COMMONWEALTH OF KENTUCKY
CITY OF LONDON
ORDINANCE NO. 2015-03

FLOOD DAMAGE PREVENTION ORDINANCE FOR LONDON, KENTUCKY

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COMMONWEALTH OF KENTUCKY
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AN ORDINANCE FOR FLOOD DAMAGE PREVENTION

BE IT ORDAINED BY THE CITY OF LONDON AS FOLLOWS:

ARTICLE 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES

SECTION A. STATUTORY AUTHORIZATION

The Legislature of the Commonwealth of Kentucky has in Kentucky Revised Statutes KRS Chapter 100 delegated to local government units the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Council of London, Kentucky, hereby adopts the following floodplain management ordinance, as follows:

SECTION B. FINDINGS OF FACT

1) The flood hazard areas of the City of London are subject to periodic inundation which result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all which adversely affect the public health, safety, and general welfare.

2) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increased flood height and velocity, and by the location in flood hazard areas of uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise protected from flood damage.

SECTION C. STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety, and general welfare and to minimize public and private loss due to flooding by provisions designed to:

1) Restrict or prohibit uses which are dangerous to health, safety, and property due to water erosion hazards, or which result in damaging increases in erosion or in flood height or velocity;

2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which accommodate or channel flood waters;

4) Control filling, grading, dredging, and other development which may increase erosion or flood damage, and;

5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other areas.

SECTION D. OBJECTIVES

The objectives of this ordinance are to:

1) Protect human life and health;

2) Minimize expenditure of public money for costly flood control projects;

3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

4) Minimize prolonged business interruptions;

5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines; streets and bridges located in areas of special flood hazard;

6) Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard or other flood-prone areas in such a manner as to minimize future flood blighted areas caused by flooding; and,

7) Ensure that potential homebuyers are on notice that property is in a Special Flood Hazard Area.

8) Ensure that those who occupy a Special Flood Hazard Area assume responsibility for their actions.

ARTICLE 2. DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

A Zone - Portions of the special flood hazard area (SFHA) in which the principle source of flooding is runoff from rainfall, snowmelt, or a combination of both. In A zones, floodwaters may move slowly or rapidly, but waves are usually not a significant threat to structures. Areas of 100-year flood, base flood elevations and flood hazard factors are not determined.

Accessory structure (Appurtenant structure) - A structure located on the same parcel of property as the principle structure, the use of which is incidental to the use of the principle structure. Accessory structures should constitute a minimal initial investment, may not be used for human habitation, and should be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds.

Accessory use - A use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

Addition (to an existing structure) - Any walled and roofed expansion to the perimeter of a structure in which the addition is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition, which is connected by a firewall or is separated by independent perimeter load-bearing walls, is new construction.

A1-30 and AE zones - Special Flood Hazard Areas inundated by the 1% annual chance flood (100-year flood. Base flood elevations (BFEs) are determined.

AH zone - An area of 100-year shallow flooding where depths are between 1 and 3 feet (usually shallow ponding). Base flood elevations are shown.

AO zone - An area of 100-year shallow flooding where water depth is between one and three feet (usually sheet flow on sloping terrain) Flood depths are shown.

Appeal - A request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance or from the floodplain administrator's ruling on a request for a variance.

AR/A1 – A30, AR/AE, AR/AH, AR/AO, and AR/A zones - Special Flood Hazard Areas (SFHAs) that result from the de-certification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection. After restoration is complete these areas will still experience residual flooding from other flooding sources.

A99 zone - That part of the SFHA inundated by the 100-year flood which is to be protected from the 100-year flood by a Federal flood protection system under construction. No base flood elevations are determined.

Area of shallow flooding - A designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) where the base flood depths range from one to three feet, there is no clearly defined channel, the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

B and X zones (shaded) - Areas of the 0.2% annual chance (500-year) flood, areas subject to the 100-year flood with average depths of less than one foot or with contributing drainage area less than 1 square mile, and areas protected by levees from the base flood.

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"). Base flood is the term used throughout this ordinance.

Base Flood Elevation (BFE) - The elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO 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.

Basement - That portion of a structure having its floor subgrade (below ground level) on all four sides.

Building - A walled and roofed structure that is principally aboveground; including a manufactured home, gas or liquid storage tank, or other man-made facility or infrastructure. See definition for structure.

C and X (unshaded) zones - Areas determined to be outside the 500-year floodplain.

Community - A political entity having the authority to adopt and enforce floodplain ordinances for the area under its jurisdiction.

Community Rating System (CRS) - A program developed by the Federal Insurance Administration to provide incentives to those communities in the Regular Program to go beyond the minimum floodplain management requirements to develop extra measures for protection from flooding.

Community Flood Hazard Area (CFHA) - An area that has been determined by the Floodplain Administrator (or other delegated, designated, or qualified community official) from available technical studies, historical information, and other available and reliable sources, which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety and general welfare. Included are areas downstream from dams.

Critical facility - Any property that, if flooded, would result in severe consequences to public health and safety or a facility which, if unusable or unreachable because of flooding, would seriously and adversely affect the health and safety of the public. Critical facilities include, but are not limited to: housing likely to contain occupants not sufficiently mobile to avoid injury or death unaided during a flood; schools, nursing homes, hospitals, police, fire and emergency response installations, vehicle and equipment storage facilities, emergency operations centers likely to be called upon before, during and after a flood, public and private utility facilities important to maintaining or restoring normal services before, during and after a flood, and those facilities or installations which produce, use or store volatile, flammable, explosive, toxic and/or water-reactive materials, hazardous materials or hazardous waste.

D zone - An area in which the flood hazard is undetermined.

Development - Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials or equipment.

Elevated structure - A non-basement structure built to have the lowest floor elevated above ground level by means of fill, solid foundation perimeter walls, piling, columns (post and piers), shear walls, or breakaway walls. (See freeboard requirements for residential and non-residential structures.)

Elevation Certificate - A statement certified by a registered professional engineer or surveyor on the FEMA-approved form in effect at the time of certification that verifies a structure's elevation and other related information to verify compliance with this ordinance.

Emergency Program - The initial phase under which a community participates in the NFIP, intended to provide a first layer amount of insurance at subsidized rates on all insurable structures in that community before the effective date of the initial FIRM.

Enclosure - That portion of a structure below the Base Flood Elevation (BFE) used solely for parking of vehicles, limited storage, or access to the structure.

Encroachment - The physical advance or infringement of uses, plant growth, fill, excavation, structures, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Existing construction - Any structure for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "Existing construction" may also be referred to as "Existing structures".

Existing Manufactured Home Park or Subdivision - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the 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 first floodplain management ordinance adopted by the City of London based on specific technical base flood elevation data which established the area of special flood hazards.

Expansion to an existing Manufactured Home Park or Subdivision - The preparation of additional sites by the construction of facilities for servicing the lots on which the 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).

Five-Hundred Year Flood - The flood that has a 0.2 percent chance of being equaled or exceeded in any year. Areas subject to the 500-year flood have a moderate to low risk of flooding.

Flood, Flooding, or Flood Water:

1) A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; and/or mudslides (i.e. mudflows). See Mudslides.
2) The condition resulting from flood-related erosion. See flood-related erosion.

Flood Boundary and Floodway Map (FBFM) -A map on which the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) has delineated the areas of flood hazards and the regulatory floodway.

Flood Hazard Boundary Map (FHBM) -A map on which the boundaries of the flood, mudslide (i.e. mudflow), and flood-related erosion areas having special hazards have been designated as Zones A, M, and/or E by the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA).

Flood Insurance Rate Map (FIRM) - A map on which the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) has delineated special flood hazard areas and risk premium zones.

Flood Insurance Study - The report provided by the Federal Emergency Management Agency (FEMA) or Federal Insurance Administration (FIA) containing flood profiles, the Flood Insurance Rate Map (FIRM), and/or the Flood Boundary Floodway Map (FBFM), and the water surface elevation of the base flood.

Floodplain or flood-prone area - Any land area susceptible to being inundated by flood waters from any source.

Floodplain Administrator - The individual appointed by a NFIP participating community to administer and enforce the floodplain management ordinances.

Floodplain Management - The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management ordinances, and open space plans.

Floodplain Management Regulations - This ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control), and other applications of police power, which control development in flood-prone areas. This term describes federal, state and/or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing - Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

Floodproofing Certificate - A certification by a registered professional engineer or architect, on a FEMA-approved form in effect at the time of certification stating that a non-residential structure, together with attendant utilities and sanitary facilities is watertight to a specified design elevation with walls that are substantially impermeable to the passage of water and all structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy and anticipated debris impact forces.

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. Also referred to as the "regulatory floodway".

Floodway fringe - That area of the floodplain on either side of the regulatory floodway where encroachment may be permitted without additional hydraulic and/or hydrologic analysis.

Freeboard - A factor of safety, usually expressed in feet above the BFE, which is applied for the purposes of floodplain management. It is used to compensate for the many unknown factors that could contribute to flood heights greater than those calculated for the base flood. Freeboard must be applied not just to the elevation of the lowest floor or floodproofing level, but also to the level of protection provided to all components of the structure, such as building utilities, HVAC components, etc.

Fraud and victimization - As related in Article 6, **Appeals and Variance Procedures**, of this ordinance, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, the City Council will consider the fact that every newly constructed structure adds to government responsibilities and remains a part of the community for fifty to one hundred years. Structures that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages may incur. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.

Functionally dependent use facility - A facility, structure, or other development, which cannot be used for its intended purpose unless it is located or carried out in close proximity to water. The term includes only a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

Governing body - The local governing unit, i.e. county or municipality that is empowered to adopt and implement ordinances to provide for the public health, safety and general welfare of its citizenry.

Hazard potential - The possible adverse incremental consequences that result from the release of water or stored contents due to failure of a dam or misoperation of a dam or appurtenances. The hazard potential classification of a dam does not reflect in any way the current condition of a dam and its appurtenant structures (e.g., safety, structural integrity, flood routing capacity).

Highest adjacent grade - The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

Historic Structure - Any structure that is:

1) 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;

2) 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.

3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
   a) By an approved state program as determined by the Secretary of the Interior, or
   b) Directly by the Secretary of the Interior in states without approved programs.

Increased Cost of Compliance (ICC) – Increased cost of compliance coverage provides for the payment of a claim for the cost to comply with State or community floodplain management laws or ordinances after a direct physical loss by flood. When a building covered by a Standard Flood Insurance Policy under the NFIP sustains a loss and the state or community declares the building to be substantially or repetitively damaged, ICC will help pay up to $30,000 for the cost to elevate, floodproof, demolish, or remove the building.

ICC coverage is available on residential and non-residential buildings (this category includes public or government buildings, such as schools, libraries, and municipal buildings) insured under the NFIP.

Kentucky Revised Statute 151.250 - Plans for dams, levees, etc. to be approved and permit issued by cabinet – (Environmental and Public Protection Cabinet)
(1) Notwithstanding any other provision of law, no person and no city, county, or other political subdivision of the state, including levee districts, drainage districts, flood control districts or systems, or similar bodies, shall commence the construction, reconstruction, relocation or improvement of any dam, embankment, levee, dike, bridge, fill or other obstruction (except those constructed by the Department of Highways) across or along any stream, or in the floodway of any stream, unless the plans and specifications for such work have been submitted by the person or political subdivision responsible for the construction, reconstruction or improvement and such plans and specifications have been approved in writing by the cabinet and a permit issued. However, the cabinet by regulation may exempt those dams, embankments or other obstructions which are not of such size or type as to require approval by the cabinet in the interest of safety or retention of water supply.

(2) No person, city, county or other political subdivision of the state shall commence the filling of any area with earth, debris, or any other material, or raise the level of any area in any manner, or place a building, barrier or obstruction of any sort on any area located adjacent to a river or stream or in the floodway of the stream so that such filling, raising or obstruction will in any way affect the flow of water in the channel or in the floodway of the stream unless plans and specifications for such work have been submitted to and approved by the cabinet and a permit issued as required in subsection (1) above.
(3) Nothing in this section is intended to give the cabinet any jurisdiction or control over the construction, reconstruction, improvement, enlargement, maintenance or operation of any drainage district, ditch, or system established for agricultural purposes, or to require approval of the same except where such obstruction of the stream or floodway is determined by the cabinet to be a detriment or hindrance to the beneficial use of water resources in the area, and the person or political subdivision in control thereof so notified. The Department for Natural Resources through KRS Chapter 350 shall have exclusive jurisdiction over KRS Chapter 151 concerning the regulation of dams, levees, embankments, dikes, bridges, fills, or other obstructions across or along any stream or in the floodway of any stream
which structures are permitted under KRS Chapter 350 for surface coal mining operations.

Kentucky Revised Statute 151.320 - Officers required to enforce law.
(1) The mayor or chief executive officer of each city and the county judge/executive of each county, shall have the concurrent duty of enforcing with the cabinet, within their respective cities and counties, the provisions of KRS 151.250, 151.280 and 151.310 and rules and regulations issued thereunder.
(2) When a violation of KRS 151.250, 151.280 or 151.310 within his jurisdiction is brought to the attention of a mayor or chief executive officer of a city or a county judge/executive, he shall immediately notify the cabinet of the location and details of such violation.

Letter of Map Change (LOMC) – Is an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMC's include the following categories:

1) **Letter of Map Amendment (LOMA)** – A revision based on technical data showing that a property was incorrectly included in a designated SFHA. A LOMA amends the current effective FIRM and establishes that a specific property is not located in a SFHA.
2) **Letter of Map Revision (LOMR)** - A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features.
3) **Letter of Map Revision – Fill (LOMR_F)** – A determination that a structure or parcel has been elevated by properly placed engineered fill above the BFE and is, therefore, excluded from the SHFA.

Levee - A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee System - A flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

For a levee system to be recognized, the following criteria must be met:

1) All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual (a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or revised).
2) All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

Limited storage - An area used for storage and intended to be limited to incidental items which can withstand exposure to the elements and have low flood damage potential. Such an area must be of flood resistant material, void of utilities except for essential lighting, and cannot be temperature controlled.

Lowest adjacent grade - The elevation of the sidewalk, patio, deck support, or basement entryway immediately next to the structure and after the completion of construction. It does not include earth that is emplaced for aesthetic or landscape reasons around a foundation wall. It does include natural ground or properly compacted fill that comprises a component of a structure's foundation system.

Lowest Floor - The lowest floor of the lowest enclosed area including basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, structure access, or storage in an area other than a basement area is not considered a structure's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured Home - A structure, transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected or attached to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property. The term "manufactured home" does not include a "recreational vehicle" (see Recreational Vehicle).

Manufactured home park or subdivision - A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Map - The Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by the Federal Emergency Management Agency (FEMA).

Map Panel Number - The four-digit number on a flood map, followed by a letter suffix, assigned by FEMA. The first four digits represent the map panel. The letter suffix represents the number of times the map panel has been revised. (The letter "A" is not used by FEMA, the letter "B" is the first revision.)

Market value - The structure value, excluding the land (as agreed between a willing buyer and seller), as established by what the local real estate market will bear. Market value can be established by independent certified appraisal, replacement cost depreciated by age of structure (Actual Cash Value) or adjusted assessed values.

Mean Sea Level (MSL) - The average height of the sea for all stages of the tide. For the purposes of the National Flood Insurance Program, the MSL is used as a reference for establishing various elevations within the floodplain as shown on a community's FIRM. For purposes of this ordinance, the term is synonymous with either National Geodetic Vertical Datum (NGVD) 1929 or North American Vertical Datum (NAVD) 1988.

Mitigation - Sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. The purpose of mitigation is twofold: to protect people and structures, and to minimize the costs of disaster response and recovery.

Mudslide (i.e. mudflow) - Describes a condition where there is a river, flow, or inundation of liquid mud down a hillside, usually as a result of a dual condition of loss of brush cover and the subsequent accumulation of water on the ground, preceded by a period of unusually heavy or sustained rain. A mudslide (i.e. mudflow) may occur as a distinct phenomenon while a landslide is in progress, and will be recognized as such by the Floodplain Administrator only if the mudflow, and not the landslide, is the proximate cause of damage that occurs.

Mudslide (i.e. mudflow) area management - The operation of and overall program of corrective and preventative measures for reducing mudslide (i.e. mudflow) damage, including but not limited to emergency preparedness plans, mudslide control works, and floodplain management regulations.

Mudslide (i.e. mudflow) prone area - An area with land surfaces and slopes of unconsolidated material where the history, geology, and climate indicate a potential for mudflow.

National Flood Insurance Program (NFIP) - The federal program that makes flood insurance available to owners of property in participating communities nationwide through the cooperative efforts of the federal government and the private insurance industry.

National Geodetic Vertical Datum (NGVD) - As corrected in 1929, a vertical control used as a reference for establishing varying elevations within the floodplain. (Generally used as the vertical datum on the older FIRM's. Refer to FIRM legend panel for correct datum.)

New Construction - Structures for which the start of construction commenced on or after the effective date of the City of London's floodplain management regulations and includes any subsequent improvements to such structures.

New manufactured home park or subdivision - A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the 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 the City of London's adopted floodplain management ordinances.

Non-Residential – Structures that are not designed for human habitation, including but is not limited to: small business concerns, churches, schools, farm structures (including grain bins and silos), pool houses, clubhouses, recreational structures, mercantile structures, agricultural and industrial structures, warehouses, and hotels or motels with normal room rentals for less than 6 months duration.

North American Vertical Datum (NAVD) – As corrected in 1988, a vertical control used as a reference for establishing varying elevations within the floodplain. (Generally used on the newer FIRM's and Digitally Referenced FIRM's (DFIRM's). (Refer to FIRM or DFIRM legend panel for correct datum.)

Obstruction - Includes but is not limited to any dam, wall, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, structure, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

One-Hundred Year Flood (100-Year Flood) (see Base Flood) - The flood that has a 1-percent or greater chance of being equaled or exceeded in any given year. Any flood zone that begins with the letter A is subject to the 100-year flood. Over the life of a 30-year loan, there is a 26-percent chance of experiencing such a flood with the SFHA.

Participating Community - A community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.

Pre-FIRM Construction - Construction or substantial improvement, which started on or before December 31, 1974, or before the effective date of the initial FIRM of the community, whichever is later.

Post-FIRM Construction - Construction or substantial improvement that started on or after the effective date of the initial FIRM of the community or after December 31, 1974, whichever is later.

Probation - A means of formally notifying participating NFIP communities of violations and deficiencies in the administration and enforcement of the local floodplain management regulations. During periods of probation, each insurance policy is subject to a $50 surcharge.

Program Deficiency - A defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management standards or of the standards of 44 CFR 60.3, 60.4, 60.5, and/or 60.6.

Public Safety and Nuisance - Anything which is injurious to safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Recreational Vehicle - A vehicle that is:

1) Built on a single chassis;
2) 400 square feet or less when measured at the largest horizontal projection;
3) Designed to be self-propelled or permanently towable to a light duty truck; and
4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Regular Program - The phase of a community's participation in the NFIP where more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available based upon risk zones and elevations determined in a FIS.

Regulatory 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. See Base Flood.

Remedy a violation - The process by which a community brings a structure or other development into compliance with State or local floodplain management regulations, or, if this is not possible, to reduce the impact of non-compliance. Reduced impact may include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing state or federal financing exposure with regard to the structure or other development.

Repair - The reconstruction or renewal of any part of an existing structure.

Repetitive Loss - Flood-related damages sustained by a structure on two or more separate occasions during a 10-year period where the value of damages equals or exceeds an average of 50% of the current value of the structure, beginning on the date when the damage first occurred, or, four or more flood losses of $1000.00 or more over the life of the structure, or, three or more flood losses over the life of the structure that are equal to or greater than the current value of the structure.

Riverine - Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Section 1316 - That section of the National Flood Insurance Act of 1968, as amended, which states that no new or renewal flood insurance coverage shall be provided for any property that the Administrator finds has been declared by a duly constituted state or local zoning authority or other authorized public body to be in violation of state or local laws, regulations, or ordinances that are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

Sheet flow area - see **"Area of shallow flooding".**

Special flood hazard area (SFHA) - That portion of the floodplain subject to inundation by the base flood and/or flood-related erosion hazards as shown on a FHBM or FIRM as Zone A, AE, A1 – A30, AH, AO, or AR.

Start of Construction (includes substantial improvement and other proposed new development) - The date a building permit is issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvement is within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including manufactured home) on a site, such as the pouring of slabs or footings, the installation of piles, construction of columns, or any work beyond the stage of excavation; or the placement of a 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; the installation on the property of accessory structures, 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 structure.

Structure - A walled and roofed building that is principally above ground; including manufactured homes, gas or liquid storage tanks, or other man-made facilities or infrastructures. See Building.

Subdivision - Any division, for the purposes of sale, lease, or development, either on the installment plan or upon any and all other plans, terms and conditions, of any tract or parcel of land into two (2) or more lots or parcels.

Subrogation - An action brought by FEMA to recover insurance money paid out where all or part of the damage can be attributed to acts or omissions by a community or other third party.

Substantial Damage - Means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred."

Substantial Improvement - Means any reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during a 1-year period in which the cumulative percentage of improvement equals or exceeds 50 percent of the market values 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.

Substantially improved existing manufactured home parks or subdivisions - Repair, reconstruction, rehabilitation, or improvement of the streets, utilities, and pads equaling or exceeding 50 percent of the value of the streets, utilities, and pads before the repair, reconstruction, or improvement commenced.

Suspension - Removal of a participating community from the NFIP for failure to enact and/or enforce floodplain management regulations required for participation in the NFIP. New or renewal flood insurance policies are no longer available in suspended communities.

Utilities - Includes electrical, heating, ventilation, plumbing, and air conditioning equipment.

Variance - Relief from some or all of the requirements of this ordinance.

Violation - Failure of a structure or other development to fully comply with this ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

Watercourse - A lake, river, creek, stream, wash, channel or other topographic feature on or over which water flows at least periodically.

Water surface elevation - The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Watershed - All the area within a geographic boundary from which water, sediments, dissolved materials, and other transportable materials drain or are carried by water to a common outlet, such as a point on a larger stream, lake, or underlying aquifer.

X zone - The area where the flood hazard is less than that in the SFHA. Shaded X zones shown on recent FIRMs (B zones on older FIRMs) designate areas subject to inundation by the flood with a 0.2-percent probability of being equaled or exceeded (the 500-year flood) in any year. Unshaded X zones (C zones on older FIRMS) designate areas where the annual exceedance probability of flooding is less than 0.2 percent.

Zone - A geographical area shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

ARTICLE 3. GENERAL PROVISIONS

SECTION A. LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all Special Flood Hazard Areas (SFHA) and, as determined by the Floodplain Administrator or other delegated, designated, or qualified community official as determined by the City Council of the City of London from available technical studies, historical information, and other available and reliable sources, areas within the jurisdiction of the City Council of the City of London which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety, and general welfare of the citizens of the City of London.

SECTION B. BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) for Laurel County, dated March 16, 2015, with the accompanying Flood Insurance Rate Maps (FIRMS) and other supporting data are adopted by reference and declared to be a part of these regulations by the City of London, and for those land areas acquired by the City of London through annexation. This FIS and attendant mapping is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this ordinance and which are recommended to the City Council by the Floodplain Administrator and are enacted by the City Council pursuant to statutes governing land use management regulations. The FIS and/or FIRM are permanent records of the City of London and are on file and available for review by the public during regular business hours at the City of London City Hall at 501 South Main Street, London, Kentucky.

SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT

A Development Permit shall be required in conformance with the provision of this ordinance prior to the commencement of any development activities in the special flood hazard areas (SFHA). See Article 4, Section B for instructions and explanation.

Application for a development permit shall be made on forms furnished by the Floodplain Administrator.

SECTION D. COMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted or structurally altered without full compliance with the terms of this ordinance and other applicable state regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the City Council from taking such lawful action as is necessary to prevent or remedy any violation.

SECTION E. ABROGATION AND GREATER RESTRICTIONS

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

SECTION F. INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

1) Considered minimum requirements;

2) Liberally construed in favor of the governing body; and,

3) Deemed neither to limit nor repeal any other powers granted under state statutes.

SECTION G. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damage. This ordinance shall not create liability on the part of the City Council of the City of London, any officer or employee, the Commonwealth of Kentucky, the Federal Insurance Administration, or the Federal Emergency Management Agency, thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

SECTION H. ENFORCEMENT, VIOLATION NOTICE AND PENALTIES

1) Civil Offense: If, at any time, development occurs which is not in accordance with the provisions of this ordinance including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications, such development shall constitute a civil offense.
2) Notice of Violation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this ordinance including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator shall issue a notice to the person responsible for the violation and/or the property owner, stating the facts of the offense or violation, the section of this ordnance and/or of the permit violated, when it occurred, how the violation is to be remedied to bring the development into conformity with this ordinance or with the approved permit, and within what period of time the remedy is to occur, which period of time shall be reasonable and shall be determined by the nature of the violation and whether or not it creates a nuisance or hazard. The remedy may include an order to stop work on the development. The notice shall also state that a citation may be forthcoming in the event that the requested remedies and corrective actions are not taken, which citation will request a civil monetary fine and shall state the maximum fine which could be imposed. See below.
3) Notice of Citation: Notice of Violation: If, at any time, a duly authorized employee or agent of the Floodplain Administrator has reasonable cause to believe that a person has caused development to occur which is not in accordance with the provisions of this ordinance including obtaining or complying with the terms and conditions of a floodplain construction permit and any approved modifications thereof, a duly authorized employee of the Floodplain Administrator may issue a citation to the offender stating the violation, prior notices of violation issued, how the violation is to be remedied to bring the development into conformity with this ordinance or with the approved permit, and within what period of time the remedy is to occur, and what penalty or penalties are recommended. When a citation is issued, the person to whom the citation is issued shall respond to the citation within seven (7) days of the date the citation is issued by either carrying out the remedies and corrections set forth in the citation, paying the civil fine set forth in the citation or requesting a hearing before the governing body. If the person to whom the citation is issued does not respond to the citation within seven (7) days, that person shall be deemed to have waived the right to a hearing and the determination that a violation occurred shall be considered final.
4) Penalties: Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with granting of a variance or special exceptions, shall constitute a misdemeanor civil offense. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined no less than one hundred dollars ($100.00) or imprisoned for not more than 10 days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Floodplain Administrator from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE 4. ADMINISTRATION

SECTION A. DESIGNATION OF LOCAL ADMINISTRATOR

The City Council of the City of London hereby appoints the Building Inspector to administer, implement, and enforce the provisions of this ordinance by granting or denying development permits in accordance with its provisions, and is herein referred to as the Floodplain Administrator.

SECTION B. ESTABLISHMENT OF DEVELOPMENT PERMIT

A development permit shall be obtained before any construction or other development begins within any special flood hazard area established in Article 3, Section B. Application for a Development Permit shall be made on forms furnished by Floodplain Administrator prior to any development activities, and may include, but not be limited to, the following: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Endorsement of local administrator is required before a state floodplain construction permit can be processed. Specifically, the following information is required.

1) **Application Stage**

   a) Proposed elevation in relation to Mean Sea Level (MSL) of the proposed lowest floor (including basement) of all structures in Zone A and elevation of highest adjacent grade; or

   b) Proposed elevation in relation to Mean Sea Level to which any non-residential structure will be flood-proofed;

   c) All appropriate certifications from a registered professional engineer or architect that the non-residential flood-proofed structure will meet the flood-proofing criteria in Article 5, Section B (2) and Section D (2);

   d) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

2) **Construction Stage**

   Upon placement of the lowest floor, **and before construction continues**, or flood proofing by whatever construction means, it shall be the duty of the permit holder to submit to the Floodplain Administrator and to the State a certification of the elevation of the lowest floor or flood-proofed elevation, as built, in relation to Mean Sea Level. In AE, A1-30, AH, and A zones where the Community has adopted a regulatory Base Flood Elevation, said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same.

   When flood proofing is utilized for a particular structure, said certification shall be prepared by or under the direct supervision of a certified professional engineer or architect. Any continued work undertaken prior to the submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the lowest floor and flood proofing elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

SECTION C. DUTIES AND RESPONSIBILITIES OF THE LOCAL ADMINISTRATOR

The Floodplain Administrator and/or staff is hereby appointed, authorized and directed to administer, implement and enforce the provisions of this ordinance. The Floodplain Administrator is further authorized

to render interpretations of this ordinance, which are consistent with its spirit and purpose by granting or denying development permits in accordance with its provisions.

The duties and responsibilities of the Floodplain Administrator shall include, but not be limited to the following:

1) **Permit Review**: Review all development permits to ensure that:

   a) Permit requirements of this ordinance have been satisfied;

   b) All other required state and federal permits have been obtained: Advise permittee that additional federal or state permits may be required, and if specific federal or state permit requirements are known, require that copies of such permits be provided and maintained on file with the development permit;

   c) Flood damages will be reduced in the best possible manner;

   d) The proposed development does not adversely affect the carrying capacity of affected watercourses. For purposes of this ordinance, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one foot at any point.

2) **Review and Use of Any Other Base Flood Data**. When base flood elevation data has not been provided in accordance with Article 3, Section B, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer Article 5. Any such information shall be submitted to the City Council for adoption.

3) **Notification of Other Agencies**:

   a) Notify adjacent communities, the Kentucky Division of Water, and any other federal and/or state agencies with statutory or regulatory authority prior to any alteration or relocation of the watercourse, and

   b) Submit evidence of such notification to the Federal Insurance Administration, Federal Emergency Management Agency (FEMA); and

   c) Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.

4) **Documentation of Floodplain Development**. Obtain and maintain for public inspection and make available as needed the following:

   a) Certification required by Article 5, Section B (1) (lowest floor elevations) as shown on a completed and certified **Elevation Certificate**. Verify and record the actual elevation (in relation to Mean Sea Level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article 4, Section B (2);

   b) Certification required by Article 5, Section B (2) (elevation or floodproofing of nonresidential structures) as shown on a completed and certified floodprooofing certificate. Verify and record the actual elevation (in relation to Mean Sea Level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article 4, Section B (2);

   c) Certification required by Article 5, Section B (3) (elevated structures),

   d) Certification of elevation required by Article 5, Section E (1) (subdivision standards),

e) Certification required by Article 5, Section B (5) (floodway encroachments),

f) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;

g) Review certified plans and specifications for compliance;

h) Remedial Action. Take action to remedy violations of this ordinance as specified in Article 3, Section H.

5) **Map Determinations**. Make interpretations where needed, as to the exact location of the boundaries of the special flood hazard areas, for example, where there appears to be a conflict between a mapped boundary and actual field conditions.

a) Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Article 6, Section (3) b;

b) When base flood elevation data or floodway data have not been provided in accordance with Article 3, Section B, then the Floodplain Administrator shall obtain, review, and reasonable utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of Article 5;

c) When flood-proofing is utilized for a particular structure, the Floodplain Administrator shall obtain certification from a registered professional engineer or architect, in accordance with Article 5, Section B (2) a floodproofing certificate;

d) All records pertaining to the provisions of this ordinance shall be maintained in the office of the Floodplain Administrator and shall be open for public inspection.

6) **Right of Entry.**

a) Whenever necessary to make an inspection to enforce any of the provisions of this ordinance, or whenever the administrator has reasonable cause to believe that there exists in any structure or upon any premises any condition or ordinance violation which makes such building, structure or premises unsafe, dangerous or hazardous, the administrator may enter such building, structure or premises at all reasonable times to inspect the same or perform any duty imposed upon the administrator by this ordinance.

b) If such structure or premises are occupied, he/she shall first present proper credentials and request entry. If such building, structure, or premises are unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of such request entry.

c) If entry is refused, the administrator shall have recourse to every remedy provided by law to secure entry.

d) When the administrator shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other persons having charge, care or control of any building, structure, or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the administrator for the purpose of inspection and examination pursuant to this ordinance.

7) **Stop Work Orders**

a) Upon notice from the administrator, work on any building, structure or premises that is being done contrary to the provisions of this ordinance shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed.

8) **Revocation of Permits**

a) The administrator may revoke a permit or approval, issued under the provisions of this ordinance, in case there has been any false statement or misrepresentation as to the material fact in the application or plans on which the permit or approval was based.

b) The administrator may revoke a permit upon determination by the administrator that the construction, erection, alteration, repair, moving, demolition, installation, or replacement of the structure for which the permit was issued is in violation of, or not in conformity with, the provisions of this ordinance.

9) **Liability**

a) Any officer, employee, or member of the floodplain administrator's staff, charged with the enforcement of this ordinance, acting for the applicable governing authority in the discharge of his duties, shall not thereby render himself personally liable, and is hereby relieved from all personal liability, for any damage that may accrue to persons or property as a result of any act required or permitted in the discharge of his duties. Any suit brought against any officer, employee, or member because of such act performed by him or her in the enforcement of any provision of this ordinance shall be defended by the department of law until the final termination of the proceedings.

10) **Expiration of Floodplain Construction Permit**

a) A floodplain construction permit, and all provisions contained therein, shall expire if the holder of a floodplain construction permit has not commenced construction within one hundred and eighty (180) calendar days from the date of its issuance by the Floodplain Administrator.

ARTICLE 5. PROVISIONS FOR FLOOD HAZARD REDUCTION

SECTION A. GENERAL CONSTRUCTION STANDARDS

In all **Special Flood Hazard Areas** the following provisions are required:

1) All new construction and substantial improvements shall be adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

2) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or fame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.

3) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

4) New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage;

5) Electrical, heating, ventilation, plumbing, air condition equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and if

6) Within Zones AH or AO, so that there are adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures.

7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

8) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;

9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and,

10) Any alteration, repair, reconstruction, or improvements to a structure, which is not in compliance with the provisions of this ordinance shall meet the requirements of "new construction" as contained in this ordinance;

11) Any alteration, repair, reconstruction, or improvements to a structure, which is not in compliance with the provisions of this ordinance, shall be undertaken only if said non-conformity is not furthered, extended, or replaced.

SECTION B. SPECIFIC STANDARDS

In all special flood hazard areas where base flood elevation data have been provided, as set forth in Article 3, Section B, the following provisions are required:

1) **Residential Construction.** New construction or substantial improvement of any residential structure (or manufactured home) shall have the lowest floor, including basement, mechanical equipment, and ductwork elevated no lower than one (1) feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of Article 5, Section B (3).

   a) In an AO zone, elevated above the highest adjacent grade to a height equal to or exceeding the depth number specified in feet on the FIRM, or elevated at least two feet above the highest adjacent grade if no depth number is specified.

   b) In an A zone, where no technical data has been produced by the Federal Emergency Management Agency, elevated one (1) feet above the base flood elevation, as determined by this community. The Floodplain Administrator will determine the method by which base flood elevations are determined. Methods include but are not limited to detailed hydrologic and hydraulic analyses, use of existing data available from other sources, use of historical data, best supportable and reasonable judgement in the event no data can be produced. Title 401 KAR (Kentucky Administrative Regulations) Chapter 4, Regulation 060, Section 5(5)a, states as a part of the technical requirements for a State Floodplain Permit: The applicant shall provide cross sections for determining floodway boundaries(and thereby Base Flood Elevations) at any proposed construction site where FEMA maps are not available. All cross sections shall be referenced to mean sea level and shall have vertical error tolerances of no more than + five-tenths (0.5) foot. Cross sections elevations shall be taken at those points which represent significant breaks in slope and at points where hydraulic characteristics of the base floodplain change. Each cross section shall extend across the entire base floodplain and shall be in the number and at the locations specified by the cabinet. If necessary to ensure that significant flood damage will not occur, the cabinet may require additional cross sections or specific site

elevations which extend beyond those needed for making routine regulatory floodway boundary calculations.

c) In all other Zones, elevated one (1) feet above the base flood elevation.

Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspection department to be properly elevated. Such certification and verification shall be provided to the Floodplain Administrator.

2) **Non-residential Construction.** New construction or substantial improvement of any commercial, industrial, or non-residential structure (including manufactured homes used for non-residential purposes) shall be elevated to conform with Article 5, Section B (1) or together with attendant utility and sanitary facilities:

a) Be floodproofed below an elevation one (1) feet above the level of the base flood elevation so that the structure is watertight with walls substantially impermeable to the passage of water;

b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

c) Have the lowest floor, including basement, mechanical equipment, and ductwork, elevated no lower than one (1) feet above the level of the base flood elevation, or;

d) A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article 4, Section B (1) c.

e) Manufactured homes shall meet the standards in Article 5, Section B (4).

f) All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be constructed of flood resistant materials below an elevation one (1) feet above the base flood elevation, and, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Opening sizes (FEMA Technical Bulletin 1-93) for meeting this requirement must meet or exceed the following minimum criteria:

(i) Be certified by a registered professional engineer or architect; or

(ii) Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. **The bottom of all openings shall be no higher than one foot above grade.** Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

3) **Elevated Structures.** New construction or substantial improvements of elevated structures on columns, posts, or pilings (e.g.) that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

a) Opening sizes for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

(i) Provide a minimum of two (2) openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

(ii) The bottom of all openings shall be no higher than one foot above foundation interior grade (which must be equal to in elevation or higher than the exterior foundation grade); and,

(iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

b) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and,

c) The interior portion of such enclosed areas shall not be partitioned or finished into separate rooms.

4) **Standards for Manufactured Homes and Recreational Vehicles.**

a) All new or substantially improved manufactured homes placed on sites located within A, A1-30, AO, AH, and AE on the community's Flood Insurance Rate Map (FIRM) must meet all the requirements for new construction, including elevation and anchoring. Locations include:

- On individual lots or parcels,
- In expansions to existing manufactured home parks or subdivisions,
- In new manufactured home parks or subdivisions or
- In substantially improved manufactured home parks or subdivisions, or
- Outside of a manufactured home park or subdivision,
- In an existing manufactured home park or subdivision on a site upon which a manufactured home has incurred "substantial damage" as the result of a flood,

All Manufactured homes must be:

(i) Elevated on a permanent foundation, and

(ii) Have its lowest floor elevated no lower than one (1) feet above the level of the base flood elevation, and

(iii) Be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

b) Excepting manufactured homes that have incurred substantial damage as a result of a flood, all manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:

(i) The manufactured home is securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement, so that either the:

- The lowest floor of the manufactured home is elevated no lower than one (1) feet above the level of the base flood elevation, or

- The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than 36 inches in height above the highest adjacent grade.

c) All recreational vehicles placed on sites located within A, A1-30, AO, AH, and AE on the community's Flood Insurance Rate Map (FIRM) must either:

(i) Be on the site for fewer than 180 consecutive days,

(ii) Be fully licensed and ready for highway use, or

(iii) Meet the permit requirements for new construction of this ordinance, including anchoring and elevation requirements for "manufactured homes".

A recreational vehicle is ready for highway use if it is licensed and insured in accordance with the State of Kentucky motor vehicle regulations, is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

5) **Floodways.** Located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and has erosion potential, the following provisions shall apply:

Prohibit encroachments, including fill, new construction, substantial improvements, and other developments unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in the base flood elevation levels during occurrence of base flood discharge;

- If Article 5, Section B (5) is satisfied, all new construction and substantial improvements and other proposed new development shall comply with all applicable flood hazard reduction provisions of Article 5.

6) **Standards for Utilities.**

a) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:

(i) Infiltration of flood waters into the systems, and

(ii) Discharge from the systems into flood waters.

b) On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding.

SECTION C. STANDARDS FOR STREAMS WITHOUT ESTABLISHED BASE FLOOD ELEVATION (UNNUMBERED A ZONES) AND/OR FLOODWAYS

Located within the special flood hazard areas established in Article 3, Section B, where streams exist but where no base flood data has been provided or where base flood data has been provided without floodways, the following provisions apply:

1) No encroachments, including fill material or structures shall be located within special flood hazard areas, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

2) New construction or substantial improvements of structures shall be elevated or flood proofed to elevations established in accordance with Article 3, Section B.

SECTION D. STANDARDS FOR SHALLOW FLOODING ZONES

Located within the special flood hazard areas established in Article 3, Section B, are areas designated as shallow flooding areas. These areas have flood hazards associated with base flood depths of one to three feet (1 – 3'), where a clearly defined channel does not exist and the water path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

1) All new construction and substantial improvements of residential structures shall:

   a) Have the lowest floor, including basement, elevated to or above either the base flood elevation or in Zone AO the flood depth specified on the Flood Insurance Rate Map above the highest adjacent grade. In Zone AO, if no flood depth is specified, the lowest floor, including basement, shall be elevated no less than two (2) feet above the highest adjacent grade.

2) All new construction and substantial improvements of non-residential structures shall:

   a) Have the lowest floor, including basement, elevated to or above either the base flood elevation or in Zone AO the flood depth specified on the Flood Insurance Rate Map, above the highest adjacent grade. In Zone AO, if no flood depth is specified, the lowest floor, including basement, shall be elevated no less than two (2) feet above the highest adjacent grade.

   b) Together with attendant utility and sanitary facilities be completely floodproofed either to the base flood elevation or above or, in Zone AO, to or above the specified flood depth plus a minimum of one foot so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as stated in Article 5, Section B (2).

SECTION E. STANDARDS FOR SUBDIVISION PROPOSALS

1) All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood and be consistent with the need to minimize flood damage;

2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;

3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and,

4) In areas where base flood elevation and floodway data is not available (Zone A or unmapped streams), base flood elevation and floodway data for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, shall be provided.

5) All subdivision plans will include the elevation of proposed structure(s) and lowest adjacent grade. If the site is filled above the base flood elevation, the lowest floor and lowest adjacent grade elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.

SECTION F. STANDARDS FOR ACCESSORY STRUCTURES IN ALL ZONES BEGINNING WITH THE LETTER 'A'

For all accessory structures in special flood hazard areas designated 'A' the following provisions shall apply:

1) Structure must be non-habitable;

2) Must be anchored to resist floatation forces;

3) Will require flood openings/vents no more than one foot above grade, total openings are to be one square inch per one square foot of floor area, at least two openings required on opposite walls;

4) Built of flood resistant materials below a level one (1) feet above the base flood elevation;

5) Must elevate utilities above the base flood elevation;

6) Can only be used for storage or parking;

7) Cannot be modified for a different use after permitting.

SECTION G. CRITICAL FACILITIES

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA (100-year floodplain). Construction of new critical facilities shall not be permissible within the floodway; however, they may be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated one foot or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

ARTICLE 6. APPEALS AND VARIANCE PROCEDURES

1) **Nature Of Variances**

The variance criteria set forth in this section of the ordinance are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this ordinance would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

It is the duty of the City Council to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below flood level is so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

2) **Designation of variance and appeal board**

a) The City Council of the City of London shall establish an Appeal Board consisting of The Board of Adjustments.

3) **Duties of variance and appeals board**

a) The Appeal Board shall hear and decide requests for variances from the requirements of this ordinance and appeals of decisions or determinations made by the Floodplain Administrator in the enforcement or administration of this ordinance.

b) Any person aggrieved by the decision of the Appeal Board or any taxpayer may appeal such decision to the Local Circuit Court as provided in Kentucky Revised Statutes.

4) **Appeals/Variance Procedures**

In passing upon such applications, the Appeal Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and the:

a) Danger that materials may be swept onto other lands to the injury of others;

b) Danger to life and property due to flooding or erosion damage;

c) Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;

d) Importance to the community of the services provided by the proposed facility;

e) Necessity that the facility be located on a waterfront, in the case of functionally dependent facility;

f) Availability of alternative locations which are not subject to flooding or erosion damage;

g) Compatibility of the proposed use with existing and anticipated development;

h) Relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

i) Safety of access to the property in times of flood for ordinary and emergency vehicles;

j) Expected height, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,

k) Costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water systems, streets, and bridges.

5) **Conditions for Variances**

Upon consideration of the factors listed above and the purposes of this ordinance, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

a) Variances shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result.

b) Variances shall only be issued upon a determination that the variance is the "minimum necessary" to afford relief considering the flood hazard. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this ordinance. For example, in the case of variances to an elevation requirement, this means the City Council need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which the City Council believes will both provide relief and preserve the integrity of the local ordinance.

c) Variances shall only be issued upon a determination that the variance is the "minimum necessary" to afford relief considering the flood hazard. In the instance of an historical structure, a determination shall be made that the variance is the minimum necessary to afford relief and not destroy the historic character and design of the structure.

d) Variances shall only be issued upon:

(i) A showing of good and sufficient cause;

(ii) A determination that failure to grant the variance would result in exceptional hardship to the applicant (as defined in this ordinance); and

(iii) A determination that the granting of a variance will not result in increased flood height, additional threats to public safety, cause extraordinary public expense, create nuisance (as defined in the definition section under "Public safety and nuisance"), cause fraud or victimization of the public (as defined in the definition section) or conflict with existing local laws or ordinances.

f) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

b) The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency (FEMA) and the Federal Insurance Administration (FIA) upon request.

h) Variances may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use provided that the provisions of Sections 6.3 A through 6.3 E are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and does not result in additional threats to public safety and does not create a public nuisance.

6) **Variance Notification**

Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:

a) The issuance of a variance to construct a structure below the base flood elevation will result in increased premium rates for flood insurance up to amounts as high as $25 for $100 of insurance coverage, and;

b) Such construction below the base flood level increases risks to life and property. A copy of the notice shall be recorded by the Floodplain Administrator in the Office of the City of London Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

c) The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance, and report such variances issued in the community's biennial report submission to the Federal Emergency Management Agency.

7) **Historic Structures**

Variances may be issued for the repair or rehabilitation of "historic structures" (see definition) upon determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

8) **No Impact Certification within the Floodway**

Variances shall not be issued within any mapped or designated floodway if any increase in flood levels during the base flood discharge would result.

ARTICLE 7. **SEVERABILITY**

This ordinance and the various parts thereof are hereby declared to be severable. Should any section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

If any section, clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

_____

Mayor Troy Rudder

ATTESTED:

_____

Carol Adams
City Clerk

FIRST READING DATE: _____

SECOND READING DATE: _____

PUBLICATION DATE: _____