STATE OF LOUISIANA

CITY OF WEST MONROE

ORDINANCE NO._____ MOTION BY:_____

SECONDED BY:_____

ORDINANCE TO AMEND THE PROVISIONS OF CHAPTER 6 - FLOOD DAMAGE PREVENTION OF PART 12 - PLANNING AND DEVELOPMENT OF THE CODE OF ORDINANCES, CITY OF WEST MONROE, LOUISIANA, BY ENACTING NEW ARTICLE F - STORM DRAINAGE AND FLOOD CONTROL, CONSISTING OF SEC. 12-6041 TO SEC. 12-6110, WHICH ESTABLISH PROVISIONS GOVERNING THE ALTERATION OF NATURAL OR EXISTING STORM DRAINAGE FACILITIES, AND ESTABLISH A STANDARD AND UNIFORM BASIS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC STORM DRAINAGE FACILITIES AND IMPROVEMENTS; TO PROVIDE FOR CONFLICTS WITH OTHER PROVISIONS OF THE CODE OF ORDINANCES; AND TO OTHERWISE PROVIDE WITH RESPECT THERETO.

SECTION 1. BE IT ORDAINED by the Mayor and Board of Aldermen of the City of West Monroe, Louisiana, in regular and legal session convened, that the provisions of Chapter 6 - Flood Damage Prevention of Part 12 - Planning and Development of the Code of Ordinances, City of West Monroe, Louisiana, is hereby amended by now enacting Article F. - Storm Drainage and Flood Control, consisting of Sec. 12-6041 to Sec. 12-6110, to provide as follows:

"ARTICLE F - STORM DRAINAGE AND FLOOD CONTROL

IN GENERAL

Secs. 12-6041 to 12-6060. Reserved.

STORM DRAINAGE

DIVISION 1. - GENERALLY

Sec. 12-6061. - Statement of purpose.

It is the purpose of this article to establish provisions governing the alteration of natural or existing storm drainage facilities and to establish a standard and uniform basis for the design and construction of public storm drainage facilities and improvements within the city in order to:

(1) Promote the public health, safety and general welfare;

(2) Promote the orderly development of public storm drainage facilities within the city;

(3) Reduce the hazards and damages of flooding within the various drainage areas of the city;

(4) Reduce the expenditure of public funds necessary to maintain and improve inadequate storm drainage facilities; and

(5) Provide for adequate drainage servitudes and rights-of-way for maintenance purposes.

Sec. 12-6062. - Jurisdiction.

This article shall apply to all lands within the municipal boundaries of the city.

Sec. 12-6063. - Penalties for noncompliance.

After notice by registered mail and failure to correct within thirty (30) days from the date of said notice, violation of the provisions of this article by failure to comply with any of its requirements shall constitute a misdemeanor. Any person who

violates this article or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars ($500.00), or imprisoned for not more than thirty (30) days, or both, for each violation. Nothing herein contained shall prevent the city from taking such other lawful action as is necessary to prevent or remedy any violation.

Sec. 12-6064. - Interpretation.

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

(1) Considered as 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.

Sec. 12-6065. - Warning and disclaimer of liability.

The degree of storm drainage and flood protection required under this article is considered to be reasonable for regulatory purposes and is based on scientific and engineering considerations. The design and construction requirements herein set forth are minimum criteria. Greater storm drainage and flooding conditions may occur beyond the minimum basis of design as a result of man-made or natural causes. This article shall not create liability on the part of the city or any officer, or employee or official representative for any storm drainage or flood damages that result from reliance on this article or any administrative decision lawfully made hereunder.

Sec. 12-6066. - Definitions.

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

Appurtenance. Inlet, junction box, headwall, etc., which is a part of a culvert or a storm sewer system.

Culvert. A conduit for the free passage of surface drainage water under a highway, railroad, canal or other embankment, the upstream end of which is open.

Freeboard. The vertical distance between the normal maximum level of the water surface and the top of the sides of a ditch, levee or structure which is provided so that waves and other movements of the water will not overtop the confining structure.

Headwater. Water upstream of a structure.

Inlet. (1) A structure which permits the admission of surface or storm water into a storm sewer. (2) An intake. (3) The upstream end of any structure through which water may flow.

Pipe lateral. A storm sewer which discharges into a branch or other storm sewer and has no common storm sewer tributary to it.

Public drainage facility.A natural or artificial drain of surface or subterranean water which has been maintained or controlled by the city, and any natural or artificial drain of surface or subterranean water which affects the interest of other than particular individuals.

Rainfall intensity.The intensity of rainfall in inches per hour for a selected storm frequency and for a duration equal to the time of concentration.

Roadway ditch. An open drainage channel paralleling a roadway generally constructed as part of a roadway project.

Runoff. That part of the precipitation which runs off the surface of a drainage area and reaches a stream storm sewer, or other body of water.

Storm sewer. An underground drainage system that carries storm water and surface water from an inlet or junction box to an inlet, junction box, or outlet headwall further downstream.

Tailwater. Water downstream of a structure.

Time of concentration. The time required for runoff from the most remote part of the drainage area to reach the point under design or consideration.

Secs. 12-6067 to 12-6070. - Reserved.

DIVISION 2. - GENERAL DRAINAGE REQUIREMENTS

Sec. 12-6071. - Lands to which division applies.

This division shall apply to all lands, drainage works and facilities within the municipal limits of the city.

Sec. 12-6072. - Alteration of natural or existing drainage.

(a) Natural or existing drainage patterns, channels, reservoirs, flood plains and flood protection systems shall not be altered except with the prior written approval of the city.

(b) All clearing, filling, grading, dredging and other forms of development shall not interfere with or restrict the natural or existing flow of drainage with the prior written approval of the city.

Sec. 12-6073. - Obstruction of natural or existing drainage.

(a) It shall be unlawful for any person or persons to construct, deposit, or cause to be located any material or substance whatever within the limits of a natural or existing drainage ditch, channel, stream, drain or course such that the free flow of drainage is obstructed, impeded, or diverted to other lands.

(b) It shall be unlawful for any person or persons to place and/or burn any leaves, trash, or other debris in city drainage facilities, including but not limited to any natural or existing ditch, channel, stream, drain or course.

(c) Any person or person who violates any provision of this section shall be fined not more than one hundred dollars ($100.00) or imprisoned for not more than ten (10) days or both, for each violation. Sec. 12-6074. - Damage to public drainage system.

It shall be unlawful for any person, firm or corporation to deface, injure, disturb or molest any culvert, pipe, ditch, channel or other physical component or appurtenance of the public drainage system.

Sec. 12-6075. - Crossing of public drainage channels.

(a) Generally.

(1) No public drainage ditch, canal, channel or stream shall be crossed or spanned by temporary or permanent construction of any means except with the prior written approval of the city.

(2) Any culvert, pipe, bridge or other method of crossing located within the flow carrying limits of a public drainage channel shall be adequately designed and sized to allow for minimum restricted flow through the point of crossing based on minimum rainfall design frequencies set forth in Section 12-6095.

(b) Utility crossings.

(1) No exposed pipe, conduit, wire, cable or other type of utility line or component shall be placed or installed within the flow carrying limits of a public drainage channel.

(2) Any utility line or component which crosses a public drainage channel shall be placed or installed:

a. A minimum of thirty-six (36) inches below the existing flow line or the twenty-five-year design bottom profile of the channel, whichever is lower; or

b. A minimum of twenty-four (24) inches above the highest known water level or twenty-five-year design flood profile of the channel.

(3) No utility line or component shall be placed within the right-of-way of a public drainage channel such that it would interfere in any way with the operation or maintenance of said channel.

(4) Aerial utility line crossings shall be adequately designed and braced so as to provide for a minimum clear span of the public drainage channel between top high banks.

(5) Subsurface utility line crossings shall be sufficiently anchored to prevent flotation.

(6) If necessary to maintain the integrity of a utility system, utility line crossings shall be cased or sheathed to protect said line within the public right-of-way.

(7) Once a utility line or component has been placed or installed across a public drainage channel, it shall be the responsibility of the owner of said line or component to perpetually maintain said line or component and to raise, lower or otherwise modify said line or component at his expense if, for any reason, the cross-section or profile of the channel is thereafter improved or changed by the city.

(c) Bridge crossings.

(1) All bridge crossings shall be designed and constructed in accordance with the requirements and specifications of the city.

(2) The lowest level of any bridge deck (super structure) shall be set a minimum of twenty-four (24) inches above the twenty-five-year design flood profile of the channel.

(3) For piling supported bridges, the pilings shall be arranged and oriented within the channel so as to minimize the restriction of flow and potential accumulation of debris.

(4) Bulkheads, wing walls, revetment or other means of stabilizing the ends of bridges shall be employed to protect channel banks and flow lines from scour and erosion.

(d) Private culverts.

(1) No culvert or drainage pipe shall be placed or installed within a public right-of-way or servitude without the prior written approval of the city.

(2) Unless otherwise authorized by the director of public works in writing:

a. All culverts and drainage pipes placed or installed within a public right-of-way or servitude shall be of a standard shape and cross-sectional area sufficient to allow for the minimum restricted passage of stormwater through the point of installation.

b. The minimum size of any culvert or drainage pipe shall be eighteen (18) inch diameter or the equivalent sized elliptical pipe or pipe arch.

Sec. 12-6076. - Procedure for installation of private culverts.

(a) Any person, firm or corporation desiring to install culverts or drainage pipe for the purpose of enclosing open ditches within public road rights-of-way within the City shall make application on forms to be provided by the Public Works Department. The application shall be accompanied by a nonrefundable fee payment in the amount of one hundred dollars ($100.00) to cover the costs of the survey. The payment shall be in the form of cash, bank money order or bank check made payable to the city. The application shall contain a specific and accurate description and location of the place at which the culverts are to be installed.

(b) Upon receipt of the application, the city shall inspect the location of installation and shall establish a flow line elevation in which the culvert is to be set, and the proper size of the culvert. Installation shall be completed by a qualified contractor in good standing with the State of Louisiana, said contractor to be chosen by the landowner.

(c) Upon completion of the installation of the culvert, the public works director shall cause same to be inspected, and if properly installed, the fact shall be noted on the back of the culvert permit and notice to proceed to cover same shall be given. If the public works director or his agents determine that the culvert has not been properly installed, the applicant shall be notified in writing of the deficiencies as to the installment and given a period of ten (10) days to correct the deficiencies.

(d) If the deficiencies and the installation of the culvert are not corrected within ten (10) days, then the culvert shall be removed by the employees of the public works department.

(e) No culvert shall be for the purpose of enclosing open ditches thirty (30) feet or greater in length, and shall be installed by agents or employees of the city without the written consent of the city.

Sec. 12-6077. - Catch basin requirements.

Unless otherwise authorized by the director of public works, catch basins shall be required for all culvert or drainage pipe installations in excess of fifty (50) feet in length. The location and spacing of catch basins shall be as directed by the director of public works at the time a permit is issued for the culvert or drainage pipe installation. The design and construction of catch basins shall be in conformance with the requirements and specifications of the city. Catch basins' inlets and grates shall be of such design as to allow the free inflow of stormwater into the drainage system with minimal surface ponding and with no detrimental effects of flooding.

Sec. 12-6078. - Irrigation systems.

(a) No irrigation system which is used for agricultural or other purposes shall use a public drainage channel as a storage reservoir for the purpose of supplying water to said system, nor shall any pump, pipe or other component of said system be placed or installed within a public drainage channel, except with the prior written approval of the city.

(b) It shall be unlawful to temporarily or permanently barricade, block or restrict in any way, the flow carrying capacity of any culvert, pipe, channel or other feature of the public drainage system for the purpose of storing water to supply an irrigation system, except with the prior written approval of the city.

Sec. 12-6079. - Responsibility of drainage districts or other independent districts.

(a) No drainage district or other independent district presently existing or hereafter created by the city shall:

(1) Construct, erect, alter, maintain, or operate within its jurisdiction or otherwise, any facility which interrupts, impedes or obstructs natural or existing drainage within, or outside, the territorial limits of its jurisdiction except with the prior written approval of the city.

(2) Obstruct, alter or otherwise change any natural or existing drainage pattern, channel, reservoir, flood plain and flood protection system within its territorial jurisdiction except with the prior written approval of the city.

(3) Construct or alter any natural or existing drainage, system, flood protection system, or other public works involving drainage without submitting construction plans, specifications and supportive data to the city and receiving written approval of the city prior to the commencement of work.

(b) Upon completion of the construction or alteration of natural or existing drainage, a flood protection system or other public works involving drainage, any drainage district or other independent district presently existing or hereafter created by the city shall submit as-built plans and supportive data to the city which accurately documents the completed work.

Secs. 12-6080 to 12-6090. - Reserved.

DIVISION 3. - SPECIAL REQUIREMENTS FOR PUBLIC DRAINAGE FACILITIES

Sec. 12-6091. - Land and works to which division applies.

This division shall apply to all drainage works and facilities in the city which are located, placed, or installed within a public right-of-way or servitude and which are accepted, owned, operated and maintained by the city within its jurisdiction.

Sec. 12-6092. - Approval required.

No alteration of natural drainage, alteration of the existing public drainage system or new drainage works or facilities shall be accepted, owned, operated or maintained by the city after the effective date of this article except with their prior written approval.

Sec. 12-6093. - Drainage impact statement.

(a) A drainage impact statement shall be submitted prior to the approval and commencement of construction for any alteration or improvement of natural or existing drainage involving an area of more than one (1) acre in size, and, for any drainage works or facilities which are accepted, owned, operated and maintained by the city.

(b) The drainage impact statement and request for project approval shall be presented to the city on forms furnished by it and may include, but not be limited to, plans in duplicate drawn to scale clearly showing the nature, location, dimensions, and elevations of the proposed project or construction including landscape alterations, watercourses, existing structures, and existing and proposed drainage facilities. Additionally, the following information is required:

(1) Elevations in relation to mean sea level.

(2) Description of the extent to which any watercourse, reservoir or floodway will be altered or relocated as a result of the proposed construction.

(3) Description of the impact which the proposed construction would have on storm drainage and flooding conditions in upstream and downstream areas.

(4) Drainage calculations to substantiate the adequacy of all major components of a storm drainage system which are required to transfer runoff to a receiving stream, channel or discharge point.

(5) Copies of all federal, state, and other local permits and certifications applicable to the proposed project.

(6) Written certification by a registered professional engineer that, to the best of his knowledge and belief, the proposed project will not adversely damage or impact upstream or downstream property owners or segments of the drainage system except as noted or stated in the drainage impact statement.

Sec. 12-6094. - Design methods.

All storm drainage works and facilities to which this division applies shall be designed on the basis of accepted methods of engineering analysis.

(1) Stormwater runoff. Stormwater runoff and discharge from a watershed or drainage area shall be computed on the basis of:

a. Soil conservation service (SCS) methods;

b. Louisiana Department of Transportation and Development (La. DOTD) methods; or

c. An accepted method of engineering analysis which is based on the "rational method" and which takes into account such variable as infiltration, retention and transit losses.

(2) Hydraulics. All components of a storm drainage system which are required to transfer stormwater runoff to a receiving stream, channel or discharge point, shall be designed on the basis of accepted methods of engineering analysis.

Sec. 12-6095. - Design criteria.

All storm drainage works and facilities to which this division applies shall be designed to accommodate the minimum design criteria set forth below:

(1) Stormwater runoff. Design peak rates of runoff are to be based upon conditions which may be expected to exist twenty (20) years in the future. Factors to be considered in determining stormwater runoff shall include the watershed size, shape, slope, soil type and land use.

(2) Rainfall. Rainfall shall be based on a twenty-four-hour duration as published by U.S. Department of Commerce, Weather Bureau, Technical Paper No. 40, "Rainfall Frequency Atlas of the United States" (latest publication), or as developed for the State of Louisiana and published by the Louisiana Department of Transportation and Development.

(3) Design storm frequencies. Storm drainage works and facilities shall be designed to accommodate the following minimum rainfall frequency intervals:

a. Ten-year storm. Open drainage channels, canals and ditches; inlet spacing for storm sewers; and, pavement drainage.

b. Twenty-five-year storm. Culverts, cross-drains and storm sewers; all bridges.

Sec. 12-6096. - Culverts and cross-drains.

(a) Culvert design. Culverts shall be designed of a standard shape and cross-sectional area sufficient to allow for the minimum restricted passage of stormwater runoff and discharge calculated for the required minimum rainfall design frequency.

(1) Inlet control. If a culvert is designed on the basis of inlet control; the shape of the inlet and potential headwater flood levels upstream from the point of design shall be identified.

(2) Outlet control. If a culvert is designed on the basis of outlet control; potential tailwater flood levels downstream from the point of design shall be identified.

(b) Culvert types. The permissible types of culverts under roadways and embankments shall include reinforced concrete-or asphalt-coated metal, round or elliptical pipe or pipe arch and concrete box. Double-wall corrugated high-density polyethylene or polyvinyl chloride drainage pipe may be used for side drains and residential driveway connections to public roads.

(c) Minimum culvert size. The minimum size of pipe for any culvert shall be eighteen (18) inches in diameter or the equivalent sized elliptical pipe or pipe arch.

(d) Minimum cover. Where possible, the minimum cover over any culvert shall be twelve (12) inches from the bottom of the pavement or surface course under which it is located.

(e) Pipe bedding. In situations where unstable bedding conditions exist and differential settlements may be anticipated, appropriate bedding materials and procedures shall be utilized to ensure the stability of the pipe.

Sec. 12-6097. - Storm sewers.

Storm sewers may be used to collect and convey drainage waters from, across and through street rights-of-way, parking lots and other facilities requiring removal of stormwater. Storm sewers shall be designed in accordance with the applicable provisions of this article and the following additional requirements:

(1) The minimum pipe size for storm sewers shall be fifteen (15) inches in diameter or the equivalent sized elliptical pipe or pipe arch.

(2) For all pipes thirty (30) inches in diameter or less, storm sewers shall be designed and constructed to provide a mean velocity when flowing full of not less than two (2) feet per second (fps).

(3) Pipe fittings or junction boxes shall be required at all pipe intersections and at all changes in horizontal or vertical pipe alignment.

(4) Appropriately sized inlets, screened with grates or other methods of preventing debris from entering the system, shall be spaced in accordance with Sec. 12-6096

Sec. 12-6098. - Pavement drainage.

Pavement drainage refers to the practice of allowing stormwater runoff to flow by design within the limits of the street pavement to a point of discharge. Pavement drainage shall include the installation of curb inlets, curb block-outs, median drains and other drains so as to confine the stormwater runoff generated by the required rainfall design frequency within the limits of the pavement. Pavement drainage shall be designed to afford a minimum amount of interference to vehicular and pedestrian traffic.

Sec. 12-6099. - Drainage structures.

Drainage structures shall be of a size and type to be determined by engineering analysis and design for the specific application and purpose for which it is intended.

Sec. 12-6100. - Open channels.

(a) Open channels may be used to convey storm runoff where sufficient right-of-way is available to contain the improved cross section along with the additional width necessary for maintenance purposes.

(b) For safety purposes, open channels should be fenced or graded to reduce potential injury to the public.

(c) Minimum bend radius shall be twenty-five (25) feet or ten (10) times the bottom width, whichever is greater.

(d) Open channels shall have a trapezoidal or rectangular cross section with a flat bottom. Natural open channels shall have a maximum side slope of 2:1. Paved channels shall have side slopes varying from a minimum 2:1 to vertical.

(e) Connections at the junction of two (2) or more open channels shall be smooth with no difference in vertical channel profile unless substantiated by engineering analysis.

(f) Drainage pipe, box culverts or storm sewers entering an open channel will not be permitted to project into the normal channel section. Nor will they be permitted to enter an open channel at an angle which would direct flow from the culvert or storm sewer upstream in the channel unless substantiated by engineering analysis.

(g) As minimum protection to reduce erosion, all natural open channel slopes shall be seeded or sodded as soon after finish grading as possible.

Sec. 12-6101. - Erosion control.

Erosion control measures such as seeding, sodding, or the placement of rip-rap or pavement shall be provided to protect natural or open channels from erosion.

Sec. 12-6102. - Flow across streets or alleys.

All flow across continuous streets or alleys is to be through culverts or bridges, or properly designed valley-type gutters sized to accommodate a minimum twenty-five-year frequency rainfall, without increasing the depth of upstream flow in the channel.

Sec. 12-6103. - Rights-of-way and servitudes.

Drainage rights-of-way or servitudes of satisfactory width to provide adequate working room for construction and maintenance are to be provided for all storm drainage improvements.

Sec. 12-6104. - Variances and appeals.

(a) The city shall hear and render judgment on requests for variances from the requirements of this article.

(b) Any person or persons aggrieved by the decision of the city may appeal such decision in the courts of competent jurisdiction.

(c) Upon consideration of the stated purpose of this article, the city may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this article.

(d) Variance shall only be issued upon a determination that the variance is the minimum necessary, considering the flood and drainage hazards, to afford relief. Variances shall only be issued upon:

(1) A showing of good and sufficient cause;

(2) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local ordinances.

Secs. 12-6105 to 12-6110. - Reserved."

SECTION 2. BE IT FURTHER ORDAINED by the Mayor and Board of Aldermen of the City of West Monroe, Louisiana, in regular and legal session convened, that the provision of the enacted sections above shall supercede any and all other provisions of the Code of Ordinances, City of West Monroe, which are in direct conflict, but do not otherwise change or modify any of the existing provisions of this Code of Ordinances.

The above Ordinance was read and considered by Sections at a public meeting of the Mayor and Board of Aldermen, in regular and legal session convened, voted on by yea or nay vote, passed and adopted the 18th day of June, 2024, the final vote being as follows:

YEA:_____

NAY:_____

NOT VOTING:_____

ABSENT:_____

ATTEST:

APPROVED THIS 18TH DAY OF JUNE, 2024

_____
CINDY EMORY, CITY CLERK
CITY OF WEST MONROE
STATE OF LOUISIANA

_____
STACI ALBRITTON MITCHELL, MAYOR
CITY OF WEST MONROE
STATE OF LOUISIANA