

ORDINANCE NO. 1496

AN ORDINANCE TO REGULATE STORM WATER DETENTION
WITHIN THE CITY OF MOUNTAIN BROOK, ALABAMA

WHEREAS, the City Council of the City of Mountain Brook finds that the modification of land occasioned by development, including paving, installation of drainage structures, and removal of vegetative cover, serves to decrease the capacity of receiving streams to accommodate storm water runoff by reducing the ability of the land in its natural condition to retain and absorb rainfall; and

WHEREAS, storm water runoff that exceeds the capacity of area streams, and the flooding caused thereby, causes economic loss, creates demands on municipal resources, and has an adverse impact on the health, safety, and welfare of the City of Mountain Brook; and

WHEREAS, it is possible, through application of recognized design criteria, to regulate the amount and rate of storm water runoff and to thereby minimize the adverse impact of such runoff;

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Mountain Brook, Alabama, as follows:

1. **Scope of the Ordinance.** The terms, conditions, and requirements established by this ordinance shall apply to all projects or developments that meet both of the following criteria:
 - a. The project or development entails construction on or over land, paving on or over land, or other disturbance or modification of land that will have a measurable or demonstrable increase in the amount and/or rate of discharge of storm water runoff when compared to such data prior to development.
 - b. The project or development is one that requires review and approval of either the Public Works or Inspections Departments of the City of Mountain Brook under other provisions of the Mountain Brook City Code.

This ordinance shall apply to and be enforceable against the owner(s) of the property that is subject to development of the type described above, and all persons, firms, or corporations engaged in activities for which authorization is required under the terms of this ordinance.

2. **Nonpermitted Development Activities Prohibited.** No construction or building permit shall issue and no activity of the type described in section one shall be undertaken pursuant to any such permit unless and until the owner of the property or his (her, its) duly authorized agent shall have first secured a permit from the City of Mountain Brook ("the City") that evidences compliance with the terms, conditions, and requirements of this

ordinance (hereinafter referred to as a “storm water detention permit”). Upon issuance of the storm water detention permit, no work in furtherance of the development shall proceed except in conformity with the plans and specifications upon which issuance of the permit was based.

3. **General Storm Water Detention and Design Objectives and Criteria.**

- a. The owner(s) of land for which development is proposed, or a duly authorized agent thereof, shall submit to the City detailed engineering plans for the site proposed for development that will, when installed or otherwise implemented, minimize or, if practicable, eliminate any difference in the rate or velocity and volume of water (“differential runoff”) discharged from the parcel for which the development or project is proposed prior to and after completion of the project.
- b. The goal of storm water management design shall be to equalize amounts and rates of storm water discharge based on peak flows for 2-year through 100-year, 24-hour storms, and shall assume that land is fully developed in accordance with the City’s comprehensive land use plan. Engineering data supporting differential runoff and detention volume calculations, as well as the adequacy of detention, discharge, and control structures, shall be submitted to the City for review. A description of the method to be used in maintaining components of the storm water management system shall also be submitted.
- c. Storm water management design will ordinarily be based on development of a single tract or parcel of land unless special topographical, drainage, or engineering considerations require design based on a larger area in order to achieve the purposes of this ordinance. Where development activity is proposed for a lot or parcel that is part of a larger development plan, such as a subdivision that is to be developed in phases or sectors, the City may require that design criteria be based on the total development or project. When appropriate, land that is not within the city limits should be included within the engineering studies that form the basis of the storm water detention permit application. Conversely, while lots within a subdivision that has received a storm water management permit will ordinarily be covered by the subdivision permit, development of individual lots may require the installation of detention facilities and associated design features if the “maximum impervious area” exceeds the amount allowed by this ordinance, if conditions in the receiving system are inadequate, or if other harmful effects are likely to occur in the absence of appropriate detention facilities.
- d. Storm water management design shall be based upon and shall take into account permitted uses, densities, lot sizes, and other relevant provisions of the Mountain Brook zoning ordinance.
- e. Modifications or exceptions to the design criteria set forth in this ordinance may be approved by the City when strict application of the terms of the ordinance would

create a material hardship and would not serve the purposes of the ordinance; provided, however, that nothing herein shall be deemed to authorize any deviation from the terms of this ordinance without approval of the City.

- f. Any material modification of any existing storm water detention system shall be subject to the terms and conditions of this ordinance.

4. **Detention Facilities.**

a. **General criteria.**

- i. Detention facilities shall be located within the parcel limits of the project under consideration. ✓
- ii. Subsurface detention may be permitted with adequate verification of structural adequacy.
- iii. No detention or ponding will be permitted within public road rights-of-way.
- iv. Location of detention facilities immediately upstream or downstream of the project will be considered by special request if proper documentation is submitted with reference to practicality, feasibility, and proof of ownership or right-of-use of the area proposed.
- v. Any area susceptible to or designed as overflow by higher design intensity rainfall (10-year frequency and above) shall be sodded or paved.
- vi. Methods of detention such as seepage pits, french drains, etc., are discouraged. If such methods are proposed, confirmation of soils data, percolation, geological features, and other relevant data shall be submitted with the application.

b. **Control Features.**

- i. Detention facilities shall be provided with effective control structures. Plan view and sections of the structure with adequate detail shall be included in plans.
- ii. Low-flow pipes shall not be smaller than eight (8) inches in diameter to minimize maintenance and operating problems, except in parking lot and roof retention systems, for which the minimum size of openings shall be designed specifically for each condition. The low-flow pipe shall be provided with a bar-screen on a minimum 2:1 slope to reduce blockage by debris.

- iii. The overflow opening or spillway shall be designed to accept the total peak runoff of the improved tributary area.
- c. **Discharge Systems.** Sizing of the system below the control structure shall be for the total improved peak runoff tributary to the structure with no allowance for detention.
- d. **Maintenance.**
 - i. Detention facilities, when required, are to be built in conjunction with the storm sewer installation and/or grading and must be fully operational as soon as is practicable after vegetation is removed from the land. Silt and debris connected with early construction must be removed periodically from the detention area and control structures in order to maintain full storage capacity.
 - ii. Responsibility for maintenance of detention facilities shall remain with the property owner and the developer until such time as applicable escrows are released and the duty to permanently maintain the facilities has been transferred to and vested in trustees, officers, or other identified persons or entities by means of binding covenants, trust indentures, or like undertakings. The nature, content, and form of the instrument by which maintenance obligations are established shall be subject to the review and approval of the City and shall be enforceable by the City. The City shall have a lien on real property to the extent necessary to recover its costs in enforcing any maintenance obligation imposed upon the owner or developer or any successor thereto under the terms of this ordinance.
 - iii. The City of Mountain Brook will not accept maintenance responsibility for detention facilities required under this ordinance, and no action on the part of the City to enforce or remedy any violation of the ordinance shall be deemed an assumption of responsibility or obligation to repair or maintain the facilities.
- e. **Verification of Adequacy.** Adequacy of storm water management design shall be supported by a written engineering analysis that shall be submitted to the City and that shall include, at a minimum, the following data:
 - i. Existing drainage area and peak flows to the detention facility.
 - ii. Proposed drainage area and peak flows to the detention facility.
 - iii. Inflow hydrograph for each design storm.

- iv. Outflow hydrograph for each design storm.
- v. Storage-elevation and discharge-elevation calculations.
- vi. Required storage volume for each design storm.
- vii. Statement of methodology used for the detention facility design.
- viii. Routing calculations for each design storm.
- ix. Verification that the detention facility will not create or aggravate downstream flooding due to the delay in peak flows from the detention facility.

For all projects, routing calculations shall be submitted in legible tabulated form. Proof of adequacy of volume of retention and sizing computations for low-flow structures shall also be submitted. Features of stability and safety may also need to be documented if the scope of the project requires special attention in this area of design.

5. **Requirements Applicable to Particular Types of Development and Detention Methods.**

- a. **Common Ground Projects.** Detention facilities should be located in common areas. Projects that include common property shall establish (in the recorded plat) maintenance and access easements for the detention facilities and shall include provisions for maintenance in the trust indentures. ✓
- b. **Professional, Office Park, Local Business, Community Shopping, Mixed Use and PUD.** Detention areas in these districts will be permitted provided that maintenance and access agreements are established and recorded when required by the City.
- c. **Multiple Residential.** Detention areas in multiple family residential zoning districts Residence D and Residence E may require maintenance and access easements and, with respect to detention facilities that are located in or on common areas or property, appropriate deed restriction or trust indentures.
- d. **Single Family Residential.** Detention areas in residential zoned districts Residence A, Residence B, Residence C, Estate Residence, and Clustered Residence may be required if deemed necessary by the City. In such cases a trust indenture, covenant, or other appropriate instrument may be required in order to provide maintenance responsibility and funding therefor. The recorded plat shall be clearly marked with the legend "Detention Area." ✓

- e. **Single Lot Development.** Development of single lots shall be in accord with applicable provisions of the zoning ordinance, provided that the maximum impervious area shall be limited to the maximum building area permitted for the use in question by the zoning ordinance, plus an additional five (5) percent of the parcel on which the project is to be constructed. For purposes of this ordinance, impervious area shall be defined as the developed area of the lot, including house and appurtenant structures, as well as surfaces that do not allow the free passage of water through the material into the ground. Impervious area shall include, without limitation, sidewalks, driveways, parking areas, decks, and patios, unless such surfaces are constructed of materials that allow passage of water into the ground at a rate equal to the predeveloped condition. The percentage of building and impervious areas shall not exceed that allowed by this ordinance unless an approved method of storm water detention or landscaping is used to mitigate increases in storm water runoff. If storm water detention is used, the design shall comply with the minimum requirements set forth in this ordinance. If landscaping and/or plantings are used, the design shall be performed by a registered architect, landscape architect, or engineer, and shall include plans, details, and calculations demonstrating compliance with the requirements of this ordinance.
- f. **Dry Reservoirs.** Wet weather ponds or dry reservoirs shall be designed with appropriate safety, stability, and ease of maintenance features, and shall not exceed five (5) feet in depth. Maximum side slopes for grassed reservoirs shall not exceed one (1) foot vertical for two (2) foot horizontal (2:1) unless adequate measures are included to provide for the above-noted features. In no case shall the limits of maximum ponding elevation be closer than thirty (30) feet horizontally from any building and less than two (2) feet (vertically) below the lowest sill elevation of any building to be located on the parcel to be developed. The entire reservoir area shall be seeded, fertilized and mulched, sodded, or paved prior to release of surety if required by the City. Wet weather ponds or dry reservoirs shall be enclosed by fencing a minimum of six (6) feet high, with one (1) gate and lock provided. The applicant is encouraged to use a fencing material aesthetically compatible with the surrounding area and the development.
- g. **Open Channels.** Normally permitted open channels may be used as detention areas provided that the limits of the maximum ponding elevation are not closer than thirty (30) feet horizontally from any buildings, and not less than two (2) feet (vertically) below the lowest sill elevation of any building to be located on the parcel to be developed. No ponding will be permitted within public road rights-of-way. Maximum depth of detention in open channels shall be five (5) feet.

For trapezoidal sections, the maximum side slopes of the detention area of the channel shall not exceed one (1) foot vertical for two (2) feet horizontal (2:1). Safety, stability, and ease of maintenance shall be incorporated into channel section design.

The entire reservoir area of the open channel shall be seeded, fertilized and mulched, sodded, paved, or lined prior to release of escrows.

The hydraulic elevations resulting from channel detention shall not adversely affect adjoining properties.

- h. **Permanent Lakes.** Permanent lakes with fluctuating volume controls may be used as detention areas provided that the limits of maximum ponding elevations are no closer than thirty (30) feet horizontally from any building and not less than two (2) feet (vertically) below the lowest sill elevation of any building located on the parcel to be developed.

Maximum side slopes for the fluctuating area of permanent lakes shall be one (1) foot vertical to two (2) feet horizontal (2:1).

Maximum fluctuation from permanent pool elevation to maximum ponding elevation shall be three (3) feet.

Special attention should be given to safety considerations in designing permanent lakes in residential areas.

Viability of the permanent impoundment shall be considered. Generally, the permanent pool should be no greater than one-tenth the size of the tributary drainage area. The minimum depth of at least twenty-five percent (25%) of the permanent pool area should be no less than eight (8) feet. Allowances for silting under denuded soil conditions (during construction) for a period of at least one (1) year is also recommended.

The entire fluctuating area of the permanent reservoir shall be seeded, fertilized and mulched, sodded, or paved prior to release of surety if required by the City. Any area susceptible to or designed as overflow by higher design intensity rainfall (10-year frequency) shall be sodded or paved.

- i. **Parking Lots.** Detention is permitted in parking lots to a maximum depth of eight (8) inches. In no case should the maximum limits of ponding be designed closer than ten (10) feet from a building unless waterproofing of the building and pedestrian accessibility are properly documented. The minimum freeboard from the maximum ponding elevation to the lowest sill elevation shall be one (1) foot.

6. Application and Appeal Process.

- a. **Letter of Application.** All proposed projects shall be submitted with a letter of application that shall include the name of the project; the name, address, and telephone number of the property owner and the developer; the name, address and

telephone number of the owner/developer's consulting engineer; and a description of the development for which the storm water detention permit is sought.

- b. **Engineer's Seal.** All plans and specifications submitted for review and/or approval shall be prepared by, or under the direct supervision of, a registered professional engineer, licensed in the state of Alabama, and shall meet the minimum standards and requirements of the City and other applicable authorities. Each of the plan, profile, and special drawing sheets for a project shall bear a legible stamp of the professional engineer in charge of the project or development. If the name or license number is not clear, the signature and number shall be added.
- c. **Predesign Conference.** The applicant and the consulting engineer are encouraged to contact the City for a predesign conference at the conceptual stage of a project in order to clarify the application of this ordinance to the development, address any questions, and minimize cost, delay, and inconvenience to the developer.

Subsequent conferences during the preparation of plans may be arranged by the consulting engineer or the developer to obtain preliminary, informal decisions on items requiring clarification.

- d. **Review Fees.** Each application for a storm water detention permit shall include a nonrefundable fee of Four Hundred Dollars (\$400). Should the actual, reasonable cost to the City for engineering or other technical review of the application exceed Four Hundred Dollars (\$400), the additional cost shall be paid by the applicant prior to issuance of the detention permit.
- e. **Issuance of Certificate.** As soon as is practicable following submission of all materials required under this ordinance and any additional material or information that may be required by the City, the City shall approve or disapprove in writing the application for a storm water detention permit. Prior to issuance of a final decision on the application, the City may engage in informal discussions with the applicant that are aimed at resolving any matters that could ultimately impede or prevent approval of the permit. Conditional approval may be given, but should be reserved only for exceptional circumstances under conditional approval would better serve the purposes of this ordinance.
- f. **Appeal of Adverse Decision.**
 - i. In the event favorable action is not taken on the application within sixty (60) days of its filing, the applicant may appeal the City's adverse action (or its failure to act) in writing to the Mountain Brook Planning Commission. After setting the matter for hearing, the Planning Commission may review and determine any issue or matter made the basis of the appeal, but may condition its agreement to accept and decide any

appeal on applicant's agreement to pay for the cost of any additional testing or evaluation that the Planning Commission may reasonably require in connection with its review of the case. The Planning Commission may likewise review any decision to suspend or revoke any storm water detention permit.

- ii. All appeals must be made in writing, must specify the grounds for appeal, and must be accompanied by a payment of One Hundred Dollars (\$100) to cover the cost of additional processing and review. Appeals should be addressed to the attention of the City Manager and must be received by the City Manager within thirty (30) days of the date of the written decision that is the basis of the appeal.
- iii. Following a review of the appeal, the Planning Commission shall be authorized to sustain, reverse, or modify the decision from which the appeal is taken, or to grant such other relief, if any, as it believes to be warranted under the facts and circumstances, and with due regard to the applicable provisions of this ordinance and the purposes sought to be served hereby.
- iv. The Planning Commission shall decide any appeal presented to it within ninety (90) days of its filing. The decision of the Planning Commission shall be in writing and shall be final, subject to any remedy at law or in equity that may be available to the applicant.

7. **Disclaimer of Liability.** Nothing in this ordinance and no action, statement, approval, or decision made under authority of the ordinance shall be deemed to constitute a representation, warranty, or guarantee with respect to the adequacy of any storm water management facility or design or to constitute an assumption of any legal duty or liability with respect thereto.
8. **Penalties.** Any person who shall violate any provision of this ordinance shall, upon conviction, be punished by a fine of not less than One Dollar (\$1.00) or more than Five Hundred Dollars (\$500.00) and/or may be imprisoned or sentenced to hard labor for the City for a period not exceeding six (6) months, at the discretion of the court trying the case. Any corporation found to be in violation of any provision of this ordinance shall, upon conviction, be punished by a fine of not less than One Dollar (\$1.00) or more than Five Hundred Dollars (\$500.00) at the discretion of the court trying the case. Said penalties shall be in addition to any and all other actions, remedies, or means of enforcing compliance with municipal ordinances provided by law.
9. **Repealer:** All ordinances or parts of ordinances heretofore adopted by the City Council of the City of Mountain Brook, Alabama, that are inconsistent with the provisions of this ordinance are hereby expressly repealed.

10. **Severability:** If any part, section or subdivision of this ordinance shall be held unconstitutional or invalid for any reason, such holding shall not be construed to invalidate or impair the remainder of this ordinance, which shall continue in full force and effect notwithstanding such holding.
11. **Effective Date:** This ordinance shall become effective immediately upon adoption and publication as provided by law.

ADOPTED: This 13th day of November, 2001.



Alice M. Williams, Council President

APPROVED: This 13th day of November, 2001.

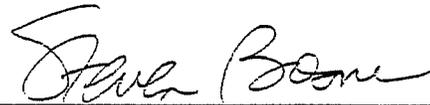


Lawrence T. Oden, Mayor

CERTIFICATION

I, Steven Boone, City Clerk of the City of Mountain Brook, Alabama, hereby certify the above to be a true and correct copy of an ordinance adopted by the City Council of the City of Mountain Brook, Alabama, at its regular meeting on November 13, 2001, as same appears in the minutes of record of said meeting, and published by posting copies thereof on November 14, 2001, at the following public places, which copies remained posted for five (5) days as provided by law:

City Hall, 56 Church Street
Gilchrist Pharmacy, 2850 Cahaba Road
Rite-Aid Pharmacy, 2020 Cahaba Road
CVS Pharmacy, 49 Euclid Avenue



Steven Boone, City Clerk

