided, however, that the subdivision by lease of land

for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

36. Substantial damage - damage from any cause sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent or more of the market value of the structure before the damage occurred.

37. Substantial improvement - any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage" regardless of the actual repair work performed. The term does not, however, include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.

38. Township - the Township of Spring, Berks County, Pennsylvania

39. Uniform Construction Code (UCC) - The statewide building code adopted by The Pennsylvania General Assembly in 1999 applicable to new construction in all municipalities whether administered by the municipality, a third party or the Department of Labor and Industry. Applicable to residential and commercial buildings, The Code adopted The International Residential Code (IRC) and the International Building Code (IBC), by reference, as the construction standard applicable with the State floodplain construction. For coordination purposes, references to the above are made specifically to various sections of the IRC and the IBC.

40. Violation - means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR §60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

41. Watercourse - a channel or conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

(Ordinance No. 391, June 11, 2012)