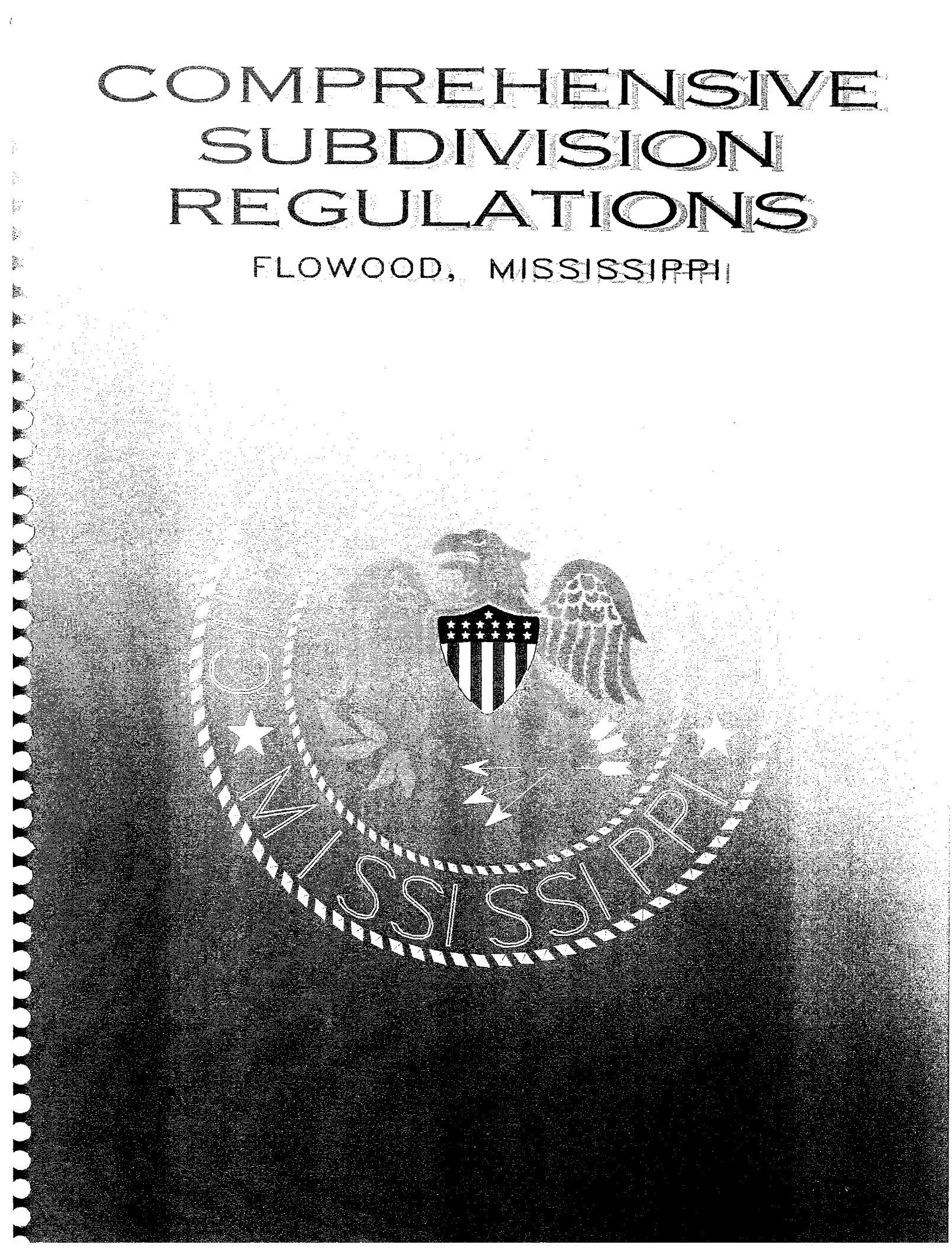
COMPREHENSIVE SUBDIVISION REGULATIONS

FLOWOOD, MISSISSIPPI



CITY OF FLOWOOD COMPREHENSIVE SUBDIVISION REGULATIONS
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NOW THEREFORE, BE IT ORDAINED BY THE MAYOR AND BOARD OF ALDERMEN OF THE CITY OF FLOWOOD, MISSISSIPPI AS FOLLOWS:

ARTICLE I
GENERAL PROVISIONS

SECTION 100 TITLE

100.01 These regulations shall be known as the "Official Subdivision Regulations for the City of Flowood", and may be so cited. However, the regulations contained herein apply to all streets and land located within the City.

SECTION 101 DEFINITIONS

101.1 As used in these regulations, words in the present tense include the future; words in the singular include the plural and words in the plural include the singular; the word "building" includes the word "structure"; and the word "shall" is mandatory and not directory.

101.2 For the purpose of these regulations certain words and phrases used herein are defined as follows:

a. A.A.S.H.T.O.: American Association of State Highway and Transportation Officials.

b. AWWA: American Water Works Association

c. Block: The area of subdivided land between two (2) streets intersecting a third street adjacent to the subdivided land.

d. City: The term city means the City of Flowood, Mississippi or, when appropriate to the context, its duly authorized representative.

e. City Engineer: The term City Engineer means the engineer employed by the City for the purpose of reviewing the plans, plats, and data required by these regulations.

f. City Public Works Director: This term means the City Officer charged with the duty to plan plats and data required by these regulations and to enforce same.

g. Comprehensive Plan: A plan including drawings illustrating short and long term improvements to subdivided land including streets, water distribution and sanitary sewer collection system improvements, landscaping and related information.

h. Construction Plans: The term Construction Plans means the drawings of work to be constructed and includes the specifications and standards and such other information as necessary to adequately describe the work, methods, the materials and the desired results.

i. Development Permit: Required when dirt is to be imported to construct improvements within the limits of the 100-year frequency flood plan.

j. Double Frontage: This situation occurs when a particular lot is fronted on two (2) sides by a street. This may occur when a lot exists on a corner or when a street extends along the front and back sides of a lot.

k. Drainage Plan: A plan consisting of drawings and calculations describing the proposed drainage improvements. The drawings shall include all drainage structures, watercourses, land contours and necessary drainage easements.

l. Engineer: The term Engineer means a registered Professional Engineer licensed to practice in the State of Mississippi.

m. Final Inspection: An on-site review held at completion of the subdivision improvements and attended by the City Public Works Director, City Engineer, Developers and/or his duly appointed representative, and the Developer's Engineer.

n. Final Recording Plat: Drawing of any lot, tract, or parcel of land requested to be recorded in the Office of the Chancery Clerk.

o. Geotechnical Investigation Report: A report of existing soil conditions at a development site prepared by a registered Professional Engineer qualified to make such recommendations.

p. Governing Authority: The term Governing Authority means the Mayor and Board of Aldermen of the City.

q. Water System Analysis: An analysis of the water distribution system improvements required to serve a development approved by the Public Works Director.

r. Lot: The term Lot means a parcel of land, or portion of a subdivision intended for lease, transfer of ownership, or development.

s. Manual on Uniform Traffic Control Devices: The standard for all traffic control devices including signs, pavement moldings, traffic signals and related devises published by the Federal Highway Administration.

t. Phase I Environmental Assessment: A search of past uses of a particular property including a title search to determine the possibility of hazardous substances existing on the property.

u. Preliminary Plat: A drawing of proposed subdivision illustrating proposed infrastructure improvements including streets, water distribution and sanitary sewer collection systems, drainage and landscape improvements. The Preliminary Plat is submitted to the City for review prior to initiating preparation of construction plans.

v. Private Street: A street not dedicated to the City for public use.

w. Reverse Frontage: Frontage on the back side of a lot.

x. Site Plan: Preliminary sketch of proposed infrastructure improvements in a subdivision showing general layout of streets, water distribution and existing sewer collection and drainage system improvements to open discussions with the City regarding required improvements. The Site Plan is submitted to the City for review prior to preparation of a Preliminary Plat.

y. Street: The term Street means a way for vehicular traffic, whether designated as a street, highway, thoroughfare, parkway, throughway, road, avenue, boulevard, lane, place, alley, or however otherwise designated.

1. Arterial streets and highways are those which are used primarily for fast or heavy traffic and which provide a means to either bypass the City or be routed expeditiously through the City.

2. Collector streets are those which carry traffic from local streets to arterial streets in the residential and business areas and may include the principal entrance streets of a residential or commercial development.

3. Local streets are those that are used primarily for access to the abutting properties.

4. Marginal access streets are those which are parallel to and adjacent to arterial streets and highways and which provide access to abutting properties and protection from through traffic.

5. Alleys are minor ways, which are used primarily for vehicular service access to the back or side of properties otherwise abutting on a street.

z. Street Jog: A situation that exists when a street intersects a cross street at two (2) separate locations.

aa. Street Plat: The term Street Plat means a plat of any Street to be constructed in the City, which is not located within a platted subdivision upon the commencement of construction.

bb. Subdivider: The term Subdivider means any person, individual, firm, partnership, association, corporation, estate or trust, or any other group or combination acting as a unit, dividing or proposing to divide land so as to constitute a subdivision as herein defined, and includes any agent of the Subdivider, or any person who constructs a street within Flowood.

cc. Subdivision: The term Subdivision means the division of a parcel of land into two or more lots or parcel, for the purpose, immediate or future, of sale, lease, or building

development or, if a new street is involved, any division of a parcel of land constitutes a Subdivision but, the division of land for agricultural purposes into lots of five acres or more in size where no new street is created does not constitute a subdivision. The term includes re-subdivision and, when appropriate to the context, shall relate to the process of subdividing or to the land subdivided. "Two or More Lots" means that a subdivision exists when the second lot is sold.

Notwithstanding the above definition, there is excluded from the definition of subdivision any lot or parcels of property that are zoned commercial or industrial and are located on a dedicated public street existing or approved pursuant to the procedures defined herein with adequate city water and sewer services, as determined by the City. All residential property must be subdivided pursuant to the provisions of this ordinance.

dd. Technical Specifications: A document consisting of descriptions of materials and workmanship required for the planned infrastructure improvements in a subdivision.

ee. Thoroughfare Plan: The plan of existing and proposed streets, thoroughfares and routes and related transportation improvements adopted by the Mayor and Board of Aldermen.

ff. Tree, Large: A tree 12 inches in caliper or larger.

gg. Tree, Small: A tree less than 12 inches in caliper.

SECTION 102 PURPOSE

102.1 It is hereby found and declared that, to promote orderly, efficient and coordinated growth and development within the City and its environs and to promote the health, safety, morals and general welfare of the residents of the City and its environs, there exists a need for setting forth certain procedures and standards to be followed in the development and redevelopment of land in the City and its environs.

102.2 These regulations seek to attain these objectives through the application of the procedures, standards, and requirements herein established. Specifically these regulations are:

a. To secure equitable handling of development plans by providing uniform procedures and standards for the observance of both the developer and the City.

b. The insure conformance of development plans with the public improvement plans of the City.

c. To establish minimum standards governing streets, drainage, utilities and other developmental improvements.

d. To establish procedures and minimum standards governing the preparation, filing and approval of subdivision plats and data.

e. To fix penalties for the violation of the provisions of these regulations.
f. To provide that the Governing Authority may vary these regulations in certain cases or under certain conditions.

SECTION 103 AUTHORITY

103.1 The provisions of this code are adopted pursuant to the authority granted by Sections 17-1-3, 17-1-23, 17-1-25 and 21-19-63 of the Mississippi Code of 1972, recompiled, as amended.

SECTION 104 SCOPE

104.1 The provisions of this ordinance apply to all subdivisions as defined herein and also apply to all property located within the City even if property is excluded from the definition of a subdivision.

104.2 The provisions of this Ordinance may be enforced by injunction from the Chancery Court of Rankin County, Mississippi.

SECTION 105 APPLICATION AND GENERAL REQUIREMENTS

105.1 Any subdivider of land within the territorial jurisdiction of the City shall submit to the City subdivision plats along with construction plans for the proposed improvements and such other information as may be required according to these regulations.

If the property to be served is not to be subdivided and platted and is commercial or industrial property, any person desiring to construct a street to serve said property shall first submit a Street Plat to the City which shall reflect the proposed infrastructure, topography and vicinity map of the proposed street. The Street Plat shall also show that the street to be constructed meets or exceeds the standards of the City and that the street together with necessary utility easements will be dedicated to the City upon acceptance. The Street Plat shall show the exact location of the street, all water, sewer and drainage improvements and/or easements and all property intended to be served thereby and the relation of said street to the nearest dedicated street on all four sides of said street and all property owned by the owner of said street and contiguous thereto. The street and utilities shall be constructed in accordance with the provisions of this ordinance.

105.2 In considering the approval of Subdivision Plats or Street Plats, the City shall observe and enforce the requirements and procedures set forth herein.

105.3 No subdivider shall proceed with any construction work in a proposed subdivision or convey or lease same on any Street for which a Street Plat must be approved without first having obtained the Final Recording Plat or Street Plat Approval as prescribed herein. All streets and utilities must be dedicated to the City upon acceptance.

ARTICLE II

PLATS AND DATA

SECTION 200 PREAPPLICATION PLANS AND DATA

200.1 An informal meeting will be held with the Subdivider and his Engineer and representatives of the City to discuss the City's requirements for streets, water and sanitary sewer infrastructure, lot sizes, setback requirements and other information pertinent to the planned development before any construction is commenced.

200.2 A Sketch Plan on a topographic map shall be provided showing in simple sketch form the proposed layout of streets, blocks, lots, and other features in relation to existing conditions. The sketch plan may be free-hand pencil sketch made directly on a print of the topographic map. In any event the sketch shall include the existing topographic data as well as the general layout of streets and utilities.

200.3 A Site Plan on a topographic map shall be provided showing in simple sketch form the proposed layout of streets, blocks, lots, and other features in relation to existing conditions. The site plan may be free-hand pencil sketch made directly on a print of the topographic map. In any event the site plan shall include the existing topographical data as well as the general layout of streets and utilities.

SECTION 201 PRELIMINARY PLATS AND DATA FOR APPROVAL

201.1 Unless otherwise specified by the City, topographic data shall be down on a drawing at a scale of not more than 200 feet to the inch and shall include existing conditions as follows:

a. Title under which proposed subdivisions is to be recorded, with names and addresses of owners of record, the Engineer preparing the plat, notation stating acreage, and Zone District Classification, floodplain classification, graphic bar scale, north arrow, bench-marks, and date of survey.

b. Location of the tract by legal description including township, range and section, and ties to be recognized quarter section points; exact boundary lines of the tract indicated by a heavy line giving dimensions, angles and at least one bearing.

c. Vicinity map showing the location of the tract and indicating such significant features as boundary lines, streets, railroads, schools, parks, other subdivisions, developments, landmarks, floodplains, floodway, etc., within one-quarter mile of the proposed subdivision.

d. Contour intervals to sea levels datum of not more than two (2) feet when the slope is less than four (4) percent, and not more than five (5) feet when the slope is greater than four (4) percent, referenced to a United States Geological Survey or a Coast and Geodetic Survey bench mark or monument, or bench mark approved by the City Engineer or Public Works Director.

e. Existing cultural and infrastructure features on and adjacent to the tract including:

1) Easements: Location, width, purpose
2) Park Areas: Type and size
3) Structures: Location and use
4) Streets: Location, name, right-of-way width and width and type of paving, walks, curbs, gutters, inlets, etc.
5) Utilities: Location, size, and invert elevation of sanitary and storm sewers; location and size of water mains and fire hydrants; location of gas lines; and location of electric and telephone poles. If water mains and sewers are not on or adjacent to the tract, the direction and distance to, and size of nearest facilities with invert elevation of sewers shall be shown.

f. Natural features on and adjacent to the tract including drainage channels, bodies of water, wooded areas, marches and other significant features. On all watercourses leaving the tract, the direction of flow shall be indicated, and for all watercourses entering the tract, the drainage area above the point of entry shall be noted. Areas subject to inundation of overflow or ponding or storm water shall be shown.

g. Owners of adjacent unplatted land as shown on latest Tax Assessor's records.

201.2 The Preliminary Plat shall be at a scale of not more than 200 feet to one inch unless otherwise specified by the City. It shall show the following data:

a. Streets: names, rights-of-way and roadway widths; similar data for alleys, if any.

b. Other rights-of-way or easements: locations, width and purpose.

c. Location of utilities, including:

1) Approximate location, and size of storm and sanitary sewers, location and size of sanitary service connections, location, bottom elevation, and location of any ditches or canals.

2) Approximate location and size of water mains and fire hydrants.

d. Lot lines and lot numbers.

e. Sites, if any, to be reserved or dedicated for parks, playgrounds, or other public use.

f. Sites, if any, for multi-family dwellings, shopping centers, churches, industry or other non-public uses exclusive of single family dwellings.

g. Minimum building setback lines.

h. Existing and proposed covenants and restrictions.

i. Such other data, if any, as shall be required by statutes of the State of Mississippi for Plats.

j. External boundary of subdivision described by bearing and distances furnished together with documentation of survey closure.

201.3 Other preliminary plans and data: When required by the City, the Preliminary Plat shall be accompanied by such other plans and data as it deems necessary for adequate consideration of the proposed development.

SECTION 202 PLATS AND DATA FOR FINAL APPROVAL AND FILING

202.1 A Final Recording Plat shall be prepared as required by the statutes of Mississippi relating to city plats. Where necessary, the Plat may be on several sheets accompanied by an index sheet showing the entire subdivision. For large subdivisions, the Final Plat may be submitted for approval progressively in continuous sections satisfactory to the Governing Authority. The Final Plat shall show the following:

a. Name of subdivision: name, seal and registration number of the Engineer preparing the plat; owners of record, giving date record book and page number; date of drawing, north point and graphic scale; location of tract by legal description, giving acreage; vicinity map; key map when more than one sheet is required to present the plat.

b. True courses and distances to the nearest established section corners, or other recognized permanent monuments which shall accurately locate the property described in the Plat.

c. Exact boundary lines of the tract indicated by a heavy line, or other acceptable control traverse, giving dimensions to the nearest one-one hundredth (1/100) foot, and angles to the nearest second, which shall be balanced and closed with an error of closure not to exceed the minimum standards for land surveying established by the Mississippi State Board of Registration for Professional Engineers and Land Surveyors. Documentation of survey closure shall be submitted with the Final Plat.

d. Street and alley and other right-of-way lines with locations and width, with street names indicated.

e. Lot lines with dimensions to the nearest one-one hundredth (1/100) foot, necessary internal angles, arcs and chords and radii of rounded corner; building lines with dimensions.

f. Lot numbers.

g. Easements giving dimensions, location and purpose; accurate outlines and description of any areas to be dedicated or reserved for public use or acquisition with the purposes indicated thereon; and of any areas to be reserved by deed covenant for common uses of all property owners.

h. Accurate location and description of all monuments.

i. Certificate of Engineer; Certificate of Owner; Certificate of Final Approval; Clerk's Certificate.

j. Reference to recorded subdivision plats of adjoining platted land by record name, book and page numbers.

k. Any other requirement of the statutes of Mississippi relating to plats. In case of any conflict between these regulations and a statue of Mississippi, the statue shall control.

l. Other data such as certificates, affidavits, or endorsements as may be required by the Governing Authority in the enforcement of these regulations.

The names of record owners of adjoining unplatted land and protective covenants, if any, in form for recording shall also be provided along with the plat.

202.2 The Final Plat shall be accompanied by the following information and documents unless shown on the plat itself:

a. Letters of final approval of water supply and sanitary sewage collection systems from the appropriate agency.

b. All calculations and field notes when required by the Governing Authority.

c. House numbering plan.

d. Resolution of the Governing Authority accepting the dedication of the parks, public open spaces, streets, avenues or other public ways shown on the plat, together with the certificate of the City Clerk or Chancery Clerk, as applicable, as to the correctness of the resolution.

SECTION 203 STREET PLATS

203.1 Street Plats whether preliminary or final shall contain the following information:

a. Name of property owner(s).

b. Legal description of the street and easements.

c. Legal description of all property to be served by such street.

d. Property lines indicated by bearings and distances of property to be served by such streets.

e. Location of the street and easements within property lines and including all chords, bearings, distances, etc., required to accurately depict the street and its right-of-way and relationship to names of adjoining streets.

f. Location of all improvements, including water, sewer and other utility services.

g. Accurate location and description of all monuments.

h. Certificate of Engineer; Certificate of Owner; Certificate of Final Approval; Clerk's Certificate.

SECTION 204 PLAT CERTIFICATES

204.1 Each Plat submitted to the Governing Authority shall carry the following certificates thereon:

(a) CERTIFICATE OF ENGINEER: I, _____, hereby certify that this plat correctly represents a survey and a plat made by me or under my supervision; that all monuments shown hereon actually exist and their locations are correctly shown.

_____
Date of Execution

_____
(signed) _____
Registered Professional Engineer
or Registered Land Surveyor
No. _____, Mississippi

(b) CERTIFICATE OF OWNER: I (we), the undersigned, owner(s) of the real estate shown and described herein, do hereby certify that I (we) have laid off, platted, and subdivided, and do hereby lay off, plat and subdivide the real estate in accordance with the within plat.

_____ (signed) _____
Date of Execution

Address: _____
_____

I, _____, Notary Public in and for the County of _____, and State of Mississippi, hereby certify that _____, to be personally known as the owner(s) of the above real estate, appeared before me on the ___ day of _____, 20 __, and made the above oath.

_____ (signed) _____
Date Notary Public

My Commission expires: _____

(c) CERTIFICATE OF FINAL APPROVAL: Pursuant to the Official Subdivision Regulations of the City of Flowood, Mississippi, this document was given approval by the Mayor and Board of Aldermen at a meeting held _____, 20 ___.

_____ _____
City Clerk Mayor

(d) CLERK'S CERTIFICATE: I, _____ Clerk of the Chancery Court of Rankin County, Mississippi, do hereby certify that I have this day, examined the original plat of (Subdivision) _____ as certified by the owner and the engineer, and this plat is a true and exact copy and a duplicate of the original map and contains the executed certificates of the owner and the engineer, and the same is hereby filed and placed on record on this day in Plat Cabinet No. _____ at page _____ in my office. This _____ day of _____, 20 ___.

_____
Clerk of the Chancery Court
of Rankin County, Mississippi

(e) RESTRICTIVE COVENANTS: The property located in (subdivision) _____ as shown on this plat is subject to restrictive covenants which are out in an instrument recorded in Book ____ at Page ____ of the deed of records of Rankin County, Mississippi.

_____
Clerk of the Chancery Court of
Rankin County, Mississippi

ARTICLE III

PROCEDURE

SECTION 300 PREAPPLICATION PROCEDURE

300.1 Prior to submitting the Preliminary Plat or Street Plat the Subdivider shall submit to the City a Site Plan including the information and data in accordance with Section 300 herein.

300.2 The purpose of the procedure described in Section 300.1 is to afford the Subdivider an opportunity to avail himself of the advice and assistance of the City and to consult early an informally with the City before preparation of the Preliminary Plat and before formal application for its approval.

300.3 The City shall promptly inform the Subdivider that the plans and data as submitted or as modified do or do not meet the objectives of these regulations and, if they do not meet the objectives, the respects in which they do not do so.

SECTION 301 PROCEDURE FOR APPROVAL OF THE PRELIMINARY PLAT

301.1 On reaching conclusions informally, as recommended in Section 300 above, regarding his general program and objectives, the Subdivider shall cause to be prepared in accordance with Section 201 herein a Preliminary Plat or Street Plat, for the required improvements as specified in ARTICLE IV.

301.2 Two (2) copies of the Preliminary Plat or Street Plat, for the required improvements and the supplementary material specified, including covenants, shall be submitted initially to the City with written application for approval. These data shall be submitted at least 10 working days prior to the regularly scheduled meeting of Governing Authority at which they are to be considered.

301.3 Fees in accordance with paragraph 901 herein shall be paid upon submission of the Preliminary Plat or Street Plat for approval.

301.4 Following (a) review of the Preliminary Plat or Street Plat, and other material submitted for conformity to these regulations by the City, and (b) negotiations with the Subdivider on changes deemed advisable and the kind and extent of improvements to be made in the proposed subdivision, the City shall express informal approval or conditional approval and shall state the conditions of such approval, if any, or if disapproved shall express disapproval and the reasons therefor.

301.5 The action of the City and any conditions thereof, shall be noted on copies of the Preliminary Plat or Street Plat. One (1) copy of each shall be returned to the Subdivider and the others retained by the City.

301.6 Approval of a Preliminary Plat or Street Plat shall not constitute approval of the Final Recording Plat. It shall be deemed only an expression of approval of the general nature of the required improvements and the layout of the Preliminary Plat which may be used as a guide in the preparation of the Construction Plans and Final Plat to be submitted for approval of the City Authority and for recording upon fulfillment of the requirements of these regulations.

SECTION 302 PROCEDURE FOR APPROVAL OF CONSTRUCTION PLANS AND IMPROVEMENTS

302.1 In consideration of the acceptance by the City and the assumption of the responsibility for maintaining the utilities and streets constructed in a subdivision or property, the Subdivider shall cause to be constructed, at no expense to the City, the improvements required by this Ordinance according to the current City practices and the specifications set forth in this Ordinance.

302.2 All improvement construction shall be designed and supervised by a Professional Engineer registered in the State of Mississippi engaged at the expense of the Subdivider.

302.3 Two (2) copies of the Construction Plans and Technical Specifications prepared pursuant to the design requirements of Article IV herein shall be submitted to the City Department of Public Works for review.

302.4 Two (2) copies of a Geotechnical Investigation Report shall accompany the Construction Plans for the proposed improvements. The Geotechnical Report shall contain the results of soil borings taken along the proposed street alignment and recommendations for street subgrade preparation. A Phase I Environmental Assessment may also be required if the City deems same advisable.

302.5 Two (2) copies of a pavement design shall accompany the Construction Plans for any street improvements proposed. The pavement design shall be based on the pavement design procedure utilized by the Mississippi Department of Transportation based on the number of equivalent axle loadings and projected vehicular traffic expected to use the proposed street during a twenty (20) year period.

302.6 Two (2) copies of the drainage calculations used to determine the sizes of any proposed drainage improvements shall accompany the Construction Plans.

302.7 Two (2) copies of a Water System Analysis for water system improvements.

302.8 Following review of the Construction Plans and supporting documentation, and negotiations with the Subdivider with regard to changes deemed advisable, the City shall express conditional approval and shall state the conditions of such approval, if any, or if disapproved, shall express disapproval and the reasons therefor.

302.9 Before starting construction, the Subdivider shall make arrangements with a Professional Engineer engaged at the expense of the Developer for adequate laboratory and construction inspection to insure that the improvements shall comply with these regulations. Records of such tests and inspections shall be provided to the City as such tests and inspections are completed.

SECTION 303 PROCEDURE FOR APPROVAL OF FINAL RECORDING PLAT

303.1 The Final Recording Plat (as used herein "Final Recording Plat", includes Final Street Plat) shall conform substantially to the Preliminary Plat as approved and Section 202 herein, and, if desired by the Subdivider, may constitute only that portion of the approved Preliminary Plat which he proposes to record and develop at the time provided, however, that such portion conforms to all requirements of these regulations.

303.2 Two (2) blueline copies of the Final Recording Plat and record drawings of the completed improvements must be submitted to the City Department of Public Works at least 15 days prior to the meeting in which the Final Plat is to be considered for acceptance by the Governing Authority. These two (2) copies of the Plat will be reviewed by the City Public Works and City Engineer.

303.3 Upon receipt of written comments from the City Engineer or City Public Works Director regarding the Final Recording Plat, the Subdivider shall submit one (1) original Final Recording Plat with cloth-type back and one (1) reproducible copy of said Plat along with the following documents at least ten (10) working days prior to consideration for acceptance by the Governing Authority at a regularly scheduled meeting:

(a) Surety Bond or Letter of Credit in the amount of 150 percent of the established construction cost of the final asphalt wearing surface provided same has not been applied to the streets in the Subdivision and in addition, the City Engineer or City Public Works Director may also require an additional Bond or Letter of Credit in the amount of 150 percent of the estimated construction cost for any improvements deemed necessary by the City to secure the stability and integrity of the streets, utilities and appurtances. The surety bond or letter of credit shall remain in full force and effect and renewed annually until the 1st anniversary of the application of and acceptance by the City of Flowood once the final asphalt wearing coarse has been applied

(b) Two (2) copies of a Letter of Final Approval from the Mississippi State Health Department for the completed water distribution system improvements.

(c) Two (2) copies of a Letter of Final Approval from the Mississippi Department of Environmental Quality for sanitary sewer collection system improvements.

(e) Two (2) copies of the Protective Covenants.

(f) Developer must execute an agreement to maintain said storm water facilities and implement a pollution source control plan. (See Appendix for agreement)

303.4 The Subdivider shall have prepared and submitted to the City's Attorney for approval prior to consideration by the Governing Authority, a Certificate of Title of the land embraced in such subdivision before the Final Recording Plat is finally accepted by the City.

303.5 Approval of the Final Recording Plat shall not be granted until the Subdivision or Streets meet the requirements contained in these regulations, subject to any waivers or exceptions having been granted.

303.6 In the event the Governing Authority should approve the Final Recording Plat, an endorsement shall be made thereon by the Mayor indicating such approval together with the date of the Governing Authority's order. A copy of said map shall be filed with the City Clerk as well as with the Chancery Clerk of Rankin County by the Subdivider after said map has been properly signed and acknowledged.

SECTION 304 REQUIRED INSPECTIONS

304.1 The developer shall employ a registered Professional Engineer to inspect the improvements as they are installed. This Engineer shall then certify to the City Engineer or City Public Works Director that each improvement has been construction in accordance with the approved plat, construction plans and specifications, and requirements of this Ordinance.

304.2 Upon approval of the Construction Plans by the City Engineer or City Public Works Director, with such changes and alterations, if any, as may be ordered, the developer may proceed with proposed improvements. If improvements are to be constructed in a 100-year frequency floodplain, a Development Permit must be obtained prior to initiation of construction activities.

304.3 After completion of all improvements and notification of this by the Developer's Engineer of Record, the City Engineer and/or City Public Works Director shall make a Final Inspection of the improvements required by this Ordinance, and any other improvements to be accepted by the City after Certification by the Developer's Engineer that such improvements have been completed in accordance with approved plans and specifications. Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause found to exist prior to final acceptance of the work, shall be removed and replaced in an acceptable manner at no cost to the City. The City Engineer and/or City Public Works Director, acting as the duly authorized representative of the City and subject to the rules and regulations contained herein, shall decide all questions that may arise as to quality or acceptability of materials furnished or work performed. Such decisions may be appealed to the Mayor and Board of Aldermen and acceptance of each phase shall be binding upon the City subject to correction by the Developer and his contractor of any damage that might occur during subsequent work on other required improvements.

304.4 If the City Engineer and/or City Public Works Director has verified that the contracted improvements are complete and free from defect, then upon receipt of the Final Recording Plat, and any other statements and certificates and/or agreements, the Mayor and Board of Aldermen shall accept the dedication of any portion of the required improvements, provided that all statements and agreements specified above have been received for that portion of the improvements.

ARTICLE IV

DESIGN STANDARDS AND REQUIRED IMPROVEMENTS

SECTION 400 GENERAL

400.1 Where no City standard exists governing the design or construction of required improvements, the City Engineer or City Public Works Director shall determine the requirements for design and/or construction predicated on the following:

Streets: Latest Edition of "A Policy on Geometric Design of Roadways and Streets," AASHTO; and the latest edition of the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction.

Water: American Water Works Association Standards.

Sanitary Sewers: Mississippi Department of Environmental Quality Standards.

Storm Drainage: Latest Edition of MDOT Design Manual and Standard Specifications for Roads and Bridge Construction.

SECTION 401 STREETS

401.1 The arrangement, character, extent, right-of-way and pavement widths, grade, and location of all streets to be considered in their relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets.

401.2 The arrangement of streets in a Subdivision or on other property shall:

a. Provide for the continuation or appropriate projection of existing principal streets in surrounding areas.

b. Conform to a plan for the neighborhood approved by the City to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical.

c. Conform to the City's adopted Thoroughfares Plan.

401.3 Access from properties zoned industrial or commercial in terms of driveways to state maintained roadways shall require acquisition of an access permit from the Mississippi Department of Transportation. New streets whether arterial, collector or local connecting or intersecting with divided median arterial roadways and streets shall do so only at existing median

crossings and shall be constructed to the technical requirements of the regulations established herein.

401.4 Where a Subdivision abuts or contains an existing or proposed arterial street, the City may elect to require physical improvements to maintain the integrity and character of the subdivision. These physical improvements may include but not limited to frontage roads and landscaping or such other treatment as may be necessary for adequate protection of residential and commercial properties and to afford separation of through and local traffic. In cases where a major street fronts or passes through a commercial area and marginal access streets are required, commercial facilities will be allowed to front the Marginal Access Street.

401.5 Street jogs should be avoided when possible, but will be considered in accordance with sound traffic engineering principles.

401.6 Changes in horizontal alignment shall be accomplished by a curve with a radius sufficient to insure an adequate sight distance. Sight distance shall meet the requirements of the MDOT Design Manual.

401.7 Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street shall intersect any other street at less than 75 degrees.

401.8 Property lines at street intersections shall be rounded with a radius of 10 feet minimum, or by triangular flare with minimum sides of 10 feet.

401.9 Street right-of-way and pavement widths shall be in accordance with the following:

Street Type	20 Yr. Projected Average Traffic Volume	Minimum Right of Way	Pavement Width Back to Back of Curb	Maximum Grade
Principal Arterial	7,500	100 ft.	64ft & Variable	6%
Minor Arterial	1500-5000	80 ft.	40ft min	6%
Collector	0-1500	60 ft	32ft min	6%
Local (residential only)	0-800	50 ft	28ft	6%

401.10 Where not shown in the Thoroughfares Plan for the City, the arrangement of streets in a subdivision shall provide for the continuation of appropriate projection of existing streets.

401.11 Dead-end streets, designed to be so permanently, shall not be longer than 600 feet and shall be provided at the closed end with a cul-de-sac having minimum a roadway diameter of 80 feet measured from back of curb to back of curb and minimum right-of-way diameter of 100 feet. The front of all lots in a cul-de-sac shall have a minimum width measured along the street right-of-way of 60 feet.

401.12 Temporary dead-end streets shall be paved, 80 feet in diameter and have proper traffic control devices placed by the Developer or a designated representative thereof at the end of said street in accordance with the most recent edition of the Manual on Uniform Traffic Control Devices. These devices shall remain in place until such time as the temporary dead end street is extended to connect with another street or a permanent cul-de-sac is constructed.

401.13 Cul-de-sac streets will not be allowed to connect directly to State maintained thoroughfares. This provisions means that streets that connect to state maintained thoroughfares must be constructed so as to show the extension of such street to connect to another street at some time in the future.

401.14 All streets constructed within the City, except industrial zoned property, shall have concrete curb and gutter on both sides of the street and subsurface drainage in accordance with Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction.

401.15 In Industrial areas open ditch type roadway with 8 feet minimum wide shoulders may be constructed in lieu on curbs and gutters with subsurface drainage.

401.16 Entrances to residential and commercial developments off of an arterial or collector street shall have a landscaped entrance.

401.17 Setback requirements from arterial or collector streets for corner lots in a residential or commercial development shall be a minimum of 50 feet and are required to have a planting screen easement of at least 10 feet width adjacent to the street right-of-way. Planting screens are required in accordance with the City Landscape Ordinance.

401.18 Pedestrian crosswalks, not less than 10 feet wide and consistent with the latest edition of the manual of Uniform Traffic Control Devices shall be required where deemed necessary to provide circulation or access to schools, playgrounds, shopping centers, transportation, and other community facilities.

401.19 The City may require that certain streets serving a Subdivision or property be constructed to higher standards than would be necessary to serve the particular subdivision or property in the best interest of the City as a condition precendent of approval of the subdivision or street.

401.20 Street name signs, regulatory and warning signs shall be the responsibility of the Subdivider and shall conform to the requirements of the latest edition of the manual of Uniform Traffic Control Devices. Proposed streets which are obviously in alignment with others already existing shall bear the names of the existing streets. In no case shall names of proposed streets duplicate or be confused with existing street names.

Street names shall be stated and approved on a preliminary plat. All traffic signs and street name signs shall be purchased by the developer and/or installed to the satisfaction of the City before the final plat approval.

401.21 The Subdivider shall coordinate with the local E911 system regarding naming streets.

401.22 Streets shall comply with the following criteria:

(a) Reverse curves shall be avoided when possible. Should it become absolutely necessary to utilize a reverse curve, a tangent of at least one hundred (100) feet shall be introduced between curves, or as necessary to provide sufficient super elevation run-off.

(b) The minimum radius of curvature permitted on a horizontal curve shall depend upon design speed and corresponding friction coefficients developed by AASHTO (American Association of State Highway and Transportation Officials), but shall not be less than two hundred (200) feet.

401.23 Intersections shall meet the following criteria:

(a) Street intersections and approaches shall be designed on as flat a grade as possible. Street gradients within 100 feet of intersections shall not exceed 4% and every reasonable effort shall be made to keep the gradient below 2%.

(b) The minimum curb radius permitted at intersections shall be twenty (20) feet for residential streets, and twenty-five (25) feet for collector streets, and forty (40) feet for streets serving industrial developments.

(c) Two streets intersecting the same street (T-intersection) shall be offset a minimum of one hundred fifty (150) feet (centerline offset).

(d) Turning lanes shall be provided at heavily traveled intersections as determined by the City Engineer or City Public Works Director.

401.24 Typical Section and Pavement requirements are as follows:

(a) All streets shall be designed with a centerline crown and two (2) percent traverse slope.

(b) Street pavement designs shall be based on consideration of the anticipated traffic volumes by weight, the sub-grade soil, surface drainage, ground water and climatic conditions. The minimum pavement structural design shall be based on street category and subgrade CBR as determined by a certified testing laboratory and shall be calculated excluding the 1.5 inches of surface asphalt paving. Pavement design approval will be contingent and based on the findings of the Geotechnical Report.

The thickness of pavement increments shall be determined according to accepted

A.A.S.H.T.O. design practice and pavement material equivalencies. Street surfaces shall be a minimum of 1 ½" Hot Bituminous surface course and five inches (5") of hot bituminous base course, or a minimum of 10 inches clay gravel base with a 2 ½" hot bituminous surface course or equivalent as determined by asphalt thickness of the Base Course and wearing surface will be verified by coring test to be taken by the Contractor at various locations as directed by the City Engineer or City Public Works Director.

Materials and construction procedures shall comply with the latest edition of the "Mississippi Department of Transportation Standard Specifications for Road an Bridge Construction".

Certified testing laboratory results of representative samples of all in place materials shall be submitted to the Department of Public Works for review and recordation.

SECTION 402 PRIVATE STREETS

402.1 Private Streets are allowed provided that the street meets or exceeds City Specifications and the Subdivision consisting of Private Streets is constructed in accordance with the provisions of this Ordinance and other ordinances of the City.

402.2 Notwithstanding section 303.1, the extension of existing private streets in residential areas of the City shall be allowed and if no curb and gutter exists, the extension may exclude curb and gutters. However, except for the requirement of curb and gutter all other City specifications for streets must be met even though the Street is Private.

402.3 If Private Streets are used, the Subdivider shall provide the City with sufficient access and easements to maintain utilities and provide City Services such as garage service and fire protection, if such services are desired.

402.4 Private streets will only be allowed in Residential Developments.

SECTION 403 SIDEWALKS

403.1 Sidewalks shall be required on both sides of the street in all Subdivisions located on property zoned R-1 in accordance with the Zoning Ordinance of the City.

403.2 All streets inside the development and all abutting streets shall be included under this requirement.

403.3 All sidewalks shall be a minimum of four feet (4') in width, four inches (4") in thickness, sloped toward the roadway and be located next to the street curb or have a minimum of two foot (2') grassed or landscaped median area separating the sidewalk and adjacent curb, unless otherwise approved in writing by the City Engineer or City Public Works Director.

All maintenance of sidewalks located within City right-of-way shall be the responsibility of the City, its agents or assigns.

These requirements shall only pertain to areas encompassed by the subdivision plat.

SECTION 404 ZERO LOT LINE

Zero Lot Line developments are prohibited.

SECTION 405 UNDERGROUND UTILITIES

405.1 All electrical, cable television and phone utilities must be laid underground rather than overhead in all Subdivisions. The electrical boxes and streetlights shall be located as near as possible to the lot lines. Three phase electrical wiring may be installed overhead.

SECTION 406 LANDSCAPING REQUIREMENTS

406.1 Landscaping must be provided in all subdivisions in accordance with the adopted Landscape Ordinance.

SECTION 407 PARK AREA SET ASIDE

407.1 The Subdivider of every residential subdivision which is to contain more than twenty (20) lots shall be set aside and convey to a homeowners association or if no homeowners association, to the City, a green space area for the use and benefit of all property owners in the Subdivision or public park.

407.2 The green space area shall be equal to or greater in size than one (1) typical size lot within the Subdivision and there shall be one (1) green space area for each fifty (50) lots.

407.3 The green space area shall be improved by the Subdivider with landscaping consistent with the adopted Landscape Ordinance and park benches or related equipment selected by the Subdivider and approved by the City Engineer or City Public Works Director.

SECTION 408 ALLEYS

408.1 No public alleys shall be allowed.

SECTION 409 UTILITY AND DRAINAGE EASEMENTS

409.1 Utility and Drainage Easements across lots or centered on rear or side lot lines shall be provided for utilities where necessary and shall be at least fifteen (15) feet wide at ground level or as required by the Public Works Director. Utility easements shall be provided parallel to the roadway in residential, commercial, and industrial areas at least 10 feet in width measured outside and adjacent to the street right-of-way for the purpose of accommodating utilities, electrical, cable television, telephone and gas utilities.

409.2 No buildings or other structures will be permitted in easements.

409.3 Fences constructed within easements are discouraged. If so constructed any removal necessary for the City to replace, repair or otherwise use it's easement shall be at the expense of the owner of the property at the time of the repair, replacement or other use.

409.4 Any overhanging limbs, shrubbery, or vegetation of any kind may be removed from within the limits of easements at the sole discretion of the maintenance personnel of the utilities installed or to be installed on or above the easement.

409.5 Where a Subdivision or property is traversed by a water course, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of such water course or an accepted canal or drainage course, and such further width or construction, or both, as will be necessary for equipment access.

SECTION 410 BLOCKS

410.1 The lengths, widths and shapes of blocks in Subdivision or along streets shall be determined with due regard to:

a. Provision of adequate building sites suitable to the special needs to the type of use contemplated.

b. Zoning requirements as to lot sizes and dimensions.

c. Needs for convenient access, circulation, control and safety of street traffic.

d. Limitations and opportunities of topography.

410.2 As a usual practice, block lengths shall not exceed 1,320 feet or be less than 400 feet and block widths shall be wide enough to allow two (2) rows of lots that are the dimensions as required by the zoning ordinance of the City, but the City may elect to make exceptions in particular cases.

SECTION 411 LOTS

411.1 The lot size, width, depth, and the minimum building setback lines shall conform to the requirements of the zoning ordinance.

411.2 The minimum size of residential lots where a public sanitary sewer is not available shall be determined by a Professional Engineer after studies have been made of the soil conditions existing on the site of the proposed subdivision with the approval of the Mississippi Health Department and the City. The costs of such studies shall be borne by the Subdivider.

411.3 Corner lots shall be twenty (20) feet wider than the interior lots with a setback equal to the front setback off of the side street.

411.4 The subdividing of land or division of same by a street shall be such as to provide each lot or parcel of property with access to an existing public street.

411.5 Double frontage and reverse frontage lots shall be avoided except where necessary to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation. A planting screen easement of at least 10 feet and across which there shall be no right of access, shall be provided along the line of lots abutting such a traffic artery or other incompatible use.

411.6 Side lot lines shall be as close as possible at right angles to straight street lines, and radial to curved street lines.

411.7 Minimum lot size must be exclusive of open drainage ditches. Open ditches will not be allowed along the front or side or rear lot lines except by special permission from the City Engineer or City Public Works Director.

SECTION 412 MONUMENTS

412.1 Concrete monuments shall be placed at all material changes of alignment along the boundary of the subdivision and iron pins should be placed at all lot corners or changes in alignment in lot boundaries.

412.2 All concrete monuments shall be set with the top thereof flush with finish grade. Where farming operations or other land uses might destroy or disturb the monument, the monument shall be buried underground a sufficient depth to preserve it and referenced to a permanent landmark.

SECTION 413 GRADING

413.1 The Subdivider shall be responsible for all grading in the subdivision or property until the lot(s) are sold. Such grading shall be in accordance with plans approved by the City and said plans shall show both existing and proposed contours and such other data as the City may require for adequate review.

413.2 Final cross sections and profile of streets and other installations shall conform to grades approved by the City.

413.3 All timber, logs, trees, brush, vegetable matter and other rubbish shall be removed and disposed of so as to leave the areas that have been disturbed with a neat and finished appearance.

413.4 All tree stumps, masonry and other obstructions shall be removed to a depth as follows:

For paved areas: Entire stump, masonry and obstructions must be fully removed.

For lawn areas upon which construction is to be made: At least two (2) feet minimum below finished grade.

413.5 Grading shall be continued until the area conforms with the lines, grades, slopes and typical cross sections shown on the approved plans.

SECTION 414 DRAINAGE

414.1 The Subdivider or person shall be responsible for the construction of all drainage facilities.

414.2 All storm drainage systems shall be in accordance with the appropriate sections and subsections of the latest edition of the Mississippi Department of Transportation Design Manual and Standard Specifications for Road and Bridge Construction and shall be subject to approval of the City. The City requires that side drains and miscellaneous storm sewers be designed to handle storms occurring on an average frequency of 25 years and duration of 12 hours and minor streams, channels or ditches be designed to hold the 50-year frequency, 24 hours and storm within its banks. All major streams, channels, open ditches, or drains be designed to accommodate the 50-year frequency, 24 hour duration storm. The City reserves the right to prohibit the filing of low-lying areas and to zone such areas for uses that would not be damaged by short duration flooding.

414.3 The Drainage Plan will show location and size of pipes and ditches, manholes and catch basins, culverts with headwalls and aprons for same, and bridges, contours of the project, street layout and lotting pattern with lot numbers. The drainage plan will also show the kind, invert elevations and grade of each drainage pipe or channel, and the contributing drainage area along with the calculations supporting the planned improvements.

414.4 The Subdivider may be required to install drainage structures in excess of those required to adequately serve the Subdivision or property in the best interest of the City as a condition precendent to approval of the Subdivision or area to be served by any street and contiguous downstream areas.

414.5 The design of storm water drainage systems shall insure adequate control of storm water runoff through the use of the property sized and positioned drainage structures including, but not limited to, curb and gutter, curb and grate inlets, storm sewer pipe, box culverts, intersectional drains, open ditches and bridges. The design of the storm drainage systems shall be in accordance with generally accepted engineering practice.

The design of any storm water drainage system shall be compatible with master drainage plans developed for and approved by the City where applicable and the applicable storm water detention requirements.

All drainage facilities shall be designed to prevent excessive runoff onto adjacent properties.

In no case shall channel slopes be steeper than 3:1 unless adequate slope protection is provided and approved by the City Engineer or City Public Works Director.

414.6 Pipe and culvert sizes shall be selected by sue of computed hydrological and hydraulic data. Design flows shall be based on climatic factors such as rainfall intensity, duration, frequency and distribution and physiographic factors such as size, shape, and slope of drainage areas, anticipated land use or cover, surface infiltration condition, soil type and topographical condition. Pipe selection shall be based on its hydraulic capacity considering size, slope, and roughness characteristics as well as its tendency to become choked and the ability to clean and remove obstructions.

The minimum storm drainage pipe size shall be 15 inches.

Cross drains shall be provided to accommodate all natural water flow and shall be of sufficient length to permit construction of the full width of the roadway including side slopes. Headwalls or flared end section aprons as well as channel bottom and slope protection shall be provided at the upstream and discharge end of the cross and side drains as required by the City Engineer or City Public Works Director.

414.7 The horizontal and vertical alignment of streets shall be compatible with the storm water runoff system and drainage design.

The hydraulic capacity of the curb and gutter shall be determined by generally accepted engineering principles taking into consideration roughness, street cross-slope, and street gradient, and allowable spread of water over the travel lane.

The hydraulic capacity of curb opening and gutter grate inlets shall be determined by generally accepted engineering principles taking into consideration inlet geometry and characteristics of the gutter flow. Inlets shall be spaced so as to limit the spread of water to not more than one quarter of the street width during a design storm of five (5) year return period and 30 minute duration. Inlets shall also be placed at all low points in the gutter grade, at intersections where necessary to prevent gutter flow from crossing traffic lanes of any intersecting street, or at points of special concern as designated by the City Engineer or City Public Works Director. Inlets shall be provided so that surface water shall not be carried across or around any intersection nor for a distance of more than 400 feet in the gutter. When calculations indicate that curb capacities are exceeded at a point, no further allowance shall be made for flow beyond that point, and basins shall be used to intercept flow at that point. Surface water drainage patterns shall be shown for each and every lot and block.

414.8 The Developer's Engineer shall study the effect of each development on existing downstream drainage facilities both inside and outside the area of the subdivision. City drainage studies, if applicable, together with such other studies as shall be appropriate, shall serve as a guide to needed improvements. Where it is anticipated that the additional runoff incident to the development of the subdivision will overload an existing downstream drainage facility, the City Engineer or City Public Works Director may recommend withholding approval of the development until provision has been made for the improvement of said potential condition

through storm water detention or some other acceptable means. No development shall be approved unless adequate drainage will be provided to an adequate drainage water course or facility.

414.9 The structural design of all box culverts or bridges shall conform to the state standard plans of the Mississippi Department of Transportation for a live load capacity of HS15-44 minimum. Bridges, where required, shall be constructed of reinforced concrete or structural steel with a reinforced concrete deck. No mud sills or timber grills will be permitted for bridge foundations. All bridges shall be provided with substantial guard rails and if required, sidewalks.

414.10 All material used in the construction of storm drainage systems, shall conform to the following minimum specifications.

(a) Concrete shall be ready mix as per ASTM C-94, which will develop a minimum compressive strength of 3,000 psi at 28 days conforming to ASTM C-31.

(b) All reinforcing steel shall conform to ASTM A-615.

(c) Bricks used in the construction of inlet boxes and manholes shall conform to ASTM C-32, Grade MA, if allowed by the city

(d) All Portland Cement shall conform to ASTM C-150, Type 1.

(e) All sand shall conform to ASTM C-33.

(f) All mortar shall consist of 1 part cement, 2 parts sand, and 10% lime (by volume).

(g) All culvert pipe shall be reinforced concrete pipe. This pipe shall conform to ASTM C-76, and be Class III minimum, standard strength, bell and spigot or tongue and groove. All pipe under streets shall be reinforced concrete pipe. If not under streets, pipe may be asphalt coated or polymer coated corrugated metal pipe. All pipe must meet or exceed DOT standards.

(h) Rubber gaskets shall conform to the requirements of ASTM C-443. Mortar joints shall not be used to join concrete pipe. Plastic points are allowed.

(i) Precast concrete manholes shall conform with ASTM C-478.

(j) Casting shall conform to ASTM A-48. Manhole covers and rings shall have a combined weight of not less than 300 lbs. and be suitable for traffic loads.

414.11 Installation requirements are as follows:

(a) Any materials delivered to a job site defective or damaged shall be rejected by the City and shall not be used for construction.

(b) All concrete pipe, catch basins, curb inlets and headwalls shall be installed in strict accordance with the manufacturers recommendations and/or all applicable provisions of the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction.

(c) All pipe shall be laid to alignment and grade with the use of a laser. Batter boards and string are permitted.

(d) No more trench shall be opened than can be effectively utilized in a day. Excavations to be left open during non-working hours shall be kept to a minimum. Such openings shall be adequately protected or marked to prevent injuries.

(e) Backfilling shall be carried out as follows:

i. In areas under streets, walks, or parking areas the backfill shall be placed in 9" lifts and compacted to a minimum of 95% of standard proctor density by ASTM D-698 using mechanical devises designed for that purpose.

ii. In all other areas the backfill may be placed in 12" lifts compacted to 90% of standard proctor density by ASTM D-698.

SECTION 415 WATER SUPPLY

415.1 The Subdivider shall be required to provide an adequate supply of potable water to all lots in the subdivision or on the property. The water supply shall be sufficient to satisfy the needs of both domestic use and fire protection. The distribution system shall be so designed and constructed as to form an integral part of the City's distribution system and shall be in accordance with current City practices as well as the standards of the State Health Department and the State Fire Rating Bureau.

415.2 Fire hydrants shall be installed on water mains only, shall be AWWA approved type with 5 ½ inch opening installed at the extremity of a six (6) inch minimum diameter pipe and shall be so located such that no lot will be in excess of 400 feet from a fire hydrant with the measurement being made along the streets. Both valves and hydrant shall be installed with ductile iron anchor couplings to the main. Fire hydrants in commercial districts shall not exceed 300 feet spacing.

415.3 All valves shall be AWWA approved and shall be installed at junctions to enable isolation of line segments for maintenance.

415.4 The Subdivider may be required to install water mains, fire hydrants, and valves in excess of those required to adequately serve the subdivision or property.

415.5 All Subdivisions or property to be served by any street constructed pursuant to the terms hereof must obtain water service from the City.

415.6 Water mains shall be designed, constructed and properly connected with the public waters supply system in such a manner as to adequately serve all lots shown on the subdivision plat for both domestic and fire prevention purposes and will adhere to the minimum requirements set forth herein below:

(a) Water distribution systems shall be designed using the Water System Method. The Hazen-Williams formula shall be used in computing head loss.

(b) Water distribution systems shall be designed for the peak hour flow or the maximum day flow plus fire flow whichever is greater.

(c) The water distribution system shall be designed so that the following range of dynamic pressures are provided: 50 to 80 psi for average daily flows; 20 psi to 30 psi for peak hour flows; 20 psi to 50 psi for maximum daily flow plus fire flow. The minimum dynamic pressure at any point shall be 20 psi. The maximum static pressure at any point shall not exceed 80 psi.

(d) The maximum design velocity shall not exceed 5 fps.

(e) Water distribution systems shall be laid out on a grid system with cross connections at cross sheets. Dead end pipes shall be avoided whenever possible.

(f) Valves shall be installed at each intersection or change in pipe size, and shall be placed so that no single case of pipe breakage shall require shut-off from service of an artery of more than 500 feet of pipe in high value districts, or more than 1000 feet of pipe in any area or as directed by the City Engineer or City Public Works Director. All valves shall be tied to mains with anchor couplings or mechanical joint fittings.

(g) Mains shall be minimum of 6" in diameter where length is 600 feet or less and must be gridded or looped from more than one source of supply wherever possible. Mains installed for distances greater than 600 feet shall be 8" in diameter and larger, gridded or looped with more than one source of supply. The size shall be determined by using accepted engineering calculation methods as approved by the City Engineer or City Public Works Director.

(h) Service lines shall be installed from the main to the property line.

(i) The service assembly shall consist of a curb stop set to finish grade. The calculating method for areas of higher density development potential, based upon the zoning of the properties to be served, shall reflect the higher density development and the main size increased, if conditions warrant. The requirements for water distribution systems serving commercial and industrial developments shall be determined by engineering analysis based on specific water requirements for the type of use intended or those required by the height and

density permitted by the zoning classification of the property, whichever is greater. Newly installed systems shall be pressure tested at 150 pounds for 24 hours under the inspection of The City of Flowood personnel or the City Engineer or City Public Works Director. Allowable leakage shall not exceed ten (10) pounds per twenty-four (24) hours per inch of diameter per mile of pipe at 150 pounds per square inch. Certified test results will be submitted to the City Engineer or City Public Works Director by the Developers Engineer for each line tested. All newly installed systems shall be disinfected and must pass bacteriological tests to the satisfaction of the City Engineer or City Public Works Director, and the Mississippi State Department of Health, prior to placing said system in service, or accepted by the City. All water used in hydrostatic tests shall be potable water; containers holding water shall be sterile. It shall be the responsibility of the developer or his Contractor, to reimburse the City of Flowood for tie-ins to existing mains, if made by the City. Where possible, water mains shall be located in the street right-of-way at least two (2) feet but not more than four (4) feet from the edge of the sidewalk or pavement or as approved by the Mayor and Board of Aldermen or the City Engineer or City Public Works Director.

415.7 All material used in the construction of the water supply system shall conform to the following minimum specifications:

(a) Ductile iron pipe shall be water pipe manufactured in accordance with the American National Standards Institute, Incorporated (ANSI) Standard Specification A-21.51. The metal thickness of ductile iron pipe shall be as specified in ANSI Standard Specifications A-21.51, class 52. Unless special bedding conditions are specified by the Engineer, the maximum depth of cover for the various classes of ductile iron pipe shall not exceed that by the manufacturer or approved by the City Engineer or City Public Works Director. All ductile iron pipe shall be coated outside with a standard bituminous coating and lined inside with a cement-mortar lining in accordance with ANSI/AWWA C104/a21.4.

(b) PVC pipe shall conform to all of the latest revisions of the following specifications:

ASTM C-900, Class 150

The pipe shall bear the National Sanitation Foundation seal of approval and shall be designed to carry potable water at pressure (including surges) up to the maximum class rating. Pipe shall not excess 40 feet in length and be pressure rated, as required by the City Engineer or City Public Works Director, and have a stop mark on the plain end of each piece of pipe supplied. Pipe supplied shall be of the quality manufactured by Certain-Teed, Can-tex or an approved equal. Pipe joints shall be of the integral belled type elastomeric gaskets, conforming to the AWWA C-900.

(c) Gate valves shall be standard AWWA, nonrising stem, iron body bronze mounted resilient seated and tested to 350 psi. Valves shall be open by turning counter-clockwise, be equipped with "O" Rings Seals at the top of the stem, and a 2" operating nut. The valves shall be American-Darling, Mueller, or approved equal. Tapping valves shall be similar to design to AWWA gate valves.

(d) Valve boxes shall be installed on all valves. Boxes shall be cast iron with a 1 ¼" shaft adjustable to appropriate height to be flush with ground, and with the correct base for each size valve. The boxes shall be as manufactured by M & H or an approved equal with a cast iron drop-in lid marked "water".

(e) Concrete shall develop a compressive strength of 3,000 pounds per square inch at twenty-eight (28) days.

(f) The steel casing pipe shall conform to ASTM designation A-53 and have a A.R.E.A. Standard thickness and be coated inside and outside with coal tar enamel meeting the requirements of AWWA Specification C-203, latest edition.

(g) Five hydrants shall be the improved traffic type with one (1) 5 ¼" pumper and two (2) 2 ½" openings as manufactured by the Mueller Company or an approved equal, with NSF threads.

(h) Meter boxes shall be plastic or cast iron, approximately 12" x 18" deep. Prior approval by the City Engineer or City Public Works Director will be required.

(i) Curb Stops shall be Mueller Mark II or approved equal.

(j) Corporation stops shall be as manufactured by the Mueller Company or equal.

(k) Branch connections shall be as manufactured by Mueller Company or equal.

(l) Copper service line if called for shall be seamless copper tubing suitable for underground water services. This material shall be supplied in conformance with ASTM Specification B-88-62 "Type K".

(m) An AWWA C 902, 250 psi, polybutylene service pipe may be used which is approved by the National Sanitary Foundation for use with potable water.

(n) Air release valves, shall be installed at high points on the lines as required or as directed by the City Engineer or City Public Works Director and shall meet the City of Flowood's Standard Water Specifications.

(o) Blow-off valves shall be placed on all dead end lines or as directed by the City Engineer or City Public Works Director and shall employ an American made 1 ½" AWWA approved bronze gate valve, pressure rate at 125 psi, a meter box and marker.

415.8 All installation, construction, backfilling and testing shall be in strict accordance with the manufacturers recommendations and the requirements of the Mississippi State Department of Health, City Engineer or City Public Works Director. A minimum of 36" of cover is required over pipes. Thrust blocks shall be installed at all bends, and at all tees, caps, and plugs. Thrust blocks will be of concrete.

SECTION 416 SANITARY SEWERS

416.1 Sanitary sewers shall be constructed by the Subdivider, shall provide a minimum of one 4" connection for residential property and 6" minimum for commercial and industrial property at the street boundary line for each lot or parcel of record and shall be so designed and constructed as to form an integral part of the sanitary collection system of the City and shall be in accordance with all applicable state and local laws pertaining to sewage collection.

416.2 All sewer pipe shall be ductile iron pipe or vitrified clay or polyvinylchloride. Sewer pipe installed with trench depth up to and including ten (10) feet shall be standard strength, and for trench depth greater than ten (10) feet, extra strength pipe shall be used in accordance with standards for same as set forth by the particular pipe manufacturer.

416.3 All joints shall be either rubber gasket, preformed plastic joint or factory cast plastic seal.

416.4 The minimum diameter pipe for sanitary sewers shall be eight (8) inches. Minimum diameter service pipe for house connection shall be four (4) inches for single-family dwellings and six (6) inches for multifamily dwellings. House connections shall be stubbed out to each lot Property line before street construction, and plugged with extended sewer stub marker tape from pipe to surface.

416.5 The minimum slope allowable for 8" sewer line will be 0.40 feet per 100 feet.

416.6 Manholes shall be no more than four hundred (400) feet apart and at each change in alignment or grade and shall be provided with traffic grade cast iron lids and frames.

416.7 There shall be a minimum of ten (10) feet horizontal separation between all parallel sanitary sewer and water mains.

416.8 Any sewer mains exposed in open ditches shall be 52 ductile iron for mains, or cast iron soil pipe for services.

416.9 Infiltration in any section of sewer main or service line shall not exceed 200 gallons per day per inch diameter per mile of pipe.

416.10 When any one of the sanitary sewers within a proposed subdivision or property, or sewers necessary to connect the proposed subdivision with the City sewer system or an outlet

acceptable to the City are so located that portions thereof may be a segment of a sanitary sewer main or outfall, the Subdivider person may be required to install sewer pipe for that portion of the line which may become a main or outfall sewer of such size as may be necessary to facilitate future expansion of the sanitary sewer system.

416.11 The minimum design standards of the sanitary sewer system for each subdivision shall conform to the following:

1. Minimum cover – three (3) feet. Depth as necessary to serve the proposed area and as needed to serve remainder of drainage basin.

2. Minimum stubout diameter – 4 inch, one stubout located in center of each lot not less than 3 ft nor more than 4 ft below finished grade.

3. Top manhole elevation – minimum shall be to finished grade or 1' above 100 year flood elevation whichever is greater. In undeveloped areas, tops shall be minimum of 30" above ground elevation.

416.12 The use of sewer lift stations should be minimized. However, when pump stations cannot be avoided, they should be designed for easy maintenance, maximum operating life, and adequate pumping capacity. The designed calculations must show flow rates and velocities for the pump station and force main. Some requirements for pump stations include:

(a) Minimum of two (2) pumps, each of which has capacity to handle the expected load. Pumps to operate at non-overloading condition across full operating range.

(b) Adequate controls with overload and lightning protection, phase failure protection, and alternators.

(c) Adequate pump housing and heaters to prevent freezing.

(d) Adequate wetwell and single pump capacity for calculated peak flow. Wetwell and discharge piping/valves shall be sized for entire drainage basin and other areas that may be practicably pumped to basin based on concurrency of City Engineer and/or Public Works Director.

(e) Necessary access roads and security fencing.

(f) Minimum flow velocity of 2 feet per second in force main, with a maximum of 12 feet per second with dual pump operation.

(g) Adequate vented wetwell.

(h) Valves on discharge lines located outside of wetwell.

(i) Non-corrosive side rails with stainless steel lifting chains on submersible pumps.

416.13 All material used in the construction of the sanitary sewer system shall conform to the following minimum specifications.

(a) The gravity sewer pipe shall be constructed of extra strength vitrified clay, ASTM serial designation C-700; ductile iron pipe, ANSI standard specifications A-21.50 Class 52 and coated outside with standard bituminous coating and lined inside with polyethylene or epoxy lining 40 mils in thickness with rubber gasket joints; or PVC (polyvinyl chloride) ASTM D-3034, SDR-26.

(b) Sanitary sewer manholes/wetwells shall be precast concrete with reinforced riser sections, and eccentric cone or flat slab top section and a base section. Riser section shall conform to the latest edition of ASTM Serial Designation C-478. The interior surfaces of all manholes/wetwells shall be coated with 24 mills coal tar epoxy in strict accordance with the coating manufacturers recommendations. Joints for precast manhole/wetwell sections shall be a combination of rubber gaskets, preformed bituminous joint compound, and a mastic joint material.

(c) Frames and covers for manholes shall conform to ASTM Standard Specification A-48 for "Gray Iron Castings", "Class 25" Castings shall be manufactured to the sizes and shapes as illustrated on the Construction Drawings or as specified by the manufacture's model number. Frames shall be furnished with a 1" lip protruding into the reinforced concrete cone.

(d) Each wetwell and discharge piping valve pit shall have aluminum access hatches. The frame shall be case in a concrete cover. Minimum hatch openings shall be 36" x 36" for wetwells and 30" x 30" for valve pits or larger as required for proper access to the equipment. Hatches shall be equal to Haliday Series H except when subject to traffic, a H-20 loading design is required.

(e) Steps for manholes shall be the plastic coated corrosion resistant Perma Step PS-1-PF as manufactured by Utility Products, Incorporated of San Antonio, Texas, or Liver Tire and Rubber Company of Oakland, California, rubber encased "Surefoot" Manhole Step, or equal.

(f) The force main pipe shall be constructed of ductile iron pipe. ANSI Standard Specification A-21.50 with rubber gasket joints or PVC pipe, pressure rated at 160 with a standard dimension ratio (SDR) of 26 for both barrel and joint dimensions. The joints shall be the factory installed heavy-duty type elastomeric gaskets in conformance with the requirements of ASTM F-477.

(g) Air release vacuum valves shall be installed at all high points on force mains. Valves shall be equal to those by Crispinor APCO for the particular application needed. Valves shall be placed in a concrete pit as per City's Standard Details.

(h) All pump stations shall be duplex stations with non-clog solids pumps capable of passing a 3" diameter solid. Submersible pumps shall have two (2) mechanical seals on the motor. The lower one outside the motor and protecting the upper one which is in an oil filled chamber. Moisture detection probes in the oil filled seal chamber shall be connected to the control panel to indicate the presence of moisture in the seal chamber. Thermal overload protectors shall be embedded in the motor in the event of overload. Motor shall be approved by Underwriters Laboratories for an explosion proof atmosphere. Motors shall be furnished with overload protectors. The controls shall be a duplex pumping plant panel complete with combination starters with circuit breakers, automatic, alternator, mercury float switches or air bubblers for liquid level control, running lights, pump failure lights, three (3) running time meters, lightning arrestor, condensation heater, panel lighting, GFI duplex outlet, engraved plastic labels and main circuit breakers. Moisture sensor relays with lights indicating seal failure; all in NEMA 3R enclosure with H-O-A selector switches in cover shall be provided. A red exterior high water alarm light shall also be required in a visible location at the station site. All conduits entering the control panel shall be equipped with gas tight fittings to prevent the intrusion of sewer gases into the control panel.

416.13 All installations, construction, backfilling and startup operations shall be in strict accordance with the manufacturers recommendations and the requirements of the City Engineer or City Public Works Director.

416.14 (a) Before acceptance, each section of line between manholes or such other length as determined by the City Engineer or City Public Works Director to be suitable, shall be thoroughly inspected and any defects in workmanship shall be immediately corrected.

(b) Infiltration testing of the completed gravity sewer system (after backfilling) shall be conducted. The testing shall be conducted by the CONTRACTOR in the presence of the City Engineer or City Public Works Director. The Engineer shall be given at least 24 hours notice before tests are to be conducted. If the ground water table is at least three feet above the top of the pipe at all points, the infiltration test shall be used. Otherwise, the air test shall be used. Only those sections under the groundwater table shall be tested by the infiltration test.

(c) The infiltration test shall be conducted between adjacent manholes. The outlet pipe on the downstream manhole shall be plugged and tested for water tightness to the satisfaction of the City Engineer or City Public Works Director. The accumulated depth of water in the downstream manhole shall be read at 12-hour intervals for two days and the infiltration rate calculated from the data obtained. Any section exceeding an infiltration rate of 200 gallons/day/inch/diameter/mile shall be re-laid. If the leakage in any reach exceeds the allowable maximum, the reach shall be re-tested after the leaks are repaired. This means that the Contractor shall locate and repair leaks as necessary to pass the infiltration test.

(d) The sewer line to be air tested shall be tested between manholes. The line shall be sealed at both ends. The seal at one end shall have an orifice through which to pas air into the pipe. An air supply shall be connected to the orifice at one end of the line. The air supply line will contain an on-off gas valve and a pressure gauge having a range of 0 to 15 psi. The gauge shall have minimum divisions of .10 psi and shall have an accuracy of more or less .04 psi. Pressuring equipment should include a regulator or relief valve to avoid over pressuring and damaging an otherwise acceptable line. The pipe line under test shall be pressurized to 4 PSIG. The line will be allowed to stabilize between 4 PSIG and 3.5 PSIG for a period of no less than 5 minutes. If necessary, air should be added to the line to maintain the pressure above 3.5 PSIG. After stabilization period, the gas valve shall be closed. When the line pressure drops to 3.5 PSIG, commence timing with a stop watch. The stop watch should be allowed to run until such time as line pressure drops to 2.5 PSIG. Then the watch should be stopped and the time lapse compared with the allowable time lapse in Table I below, which follows for the pipe size used. If the time lapse is greater than the allowable, the section undergoing testing shall have passed, and the test may be discontinued at the time. If the time is less than the allowable the line ahs not passed the test and the Contractor will be required to find the leaks, repair them and re-test until the section passes at his own expense.

(e) 100% of the PVC gravity sewer shall be tested using a "go, no-go" mandrel, which is sized to such dimensions that it will not "go" when encountering a deflection greater than 5%.

(f) Pipeline alignment shall be checked with a light of sufficient intensity to be seen from one manhole to the next. A full circle of light must be seen from each direction.

(g) Force mains shall be tested in same manner as water mains.

(h) All lift stations shall be started up and demonstrated by an authorized representative of the manufacturer. Pressure gauges shall be furnished on the discharge side of each force main and shall be readily convenient for observation. The pumps, controls, and discharge piping and valves shall be fully checked and adjusted for all operational sequences. A performance test shall be made on each pump to determine the actual field pumping range and TDH. O & M Manuals shall be provided to the City.

(i) The completed gravity flow system shall be free of all mud, siltation and other foreign matter deposited or collected during construction. Flushing shall commence at the upstream end of the completed system and continue downstream manhole to manhole. Only water from an approved source will be permitted. Water used in flushing will not be permitted to enter into the existing system but shall be disposed of in a manner acceptable to the City Engineer or City Public Works Director. Flushing shall be accomplished prior to testing should the

collected matter be sufficient in quantity to obstruct or affect the testing. Flushing will not be required in those sectors of the installed pipes and manholes where the exfiltration tests have adequately cleaned the mains.

SECTION 417 WATER DISTRIBUTION SYSTEMS AND STORM OR SANITARY SEWERS OUTSIDE THE CORPORATE LIMITS

417.1 City policy regarding the construction or extension of water distribution systems and storm or sanitary sewers outside the corporate limits of the City shall be as follows:

(a) Any water distribution system, storm sewer or sanitary sewer or appurtenance thereto constructed outside the corporate limits of the City to connect with or discharge into a like facility owned by the City shall be constructed in accordance with the requirements established be this Ordinance before such connection or discharge will be permitted. If any such facilities are not constructed in accordance with these provisions and at some future time, the City extends its area to include the facilities or any part thereof, the City may replace the entire facility or any part hereof which it determines to be unsatisfactory and assess the cost of replacement against the property benefitted in accordance with the Mississippi Code Annotated. Further, the Subdivider or person may be required to install storm sewers, water mains, fire hydrants, sanitary sewers, valves and related appurtenances in excess of those required to adequately serve the Subdivision or property for that portion of the line which may be necessary to facilitate future expansion of the storm, water or sanitary sewer system.

(b) Any subdivision located outside the City limits that connect to City water and/or sewer must also comply with other provisions of this ordinance and other ordinances of the City governing development of a subdivision.

SECTION 418 FLOODPLAIN AREAS

418.1 Land subject to flooding with a frequency of a one hundred (100) year flood shall not be subdivided or developed unless precautionary measures are taken or minimize flood hazards. All building grades shall be raised to an elevation one (1) foot above the maximum flood elevation one (1) foot above the maximum flood elevation of a one hundred (100) year flood calculated for the area in which the proposed Subdivision or property is situated. This is provided, however, that no fill shall be made, or any subdivision constructed or property improved, which will increase flood hazards to other land, or in any manner impede or restrict the flow of water in a flood situation. All areas that will remain subject to flooding after the subdivision is constructed shall be delineated on the final plat.

418.2 All utilities and facilities, such as water, sewer, gas, and electrical systems, shall be located, elevated, and constructed to eliminate or minimize flood damage; and adequate drainage shall be provided so as to reduce exposure to flood hazards.

SECTION 419 PLANTINGS

419.1 No planting, other than lawn grasses, shall be allowed, except regulatory signs and street name signs, within 15 feet of the street right-of-way boundaries without approval by the City Engineer or City Public Works Director consistent with the requirements as set forth in the adopted City Landscape Ordinance.

SECTION 420 GAS UTILITIES

420.1 Where a Gas Utility desires to locate a gas distribution system in a subdivision or property, the system piping shall be located in the street right-of-way or other City approved easement and the exact location will be coordinated with other underground utilities. The gas piping courses shall yield position to gravity-governed utilities.

SECTION 421 ELECTRICAL POWER AND STREET LIGHTING

Street lights shall be located at least one for each eight (8) lots and at each street intersection. The lights shall be 150 watts high-pressure sodium with photoelectric cell for automatic operation. The poles shall be precise concrete or an approved substitute.

An installation of conduit and wiring shall be underground. The electrical boxes and street lights shall be located as near as possible to the lot lines.

No Transformer shall be set in front of or within five (5) feet of a fire hydrant. Underground wiring and poles shall be located along front lot lines within the street right-of-way where possible.

ARTICLE V
DISCHARGE MANAGEMENT

SECTION 5 GENERAL STANDARDS

500.1 Applicability and Exceptions

500.1-01 This ordinance shall be applicable within The City of Flowood's jurisdictional area and shall apply to any residential development which is a portion of a piece property of one acre or more or any non-residential development which is a portion of a piece of property which is one acre or more. Also, developments less than one acre with an impervious area of 50% of the site shall be required to adhere to these regulations. These regulations are not intended to apply to individual residential lot owners. Please refer to City Building Regulations for individual lot developments.

500.2 Cutting of Trees

500.2-01 The cutting of trees shall be governed by the requirements of the Buffer Ordinance and Erosion and Sediment Control Ordinance.

500.3 Regulations Governing Rate of Storm water Discharge

500.3-01 Rate of discharge shall be determined at each point where storm water leaves the property being developed in its pre-development state;

500.1-02 The storm water management system shall be designed so that the peak flow rate at any discharge point in the post-development state shall be less than or equal to the peak flow rate for the discharge point in the pre-developed state for the 2-year, 5-year, 10-year, 25-year, and 50-year 24-hour storm events;

500.1-03 In addition to the peak flow requirement listed above, it shall be the responsibility of the developer and his engineer to ensure that any change in timing of the discharge of the 50-year storm event does not create a flooding problem at any road, street, or storm water conveyance within 500 feet of any discharge exit point from the property which did not previously exist.

500.1-04 For the purpose of this ordinance, "flooding problem" will be defined as any one of the following:

A. A building or structure where the pre-development 50-year flood elevation is more than 1 foot below finished floor elevation and the post-development 50-year flood elevation is less than 1 foot below finished floor elevation;

B. A road, street, or storm water conveyance for which the pre-development 50-year flood elevation did not overtop the facility and the post-development 50-year flood elevation is above the elevation of the subgrade;

C. A road, street, or storm water conveyance for which the pre-development 50-year flood elevation did not overtop the facility and the post-development 50-year flood elevation does overtop the facility;

D. A building or structure where the pre-development 50-year flood elevation was below the finished floor elevation and the post-development 50-year flood elevation is above the finished floor elevation.

E. A building, structure, road, street, or driveway where the pre-development 50-year flood elevation was less than 2 feet deep and the post-development 50-year flood elevation is greater than 2 feet deep;

F. A building, structure, road, street, or driveway where the pre-development 50-year flow velocity was less than 2 feet per second in the pre-developed condition and is greater than 2 feet per second in the post-developed condition.

500.4 Regulations Regarding Velocity of Storm water Discharge

500.4-01 Velocity calculations for the purposed of compliance with this ordinance shall be calculated using the 2-year 24-hour storm event;

500.4-02 The velocity of flow at any of the storm water discharge points from the property for the post-developed state shall be less than or equal to the velocity of flow in the pre-developed state.

500.5 Regulations Regarding Regimes of Flow

500.5-01 For the purpose of this ordinance, there will be considered to be two regimes of flow: sheet flow and concentrated flow;

500.5-02 Sheet flow shall be defined as any flow for which there is no defined channel in the ground at the exit point from the property. Any flow designated as either "sheet flow" or "shallow concentrated" flow for the purpose of SCS TR-55 flow calculations will fall into the category of sheet flow for the purpose of this portion of the ordinance;

500.5-03 Concentrated flow shall be defined as any flow for which there is a defined channel or culvert in the ground at the exit point from the property;

500.5-04 Flow must exit the property in the post-developed condition in the same regime as it exited the property in the pre-developed condition.

500.6. Regulations Regarding Bypass of Upstream Flows

500.6-01 If it is desired by the developer of a piece of property to pass upstream flows through the property through means of a drainage way physically separated from the storm water management system of the development, this a an acceptable practice;

500.6-02 The bypass drainage way must be designed to pass the 50-year 24-hour storm event without overtopping;

500.6-03 The bypass drainage way must exit the property in the post-developed condition at the same location as the drainage from that upstream basin exited the property in the pre-developed state;

500.6-04 The bypass drainage way must have approximately the same flow exiting the property as it did entering the property or must be included in the calculations for the overall storm water management system for the development;

500.6-05 In addition to the peak flow requirement listed above, it shall be the responsibility of the developer and his engineer to ensure that any change in timing of the discharge of the 50-year storm event does not create a flooding problem at any road, street, or storm water conveyance within 500 feet of any discharge exit point from the property which did not previously exist.

500.6-06 Refer to Section 200.01-04 of this ordinance for the definition of "flooding problem".

500.7 Regulations Regarding Detention in the 50-year Floodplain.

500.7-01. In the event that detention is to be provided within the 50-year floodplain, no storage will be considered below the flood elevation for the respective design storm event (e.g. 2-year, 5-year, 10-year, 25-year, or 50-year / 24-hour storm event);

500.7-02. In the event that calculations determining the elevation of the appropriate design storm event are (in the decision of the City Engineer of The City of Flowood) not conclusively presented, no storage will be considered below the 50-year flood elevation.

500.8 Regulations Regarding Retention in Detention Ponds (Wet Ponds)

500.8-01 For the purpose of this ordinance, "retention" will be considered the permanent storage of water and "detention" will be considered the temporary storage of water for the purpose of storm water management. Therefore, a retention/detention

basin provides for the permanent storage of water while utilizing the freeboard above the permanent pool elevation for detention of storm water run-off. The phrase "wet pond" will be used to mean the retention portion of the basin.

500.8-02. No volume below the permanent pool elevation for the wet pond will be considered for storage in the detention calculations;

500.8-03 The City reserves the right to require aeration in any wet pond at the expense of the developer. In the event that the developer questions such a requirement, he must provide calculations showing that the pond will not become a nuisance during any month of the year.

500.9 Existing Downstream Erosion and Flooding Problems

500.9-01 When the situation presents itself, developers are strongly encouraged to provide assistance with downstream drainage problems by means of decreasing rates of flow to substantially less than their pre-development conditions or slowing flow velocities to substantially less than their pre-development state;

500.9-02 In the event that such an opportunity exists, the City Engineer of The City of Flowood will make the possibility known to the developer at the earliest opportunity.

500.9-03 In the event that such improvements are made and The City of Flowood agrees that such improvements benefit the public welfare of the people of The City of Flowood, the provisions of Section V, Article B, of this ordinance may apply.

SECTION 501. TECHNICAL STANDARDS

501.1 Detention Basins

501.1-01 Definition

A surface water run-off storage facility that is normally dry but is designed to hold or retain storm water run-off temporarily during and immediately after a storm event. Examples of detention basins include but are not limited to: natural swales with crosswise earthen berms, constructed or natural surface depressions, subsurface tanks, pipes, or reservoirs;

501.1-02 Storage Volumes

The detention basin shall provide storage sufficient to control the excess run-off from the 2-year, 5-year, 10-year, 25-year, and 50-year / 24-hour storm events;

501.1-03 Maximum Depth

The maximum depth from the emergency spillway elevation to the lowest bottom of basin elevation shall be five (5) feet unless deeper depths are approved by the City Engineer of The City of Flowood;

501.1-04 Side slopes

Side slopes of the wet side of a detention basin dam shall be 4:1 or flatter. Side slopes of the dry side of a detention basin dam shall be 3:1 or flatter. These criteria are maximum slopes and are not intended to be design guidelines. The developer's engineer shall use geotechnical expertise and sound engineering judgment in the determination of appropriate slopes.

501.1-05 Principle Spillway (PSW)

The principle spillway shall be a reinforced concrete pipe of a class suitable for the depth of cover and other loads. The inlet control structure shall be a cast-in-place or precast concrete and designed to operate utilizing gravity and water head as the only driving forces. Inlet control structures utilizing pumps or other artificial operators are prohibited. The minimum diameter of the outfall pipe of the principle spillway is eighteen (18) inches. Seepage collars or a foundation trench, chimney drain, and strip drain shall be provided on all pipes through the dam embankment.

501.1-06 Emergency Spillways (ESW)

Emergency spillways should be constructed in cut conditions whenever possible and should not be provided over the dam embankment. In the event that a ramp spillway (a spillway over the embankment) is required by site conditions, this spillway must be paved using either concrete or riprap from the beginning of the control section to at least five (5) feet past the downstream toe of dam. Emergency spillways must be open channels and may not be pipes. The control section of the ESW must be a section, which is level in profile, is set at the ESW elevation, and is a least ten (10) feet long in profile. Vegetative cover must be established over all unpaved portions of the ESW. The ESW must be designed to pass the 50-year 24-hour storm event should the PSW get clogged.

501.1-07 Downstream Channels

Calculations must be provided showing the capacity of downstream channels to handle the rate and velocity of flow from the detention basin. These calculations must also meet all the standard storm water design criteria of The City of Flowood.

501.1-08 Appearance

Natural vegetation shall be maintained in detention areas where possible. No trees or deep-rooted shrubs shall be planted on the detention dam.

501.1-09 Seed, Sod, and Mulch

The requirements for seeding, sodding, and mulching shall be in accordance with the Mississippi Department of Transportation Standard Specifications.

501.1-10 Fencing

Detention structures shall be enclosed by a six-foot fence where the depth of the water would reach two (2) feet.

SECTION 502 RETENTION BASINS

502.1 Definitions

A. Retention Basin: A pond or basin which always retains a substantial volume of water to serve recreational, aesthetic, water supply, or other functions.

B. Retention / Detention Basin: A pond or basin provides for the permanent storage of water while utilizing the freeboard above the permanent pool elevation for detention of storm water run-off.

502.2 Retention / Detention Criteria

Retention/detention basins shall conform to all of the criteria listed in Section II, Article A, above.

502.3 Minimum Depths

The minimum depth of the permanent pool shall be four (4) feet.

502.4 Facilities for Emptying

For emergency purposes and periodic maintenance, facilities shall be provided or plans prepared to permit emptying and drainage. Pumps may be planned to be used for this purpose but an emergency plan must be prepared which details the precise location for obtaining the pump and an estimated time for its arrival.

502.5 Side slopes

Below water side slopes shall be 4:1 or flatter. A ledge shall be located between two (2) and three (3) feet under the permanent pool elevation which slopes back toward shore at about 1% slope. This ledge shall be a minimum of four (4) feet wide. These criteria are maximum slopes and are not intended to be design guidelines. The developer's engineer shall use geotechnical expertise and sound engineering judgment in the determination of appropriate slopes.

502.6 Freeboard

There shall be a freeboard of at least twelve (12) inches from the permanent pool elevation to the top of dam and the PSW structure should be capable of passing the 50-year 24-hour storm event before overtopping the dam.

502.7 Sediment Storage

Sediment storage shall be provided in all retention ponds such that sediment removal should be required no more than annually.

SECTION 503 FREESTANDING VELOCITY CONTROL STRUCTURES (ENERGY DISSIPATERS)

503.1 Where energy dissipaters are required to meet the velocity requirements contained within this ordinance, those structures shall be constructed in a permanent nature and shall be comprised of concrete, masonry, or stone.

503.2 Energy dissipaters are considered to be freestanding when they are more than 100 feet downstream from detention or retention dam. Otherwise, they fall under the requirements of Section II, Article A, above.

SECTION 504 FLOW REGIME STRUCTURES

504.1 Where flow regime structures are required to meet the flow regime requirements contained within this ordinance, those structures shall be constructed in a permanent nature and shall be comprised of concrete, masonry, or stone.

504.1-01 Flow will be considered to have been returned from concentrated flow to sheet flow when the flow width has been increased to five (5) times the concentrated flow width (top of bank to top of bank) or 40 feet, whichever is greater.

SECTION 505 SUBMITTAL REQUIREMENTS

505.1 Rate of Discharge

505.1-01 Pre-Development State Drainage Map – A drainage map shall be provided to the City Engineer of The City of Flowood showing (at a minimum) the following:

A. Contours of the land at 2-foot maximum intervals (in flat areas, spot shots and drainage areas, delineating the drainage basins, and showing the points where storm water discharge exits the property;

B. Property lines and easements with purposes noted. Name of all adjacent property owners and all property owners within 500 feet downstream;

C. Vicinity Map

D. Public rights-of-way adjacent to the property;

E. Existing drainage facilities and structures;

F. Peak flow rates for the 50-year storm event at points 500 feet downstream from all exit points;

G. A graphical display of the hydraulic length of the different drainage basins, which was used for calculating the time of concentration and travel time for each basin;

H. Location and elevations of all defined floodplains for the site.

505.1-02 Pre-Development State Calculations – Calculations shall be provided which show the pre-development rate of run-off at each of the exit points for the 2-year, 5-year, 10-year, 25-year, and 50-year / 24-hour storm events. These calculations shall use the SCS TR-55 methodology or other methodology approved by the City Engineer;

505.1-03 Post-Development State Calculations (without detention) – Calculations shall be provided which show the post-development rate of run-off at each of the exit points for the 2-year, 5-year, 10-year, 25-year, and 50-year / 24-hour storm events. These calculations shall use the SCS TR-55 methodology or other methodology approved by the City Engineer. These calculations shall use the same methodology and assumptions which were used to calculate the existing (pre-development state) peak flow rates;

505.1-04 Post-Development State Drainage Map – A drainage map shall be provided to the City Engineer of The City of Flowood showing (at a minimum) the following:

A. The existing and proposed contours of the land at 2-foot maximum intervals showing the effect of the proposed development on the delineation of the drainage basins and on the points where storm water discharge exits the property;

B. A table which gives the following information for each exit point:

1. Existing and proposed acreage draining to that point;
2. Existing and proposed time of concentrations;
3. Existing and proposed Curve Numbers;
4. Existing and proposed Peak Flow Rates for the 2, 5, 10, 25, & 50-year / 24-hour storm events. (without detention)

C. Proposed type of street drainage: roadside ditch, curb, or curb & gutter.

D. Proposed storm sewers and open drainage ways;

E. Location of proposed detention basins numbered to correspond with details;

F. Proposed peak flow rates and velocities for design flows at all exit points for the property including bypass channels;

G. Proposed peak flow rates for the 50-year 24-hour storm event at points 500 feet downstream from all exit points including bypass channels;

H. Location and elevations of all defined floodplains;

505.1-05 Storm water Detention Calculations – In the event that storm water detention is utilized to manage the storm water peak flow rate, calculations must be provided which show the following for each exit point:

A. Stage-Storage-Discharge curves for the detention basins;
B. Inflow hydrographs for the 2, 5, 10, 25, and 50-year 24-hour storm events (these must use the same methodology and assumptions as the peak flow calculations listed in Section III, Article A, Subsection iv, above);
C. Outflow hydrographs for the 2, 5, 10, 25, and 50-year 24-hour storm events (same methodology as referenced above);
D. Emergency spillway elevations with section and profile view;
E. Inlet riser details showing elevations and principle spillway details;
F. Top of dam and overtop elevations;
G. Listing of all input assumptions (if computer software used);
H. Backwater elevations for the flood elevations for the 2-year, 5-year, 10-year, 25-year, and 50-year 24-hour storm events and any impacts on the storage volume;
I. The FEMA 50-year flood elevation at the location of the proposed detention basin and any impacts on the storage volume.

505.1-06 Final Grading and Drainage Plan – A plan shall be provided to the City Engineer of The City of Flowood showing the effect of the proposed development with detention on the contours of the land, the delineation of the drainage basins, and on the points where storm water discharges from the property.
This plan must include the following as a minimum:

A. A table which gives the following information for each exit point:

1. Existing and proposed acreage draining to that point;
2. Existing and proposed time of concentrations;
3. Existing and proposed Curve Numbers;
4. Existing and proposed Peak Flow Rates for the 2, 5, 10, 25, & 100-year / 24-hour storm events. (with detention)

B. Layout of all proposed improvements on the site;

C. Existing and proposed contours with a 2-foot maximum interval;

D. The banks and centerlines of streams and channels;

E. The normal shoreline of lakes, ponds, retention basins and detention basins;

F. Storm, sanitary, and combined sewers with inverts and outfalls;

G. Delineation of 50-year floodplain as established by the 50-year flood elevations and the surveyed contours of the property;

H. Environmental features such as wetlands and designated natural areas;

I. Proposed storm sewers including sizes, inverts, outfalls, slopes, design flows, and headwater depths;

J. Location and invert elevation of proposed and existing sanitary sewers at all locations where they cross storm sewers;

K. A table which gives the following information for the site:

1. Overall site acreage;
2. Existing impervious surface percentage;
3. Proposed impervious surface percentage;

L. For each retention/detention basin, a table shall be shown giving the following information at a minimum:

1. Permanent pool elevation (retention only);
2. Permanent pool storage in acre-feet (retention only);

3. ESW elevation;
4. Pool storage at ESW elevation in acre-feet;
5. Outflow rate at ESW elevation;
6. Top of dam elevation;
7. Pool Storage at top of dam elevation in acre-feet;
8. Outflow rate at top of dam elevation;
9. The FEMA 50-year floodplain elevation at the location of the detention basin;

SECTION 506 ROUTING OF THE 50-YEAR STORM EVENT

506.1 Calculations shall be provided demonstrating that the 50-year storm event has been routed through the proposed drainage system utilizing the SCS TR-55 methodology or other methodology approved by the City Engineer. The calculations shall show the following at a minimum:

A. The ability of the detention basin / ESW system to handle the 50-year storm event without overtopping;

B. A comparison of existing versus proposed 50-year flood elevations at any road, street, and driveway crossings, storm water conveyances, and existing structures within 500 feet of the storm water discharge exit point from the proposed development;

C. That the impacts of the 50-year flood in the post-developed state do not satisfy any of the criteria for "flooding problems" as listed in this ordinance for any road, street, driveway, building, or structure within 500 feet from any storm water discharge exit point from the property. This includes structures which are located on the far side of an adjacent property owner or right-of-way.

SECTION 507 VELOCITY OF DISCHARGE

507.1 Calculations for all discharge exit points giving the velocities of flow in the pre-developed and the post-developed states for the 2-year 24-hour storm event. These calculations shall take into account changes in flow rates, cross-section, channel lining, flow regime, and proximity of detention basin outfall;

507.02 Calculations showing the impact of energy dissipaters as required on the velocity of discharge flow.

SECTION 508 REGIMES OF FLOW

508.1 Detailed information shall be provided for each discharge exit point from

the proposed development property, which determines the pre-development flow regime. Survey information, photographic evidence, or engineer's certification are acceptable;

508.2 Should it be required to change a concentrated flow to a sheet flow, calculations will be required showing the minimum spread of flow;

508.3 Sketches will be required showing the layout of the overflow structure and how it meets the minimum flow spread.

SECTION 509 BYPASS CHANNELS

509.1 Calculations showing the ability of the bypass channel to handle the 50-year 24-hour storm event without overtopping;

509.2 Calculations showing the ability of the bypass channel to handle the 2-year 24-hour storm event without severe erosion problems;

SECTION 510 RETENTION BASISNS

510.1 Calculations demonstrating that the retention basin can pass the 50-year 24-hour storm event without overtopping the dam;

510.2 Calculations confirming that the retention basin has sufficient storage to store one average year of sediment;

SECTION 511 REQUIRED DETAILS

511.1 Cross-section of proposed detention or retention dams;
511.2 Detail of PSW inlet structure;
511.3 Profile of ESW;
511.4 Cross-section of ESW;
511.5 Detail of impact basin at PSW outlet (if required);
511.6 Cross-sections of all major proposed drainage channels showing lining;
511.7 Details of freestanding velocity control structures (if required);
511.8 Details of flow spread structures (if required);
511.9 Sections of retention basin side slopes;
511.10 Detail of retention basin emptying system.

SECTION 512 ENGINEER'S STATEMENT

512.1 The above maps and calculations shall be accompanied by a transmittal letter which contains the following statement:

"I hereby state that the reports, calculations, and plans for the storm water management design of Name of Development were prepared under my direct supervision and the best of my knowledge and belief they are in accordance with the provisions of the The City of Flowood Storm water Discharge Management Ordinance."

Registered Professional Engineer
State of Mississippi
Registration NO.

ARTICLE VI.
EROSION AND SEDIMENT CONTROL/GRADING ORDINANCE

SECTION 600. During the construction process, soil is the most vulnerable to erosion by wind and water. This eroded soil endangers water resources by reducing water quality, and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of lakes. In addition, clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat, and to provide a healthy living environment for citizens of City of Flowood.

SECTION 601. As a result, the purpose of this article is to safeguard persons, protect property, prevent damage to the environment and promote the public welfare by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth on land in City of Flowood.

SECTION 602. DEFINITIONS

602.01 Certified Contractor	An individual who has received training and is licensed by Mississippi Department of Environmental Quality to inspect and maintain erosion and sediment control practices.
602.02 Clearing	Any activity, which removes the vegetative surface cover.
602.03 Drainage Way	Any channel that conveys surface runoff throughout the site.
602.04 Erosion Control	Measures that prevent erosion.
602.05 Erosion and Sediment Control Plan	A set of plans prepared by or under the direction of a licensed professional engineer indicating the specific measures and sequencing to be used controlling sediment and erosion on a development site both before, during and after construction.
602.06 Grading	Excavation or fill of material, including the resulting conditions thereof.
602.07 Perimeter Control	A barrier that prevents sediment from leaving a site either by filtering sediment-laden runoff, or diverting it to a sediment trap or basin.

602.08 Phasing	Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.
602.09 Sediment Control	Measures that prevent eroded sediment from leaving the site.
602.10 Site	A parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.
602.11 Site Development Permit	A permit issued by the municipality for which the construction or alteration of ground improvements and structures for the control of erosion, runoff and grading.
602.12 Stabilization	The use of practices that prevent exposed soil from eroding.
602.13 Start of Construction	The first land-disturbing activity associated with a development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.
602.14 Watercourse	Any body of water, including but not limited to lakes, ponds, rivers, streams, and bodies of water which are delineated by City of Flowood.
602.15 Waterway	A channel that directs surface runoff to a watercourse, or to the public storm drain.

SECTION 603 PERMITS

603.01 No person shall be granted a site development permit for land-disturbing activity, which would require the uncovering of part of a larger common plan of development or sale with a cumulative planned disturbance of equal to or greater than one (1) acre (for example, individual or commercial lots that are part of a subdivision or a commercial development that initially impacts less than one (1) acre but will ultimately exceed the one (1) acre threshold) or where the impact is on less than one (1) acre when more than fifty percent of the post development ground surface will be impervious without the approval of an Erosion and Sediment Control Plan by City of Flowood. (To be found in Appendix)

603.02 No site development permit is required for the following activities:

A. Any emergency activity, which is immediately necessary for the protection of life, property or natural resources.
B. Existing nursery and agricultural operations conducted as a permitted main or accessory use.

603.03 Each application shall bear the name(s) and address (es) of the owner or developer of the site, and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm, and shall be accompanied by a filing fee.

603.04 Each application shall include a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the Erosion and Sediment Control Plan, and that a Certified Contractor shall be on site on all days where construction or grading activity takes place.

603.05 The applicant will be required to file with City of Flowood a faithful performance bond or bonds, letter of credit, or other improvement security in an amount deemed sufficient by City of Flowood to cover all costs of improvements, landscaping, and maintenance of improvements for such period as specified by City of Flowood and engineering and inspection costs to cover the cost of failure or repair of improvements installed on the site.

SECTION 604 REVIEW AND APPROVAL

604.01 City of Flowood will review each application for a site development permit to determine its conformance with the provisions of this local regulation. Within thirty (30) days after receiving an application, City of Flowood shall, in writing:

A. approve the permit application;

B. approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this regulation, and issue the permit subject to these conditions; or

C. disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

SECTION 605 EROSION AND SEDIMENT CONTROL PLAN

605.01 The Erosion and Sediment Control Plan shall include:

A. A natural resources map identifying soils, forest cover, and resources protected under other chapters of this code. *This map should be at a scale no smaller than 1" = 100'.*

B. A sequence of construction of the development site, including stripping and clearing, rough grading, construction of utilities, infrastructure, and buildings, and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.

C. All erosion and sediment control measures necessary to meet the objectives of this local regulation throughout all phases of construction and permanently, after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate plans may be required at the close of each season.

D. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.

E. Provisions for maintenance of control facilities, including easements and estimates of the cost of maintenance.

605.02 MODIFICATION TO THE PLAN

A. Major amendments of the erosion and sediment control plan shall be submitted to City of Flowood and shall be processed and approved, or disapproved, in the same manner as the original plans.

B. Field modifications of a minor nature may be authorized by City of Flowood by written authorization to the permitee.

SECTION 606 DESIGN REQUIREMENTS

606.1 Grading erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of City of Flowood, and shall be adequate to prevent transportation of sediment from the site to the satisfaction of City of Flowood.

606.2 Clearing and Grading

A. Clearing and grading of natural resources, such as forest and wetlands, shall not be permitted, except when in compliance all other chapters of this Code.

B. Clearing techniques that retain natural vegetation and retain natural drainage patterns, as described in *Planning & Design Manual for the Control of Erosion, Sediment & Storm water,* shall be used to the satisfaction of City of Flowood.

C. Phasing shall be required on all sites disturbing greater than thirty (30) acres, with the size of each phase to be established during plan review and as approved by City of Flowood.

D. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.

E. Cut and fill slopes shall be no greater than 3:1, except as approved by City of Flowood to meet other community or environmental objectives.

F. As a minimum all silt fences shall be installed using metal T-posts. No silt fences may be installed by the use of wooded posts.

606.3 Erosion Control

A. Soil must be stabilized within five (5) days of clearing or inactivity in construction.

B. If vegetative erosion control methods, such as seeding, have not become established within two (2) weeks, City of Flowood may require that the site be reseeded, or that a non-vegetative option be employed.

C. On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in *Planning & Design Manual for the Control of Erosion, Sediment & Storm water* shall be used to ensure stabilization.

D. Soil stockpiles must be stabilized or covered at the end of each workday.

E. At the close of the construction season, the entire site must be stabilized, using heavy mulch layer, or another method that does not require germination to control erosion.

F. Techniques shall be employed to prevent the blowing of dust or sediment from the site.

G. Techniques that divert upland runoff past disturbed slopes shall be employed.

606.4 Sediment Controls

A. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.

B. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long-term storm water management.

C. Adjacent properties shall be protected by the use of a vegetated buffer strip, in combination with perimeter controls.

606.5 Waterways and Watercourses

A. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from the appropriate governmental agency.

B. When in-channel work is conducted, the channel shall be stabilized before, during and after work.

C. All on-site storm water conveyance channels shall be designed according to the criteria outlined in *Planning & Design Manual for the Control of Erosion, Sediment & Storm water.*

D. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels.

606.6 Construction Site Access

A. A temporary access road shall be provided at all sites.

B. Other measures may be required at the discretion of City of Flowood in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.

C. It shall be the responsibility of the developer to ensure that construction siltation is cleaned from the public road access at the end of each work day. In the event that the developer or his contractor does not maintain a clean access drive he shall be issued a stop work order until such clean up is complete.

SECTION 607 INSPECTION

607.1 City of Flowood or designated agent shall make inspections as hereinafter required and shall either approved that portion of the work completed or shall notify the permitee wherein the work fails to comply with the erosion and sediment control plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of City of Flowood shall be maintained at the site during the progress of the work. In order to obtain inspections, the permitee shall notify City of Flowood at least two (2) working days before the following:

A. Start of Construction
B. Erosion and sediment control measures are in place and stabilized
C. Site Clearing has been completed
D. Rough Grading has been completed
E. Final Grading has been completed
F. Close of the Construction Season

G. Final Landscaping

607.2 The permitee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved erosion and sediment control plan(s). The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional control measures. All inspections shall be documented in written form and submitted to City of Flowood at the time interval specified in the approved permit.

607.3 City of Flowood or its designated agent shall enter the property of the applicant as deemed necessary to make regular inspections to ensure the validity of the reports.

SECTION 608 ENFORCEMENT

608.1 Stop-Work Order; Revocation of Permit

In the event that any person holding a site development permit pursuant to this ordinance violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare, or safety of persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, City of Flowood may suspend or revoke the site development permit.

608.02 Violation and Penalties

No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this ordinance. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this ordinance is committed, continued or permitted, shall constitute a separate offense. Upon conviction of any such violation, such person, partnership, or corporation shall be punished by a fine of not less than $100 (one hundred dollars) and not more than $1000 (one thousand dollars), or by imprisonment for not more than six months, or both, for each separate offense. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this ordinance shall be required to bear the expense of such restoration.

SECTION 609 SEPARABILITY

The provisions and sections of this ordinance shall be deemed to be separable, and the invalidity of any portion of this ordinance shall not affect the validity of the remainder.

ARTICLE VII
ILLICIT DISCHARGE AND CONNECTION

SECTION 700. PURPOSE/INTENT

700.1 The purpose of this article is to provide for the health, safety, and general welfare of the citizens of The City of Flowood through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

700.1-01 To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by storm water discharges by any user

700.1-02 To prohibit illicit connections and discharges to the municipal separate storm sewer system

700.1-03 To establish legal authority to carry out all inspecting, surveillance and monitoring procedures necessary to ensure compliance with this ordinance

SECTION 701. DEFINITIONS

For the purpose of this ordinance, the following shall mean:

701.1 Authorized Enforcement Agency: employees or designees of the director of the municipal agency designated to enforce this ordinance.

701.2 Best Management Practices (BMPs): schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to storm water, receiving waters, or storm water conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

701.3 Clean Water Act: The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) and any subsequent amendments thereto.

701.4 Construction Activity: Activities subject to NPDES Construction Permits. These include construction projects resulting in land disturbance of 1 acre or more. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

701.5 Hazardous Materials: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious

characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

701.6 Illegal Discharge: Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in Section 107 of this ordinance.

701.7 Illicit Connections: An illicit connection is defined as either of the following:

701.7-01 Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or,

701.7-02 Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

701.8 Industrial Activity: Activities subject to NPDES Industrial Permits as defined in 40 CFT, Section 122.26(b)(14).

701.9 National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: means a permit issued by EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

701.10 Non-Storm Water Discharge: Any discharge to the storm drain system that is not composed entirely of storm water.

701.11 Person: means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

701.12 Pollutant: Anything, which causes or contributes to pollution. Pollutants may include, but are not limited to: plants, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid waste and yard wastes; refuse, rubbish, garbage, litter, or other discharged or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metal; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

701.13 Premises: Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

701.14 Storm Drainage System: Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-make or altered drainage channels, reservoirs, and other drainage structures.

701.15 Storm Water: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

701.16 Storm water Pollution Prevention Plan: A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to Storm water, Storm water Conveyance Systems, and/or Receiving Waters to the Maximum Extent Practicable.

701.17 Wastewater: Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

SECTION 702. APPLICABILITY

This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

SECTION 703. RESPONSIBILITY FOR ADMINISTRATION

The City of Flowood shall administer, implement, and enforce the provisions of this ordinance. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Director of the authorized enforcement agency to persons or entities acting in the beneficial interest of or in the employ of the agency.

SECTION 704. SEVERABILITY

The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance.

SECTION 705. ULTIMATE RESPONSIBILITY

The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

SECTION 706. DISCHARGE PROHIBITIONS

Prohibition of Illegal Discharges: No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

A. The following discharges are exempt from discharge prohibitions established by this ordinance:
    1. water line flushing or other potable water sources
    2. landscape irrigation or lawn watering
    3. diverted stream flows
    4. rising ground water
    5. ground water infiltration to storm drains
    6. uncontaminated pumped ground water
    7. foundation or footing drains (not including active groundwater dewatering systems)
    8. crawl space pumps
    9. air conditioning condensation
    10. springs
    11. non-commercial washing of vehicles
    12. natural riparian habitat or wet-land flows
    13. swimming pools (if dechlorinated-typically less than one PPM chlorine)
    14. fire fighting activities
    15. any other water source not containing Pollutants.
    16.

B. Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

C. Dye testing in an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.

D. The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

Prohibition of Illicit Connections:

A. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

B. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

C. A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

SECTION 707. SUSPENSION OF MS4 ACCESS

Suspension Due to Illicit Discharges in Emergency Situations: The City of Flowood may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

Suspension Due to the Detection of Illicit Discharge: Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

SECTION 708. INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City of Flowood prior to the allowing of discharges to the MS4.

SECTION 709. MONITORING OF DISCHARGES

A. Applicability: This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

B. Access to Facilities:
   1. The City of Flowood shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force, which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.
   2. Facility operators shall allow the City of Flowood ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.
   3. The City of Flowood shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's storm water discharge.

4. The City of Flowood has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure storm water flow and quality shall be calibrated to ensure their accuracy.
5. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the City of Flowood and shall not be replaced. The costs of clearing such access shall be borne by the operator.
6. Unreasonable delays in allowing the City of Flowood access to a permitted facility is a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.
7. If the City of Flowood has been refused access to any part of the premises from which storm water is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

SECTION 710. REQUIREMENT TO PREVENT, CONTROL, AND REDUCE STORM WATER POLLUTANTS BY THE USE OF BEST MANAGEMENT PRACTICES

The City of Flowood will adopt requirements identifying Best Management Practices for any activity, operation, or facility that may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a storm water pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

SECTION 711. WATERCOURSE PROTECTION

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing

privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

SECTION 712. NOTIFICATION OF SPILLS

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the authorized enforcement agency in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the City of Flowood within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

SECTION 713. ENFORCEMENT

A. Notice of Violation: Whenever the City of Flowood finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the authorized enforcement agency may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:
   1. The performance of monitoring, analyses, and reporting;
   2. The elimination of illicit connections or discharges;
   3. The violating discharges, practices, or operations shall cease and desist;
   4. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
   5. Payment of a fine to cover administrative and remediation costs; and
   6. The implementation of source control or treatment BMPs.

If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

SECTION 714. APPEAL OF NOTICE OF VIOLATION

Any person receiving a Notice of Violation may appeal the determination of the authorized enforcement agency. The notice of appeal must be received within 30 days from the date of the Notice of Violation. Hearing on the appeal before the appropriate authority or his/her designee shall take place within 15 days from the date of receipt of the notice of appeal. The decision of the municipal authority or their designee shall be final.

SECTION 715. ENFORCEMENT MEASURES AFTER APPEAL

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within 30 days of the decision of the municipal authority upholding the decision of the authorized enforcement agency, then representatives of the authorized enforcement agency shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

SECTION 716. COST OF ABATEMENT OF THE VIOLATION

Within 15 days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within 15 days. If the amount due is not paid within a timely manner as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

Any person violating any of the provisions of this article shall become liable to the city by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of 8 percent per annum shall be assessed on the balance beginning on the 31st day following discovery of the violation.

SECTION 717. INJUNCTIVE RELIEF

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this ordinance, the authorized enforcement agency may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abate or remediation of the violation.

SECTION 718. COMPENSATORY ACTION

In lieu of enforcement proceedings, penalties, and remedies authorized by this Ordinance, the authorized enforcement agency may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, etc.

SECTION 719. VIOLATIONS DEEMED A PUBLIC NUISANCE

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

SECTION 720. RECOVERY OF PROFESSIONAL EXPENSES

The authorized enforcement agency may recover all attorney's fees, court costs and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

SECTION 721. REMEDIES NOT EXCLUSIVE

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

ARTICLE VIII

VARIATIONS AND MODIFICATIONS

SECTION 800 HARDSHIP VARIANCE

800.1 Where the Governing Authority finds that extraordinary hardships may result from strict compliance with the regulations, it may vary the regulations so that substantial justice may be done and the public interest secured, provided that such variation will not have the effect on nullifying the intent and purpose of these regulations. No variance will be granted unless it is found that:

(a) Literal interpretation of the provisions of this Ordinance would deprive the Owner of reasonable use of their land; and

(b) Granting of the variance would be in harmony with the general purpose and intent of this Ordinance and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

(c) Any other reason which the Mayor and Board of Aldermen determine utilizes the variance.

800.2 All requests for variances shall be made in writing to the Public Works Director or the City Engineer and specifically state the provision from which a variance is requested.

SECTION 801 PLANNED UNIT DEVELOPMENT

801.1 The standards and requirements of these regulations may be modified by the Governing Authority in the case of a plan and program for a new village, a complete community, or a neighborhood unit, which in the judgment of the Governing Authority provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated and which also provide such covenants or other legal provisions as will assure conformity to and achievement of the Comprehensive Plan or these regulations.

SECTION 802 CONDITIONS

802.1 In granting variances and modifications, the Governing Authority may require such conditions as will secure substantially the objectives of the standards or requirements so varied or modified.

ARTICLE IX

ADMINISTRATION

SECTION 900 ADMINISTRATION

900.1 Final approval of plats and other data shall be the responsibility of the Governing Authority as described by law.

900.2 It shall be the duty of the City Engineer or the City Public Works Director to:

a. Consult with the Subdivider at the preapplication conference to provide technical knowledge and professional experience;

b. Review all Subdivision or street maps, plats, construction plans and supplementary data for conformance with the requirements of these regulations and to inform the appropriate City agency or Governing Authority, as required, of his findings;

c. Determine requirements governing the design or construction of required improvements in cases where no City standard exists; and

d. Inform the Governing Authority when said Authority is considering Final Plat approval whether or not the subdivision is in substantial conformance with these regulations.

900.3 The Governing Authority may, from time to time, issue instructions and operating procedures to be followed in the administration of these regulations to the end that the public may be informed and that approval of plats be expedited.

900.4 No building permits shall be issued by the City for any structure on a lot for which the Final Plat has not been approved and recorded in the manner prescribed herein.

900.5 No building permit shall be issued by the City for any structure on a lot which does not front on a legally established public street, or approved private street, which street must have a right-of-way width of not les than fifty (50) feet except in private streets in existence on the date of this Order.

900.6 No building permit shall be issued by the City for any structure on a lot for which there is not a City approved Lot Grading Plan which conforms to the Subdivision Grading and Drainage Plans.

SECTION 901 FEES

901.1 The following fees will be accessed to each and every development within the city of Flowood as follows:

- Site Development Application Permit: $200 for the first 10,000 S.F. plus $20 for each additional 1,000 S.F.
- Construction Plan Review: $75 per plan profile sheet
- As Built Plan Final Inspection: $25 per plan profile sheet
- Final Filing Plat: $750 plus $5 for each platted lot

SECTION 902 ONE YEAR WARRANTY

902.1 Prior to the final acceptance by the City of the dedicated utilities and streets, a one year warranty shall be submitted by all prime contractors for their phase of the work and by the owner for all the work performed.

SECTION 903 AMENDMENTS

903.1 The Governing Authority may from time to time adopt amendments that will tend to increase the effectiveness of these regulations. The regulations may be revised or amended by the Governing Authority as required by law.

SECTION 904 PENALTIES

904.1 Any person, firm or corporation using an unapproved and unrecorded plat in the sale of subdivided land or violating any of the terms or provisions of these regulations shall be guilty of a misdemeanor and, upon conviction, shall be punished by fine of not more than $100. Each violation and each day of failure to comply with the provisions of these regulations shall constitute a separate violation.

SECTION 905 SEVERABILITY

905.1 If any section, subsection, paragraph, sentence, clause or phrase of this ordinance should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portion of this ordinance, which shall remain in full force and effect, and to this end the provisions of this ordinance are hereby declared severable.

SECTION 906 CONFLICT

906.1 All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 907 EFFECTIVE DATE

907.1 This document shall be in full force and effect from and after its passage and publication as provided by law.

SO ORDERED, this the 18th day of January, 2005

Gary Rhoads, Mayor

Julia Williams, City Clerk

SEAL

"APPENDIX"

Application for Site Development Permit

Office Use Only:
Date Received:_____Receipt #:_____SW File #:_____

Applicant: Please respond to all of the questions as appropriate. When additional space is needed, attach additional pages and number of response accordingly.

NAME OF PROJECT:_____

Address of Project:_____

1. Name of Applicant_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

2. Name of Local Agent_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

3. Owner(s) of Record_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

4. Land Surveyor_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

5. Engineer_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

6. Attorney_____Phone ( )_____
Fax ( )_____

Address_____City_____St_____Zip_____

The following shall be submitted for all projects reviewed for Stormwater approval:

- ***(a) A completed Site Development Permit Application***
- ***(b) (3) copies of Erosion and Sediment Control Plan***
- ***(c) (3) copies Storm Water Pollution Prevention Plan***
- ***(d) Review Fee*****

*****Review Fee will be $200.00 for the first 10,000 SF and $100.00 for each additional 1,000 SF or portion thereof. (Payable to City of Flowood Mississippi.)***

PROPERTY INFORMATION

7. Legal Description: Lot_____Block_____Subdivision_____
   Section_____Township_____Range_____
   If not a subdivision lot attach metes and bounds description.

8. Tax Parcel Number_____

9. Street Address_____

10. Property Size_____Acres or _____square feet

11. Type of Proposed Development:

    A. _____Residential B. _____Commercial C. _____Industrial

12. Land Cleaning:
A. Total area to be cleared:_____Acres or _____square feet

B. Indicate methods to be utilized to prevent or retard erosion_____
_____
_____
_____

C. Indicate the various plant species to be removed during the clearing process_____
_____
_____

13. Building Construction and/or Paving Activities:

    A. Total land area:_____acres or _____square feet

    B. Total surface area of all impervious _____acres _____square feet

14. Indicate the rational runoff coefficients or SCS curve numbers utilized in the design of the stormwater management system.
Predevelopment_____Post-development_____

15. Indicate the specific design storm event. Duration_____Frequency_____
_____

16. If the stormwater management system utilized basin storage provide the following volumes:
Retention:_____CF Detention:_____CF

AFFIDAVIT

I, the undersigned, being first duly sworn, state that I am the owner, attorney, attorney-in-fact, agent lessee or representative of the owners of the property and which is the subject matter of the proposed review, that all answers to the questions in this application, and all sketches, data and other supplementary matter attached to an made a part of the application are true, correct and accurate to the best of my knowledge and belief. I further agree to comply with all stipulation and conditions that might be required by the City of Flowood, Mississippi for approval of the Erosion and Sediment Control Plan and the Storm Water Pollution Prevention Plan should it be approved.

STATE OF MISSISSIPPI
COUNTY OF RANKIN

Sworn to and subscribed before the this the _____ day of _____, 20___.

_____ _____

Notary Public Signature Signature of Applicant or Authorized Agent

_____ _____

Notary Printed Signature Applicant's Printed Signature

_____

_____

Address

My Commission Expires

_____

Name: Date:
Address:
Site Development Permit No:

Name of Development:

SITE DEVELOPMENT PERMIT

The Erosion and Sediment Control Plan and the Storm Water Management Plan submitted by you for the above referenced development has been approved for the Construction Activity described in the Plans. All clearing and grading must conform to the BMP's described in the Erosion and Sediment Control Plan submitted by you. All Storm Water management must be in compliance with the Storm Water Management Plan submitted by you. You must also be in compliance with all applicable provisions of the City's Storm Water Pollution Prevention Ordinance.

Inspections will be required as set forth in the Erosion and Sediment Control Plan and the Storm Water Management Plan. A two-day notice is required but ever effort will be made to complete them sooner. Revisions in the Erosion and Sediment Control Plan may be required if needed.

No measure may be covered prior to its inspection. A fee of $50 will be charged for each scheduled inspection and for each re-inspection, which is required because of noncompliance at a scheduled inspection.

The City of Flowood, Mississippi,
Department of Public Works

_____
Garry Miller, Public Works Director

Date:
Inspection No:
Site Development Permit No:

Name of Development:

Location of Development:

STORM WATER MANAGEMENT PLAN INSPECTION REPORT

NAME OF OWNER: _____
TELEPHONE #: _____

NAME OF CONTRACTOR: _____
TELEPHONE #: _____

DATE OF LAST INSPECTION: _____

IS A STORM WATER MANAGEMENT PLAN ON FILE? _____

IS THE PLAN BEING FOLLOWED? _____

IF NOT LIST THE CORRECTIVE ACTIONS THAT ARE NEEDED:

_____

_____

_____

Map Sketch:

WAS THE OWNER OR CONTRACTOR AVAILABLE? _____

IF SO DID YOU DISCUSS THIS REPORT WITH HIM/HER? _____

Inspected by: _____

If there is any question about this report please call Garry Miller, Public Works Director, City of Flowood.

Name: Date:
Address:
Site Development Permit No:

Name of Development:

NOTICE OF NONCOMPLIANCE
STORM WATER MANAGEMENT PLAN

It has been determined that you are not in compliance with the Storm Water Management Plan at the above permit site for the following reason.

1

2

3

Corrective measures should be taken on or before _____. When corrective measures have been completed you should call for a follow up inspection.

The City of Flowood, Mississippi,
Department of Public Works

_____
Garry Miller, Public Works Director

Name: Date:
Address:
Site Development Permit No:

Name of Development:

SECOND NOTICE OF NONCOMPLIANCE
STORM WATER MANAGEMENT PLAN

On the _____ day _____, 2005, you were sent a NOTICE OF NONCOMPLIANCE, STORM WATER MANAGEMENT PLAN. That Notice informed you of the reasons for your noncompliance and that you should come into compliance.

In a recent routine inspection I noted that the corrective measures have not been completed. In order to maintain this Site Development Permit you must correct all noted problem areas within _____ days. Your failure to do so may also result in your Building Permit being revoked and additional enforcement action being taken.

The City of Flowood, Mississippi,
Department of Public Works

_____
Garry Miller, Public Works Director

THIS WILL BE BY CERTIFIED MAIL

Date:
Inspection No:
Site Development Permit No:

Name of Development:

Location of Development:

EROSION AND SEDIMENT CONTROL INSPECTION REPORT

NAME OF OWNER: _____
TELEPHONE #: _____

NAME OF CONTRACTOR: _____
TELEPHONE #: _____

DATE OF LAST INSPECTION: _____

IS AN EROSION AND SEDIMENT CONTROL PLAN ON FILE? _____

IS THE PLAN BEING FOLLOWED? _____

IF NOT LIST THE CORRECTIVE ACTIONS THAT ARE NEEDED:

_____

_____

_____

Map Sketch:

WAS THE OWNER OR CONTRACTOR AVAILABLE? _____

IF SO DID YOU DISCUSS THIS REPORT WITH HIM/HER? _____

Inspected by: _____

If there is any question about this report please call Garry Miller, Public Works Director, City of Flowood.

Name: Date:
Address:
Site Development Permit No:

Name of Development:

NOTICE OF NONCOMPLIANCE
EROSION AND SEDIMENT CONTROL PLAN

It has been determined that you are not in compliance with the Erosion and Sediment Control Plan at the above permit site for the following reason.

1

2

3

Corrective measures should be taken on or before _____. When corrective measures have been completed you should call for a follow up inspection.

The City of Flowood, Mississippi,
Department of Public Works

_____
Garry Miller, Public Works Director

CC Building Permit Dept

Name: Date:
Address:
Site Development Permit No:

Name of Development:

SECOND NOTICE OF NONCOMPLIANCE
EROSION AND SEDIMENT CONTROL PLAN

On the _____ day _____, 2005, you were sent a NOTICE OF NONCOMPLIANCE, EROSION AND SEDIMENT CONTROL PLAN. That Notice informed you of the reasons for your noncompliance and that you should come into compliance.

In a recent routine inspection I noted that the corrective measures have not been completed. In order to maintain this Site Development Permit you must correct all noted problem areas within _____ days. Your failure to do so may also result in your Building Permit being revoked and additional enforcement action being taken.

The City of Flowood, Mississippi,
Department of Public Works

_____
Garry Miller, Public Works Director

CC Building Permit Dept

THIS WILL BE BY CERTIFIED MAIL

INDEXING INSTRUCTIONS:

Rankin County, Mississippi

INSTRUMENT PREPARED BY:

_____
_____
_____
_____
_____

AGREEMENT TO MAINTAIN
STORM WATER FACILITIES AND TO IMPLEMENT A
POLLUTION SOURCE CONTROL PLAN
BY AND BETWEEN
THE CITY OF FLOWOOD, MISSISSIPPI, AND
_____, AND
ITS HEIRS, SUCCESSORS, OR ASSIGNS
(HEREINAFTER "OWNER")

The upkeep and maintenance of storm water facilities and the implementation of pollution source control best management practices (BMPs) is essential to the protection of water resources in the City of Flowood, Mississippi. All property owners are expected to conduct business in a manner that promotes environmental protection. This Agreement contains specific provisions with respect to maintenance of storm water facilities and use of pollution source control BMPs. The authority to require maintenance and pollution source control is provided in the City of Flowood, Mississippi, Storm Water Pollution Prevention Ordinance.

Whereas, Owner has constructed improvements, including but not limited to, buildings, pavement, and storm water facilities on the property more particularly described in Attachment "A" (the "Property"). In order to further the goals of the City to ensure the protection and enhancement of Flowood's water resources, the City and Owner hereby enter into this Agreement. The responsibilities of each party to this Agreement are identified below.

OWNER SHALL:

(1) Implement the storm water facility maintenance program included and described in detail herein as Attachment "B."

(2) Implement the pollution source control program included and described in detail herein as Attachment "C."

(3) Maintain a record (in the form of a logbook) of steps taken to implement the programs referenced in (1) and (2) above. The logbook shall be available for inspection by City staff at Owner's business during normal business hours. The logbook shall catalog the action taken, who took it, when it was done, how it was done, and any problems encountered or follow-up actions recommended. Maintenance items ("problems") listed in Attachment "B" shall be inspected on an annual or more frequent basis as necessary. Owner shall photocopy the individual checklists in Attachment "B" and use them to complete its monthly inspections. These completed checklists would then, in combination, comprise the logbook.

(4) Submit an annual report to the City regarding implementation of the programs referenced in (1) and (2) above. The report must be submitted on or before January 10th of each calendar year and shall contain, at a minimum, the following:

(a) Name, address, and telephone number of the business, the person, or the firm responsible for plan implementation, and the person completing the report.

(b) Time period covered by the report.

(c) A chronological summary of activities conducted to implement the programs referenced in (1) and (2) above. A photocopy of the applicable sections of the logbook, with any additional explanation needed, shall normally suffice. For any activities conducted by paid parties not affiliated with Owner, include a copy of the invoice for services.

(d) An outline of planned activities for the next year.

THE CITY OF FLOWOOD SHALL:

(1) Provide technical assistance to Owner in support of its operation and maintenance activities conducted pursuant to its maintenance and source control programs. Said assistance shall be provided upon request, and as City time and resources permit, at no charge to Owner.

(2) Review the annual report and conduct a minimum of one (1) site visit per year to discuss performance and problems with Owner.

(3) Review this Agreement with Owner and modify it as necessary at least once every three (3) years.

REMEDIES:

(1) If the City determines that maintenance or repair work is required to be done to the storm water facility existing on the Owner's property, the City shall give the Owner of the Property within which the storm water facility is located, and the person or agent in control of the Property, notice of the specific maintenance and/or repair required. The City shall set a reasonable time in which such work is to be completed by the persons who were given notice. If the above required maintenance and/or repair is not completed within the time set by the City, written notice will be sent to the persons who were given notice stating the City's intention to perform such maintenance and bill the owner for all incurred expenses.

(2) If at any time the City determines that the existing system creates any imminent threat to public health or welfare, the City may take immediate measures to remedy said threat. When practicable, notice shall be given to the Owner.

(3) The owner grants an easement to the City for access to any and all storm water system features for the purpose of performing maintenance or repair as may become necessary under Remedies (1) and/or (2).

(4) The persons listed in (1), above, shall assume all responsibility for the cost of any maintenance and for repairs to the storm water facility. Such responsibility shall include reimbursement to the City within 30 days of the receipt of the invoice for any such work performed. Overdue payments will require payment of interest at the current legal rate for liquidated judgments. If legal action is necessary to collect such amounts, any costs or fees incurred by the City will be borne by the parties responsible for said reimbursements.

(5) The owner hereby grants to the City a lien against the Property in an amount equal to the cost incurred by the City to perform the maintenance or repair work described herein.

This Agreement is intended to protect the value and desirability of the real property described above and to benefit all the citizens of the City. It shall run with the land and be binding on all parties having or acquiring from Owner or their successors any right, title, or interest in the property or any part thereof, as well as their title, or interest in the property or any part thereof, as well as their heirs, successors, and assigns. They shall inure to the benefit of each present or future successor in interest of said property or any part thereof, or interest therein, and to the benefit of all citizens of the City.

Dated this the _____ day of _____, 200_.

_____

By: _____

Title: _____

CITY OF FLOWOOD

By: _____

Title: _____

STATE OF MISSISSIPPI
COUNTY OF _____

Personally appeared before me, the undersigned authority in and for the said county and state, on this _____ day of _____, 2005, within my jurisdiction, the within named _____, who acknowledged that he/she is _____ of _____, a _____ corporation, and that for and on behalf of the said corporation, and as its act and deed, he/she executed the above and foregoing instrument, after first having been duly authorized by said corporation so to do.

_____
NOTARY PUBLIC

My commission expires:

_____

STATE OF MISSISSIPPI
COUNTY OF _____

PERSONALLY appeared before me, the undersigned authority in and for the said county and state, on this ___ day of _____ 2005, within my jurisdiction, the within named_____, who acknowledged that he/she is _____ of the City of Flowood, Mississippi, a Mississippi municipality, and that for and on behalf of the said municipality, and as its act and deed he/she executed the above and foregoing instrument, after first having been duly authorized by said municipality so to do.

GIVEN under my hand and official seal of office, this the _____ day of _____ 2005.

_____
NOTARY PUBLIC

My Commission Expires:

_____