ORDINANCE

AMENDING CHAPTER 15 (FLOODWAYS, FLOODPLAINS, DRAINAGE, AND WATER QUALITY) OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF BATON ROUGE AND PARISH OF EAST BATON ROUGE TO PROVIDE

BE IT ORDAINED BY the Metropolitan Council of the City of Baton Rouge and Parish of East Baton Rouge that:

Section 1. Chapter 15 of the Unified Development Code of the City of Baton Rouge and Parish of East Baton Rouge is hereby amended as follows:

"Section 15.10 Duties and responsibilities of the Floodplain Administrator

Duties and responsibilities of the Floodplain Administrator shall include but not be limited to the following:

A. Maintain and hold open for public inspection all records pertaining to the provisions of this chapter.

B. Review permit application to determine whether proposed building site including the placement of manufactured homes will be reasonably safe from flooding.

C. Review, approve, or deny all applications for development permits required by adoption of this chapter.

D. Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state, or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required.

E. Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (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.

F. Notify in riverine situations, adjacent communities and the state coordinating agency, which is the State Department of Transportation and Development, prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency.

G. Assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is ~~maintained~~ increased by ten percent (10%).

H. When base flood elevation data has not been provided in accordance with Section 15.7, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation data and floodway data available from a federal,

state, or other source in order to administer the provisions of Section 15.18 to Section 15.24 of this chapter.

I. When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A, A1-30 and AE on the community's FIRM, unless, it is demonstrated 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.

J. Under the provisions of 44 CFR Chapter 1 Section 65.12 of the National Flood Insurance Program Regulations, a community may approve certain development in ZonesA1-A30, AE, and AH on the community's FIRM which increases the water surface elevation of the base flood by more than one foot provided that the community first applies for a conditional FIRM revision through FEMA.

K. For application of a building or development permit, the Department of Development shall provide a flood zone determination for the site. This determination will provide the flood zone designation, base flood or adjacent base flood elevation, and record inundation value for the site.

L. Review, approve, or deny all applications for a waiver of freeboard or variance of NFIP requirements in accordance with the procedures defined in Section 15.12 of this chapter.

Section 15.14 Drainage

Adequate provisions shall be made for the management of storm water subject to the approval of the Department of Development.

A. Stormwater Management Plan (SMP). As stated in Section 15.13 Stormwater Management Plan, the developer shall prepare and submit to the Department of Development a Stormwater Management Plan that recommends specific on-site drainage improvements to provide adequate capacity for a ~~ten~~ twenty-five year storm event. The SMP shall be consistent with the issues and recommendations presented in the Drainage Impact Study (DIS), when it is required. All drainage improvements shall be planned in accordance with the criteria for drainage as specified by the Department of Development.

B. Changing or altering existing drainage ways. No person shall perform construction activity or deepen, widen, fill, reroute, or change the location of any existing drainage way without first obtaining written permission from the Department of Development. Plans for such activity in the drainage way shall comply with the criteria of the Department of Development and all state and federal regulations and shall be constructed under the supervision of and be approved by the Department of Development. Adequate servitudes or rights-of-way must be dedicated for the construction and maintenance of any channels.

1. Drainage ways shall be construed to include any drainage ditch or swale built or being constructed at any

development pursuant to the SMP as approved by the Department of Development for that development.

2. No person shall install pipe, cover, or otherwise alter any drainage way without first obtaining written permission from the Department of Development. The Department of Development may require, at its sole discretion, that such plans be submitted to and installed to specifications of the Department of Development.

C. Wherever drainage ways exist or are provided within the development, rights-of-way or servitudes shall be dedicated on either side of such drainage ways for maintenance and construction. The width of such dedicated rights-of-way shall be determined based upon established criteria after review of the drainage requirements of the development and the Stormwater Management Plan (SMP) for drainage and consultation with the engineer designing the development, and the design shall be approved by the Department of Development. Lots created along drainage ways shall not encroach on drainage rights-of-way, and all rights-of-way shall be excluded from lot area. Special servitudes may be required for outfall purposes.

D. Contour map. A contour map shall be prepared for the area comprising the development and such additional area as may be required by the Department of Development necessary to include all watersheds which drain into the property to be developed provided that this map of the adjacent area may be prepared from U.S.G.S. datum and datum filed at the Department of Development, where such is available.

E. Drainage of contributing watersheds. In the design of the drainage for a development, provisions must be made to adequately convey contributing watersheds. All closed drainage ways must be sufficient for the drainage of all contributing watersheds based on complete development of the contributing watersheds in accordance with the maximum allowed density in the comprehensive plan. Open drainage ways are to be constructed to meet current drainage needs but shall have adequate servitudes for future needs of contributing watersheds, as determined by the criteria of the Department of Development.

F. Downstream drainage. Downstream drainage improvements shall be mutually coordinated between the developer and the Department of Development. Until further implementation of the policy of providing for downstream drainage, the developer shall not be required to provide downstream drainage in excess of that required for development of the particular area for which approval is sought.

G. Floodplain management. All proposed developments shall be reviewed by the Department of Development in order to assure that:

1. All such proposals are consistent with the need to minimize flood damage;

2. All public utilities and facilities such as sewer, gas electrical, and water systems are located, elevated, and constructed to minimize or eliminate flood damage;
3. Adequate drainage is provided so as to reduce exposure to flood hazards; and
4. All necessary permits required by federal or state laws have been obtained, including those required by Section 404 of the Federal Water Pollution Control Act (33 USC 1334).

Section 15.15 Drainage Impact Study

Two copies of the required Drainage Impact Study of the proposed development and surrounding affected areas must be submitted to the Department of Development. The development will not be approved until the Drainage Impact Study has been reviewed and approved by the Department of Development.

A. Exemptions: The following development activities shall be exempted from the requirements of preparing a Drainage Impact Study:

1. Development in which the area of impervious surface does not exceed 20 percent of the development area at the point of discharge from the site. The total impervious area shall include all buildings, driveways, sidewalks, streets, parking lots, lakes, ponds, etc. All undeveloped open space, common area, etc. must be clearly identified.

2. Additions or modifications to existing developments which result in no more than a ten percent increase in existing impervious area and which have existing public storm drainage facilities designed to accommodate runoff from the existing site.

B. Waivers: Developers may request that the Department of Development approve a waiver of the Drainage Impact Study. If such a request is granted, no detailed Drainage Impact Study shall be required for the development. A waiver must be requested in writing and contain sufficient information regarding the specific details of the proposed development. A waiver shall be considered for approval provided:

1. The proposed development results in no more than a ten—percent increase in the ~~ten~~ twenty-five year pre-development peak discharge at the point of discharge from the development site.

2. The site is located within existing developed areas, which are served by a network of public storm drainage facilities, which were designed to accommodate runoff from the development site.

3. Sufficient information is submitted indicating that the runoff from the proposed development is consistent with and discharges to a previously approved development or is a part of an approved larger plan of development, both having adequate drainage facilities.

C. Development Location and Description: The Drainage Impact Study shall comply with the following minimum requirements:

1. Location:
   Describe location of subject property; locate by Township and Range; identify adjacent developments, major drainage outfalls, streets, highways, lot and block page number, and provide a vicinity map.

2. Description:
   Describe the predominant existing land use and future land use in project watershed (Comprehensive Land Use Data, aerial photos, etc.); describe the proposed development, soil types, vegetative cover, watershed slopes; provide an estimate of percent of impervious area for pre and post development conditions; and provide photos of existing channels, ditches, natural drains, and drainage structures.

D. Watershed Map: Delineate drainage boundaries; indicate the acreage; and show slope of basins, and peak ten year runoff rate at entry and exit points of the development. The watershed map should indicate the location of existing channels, ditches, natural drains, proposed major drainage structures, channel realignments, and cross section locations.

   The latest U. S. G. S. seven and one-half minute quadrangle map or better at a scale of one inch equals five hundred feet (1:500) or less may be used as the base for the watershed map.

E. Hydrologic Design:

1. The Drainage Impact Study shall indicate existing condition peak ~~ten (10)~~ twenty-five (25) year flow rates at the development entry and exit points.

2. The Drainage Impact Study shall indicate future condition peak ~~ten (10)~~ twenty-five (25) year flow rates at the development entry and exit points.

3. If ponds are used in design for routing of flows, the ~~ten (10)~~ twenty-five (25) year storm event shall be used in design. The effects of a 100-year storm on the pond should be provided.

F. Hydraulic Capacities:

1. On site capacity:
   Indicate capacity of any existing drainage outfall facility (ditch, canal, culvert, bridge, etc.) within the proposed development site and required type, size, and capacity of any proposed outfall facilities as defined above.

2. Off-site capacity:
   Determine capacity of existing downstream outfall facilities (ditches, canals, culverts, bridges, etc.) that will be utilized to convey flow from the downstream limits of the proposed development to the first public outfall as identified on the East Baton Rouge Parish Stream Index Map. An inventory of downstream structures including size, type, invert elevation, and cover topping elevation should be made. Channel cross sections at upstream and downstream limits of the proposed

development at structure locations and at intermediate canal locations shall be required to adequately define existing channel capacities.

Where the proposed development is located an extended distance from an indexed stream, the study may be terminated at a point where the total area drained exceeds the project area by five times for single family A1 residential developments and ten times for all other developments.

G. Special Site Conditions:

Special conditions, which may exist at the proposed development site, should be clearly identified including but not limited to such items as:

1. Special Flood Hazard Areas (Firm Zones A and AE)

2. Regulatory Floodway

3. Fill placement location and mitigation requirements

4. Potential wetland sites

5. Churches

6. Schools

7. Cemeteries

8. Landfills and Hazardous Waste Sites

9. Parks

H. Drainage Impact Study Conclusions and Recommendations:

Drainage Impact Study should clearly identify the results and conclusions of the study and provide recommendations of any required action(s) so that surrounding properties experience no adverse impact.

Section 15.21 Specific Standards

Except as provided in Section 15.21.F, in all areas of special flood hazard and in Zones B, C, and X, an applicant must submit a fee to the Department of Development Inspection Division for a flood zone determination to be used in the preparation of the FEMA approved Certificate of Elevation. Where base flood elevation data has been provided as set forth in Section 15.7, Section 15.10.H, or Section 15.22.C, the following provisions are required:

A. Residential Construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including the basement and mechanical equipment) elevated to meet the requirements of Section 15.21.E. (Other utilities see 15.20.4.) A registered professional engineer, architect, or land surveyor shall submit a FEMA approved Certificate of Elevation certification to the Floodplain Administrator that the standard of this subsection as proposed in Section 15.11.A.1 is satisfied.

B. Nonresidential Construction. New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including the basement and mechanical equipment) elevated to meet the requirements of Section 15.21.E or, together with attendant utility and sanitary facilities, be designed so that below the level required in Section 15.21.E the structure 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. A registered professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification including the specific elevation (in relation to mean sea level or NAVD) to which such structures are flood proofed shall be maintained by the Floodplain Administrator.

C. Enclosures. Solid fences, walls and landscaping features constructed or placed within the drainage system, as shown on the final plat, and new construction, attached garage and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

1. A minimum of two openings on separate walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;

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

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

4. Any variance of the requirements of this subsection must be approved by the Director of the Department of Development.

D. Manufactured Homes.

1. Require that all manufactured homes to be placed within Zone A shall be installed using methods and practices, which minimize flood damage. For the purpose of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over the top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces;

2. Require that all manufactured homes that are placed or substantially improved within Zones A1-30, AH, AE, B, C, and X on the community's FIRM on sites: (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the bottom of the longitudinal structural I beam of the manufactured home is elevated to or above the base flood elevation is elevated to be in compliance with Section 15.21.A, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement; and

3. Require that manufactured homes be placed or substantially improved on sites in and existing manufactured home park or subdivision with Zones A1-A30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (D)(2) of this section be elevated so that either:

   a.—The bottom of the longitudinal structural I beam of the manufactured home is at or above the base flood elevation; or

   b. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less that 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

4. All owners of manufactured home subdivision lots and owners of an individually and privately owned manufactured home site developed prior to August 1, 1990 must submit a completed official certificate of elevation to the Department of Development by November 15, 1990. As a prerequisite, the applicant must submit a fee to the Department of Development for the flood zone determination to be used in preparation of the certificate of elevation.

   All owners of manufactured homes subject to this provision shall comply with the freeboard requirements of Section 15.21.E by February 15, 1991. A temporary certificate of occupancy may be issued to the manufactured home owner pursuant to a Section A 103.9.3 of the Standard Building Code. This certificate shall expire on February 15, 1991, and shall not be renewed unless the manufactured home owner has complied with all freeboard requirements of Section 15.21.E.

5.a. All mobile home park owners submitting construction documents for a mobile home park after August 1, 1990 shall, prior to approval by the Department of Development, submit a common certificate of elevation for the mobile home park and a final plat of the mobile home park site. The final plat shall comply with Section 4.6 of this Unified Development Code and shall also show the elevation of each manufactured home pad and the required lowest floor elevation pursuant to Section 15.21.E. As a prerequisite, the applicant must

submit a fee to the Department of Development for the flood zone determination to be used in preparation of the certificate of elevation.

b. All owners of a manufactured home subdivision lot owners of an individually and privately owned manufactured home site developed after August 1, 1990 must submit, prior to approval by the inspection division, a completed official certificate of elevation pursuant to Section 15.21.E. As a prerequisite, the applicant must submit a fee to the Department of Development for the flood zone determination to be used in preparation of the certificate of elevation.

6. All manufactured homes placed or substantially improved after August 1, 1990 must submit, prior to authorization of utilities and/or occupancy, a completed official certificate of elevation pursuant to Section 15.21E.

7. Recreational vehicles require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either:

a. Be on the site for fewer than 180-consecutive days,

b. Be fully licensed and ready for highway use, or

c. Meet the permit requirements of Section 15.11.A and the elevation and anchoring requirements for "manufactured homes" of this subsection. A recreational vehicle is ready for highway use if it 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.

E. Minimum Slab Elevation.

1. All new residential, nonresidential, manufactured homes, and substantial improvements for those located in the special flood hazard area (Zone A, AE, and A1-A30) shall meet or exceed minimum lowest floor elevation levels: one foot above the FIRM base flood elevation, one foot above the record inundation, one foot above the center line of the street, and one foot above the top of the lower upstream or downstream sanitary sewer manholes between the house connection;

2. All new residential, nonresidential, manufactured homes for those located in Zones B and X, the minimum lowest floor elevation shall meet or exceed each of the following levels: one foot above the nearest adjacent FIRM Base Flood Elevation, one foot above the record inundation, one foot above the center line of the street, and one foot above the top of the lower upstream or downstream sanitary sewer manhole between the house connection;

3. All new residential, nonresidential, manufactured homes for those located in Zones C and X, the minimum lowest floor elevation shall meet or exceed each of the following levels: one (1) foot above the nearest adjacent FIRM base flood elevation, one foot above the record inundation, one foot above the center line of the street, and one foot

above the top of the lower upstream or downstream sanitary sewer manhole between the house connection;

4. The requirements set forth in Sections 15.21.E.1, 15.21.E.2, and 15.21.E.3 require that the minimum slab elevation be one foot above the center line of the street shall not apply when the approved drainage schematic contemplates that: (1) the street pavement will not serve as the drainage collector system; or (2) drainage will not be conveyed toward the street;

5. In lieu of the requirements regarding sanitary sewer manholes set forth in Sections 15.21.E.1, 15.21.E.2, and 15.21.E.3, the lowest floor elevation may be lower than one foot but not lower than six inches above the top of the lower upstream or downstream sanitary sewer manhole providing that the following requirements are met:

   a. A sanitary sewer backwater check valve and a sewer clean out:

      (1) Shall be installed in the building sanitary sewer line and located on the applicant's property but outside of the street rights-of-way and utility servitudes; and

      (2) Shall meet the requirements of Section 8:110 of the Plumbing Code.

   b. The property owner shall be responsible for perpetually maintaining the sanitary sewer backwater check valve in proper operating condition.

   c. The property owner shall sign a waiver of local freeboard which shall serve to place on notice all future owners and shall make public record of such waiver and the property owners' assumption of all liability pursuant to the granting of a waiver for the requirements regarding sanitary sewer manholes set forth in Sections 15.21.E.1, 15.21.E.2, and 15.21.E.3. This agreement shall be recorded by the Clerk of Court in the conveyance records; and a certified copy, with recording data and filing date, shall be furnished to the Department of Development before a building permit will be issued; and

6. The lowest floor elevation may be lower than six inches above the top of the lower upstream or downstream sanitary sewer manhole provided that the provisions of Sections 15.21.E.1, 15.21.E.2, and 15.21.E.3 are met and approval is granted by the chief engineer and the Floodplain Administrator.

F. Use of Landfill Material Restricted.

1. Except as provided, hereinafter, in areas of special flood hazard (Zones A, A1, A30, AH, and AE,), no off-site landfill material shall be allowed except for:

   a. Backfill required for chainwall construction. This exemption shall apply to structures of 5000 square feet or less contained within the footprint of the structure.

b. Building pads for mobile homes, trailers, and pier/column construction. This exemption shall allow for the building pad to be filled to a maximum of 18 inches above natural grade under the elevated structure to facilitate drainage. The building pad must be transitioned back to natural grade within five feet of the outside limits of the footprint of the elevated structure.

c. Transition of driveways into carports or garages. The transition distance shall extend only through the limits of the structure. The driveway from the street connection to the start of transition shall be constructed in such a manner that the finished driveway grade is at or below the natural grade prior to construction. Appropriate drainage facilities must be provided to prevent the redirection of runoff water onto adjacent properties or the blockage of surface sheet runoff.

This subsection shall not apply to improvement and reasonable transition grading on existing tracts or lots of five acres or less located within existing recognized subdivisions (residential, commercial, industrial and mobile home park) which have not experienced any reported inundation of structures constructed after July 2, 1979.

2. Unless otherwise provided, no fill shall be permitted in areas of special flood hazard, unless, the fill is mitigated by excavation and meets the following requirements:

No encroachments, including fill for landfill or other purposes, new construction, substantial improvements or other type of developments, will be allowed unless a technical evaluation demonstrates that ~~the proposed encroachments will not decrease~~ the existing volume storage capacity is increased by ten percent (10%) based upon the base flood elevation, within the boundaries of the proposed development or encroachment site located within the area of special flood hazard. Additionally, encroachment shall not increase the existing calculated base flood elevation.

A technical evaluation shall include any one or a combination of the following methods:

a. For developments with proposed onsite fill and excavation construction (no imported or offsite fill), a before and after development construction grading plan shall be provided to show ~~no decrease in the~~ at least a ten percent (10%) increase in the existing flood volume storage capacity below the base flood elevation established for the site.

(1) Fill shall not be used to restrict the existing channel cross-sectional area.

(2) For channels with intermittent flow, the excavation site shall drain to the existing adjacent channel.

(3) For channels with continuous flow, the excavation sites shall drain to the existing channel.

(4) For mitigation purposes, no credit shall be given for that portion of the excavation, which is lower than the existing channel.

b. For developments requiring imported or off-site fill in addition to the excavation, grading, and fill requirements outlined above, approved engineering methodologies such as the methods shown in the Louisiana Department of Transportation and Development Hydraulics Manual shall be used to make a before and after development analysis of the proposed site, including its offsite drainage areas, to show the increased runoff for a 100 year storm event. The existing 100 year storm channel flow, the calculated base flood elevation and the hydraulic grade line for the channel at the downstream end of the proposed site will be provided by the Department of Development. One or more of the following methods may be used, unless otherwise approved by the Department of Development:

(1) A rating curve analysis shall be made of the channel to show that the water surface for a 100 year storm event resulting from the proposed development or landfill does not increase the calculated base flood elevation.

(2) If the imported or off-site fill is taken from the channel (within the proximity of or within one-half mile upstream of the proposed development or landfill site), an inflowoutflow flood routing analysis of the proposed borrow site on the channel shall be made to show that the adverse effect of increased runoff from the 100year storm event due to the proposed development or landfill site is balanced by the beneficial effects of the increased storage provided by the proposed borrow site.

(3) If the imported or off-site fill is taken from elsewhere, approved engineering methodologies shall be used to show that the water surface elevation resulting from the proposed development or landfill does not increase the base flood elevation.

c. If downstream channel improvements are included as part of the proposed development or landfill, engineering calculations shall be made to show that the adverse effects of increased runoff from a 100 year storm event due to the proposed development is offset by the beneficial effects of the proposed channel improvements.

G. Any permissible use of off-site landfill material as provided in Section 15.21.F shall be subject to the provisions of Section 8:3 of the City Code.

H. No building shall be constructed over an existing identified natural drain as determined by the Department of Development.

I. The surface of parking lots and private streets in subdivisions of more than five lots, shall not be constructed

lower than two feet below the FIRM base flood elevation or record inundation, whichever is greater.

J. When the subsurface storm water systems are available and designed to accommodate the flow of storm water runoff:

1. Except in single-family residential use, all paved parking areas shall be graded and sloped so that the storm water runoff is conducted to trench drains or catch basins, which are connected to the storm water system.

2. No sheet flow from paved parking areas on lots greater than onethird acre but less than five acres shall be allowed to drain directly into the street or street catch basins.

3. Sheet flow from paved parking areas on lots greater than five acres, in addition to the foregoing requirements, must be directed into a storm drain and catch basin system designed for this area which would be connected to the existing storm water system, or if the aforesaid system is inadequate, it must be designed to include on-site detention/retention basin for storm water runoff. The design of storm water facilities must be submitted to the Department of Development for approval.

The Department of Development shall grant a waiver of the provisions of this subsection when it is demonstrated that the applicable existing streets have been designed to accommodate the storm water runoff from paved parking areas and adequate catch basins and inlets are available.