

Title 3: Development and Permitting

Chapter 300. General Provisions

Section 300-10. Purpose.

300.10.1 Title 3 of this UDO establishes procedures and standards related to the development and subdivision of land. This Title is designed to facilitate adequate provision for water, sewer, stormwater management facilities; for the dedication of rights-of-way or easements for streets and utility purposes; to facilitate the further subdivision of larger tracts into smaller parcels of land; and to provide proper land records for the convenience of the public and for better identification and permanent location of real property boundaries. This Title is also designed to protect and enhance the quality of the natural environment of the County by encouraging the preservation and protection of significant existing trees; assisting in the natural control of solar heat; reducing the impact of development on the community's storm drainage system; assisting in soil conservation and flood control; reduction of air emissions and noise; conserving water supply; and enhancing the visual and aesthetic appearance of the community.

Section 300-20 Relationship to Existing Ordinances.

300-20.1 Whenever there is a discrepancy between minimum standards or dimensions required in this Title and those contained in zoning regulations, building codes, or other official regulations or resolutions, the most restrictive shall apply. In those instances where development standards for a parcel of land or a specific project have been lawfully and explicitly established as a condition of approval for a rezoning, variance, permit, or other formal action by the Board of Commissioners, the Zoning Board of Appeals, or any other authorized body, the requirements of such conditions shall control.

Section 300-30. Modifications, Waivers, and Appeals.

300-30.1 Modifications. Modifications of the design standards set forth in Chapters 350 through 380 the standard drawings as described in Section 1.0 of the Appendix may be authorized by the Director in specific cases when, in his or her opinion, undue hardship may result from strict compliance; provided any such determination shall be based fundamentally on the fact that unusual topographical or other exceptional conditions require such modification, or that the granting of the modification will not adversely affect the general public welfare or nullify the intent of these standards or regulations. Any such modification granted by the Director shall be made in writing to the applicant and made a part of the Department's records. Application for any modifications shall be filed in writing with the Director by the applicant on a form provided by the Department with necessary supporting documents and application fees as established by the Board of Commissioners and shall explain in detail the reasons and facts supporting the application.

300.30.2 Waivers. Waiver requests of all other requirements of Title 3 of the UDO shall be submitted on an application form as prescribed by the Director, along with such fees as shall be established by the Board of Commissioners. When considering waivers, the Board of Commissioner's shall consider whether undue hardship may result from strict compliance; provided any such determination shall be based fundamentally on the fact that unusual topographical or other exceptional conditions require such modification, or that the granting of the waiver will not adversely affect the general public welfare or nullify the intent of these standards or regulations. The Director shall coordinate the review of each waiver with all other affected County departments and shall

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summarize such comments or recommendations as may be received to the Board of Commissioners for action in their normal course of business. Exception: waiver requests from the stormwater requirements of Title 3 shall be submitted to the Board of Construction Adjustments and Appeals for action in their normal course of business.

300-30.3 Appeals. Appeals of the interpretation by the Director of the requirements of Title 3 of the UDO and of the standard drawings as described in Section 1.0 of the Appendix shall first be submitted in writing on a form provided by the Department to the Director who shall review the request in a timely manner and receive comments from other affected county departments. The appeal thereupon shall be forwarded to the Board of Commissioners for final action in their normal course of business. Exception: appeal requests from the stormwater requirements of Title 3 shall be submitted to the Board of Construction Adjustments and Appeals for action in their normal course of business.

Section 300-40. Stop Work Orders.

300-40.1 Stop work orders may be issued for violations of Title 3 of this UDO as provided in this UDO.

Section 300-50. Activities Limited to Permit Authorization.

300-50.1 Development activities shall be limited to those as authorized by the applicable permit and as may be further restricted by conditions of approval pertaining thereto attached by the Department or other department or agency as may have authority or jurisdiction over said activities in whole or in part.

Section 300-60. Additional Information Requirements for Development on Properties with Riparian Buffers

300-60.1 Any permit applications for property requiring riparian buffers and/or setbacks must provide additional information as indicated in this UDO.

Chapter 310. Permits Required for Development or Construction

Section 310-10. Limited Land Disturbance Permits.

310-10.1 Clearing Permit, Clearing and Grubbing Permit, and Grading Permit. The following permits covering portions of the land development process may be issued in accordance with the requirements of this UDO and the provisions of any *Metropolitan River Protection Act* Certificate, if applicable:

A. *Clearing Permit:*

1. A permit limited to clearing only with no grubbing or other land disturbance except for such activities necessary to install and maintain erosion and sediment control practices (as defined in the Georgia Soil Erosion and Sedimentation Act) may be authorized upon identification of the property, a specimen tree survey, the limits of the area to be cleared, the type of activities to be undertaken and the following additional items if required by the Department:
 - a. Soil Erosion, Sedimentation and Pollution Control Plan.
 - b. Hydrology Study.
 - c. Specimen Tree Survey
 - d. Specimen Tree Concept Plan.
 - e. Tree Preservation and/or Replacement Plan.
2. All clearing activities are to be consistent with the provisions of this UDO, and any conditions of zoning approval. If clearing of the required tree density units is proposed, a performance bond and a development performance agreement may be required prior to issuance of permit to guarantee tree replacement will occur in future phases.
3. A clearing permit shall expire unless activities are commenced within 60 consecutive calendar days of issuance of the permit or if activities lapse and are abandoned for a period exceeding 60 consecutive calendar days.
4. A clearing permit shall not be construed as approval of or authorization to construct any improvements, buildings, or other structures on the property.
5. If landscape improvements are required by the clearing permit, then all plantings must be completed. A performance bond may be filed for incomplete work prior to the closing of such permit, if approved by the Department.

B. *Clearing and Grubbing Permit:*

1. A permit limited to clearing and grubbing only may be authorized upon identification of the property, a specimen tree survey, the limits of the area to be cleared and grubbed, the type of activities to be undertaken, and the following additional items if required by the Department:
 - a. Soil Erosion, Sedimentation and Pollution Control Plan.
 - b. Hydrology Study
 - c. Specimen Tree Survey
 - d. Specimen Tree Concept Plan
 - e. Tree Preservation and/or Replacement Plan.

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2. Appropriate soil erosion, sedimentation and pollution control and tree protection measures shall be placed and maintained as required. If clearing of the required tree density units is proposed, a performance bond and a development performance agreement may be required prior to issuance of permit to guarantee tree replacement will occur in future phases.
 3. A permit for clearing and grubbing shall expire unless activities are commenced within 60 consecutive calendar days of issuance of the permit or if activities lapse and the project is abandoned for a period exceeding 60 consecutive calendar days.
 4. A clearing and grubbing permit shall be limited to the removal of vegetation and stumps and the placement of required tree protection measures and soil erosion and sedimentation facilities and may authorize the removal of existing stormwater facilities and infrastructure on the property at the option of the developer. A demolition permit is required to remove all other existing structures. No grading or construction activities may be started under a clearing and grubbing permit except for such activities necessary to install and maintain erosion and sediment control practices. The approval of a clearing and grubbing permit shall not be construed as approval of or authorization to construct any improvements, buildings, or other structures on the property.
 5. If landscape improvements are required by the clearing and grubbing permit, then all plantings must be completed of a performance bond may be filed for incomplete work prior to the closing of such permit, if approved by the Department.
- C. *Grading Permit:*
1. A grading permit, which may include clearing and grubbing, may be issued prior to approval of a development permit, as provided in this UDO. A grading permit may also be issued for earth borrow or storage, where no development or construction is proposed or imminent, based on approval of a grading plan, identification of the property, a specimen tree survey, the limits of the area to be graded, the type of activities to be undertaken, , and the following additional items if required by the Department:
 - a. Soil Erosion, Sedimentation and Pollution Control Plan.
 - b. Hydrology Study
 - c. Specimen Tree Survey
 - d. Specimen Tree Concept Plan
 - e. Tree Preservation and/or Replacement Plan
 2. If clearing of the required tree density units is proposed, a performance bond and a development performance agreement may be required prior to issuance of permit to guarantee tree replacement will occur in future phases.
 3. A permit authorizing but limited to grading (and clearing and grubbing) shall expire unless activities are commenced within 60 consecutive calendar days of issuance of the permit or if activities lapse and the project is abandoned for a period exceeding 60 consecutive calendar days. Any site for which the grading permit expires shall be stabilized within 14 days.
 4. A grading permit shall be limited in its authorization to land grading activities along with associated tree protection, clearing and grubbing, and demolition activities, and may authorize the construction of storm drainage improvements and soil erosion and sedimentation measures as allowed by the permit itself. The approval of a grading permit shall not be construed as approval of or authorization to construct any other improvements, buildings, or other structures on the property.

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5. If landscape improvements are required by the grading permit, then all plantings must be completed. A performance bond may be filed for incomplete work prior to the closing of such permit, if approved by the Department.
- D. *Tree Thinning, Timber Harvesting, or Removal of Trees for Disease or Insect Infestation Permit:*
1. A tree thinning, timber harvesting, or removal of trees permit may be issued subject to the requirements of this UDO.

Section 310-20. Development Permits.

310-20.1 Development Permits.

- A. *Development Activities Authorized.* A development permit shall be issued to authorize all activities associated with the land development process, including clearing and grubbing, grading, and the construction of such improvements as streets, surface parking areas and drives, stormwater drainage facilities, sidewalks, or other structures permanently placed on or in the property. This does not authorize construction of any buildings and other structures requiring the issuance of a building permit. Sanitary sewer and water system improvements shall be authorized by the Department of Planning and Development and require the issuance of a utility construction permit prior to commencement of installation.
- B. *Development Permit Approval.* A development permit shall be issued at the developer's request following approval of a *Metropolitan River Protection Act* Certificate, if applicable, and upon approval of Development Plans, and all other documents required to be submitted by this UDO. All applications submitted for development permit approval will expire after twelve months if no permit is issued within said time period, unless otherwise authorized by the Director.
- C. *Expiration of Development Permits.* A development permit shall expire by limitation and shall become null and void under any one or more of the following conditions:
1. The development activity authorized by such permit is not commenced within 12 consecutive calendar months after issuance. Work shall be considered not commenced where there are no passed inspections of the work within the stated time frame of the permit.
 2. The project or development activity is abandoned for a period exceeding 60 consecutive calendar days. The project or development activity shall be deemed abandoned where there are no passed inspections of the work within the stated time frame.

The Director is authorized to grant one permit extension for a period of time not exceeding six consecutive calendar months provided such extension is requested by the permit holder in writing prior to expiration of the permit and justifiable cause is demonstrated. Development activity must commence within this six-month period, or the permit shall expire. The Director is also authorized to grant one renewal for a permit issued in accordance with this Chapter. The renewal shall be requested by the original permit holder in writing within six calendar months following expiration of the permit showing justifiable cause.

- D. *Lapse in Construction Activity.* For the purposes of this UDO, a lapse in or suspension of development activity as authorized by a development permit, as a direct result of action or inaction on the part of Gwinnett County completely beyond the control of the developer, shall not be considered as a lapse in activity causing the development permit to expire. The 12 months within which development activity must begin shall exclude any such time period during which the activity is prohibited or has been caused to lapse by said County action or inaction.

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Section 310-30. Issuance of Building Permits.

310-30.1 Applicable Codes. Building permits for buildings and structures are issued after meeting the applicable requirements of the fire prevention and life safety codes, the Gwinnett County Construction Code and the various health, water, sewer codes and regulations as well as the provisions of any Certificate approved under the *Metropolitan River Protection Act*, if applicable, subject to Chapter 14 of the Gwinnett County Code of Ordinances.

310-30.2 Environmental Health Section: On-Site Sewage Disposal. For any structure for which on-site sewage disposal will be provided, a permit issued by the Environmental Health Department shall be required prior to issuance of a building permit.

310-30.3 Single-Family Detached, Single-Family Attached, and Duplex Residences.

- A. A building permit for a single or two-family residence may be issued after the recording of a Final Plat or after the lot upon which the building is to be located has otherwise become a buildable lot of record, except under special circumstances limited to and as specifically described in this Section, below.
1. In a single-family detached and duplex residential subdivision, building permits for no more than four model home units may be issued by the Department on the basis of an approved Development Plan and subject to all limitations or requirements as may be established by the Director. A Certificate of Occupancy shall not be issued for the completed model home until the Final Plat encompassing the model home building lots has been approved and recorded.
 2. In fee-simple townhouse subdivisions, a building permit may be issued on a buildable lot of record established for each building (containing any number of townhouse dwelling units) through recording of a Final Plat following completion of all required public improvements. For condominium units, upon completion of the buildings, the Final Plat shall be rerecorded to establish individual lots for the units, based on their actual locations, prior to issuance of Certificates of Occupancy.
 3. Issuance of the above building permits shall be conditioned upon the following:
 - a. Fire Plan Review approval shall be required prior to issuance of any building permit.
 - b. Approval of the Environmental Health Department for on-site sewage disposal or by the Department of Water Resources for a building to be served by public sewer shall be required prior to issuance of any Building Permit.
 - c. Construction of the required public improvements shall proceed concurrently with construction of the buildings.
 - d. No Certificate of Occupancy shall be approved for any structure within a subdivision prior to recording of the Final Plat, and submittal and approval of the Certificate of Development Conformance (CDC) and related Development Performance and Maintenance Agreement and bonds, if applicable. In the case where multiple buildings are proposed and under construction, the Director, at their discretion, may approve the issuance of a Certificate of Occupancy of a building and postpone the CDC requirement to a later date. B. The approval by the Department of a House Location Plan (HLP), Residential Drainage Plan (RDP), or Residential Drainage Study (RDS), may be required prior to issuance of a building permit, as noted, and conditioned on the Final Plat or as may be required for compliance with the *Georgia Metropolitan River Protection Act*. For such lots, a Certificate of Occupancy shall not be issued until conformance to the HLP, RDP, and/or RDS has been field verified by the Department as shown on a certified foundation survey prepared by a Registered Land Surveyor. (See Chapter 330 for plan and study specifications)

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310-30.4 Multi-Family and Non-residential Structures.

- A. Issuance of a building permit for any multifamily or non-residential structure (and associated accessory structures) shall first require issuance of a development permit for the building site, and the building permit shall be consistent with said development permit.
- B. Construction documents for buildings and structures must be reviewed and approved by the Planning and Development Department and other Departments prior to permitting for all structures for compliance with this Ordinance and all other codes, ordinances, and laws.
- C. Building permits shall only be issued on buildable lots of record, as defined in this UDO.

Section 310-40. Swimming Pool Permits.

Issuance of a swimming pool permit as an accessory use to a single or two-family residence, whether to be issued at the same time as or subsequent to the permitting or construction of the residence, shall first require approval of a Swimming Pool Location Plan as described in Chapter 330. The permits shall comply with all requirements of this UDO, the Gwinnett County Swimming Pool Ordinance, and Georgia State Minimum Standards for One- and Two-Family Dwellings Code. Based on site conditions, additional plans and studies may be required prior to issuance of the permit. A Certificate of Completion shall not be issued until conformance to the Swimming Pool Location Plan (and other plans and studies, if applicable) has been field verified by the Department.

Chapter 320. Development Plan Review Procedures

Section 320-10. Pre-Application Meeting.

Whenever any site development or subdivision of a tract of land is proposed to be made, whether for residential or non-residential development, the subdivider/developer is encouraged to submit for review with the Department, preliminary documents and graphic exhibits for an early evaluation of the project's intentions and coordination with this UDO, the Unified Plan, the *Metropolitan River Protection Act*, the Gwinnett County Architectural Design Standards, the UDO Design Guidelines, and other applicable standards and regulations, at which time the Department will inform and provide the subdivider/developer with the necessary regulations in order to properly accomplish the proposed project. Requests for a Pre-Application Meeting shall be submitted as prescribed by the Director.

Section 320-20. Application and Review Process for Development Permits with Subdivision.

320-20.1 Plan Review and Approval Procedures.

- A. An application for Development with Subdivision shall be submitted to the Department as prescribed by the Director. The application shall include the Preliminary Plat, Development Plans, construction drawings, and related documents as appropriate to the project. All construction drawings and other engineering data shall be prepared and sealed by an authorized registered professional currently registered in the State of Georgia, in accordance with provisions of Georgia Law.
- B. Following submission to the Department of Development Plans and all drawings required for development permit review, a clearing and grubbing or grading permit, if permitted by zoning or zoning conditions, may be issued at the developer's request based on the approval of a Tree Protection Plan, Soil Erosion, Sedimentation and Pollution Control Plan, stormwater management report (hydrology study), and related construction drawings consistent with an approved Certificate issued under the *Metropolitan River Protection Act*, as applicable. The grading permit shall be limited to the area included within the Development Plans and may be further conditioned as deemed appropriate or necessary pending development permit approval.
- C. The Director may indicate on a review copy of the drawings, in written memorandum, or electronically, all comments related to compliance of the Development Plans with this UDO, principles of good design, conditions of zoning approval, and the regulations of other County departments and State agencies as appropriate. The Director shall have final staff authority to determine the applicability of any and all comments under this UDO or conditions of zoning approval.
- D. The Director may not approve any Development Plans whereon is shown a proposed buildable lot which would present particularly unusual difficulties for construction of a building, which would clearly require a variance or waiver to be reasonably usable, or which is otherwise "unbuildable" because of its unusability, whether due to the presence of floodplain, unusual configuration, lack of public utilities or for any other reason. A House Location Plan (HLP) may be required to be filed as a part of the Development Plans approval to substantiate the buildability of any such difficult or unusual lot.
- E. The subdivider shall be responsible for compliance with all codes, regulations, and zoning requirements and for the satisfaction of all of the noted and written comments of the Director.

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- F. Should an applicant disagree with the findings or final review comments of the Director or of any other County department, concluding that factual or interpretive errors have been made, the following appeal procedure shall be followed to resolve the issues.
1. Submit to the Department of Planning and Development a written statement clearly defining the nature of the disagreement, the specific reference to the Sections of the regulations at issue, and the applicant's own opinion.
 2. Should the Department under appeal fail to respond within 30 working days from the date of transmittal of the appeal, the Director shall automatically forward a copy of the appeal to the Zoning Board of Appeals, or Board of Commissioners, as appropriate, for final action in their normal course of business. This requirement shall not prohibit an applicant from filing an appeal to the Zoning Board of Appeals at any time.
- G. When the Director has determined that the Development Plans and related documents are in compliance with all applicable County regulations and zoning requirements, and a *Metropolitan River Protection Act* Certificate, if applicable, has been issued and approval has been received from all affected County departments, the Director or designee shall sign and date a CERTIFICATE OF DEVELOPMENT PLANS APPROVAL stamped on a reproducible copy of the plans. The approved Development Plans shall be transmitted to the applicant and retained by the Department for its records.
- H. Interdepartmental Review and Approval. The Department shall not issue a permit for any development activities until the plans, plats, or construction drawings, as applicable, have been approved by such other departments or agencies as may have authority or jurisdiction over said activities in whole or in part.
- I. Following the above approval by all affected County departments, a development permit shall be issued at the developer's request to begin construction activities based on the approved development plans.

Section 320-30. Application and Review Process for Development Permits without Subdivision.

320-30.1 Plan Review and Approval Procedures.

- A. An application for Development without Subdivision shall be submitted to the Department, as prescribed by the Director. The application shall include the Development Plans, construction drawings, and related documents as appropriate to the project. All construction drawings and other engineering data shall be prepared and sealed by an authorized registered professional currently registered in the State of Georgia, in accordance with the provisions of Georgia Law.
- B. The Director may indicate on a review copy of the drawings, in a written memorandum, or electronically all comments related to compliance of the Development Plans with this UDO, principles of good design, conditions of zoning approval, and the regulations of other County departments and State agencies as appropriate. The Director shall have final staff authority to determine the applicability of any and all comments under this UDO or conditions of zoning approval.
- C. The developer shall be responsible for compliance with all codes, regulations, and zoning requirements and for the satisfaction of all of the noted and written comments of the Director.
- D. Deeds to lands dedicated to Gwinnett County in fee simple, shall be recorded. Copies of recorded deeds shall be submitted to the Department.

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- E. Should an applicant disagree with the findings or final review comments of the Director or of any other County department, concluding that factual or interpretive errors have been made, the following appeal procedure shall be followed to resolve the issues:
 - 1. Submit to the Department of Planning and Development a written statement clearly defining the nature of the disagreement, the specific reference to the Sections of the regulations at issue, and the applicant's own opinion.
 - 2. Should the Department under appeal fail to respond within 30 working days from the date of transmittal of the appeal, the Director shall automatically forward a copy of the appeal to the Zoning Board of Appeals, or Board of Commissioners, as appropriate, for final action in their normal course of business. This requirement shall not prohibit an applicant from filing an appeal to the Zoning Board of Appeals at any time.
- F. When the Director has determined that the Development Plans and related documents are in compliance with all applicable County regulations and zoning requirements, and a *Metropolitan River Protection Act* Certificate, if applicable, has been issued and approval has been received from all affected County departments, the Director or designee shall sign and date a CERTIFICATE OF DEVELOPMENT PLANS APPROVAL stamped on a reproducible copy of the plan. The approved Development Plans shall be transmitted to the applicant and retained by the Department for its records.
- G. Interdepartmental Review and Approval. The Department shall not issue a permit for any development activities until the plans or construction drawings, as applicable, have been approved by such other departments or agencies as may have authority or jurisdiction over said activities in whole or in part.
- H. Following the above approval by all affected County departments, a development permit shall be issued at the developer's request to begin construction activities based on the approved development plans.

Chapter 330. Development Plan Guidelines

Section 330-10. Development Plans without Subdivision.

330-10.1 Conformance with Zoning Resolution. Development Plans shall conform to all conditions of zoning as indicated on any applicable zoning resolutions pertaining to the property.

330-10.2 Scale. Development Plans and other applicable plans shall be clearly and legibly drawn at an engineering scale convenient to illustrate the details of the project. Sheet size shall not exceed 42 inches by 36 inches. Plan and Profile sheets, if any, shall have a horizontal scale of no less than 100 feet to 1 inch and a vertical scale of no less than 10 feet to 1 inch.

330-10.3 Project Boundary Data.

- A. Development Plans shall be based on the boundaries of a lot as recorded on a Final Subdivision Plat or on a certified boundary survey delineating the entirety of the property contained within the project and tied to a point of reference (tie point) with the same degree of accuracy as the boundary survey itself. The survey shall have an accuracy of no less than 1 in to 10,000 feet and shall meet all requirements of Georgia Law regarding the recording of maps and plats.
- B. Each Development Plan shall be drawn on, accompanied by, or referenced to a boundary survey which shall at least meet the requirements of Subsection 320-10.3A, above.

330-10.4 List of what is required to be shown. Development Plans shall contain the following (on one or more sheets):

- A. Proposed name of development. If the project is located within a subdivision, the name of the subdivision, lot, and block number must also be shown.
- B. Name, address, email address, and telephone number of the owner of record, and of the developer (if not the owner).
- C. Name, address, email address, and telephone number of each professional firm associated with the Development Plans (engineer, landscape architect, etc.).
- D. Date of survey, north point, and graphic scale, source of datum, date of plan drawing, and space for revision dates.
- E. Proposed use of the site, including gross square footage for each different use type or building.
- F. Location, District, Land Lot(s) and Parcel(s) acreage or area in square feet, and density (if applicable).
- G. Location sketch locating the development in relation to the surrounding area with regard to well-known landmarks such as major thoroughfares or railroads. Sketches may be drawn in freehand and at a scale sufficient to show clearly the information required, but not less than 1 inch equal to 2,000 feet. U.S. Geological Survey maps may be used as a reference guide for the location sketch.
- H. Size and location of all buildings, building setback lines, minimum yard lines, and distances between buildings and from buildings to property lines; location of outdoor storage areas; parking and loading areas, driveways, curb cuts and designated fire lanes. Each building shall be identified with a number or letter.
- I. Boundary lines of the perimeter of the tract indicated by a heavy line giving lengths to the nearest one-hundredth of a foot and bearings to the nearest second. Bearing and distance to designated tie point.
- J. Directional flow arrows for street and lot drainage and minimum floor elevations for all structures.

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- K. Contour lines based on sea level datum. These shall be drawn at intervals of not more than two feet and shall include the entire site and all abutting public streets. Contour lines shall be based on field surveys or photogrammetric methods from aerial photographs. The basis for the topographic contour shown shall be specified and dated.
- L. Natural features within the proposed development, including drainage channels, bodies of water, and other known significant features such as extensive exposed rock. On all water courses the direction of flow shall be indicated. The 100-year floodplain shall be outlined, and the source of the depicted floodplain information shall be indicated. The acreage or area in square feet within the floodplain shall be indicated.
- M. Man-made and cultural features existing within and adjacent to the proposed development including existing right-of-way measured from centerline, pavement widths, and names of jurisdiction lines; existing structures on the site and their disposition, Chattahoochee River Corridor information and Chattahoochee River Tributary Protection Areas (if applicable), and other significant information. Location and dimensions of existing bridges; water, sewer, and other existing utility lines and structures; culverts and other existing features shall be indicated.
- N. Street names, roadway and right-of-way lines and widths and sites reserved through covenants, easement, dedication or otherwise for public uses.
- O. Identify unit number, division, or stage of development, if any, as proposed by the developer.
- P. Show all adjoining property owners, subdivision names, lot numbers, lot lines and block letters, and zoning.
- Q. Show the location and number of parking spaces according to the size of the building on the plans. Show factors used in determining number of spaces as required in this UDO. Parking spaces for persons with disabilities shall be shown as required by the Official Code of Georgia and any other applicable state laws.
- R. Show the zoning district, rezoning and special use permit case number(s), date of approval, and conditions. Show Modification, Waiver, or Variance case number(s), date of approval, and conditions. .
- S. If buffers, other landscaping or screening treatments, or vegetation and landscaping stormwater BMP's are required, show the location, size, and type (natural or planted) on the plans conforming to the Tree Preservation/Replacement Plan or Buffer and Landscape Plan, as applicable.
- T. Location, height, and size of all freestanding signs to be erected on the site, and indication whether lighted or unlighted.
- U. Location of all known existing landfills and proposed on-site bury pits (State EPD Permit, and Gwinnett County Special Use Permit or other approval may be required).
- V. Such additional information as may be reasonably required to permit an adequate evaluation of the project.
- W. Certificate of Development Plans Approval.

Each Site Plan shall carry the following certificate printed or stamped thereon:

All requirements of the Gwinnett County Unified Development Ordinance (UDO) relative to the preparation and submission of a development plans having been fulfilled, and said application and all supporting plans and data having been reviewed for code compliance by all affected County Departments as required under their respective and applicable regulations, approval of this development plan is hereby granted and all other development plans associated with this project shall be subject to all further provisions of said UDO.

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Director Date
Department of Planning and Development

THIS CERTIFICATE EXPIRES TWELVE MONTHS FROM THE DATE OF APPROVAL UNLESS A DEVELOPMENT PERMIT IS ISSUED

Section 330-20. Development Plans with Subdivision.

330-20.1 Conformance with Zoning Resolution Development Plans shall conform to all conditions of zoning as required by any applicable zoning resolutions pertaining to the property.

330-20.2 Scale. Development Plans shall be clearly and legibly drawn at a scale of not less than 100 feet to 1 inch. Sheet size shall not exceed 48 inches by 36 inches. Plan and Profile sheets shall have a horizontal scale of no less than 100 feet to 1 inch and a vertical scale of no less than 10 feet to 1 inch.

330-20.3 Certified Boundary Survey.

- A. Development Plans shall be based on a Certified Boundary Survey delineating the entirety of the property contained within the Subdivision and tied to a point of reference (tie point) with the same degree of accuracy as the boundary survey itself. The survey shall have an accuracy of no less than 1 in 10,000 feet and shall meet all requirements of Georgia Law regarding the recording of maps and plats.
- B. Development Plans shall be drawn on, accompanied by, or referenced to a Certified Boundary Survey which shall at least meet the requirements as described above.

330-20.4 List of what is required to be shown. Development Plans shall contain the following:

- A. Proposed name of subdivision.
- B. Name, address, email address, and telephone number of the owner of record, and of the subdivider (if not the owner).
- C. Name, address, email address and telephone number of each professional firm associated with the Development Plans (engineer, surveyor, landscape architect, etc.).
- D. Date of survey, north point, and graphic scale, source of vertical datum, date of plat drawing, and space for revision dates.
- E. Proposed use of the site, such as single-family detached residences, duplexes, townhouses, office park, industrial subdivision, etc. For residential, indicate total number of dwelling units within plat.
- F. Location, District, Land Lot(s) and Parcel(s), acreage, and density (if applicable).
- G. Location sketch locating the subdivision in relation to the surrounding area with regard to well-known landmarks such as major thoroughfares or railroads. Sketches may be drawn in freehand and at a scale sufficient to show clearly the information required, but not less than 1 inch equal to 2,000 feet. U.S. Geological Survey maps may be used as a reference guide for the location sketch.
- H. Name of former subdivision, if any or all of the land in the Development Plans has been previously subdivided, showing boundaries of same.
- I. Boundary lines of the perimeter of the tract indicated by a heavy line giving lengths in feet and hundredths of a foot, and bearings in degrees, minutes, and seconds. Bearing and distance to designated tie point.
- J. Directional flow arrows for street drainage and individual lot drainage as well as minimum floor elevations for each lot. Each lot to be labeled as slab, basement, or slab/basement.

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- K. Contour lines based on sea level datum. These shall be drawn at intervals of not more than 2 feet. Contour lines shall be based on field surveys or photogrammetric methods from aerial photographs. The basis for the topographic contour shown shall be specified and dated.
- L. Natural features within the proposed subdivision, including drainage channels, bodies of water, and other known significant features such as extensive exposed rock. On all water courses the direction of flow shall be indicated. The 100-year floodplain shall be outlined, and the source of the depicted floodplain information shall be indicated. For those lots containing floodplain, a Floodplain Lot Chart shall be provided showing the area (in square feet) of each lot lying inside and outside of the floodplain as though the land-disturbing activity were completed.
- M. Man-made and cultural features existing within and adjacent to the proposed subdivision including existing right-of-way measured from centerline, pavements widths, and names of existing and platted streets; all easements, city, and County jurisdiction lines; existing structures on the site and their disposition, Chattahoochee River Corridor information and limits of Chattahoochee River Tributary protection Area (if applicable), and other significant information. Location and dimensions of existing bridges; water, sewer, and other existing utility lines and structures; culverts and other existing features shall be indicated.
- N. Proposed layout including lot lines, lot numbers, and block letters; proposed street names, roadway, and right-of-way lines; and, sites reserved through covenants, easement, dedication, or otherwise for public uses. Lots shall be numbered in numerical order and blocks lettered alphabetically.
- O. The minimum building setback line from all streets. Streets shall be dimensioned to show right-of-way and roadway widths, central angles, intersection radii, and cul-de-sac roadway and right-of-way radii. Centerline curve data shall be provided for all roadway curves [radius, length, amount of super elevation (if any), point of curvature (P.C.), point of tangency (P.T.), etc.] if not shown separately on construction drawings.
- P. Identify unit number, division, or stage of development, if any, as proposed by the subdivider.
- Q. Existing zoning of the property. Rezoning, modification, waiver and variance case numbers, dates of approval and conditions (as applicable). Note minimum lot size and minimum building setback requirements, and other applicable zoning requirements. Show and dimension any required buffers, landscape strips, no-access easements, etc.
- R. All adjoining property owners, subdivision names, lot numbers and lot lines, block letters, and zoning.
- S. Location of all known existing or previously existing landfills.
- T. Proposed recreation area, common area, conservation space, if any, the area of each site and percent of site within the 100-year floodplain, proposed disposition of the site (public ownership, homeowners association, etc.). If these areas are required, provide calculation of the required and provided areas.
- U. Such additional information as may be reasonably required to permit an adequate evaluation of the subdivision.
- V. Certificate of Development Plans approval.

Development Plans shall carry the following certificate printed or stamped thereon:

All requirements of the Gwinnett County Unified Development Ordinance (UDO) relative to the preparation and submission of development plans having been fulfilled, and said application and all supporting plans and data having been reviewed for code compliance by all affected County Departments as required under their respective and applicable regulations, approval of these development plans is hereby granted, on this development plan and all other development plans associated with this subdivision, shall be subject to all further provisions of said UDO.

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Director

Date

Department of Planning and Development

THIS CERTIFICATE EXPIRES TWELVE MONTHS FROM THE DATE OF APPROVAL UNLESS A DEVELOPMENT PERMIT IS ISSUED.

NOTE: The boundaries of proposed lots shown on these plans have not been surveyed. These plans are not for recording.

Section 330-30. Other Plans to Accompany Development Plans without Subdivision .

330-30.1 Development Plans shall be accompanied by other plans showing the following information when same is not shown on, or evident from the Development Plans. The various plans may be combined where appropriate, and clarity can be maintained.

- A. Erosion, Sedimentation and Pollution Control Plan prepared in accordance with the requirements of this UDO. Erosion control measures may be shown on the Grading Plan, if allowed by the Department.
- B. Grading plan, prepared in accordance with the requirements of this UDO.
- C. Stormwater drainage construction data prepared in accordance with the requirements of this UDO and the Gwinnett County Storm Sewer Pipe Standards, including but not limited to:
 1. Location and size of all proposed drainage improvements, and all proposed drainage easements to be located outside street right-of-way lines.
 2. Profiles of all storm drainage pipes and slope of receiving channels. Hydraulic grade line is to be shown on all pipes (except roof drains) for the required design flow. On storm drainage profiles a pipe chart will be shown which will include: pipe numbers, pipe size, pipe material, pipe slope, pipe length, contributing drainage area, design flow, design storm frequency, runoff coefficient and velocity. On all pipes, the hydraulic grade line shall be shown.
 3. Profiles of all open channels and ditches including the design flow, normal depth, and velocity. On storm drainage profiles an open channel chart will be shown which will include: open channel numbers, conveyance size, lining material, length, channel slope, contributing drainage area, design flow, design storm frequency, runoff coefficient and velocity for the required design flow.
 4. Acreage of drainage areas and Hydrological study used in determining size of structures, including map of all contributing drainage basins and acreages.
- D. Sewage disposal plans prepared in accordance with the requirements of the current Water Main and Sanitary Sewer Design and Construction Standards and Specifications, including but not limited to:
 1. Sanitary Sewer Plans, including the profiles and other information as may be required by the Department of Planning and Development.
 2. For projects proposed to be served by on-site sewage disposal systems, location, and extent of septic tank, drain field and attendant structures, and other information required by the Environmental Health Section.
- E. Street widening and construction data prepared in accordance with the requirements of this UDO, including but not limited to:
 1. Centerline profiles and typical roadway sections of all proposed streets, as well as plans and profiles for all proposed major thoroughfares. Profiles (and plans, where required) shall be drawn on standard plan and profile sheet with plan section showing street layout, pavement and right-

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of-way width, curvature, and required drainage facilities. Typical roadway sections shall be provided for street widenings.

2. Profiles covering roadways that are extensions of existing roadways shall include elevations at 50-foot intervals for such distance as may be adequate to provide continuity consistent with the standards required by this UDO for street improvements, but no less than 200 feet.
 3. All elevations shall be coordinated and sited into U.S. Coast and Geodetic Survey or Department of Transportation benchmarks where feasible or into reference monuments established by the Federal Emergency Management Agency.
- F. Utility Plans.
- G. Specimen Tree Survey.
- H. Specimen Tree Concept Plan, if applicable.
- I. Tree Preservation and/or Replacement Plan prepared in accordance with this UDO.
- J. Buffer and Landscape Plan. If any such areas exist within the site, the plan shall be prepared in accordance with the specifications and requirements contained within this UDO.
- K. Floodplain Management Plans if any floodplain areas are located on the property. Such data as is required by this UDO shall be submitted.
- L. Water System Plans prepared in accordance with the requirements of the Water Main and Sanitary Sewer Design and Construction Standards and Specifications, including but not limited to:
1. Water Main Extension plans, if any, are to be designed in accordance with the current Water Main Specifications.
 2. Private Water System Plans, if any, indicating proposed devices, water main size and location, with fire hydrants, on the site. The distance and direction to all other fire hydrants within 500 feet of the site or buildings along existing streets or other access drives shall also be indicated.
- M. Street striping plan, showing striping in accordance with the Manual on Uniform Traffic Control Devices, for any street newly constructed to four or more lanes, and all newly constructed or widened major thoroughfares.

Section 330-40. Other Plans to Accompany Development Plans with Subdivision

330-40.1 Development Plans shall be accompanied by other plans showing the following information when same is not shown on, or evident from the Development Plans. The various plans may be combined where appropriate, and clarity can be maintained.

- A. Preliminary Plat prepared in accordance with this UDO.
- B. Erosion, Sedimentation and Pollution Control Plan prepared in accordance with the requirements of this UDO.
- C. Grading Plan prepared in accordance with the requirements of this UDO if grading is proposed beyond the street right-of-way.
- D. Stormwater drainage construction data prepared in accordance with the requirements of this UDO and the Gwinnett County Stormwater Management Manual, including but not limited to:
 1. Location and size of all proposed drainage structures, including stormwater management facilities, catch basins, grates, headwalls, pipes, and any extensions thereof, energy dissipators, improved channels, and all proposed drainage easements to be located outside street right-of-way lines.

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2. Profiles of all storm drainage pipes and slope of receiving channels. Hydraulic grade line is to be shown on all pipes (except roof drains) for the required design flow. On storm drainage profiles a pipe chart will be shown which will include pipe numbers, pipe size, pipe material, pipe slope, pipe length, contributing drainage area, design flow, design storm frequency, runoff coefficient and velocity. On all pipes, the hydraulic grade line shall be shown.
 3. Profiles of all open channels and ditches including the design flow, normal depth, and velocity. On storm drainage profiles an open channel chart will be shown which will include: open channel numbers, conveyance size, lining material, length, channel slope, contributing drainage area, design flow, design storm frequency, runoff coefficient and velocity for the required design flow.
 4. Hydrological study used in determining size of structures, including map of all contributing drainage basins and acreage.
- E. Sewage disposal plans prepared in accordance with the requirements of the current Water Main and Sanitary Sewer Design and Construction Standards and Specifications, including but not limited to:
1. Sanitary Sewer Plans, including the profiles and other information as may be required by the Department of Water Resources.
 2. For projects proposed to be served by on-site sewage disposal systems, location, and extent of septic tank, drain field and attendant structures, and other information required by the Environmental Health Section.
- F. Construction data for new streets and street widenings, including:
1. Centerline profiles and typical roadway sections of all proposed streets, as well as plans and profiles for all proposed major thoroughfares. Typical roadway sections shall be provided for street widenings.
 2. Profiles covering roadways that are extensions of existing roadways shall include elevations at 50-foot intervals for such distance as may be adequate to provide continuity consistent with the standards required by Chapter 900 for street improvements, but no less than 200 feet.
 3. All elevations shall be coordinated and tied into U.S. Coast and Geodetic Survey or Department of Transportation benchmarks where feasible, or into reference monuments established by the Federal Emergency Management Agency.
 4. Stub streets shall be profiled at least 200 feet onto adjoining property (no tree cutting).
- G. Utility Plans
- H. Specimen Tree Survey.
- I. Specimen Tree Concept Plan, if applicable.
- J. Tree Preservation and/or Replacement Plan prepared in accordance with this UDO.
- K. Buffer and Landscape Plan. If any such areas exist within the subdivision, the plan shall be prepared in accordance with the specifications under this Chapter, and the requirements.
- L. Floodplain Management Plans. If any floodplain areas are located on the property, such data as is required by this UDO shall be submitted.
- M. Water System Plans prepared in accordance with the requirements of the Water Main and Sanitary Sewer Design and Construction Standards and Specifications, including but not limited to:

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1. Water Main Extension plans, if any, are to be designed in accordance with the current Water Main Specifications.
 2. Private Water System Plans, if any, indicating proposed devices, water main size and location, with fire hydrants, on the site. The distance and direction to all other fire hydrants within 500 feet of the site or buildings along existing streets or other access drives shall also be indicated.
- N. Street striping plan, showing striping in accordance with the Manual on Uniform Traffic Control Devices, for any street newly constructed to four or more lanes, and all newly constructed or widened major thoroughfares.

Section 330-50. Preliminary Plat.

330-50.1

- A. *Plat Specifications Size.* The Preliminary Plat for a subdivision development shall be clearly and legibly drawn at a scale of not less than 100 feet to 1 inch. Sheet size shall not exceed 48 inches by 36 inches, provided, however, a scale of 200 feet to 1 inch may be used to avoid sheets in excess of 48 inches by 36 inches. The Director may approve other scales and sheet sizes as deemed appropriate. B. *List of what is required to be shown.* The Preliminary Plat shall contain the following:
1. Total acreage.
 2. Proposed total number of lots and minimum lot size.
 3. Size and location of adjoining existing streets or access drives and proposed rights-of-way, roadways, access drives, and adjoining sidewalks.
 4. Topography with contour intervals no greater than 10 feet.
 5. Proposed method of sewage disposal (expressed as a note).
 6. Boundary lines of the overall property showing bearings and distances along all lines and the bearings and distance to an existing street intersection or other recognized permanent landmark. The source of said boundary information shall be indicated.
 7. All contiguous property under the ownership or control of the developer, except those lands of a dissimilar zoning category specifically approved to be excluded by the Department. Areas not planned at the time of the submittal shall be shown as "Future Development".
 8. Authorization statement on the Preliminary Plat to read as follows:

I hereby submit this Preliminary Plat as authorized agent/owner of all property shown thereon and certify that all contiguous property under my ownership or control is included within the boundaries of this Preliminary Plat, as required by the Unified Development Ordinance.

Signature of Authorized Agent/Owner _____
Date
 9. Location sketch (vicinity map).
 10. Location and size (in acres) of lakes, ponds, wetlands and floodplains and the source of the information.
 11. Required recreation areas and other public areas to be dedicated to the public or held in common ownership by a homeowner association or other similar entity.
 12. Existing zoning of the property and adjoining properties.
 13. Land lot and district.

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14. Subdivider's name, local and permanent (if different) address, email address, and phone number.
15. Name, address, email address, and phone number of company or person who prepared plan.
16. Boundaries of the Chattahoochee River Corridor and Chattahoochee River Tributary Protection Areas, if applicable to the property.
17. General development data, such as minimum lot size, floor area, and all relevant conditions of zoning.
18. Location of public utilities.

Section 330-60. Erosion, Sedimentation and Pollution Control Plan

330-60.1 Plan Requirements

- A. *Plans shall meet minimum requirements.* Plans shall be prepared to meet the minimum requirements as contained in Section 400-30.2 and Section 400-30.3 of this UDO or through the use of more stringent, alternative design criteria which conform to sound conservation and engineering practices. In addition, plans shall also comply with the data requirements of Chapter 320 of this UDO. Conformance with the minimum requirements may be attained through the use of design criteria in the current issue of the "Manual for Erosion and Sediment Control in Georgia", published by the Georgia Soil and Water Conservation Commission as a guide; or through the use of alternate design criteria which conform to sound conservation and engineering practices. The "Manual for Erosion and Sediment Control in Georgia" is hereby incorporated by reference into this UDO. The plan for the land-disturbing activity shall consider the interrelationship of the soil types, geological and hydrological characteristics, topography, watershed, vegetation, proposed permanent structures including roadways, constructed waterways, sediment control and stormwater management facilities, local ordinances or regulations and state laws.
- B. *Data required for plan.* Data shall include all information required from the appropriate Erosion, Sedimentation, and Pollution Control Plan review checklist established by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted. The following data shall be required to be provided on all plans:
 1. Narrative or notes required by this Chapter shall be located on the plan in general notes or in erosion and sediment control notes.
 2. Description of existing land use at the project site and description of the proposed project.
 3. Name, address, email address, and phone number of the property owner.
 4. Name and phone number of the 24-hour local contact person who is responsible for erosion and sedimentation controls.
 5. Size of the project, or the phase under construction, in acres.
 6. Activity schedule, including initial installation and final removal of all best management practices, shall indicate the anticipated start and completion dates for the project.
 7. The following statement in bold letters shall be printed on the plan: "The Installation of Erosion and Sedimentation Control Measures And Practices Shall Occur Prior To Or Concurrent With Land-Disturbing Activities ONLY AFTER THE REQUIRED PRE-CONSTRUCTION SITE MEETING WITH DEVELOPMENT INSPECTORS."
 8. Stormwater and sedimentation management systems, storage capacity, hydrologic study, and calculations, including off-site drainage areas. Vegetative plan for all temporary and permanent

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vegetative practices, including species, planting dates, and seeding, fertilizer, lime, and mulching rates. The vegetation plan shall show options for year-round seeding.

9. Detail drawings for all structural practices. Specifications shall follow the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
 10. Maintenance statement shall be printed on the plan as follows: *"Erosion and sedimentation control measures shall be maintained at all times. If full implementation of the approved plan does not provide for effective erosion and sediment control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."*
- C. *Additional plan preparation and data requirements.* Maps, drawings, and supportive computations shall bear the signature and seal of the certified design professional. Persons involved in land development design, review, permitting, construction, monitoring, or inspections or any land-disturbing activity shall meet the education and training certification requirements, dependent on his or her level of involvement with the process, as developed by the Georgia Soil and Water Conservation Commission and in consultation with the Environmental Protection Division (EPD) of the Department of Natural Resources and the stakeholder advisory board created pursuant to O.C.G.A. § 12-7-20. The certified plans shall contain the following:
1. Graphic scale and north point or arrow indicating magnetic north.
 2. Vicinity map indicating the location of the project and existing streets.
 3. Boundary line survey information.
 4. Delineation of disturbed areas within the project boundary.
 5. Existing and planned contours, with contour lines drawn with an interval in accordance with the following table:

Map Scale	Ground Slope	Contour Level
One (1) inch = 100 feet; or larger scale	Flat: 0 — 2%	0.5 or 1
	Rolling: 2 — 8%	1 or 2
	Steep: 8% +	2, 5 or 10

6. Adjacent areas and features such as streams, lakes, residential areas, etc., which might be affected shall be indicated on the plan.
 7. Proposed structures or additions to existing structures and paved areas.
 8. Delineate the 25-foot horizontal buffer adjacent to state waters and the specified width of buffers in areas required by the *Metropolitan River Protection Act*.
 9. Delineate the specified horizontal buffer along designated trout streams, where applicable.
 10. Location of the erosion and sedimentation control measures and practices, using the uniform coding symbols from the "Manual for Erosion and Sediment Control in Georgia," Chapter 6.
- D. Property owner responsibility for maintenance. Maintenance of all soil erosion and sedimentation control measures and practices, whether temporary or permanent, shall be at all times the responsibility of the property owner. Section 330-70. Grading Plan.

330-70.1 Compliance with contour line and grade required. Grading shall be done in accordance with the contour lines and grades shown on the approved Grading Plan.

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330-70.2 Contour interval of 2 feet required. Grading plans shall show existing and proposed contour lines at an interval of no more than 2 feet. Grading plans shall outline the areas that are required to remain undisturbed (i.e., Tree Protection Areas, buffer, etc.) and shall indicate protective fencing or staking to be placed surrounding such areas.

330-70.3 Consistent with Metropolitan River Protection Act. If the property is within the jurisdiction of the *Metropolitan River Protection Act*, the grading shall be consistent with the Chattahoochee River Corridor Certificate approved for the project.

330-70.4 Embankment layering shall be consistent with the Gwinnett Stormwater Management Manual.

330-70.5 Maximum Slopes.

- A. The maximum slopes for cut or fill shall be 2:1 (two feet of horizontal run for each foot of rise or fall), except for the following:
 - 1) for earthen dam embankments
 - 2) for rock cuts
 - 3) where certified by a professional engineer
 - 4) as discussed below.
- B. Earthen embankments shall be 3:1 maximum unless a modification application is approved. The intent of the earthen dam embankment slope regulation is to provide for public safety, soil stability, and dam maintenance considerations. The depth of cut referred to herein shall be the maximum cut or fill that shall be allowed to occur in any one section of cut or fill. The slope of cut or fill shall be uniform throughout for each section of cut or fill unless benching is approved by the County.
- C. Maximum slopes shall otherwise be consistent with the Gwinnett County Stormwater Management Manual.

330-70.6 Special conditions for soil with low shearing resistance and cohesion shall be required as specified in the Gwinnett County Stormwater Management Manual.

330-70.7 Grading plan for building pad locations for residential subdivisions.

- A. A grading plan showing building pad locations shall be submitted for residential subdivisions zoned for a lot size of less than 12,000 square feet or a density of 4 units per acre or more unless a modification application is approved.
- B. Lot must be graded to ensure adequate lot-to-lot drainage. Granting a modification will not nullify the intent of this UDO when the layout has a minimum lot area of 14,520 square feet and a minimum lot width of 90 feet. The grading plan may be used as a construction document prior to approval of the Final Plat or as a guidance document for individual lot grading after approval of the Final Plat.
- C. The grading plan must include the minimum floor elevations, drainage flow arrows and a designation of slab, basement, or slab/basement for each lot.

330-70.8 Grading for roads and improved ditches shall be shown.

Section 330-80. Utility Plan.

All utility construction plans within County right-of-way shall be reviewed and approved by the Department before construction begins. Street cuts shall not be allowed unless deemed absolutely necessary due to the presence of rock, the need to tap into an existing line beneath the road surface, or other circumstances which makes boring impossible or infeasible.

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Section 330-90. Specimen Tree Survey and Specimen Tree Concept Plan.

330-90.1 Specimen Tree Survey. The specimen tree survey shall be to scale and prepared, certified, or sealed by a certified arborist, registered forester, or authorized registered professional.

- A. The Specimen Tree Survey P shall be prepared on a closed boundary survey of the property and at minimum the following items shall be shown:
 - 1. Parcel identification number(s).
 - 2. Project name.
 - 3. Property owner's name and contact information.
 - 4. Developer's name, company name, address, phone, and email address.
 - 5. Designer's name, company name, address, phone, and email address.
 - 6. Specimen trees located and labeled with tree identification number, diameter, genus and/or common name.
 - 7. Specimen tree stands located and labeled with their tree identification number, diameter, genus and/or common name.
 - 8. Existing structures and their location.
 - 9. Abandoned and existing wells and their location.
 - 10. Any notes required by this UDO.
- B. In chart format, provide specimen tree identification number, genus or common name, size (dbh); and condition description. as listed in Section 630-70.3.A.2).

330-90.2 Specimen Tree Concept Plan. If specimen trees are identified, a Specimen Tree Concept Plan shall be prepared by a qualified professional and submitted with development plans.

- A. The Specimen Tree Concept Plan shall be prepared on a closed boundary survey of the property. In addition to items listed in Section 330-20.1., the following shall be shown:
 - 1. Dripline or critical root zone of each specimen tree (whichever is greater) and tree save areas.
 - 2. Building footprint.
 - 3. Driveways.
 - 4. Parking Lot(s).
 - 5. Utility lines and easements (both existing and proposed).
 - 6. Limits of disturbance.
 - 7. Proposed stormwater management areas.
 - 8. Existing and proposed topography.
- B. Provide the percentage of disturbance for each specimen tree when critical root zone is partially disturbed.
- C. In chart format, provide information that states if a tree is to be removed or preserved/protected; state the tree density unit credit for each specimen tree; and provide a column for assigned recompense in the event the tree is removed or the critical root zone disturbance is greater than 30 percent.

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- D. Trails and Greenways. In the case of trails and greenways that are not located on public access easements or public or private utility easements show the proposed trail or greenway, show the trail or greenway limits of clearing and a 25-foot corridor on either side of the trail or greenway limits of clearing with any specimen tree identified within that trail or greenway corridor.
- E. For Limited Land Disturbance Permits, a tree survey is required for the area within the land disturbance and 50 feet beyond the limits of the disturbance line.

Section 330-100. Limited Land Disturbance Plan for Tree Removal.

330-100.1 List of plan requirements for Limited Land Disturbance:

- A. Tree Thinning, Timber Harvesting, or Removal of Trees for Disease or Insect Infestation shall meet plan requirements as described in this UDO and shall contain the following information:
 - 1. Owners name, address, email address, and telephone number;
 - 2. Consultant's name, address, email address and telephone number;
 - 3. Contractor's name, address, email address, and telephone number;
 - 4. Twenty-Four (24) Hour Emergency Contact;
 - 5. Location/ Vicinity Map;
 - 6. District, Land Lot(s), Parcel number(s);
 - 7. Scale;
 - 8. North Arrow;
 - 9. Closed property boundary showing bearings and distances of all property lines;
 - 10. Zoning;
 - 11. Zoning case numbers, approval date, and all conditions;
 - 12. Zoning of adjacent parcels;
 - 13. Total acreage of property;
 - 14. Total acreage of disturbed area;
 - 15. Tree protection areas;
 - 16. Tree protection fence;
 - 17. Silt fence;
 - 18. Street Name(s);
 - 19. Location of:
 - a. Streams;
 - b. Stream Buffers (State Waters)(Gwinnett County);
 - c. Impervious Surface Setback;
 - d. Topography;
 - e. 100-year floodplain;
 - f. Wetlands.

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20. Limits of land disturbance, and;
21. Approximate locations of:
 - a. Logging decks;
 - b. Haul roads;
 - c. Stream crossings;
 - d. Historical features such as cemeteries.

Section 330-110. Tree Preservation and/or Replacement Plan.

330-110.1 Tree Preservation and/or Replacement Plans shall be prepared and certified by an authorized registered professional, registered forester, or certified arborist in accordance with the specifications for such plans contained in this UDO.

330-110.2 The Tree Preservation and/or Replacement Plan shall be shown on a site plan and included with the permit application for a Development Permit and shall be, drawn to the same scale as the other development plans in the set. Specific sections of the Tree Preservation and/or Replacement Plan may be shown at a larger scale for detail purposes provided the overall plan is at the same scale as the other development plans in the set. The Tree Preservation and/or Replacement Plan may be combined with the Buffer and Landscape Plan for the project provided it remains legible.

330-110.3 The Tree Preservation and/or Replacement Plan shall provide sufficient information and detail to clearly demonstrate that all applicable requirements and standards of this UDO will be fully satisfied.

330-110.4 The Tree Preservation and/or Replacement Plan shall, at a minimum, contain the following:

- A. Project name, land district, land lot, parcel, north arrow, and scale.
- B. Developer's name, address, email address, and telephone number.
- C. The name, address, email address, and telephone number of the authorized registered professional, registered forester, or certified arborist.
- D. Delineation of overhead power lines and transmission lines.
- E. Delineation of all minimum yard areas, buffers, and landscape areas as required by this UDO or conditions of zoning, special use or variance approval.
- F. Total acreage of the site and total acreage exclusive of all zoning buffer areas.
- G. Delineation of all areas located within a 100-year flood plain.
- H. Existing trees to be retained in Tree Protection Areas:
 1. Trunk location and size (to the nearest inch in diameter at 4.5 feet above the ground), of individual trees proposed to remain for credit toward meeting the minimum Tree Density Standard on the property.
 2. Groups of three or more trees whose driplines combine into a single Tree Protection Area may be outlined as a group and their number, by diameter, shown in the Summary Table.
 3. If the number and size of all existing trees to remain on the site exceeds the required tree density standard for the entire site, only those trees required to meet the minimum Tree Density Standard must be shown.
 4. All Tree Protection Areas are to be outlined and labeled.

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- I. Tree Protection Measures:
 - 1. A detail or description of the protective tree fencing to be installed, and the location of such measures, which at a minimum shall follow the dripline of all trees to be retained along adjoining areas of clearing, grading, or other construction activity.
 - 2. Measures to be taken to avoid soil sedimentation intrusion into Tree Protection Areas, and the location of such devices.
 - 3. Proposed location of temporary construction activities such as equipment or worker parking, materials storage, burn holes, equipment washdown areas, and entrance pads.
 - 4. Proposed type and location of any tree save area signs or other pertinent signage.
- J. If replacement trees are proposed to be planted in order for the property to achieve the required Tree Density Standard, the replacement trees shall be shown and their spacing and caliper identified, to the extent needed to achieve the minimum requirements. Trees grouped together in tree planting areas may be listed on the Summary Table by total number in the grouping, by size.
- K. A Summary Table of the number of existing trees to remain by diameter to the nearest inch at 4.5 feet above the ground for preserved trees and for new trees to be planted by caliper at 6 inches above the ground for replaced trees, shall be shown along with calculations showing the tree density achieved for the site. Additional credits shall be noted where applicable.
- L. Tree Canopy Calculations. (See Chapter 630)
- M. The plan sheet which shows the grading plan, including existing and proposed contour lines, shall indicate the dripline location of all Tree Protection Areas through the use of shading on the plans. The exact location of each tree is not desired to be shown, only the limits of the Tree Protection Area and any other areas which are not to be disturbed.

- N. The location of all easements.

Section 330-120. Buffer and Landscape Plan.

330-120.1 A Buffer and Landscape Plan shall be prepared for any project wherein buffer areas or other landscaping areas, or treatment are required and when conditions of zoning, special use or variance approval, or other regulations of Gwinnett County require them, and shall be approved prior to issuance of a development permit. While the plan shall cover, at a minimum, the required buffer and landscape areas, it may be combined with the Tree Preservation and/or Replacement Plan into a general landscaping plan for the entire project at the developer's option provided it remains legible.

330-120.2 The Buffer and Landscape Plan shall be shown on a site plan or boundary survey and included in the Development Plans and drawn to the same scale as the other development plans in the set or at a larger scale for detail purposes.

330-120.3 The Buffer and Landscape Plan shall, at a minimum, contain the following:

- A. Project name and land district, land lot, parcel acreage, north arrow, and scale.
- B. Developer's name, address, email address, and telephone number.
- C. The name, address, email address and telephone number of the authorized registered professional, registered forester, or certified arborist responsible for preparation of the plan.
- D. Boundary lines of each buffer or other landscape area, appropriately labeled.

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- E. Delineation of undisturbed buffer areas along the dripline of the trees or groups of trees contained therein, and any other areas wherein trees are proposed to be retained to meet County requirements. These areas shall be treated in accordance with Tree Protection Area requirements contained in this UDO and labeled as such.
- F. Protective barriers and signage as required by this UDO shall be shown as to location and detailed.
- G. Delineation of overhead power lines and overhead transmission lines.
- H. General location of all proposed trees, shrubs, vines, groundcovers, mulching, and other features proposed within the buffer/landscape area. The layout of the vegetation and landscaping required for the proposed stormwater management facilities as well as the plant names are to be shown.
- I. Within areas involving or adjacent to landform changes, existing and finish grade topographic lines at an interval of no more than 2 feet may be required.
- J. For new plant materials to be installed, a plant material list including but not limited to:
 - 1. Common and botanical names of all proposed plants.
 - 2. Plant quantities.
 - 3. Size and condition of plants. (Example: 2-inch caliper, 6 feet height, balled and burlapped).
 - 4. Spacing.
 - 5. Remarks as necessary to ensure proper plant selection upon installation. (Example: specimen, multi-trunked).
- K. The location of easements.

Section 330-130. Floodplain Management Plan and Plat

330-130.1 An application for a development project with any Area of Special Flood Hazard or Area of Future-conditions Flood Hazard located on site shall include a floodplain management/flood damage plan. This plan shall include the following items:

- A. Site plan drawn to scale, which includes but is not limited to:
 - 1. Existing and proposed elevations of the area in question and the nature, location, and dimension of existing and/or proposed structures, earthen fill placement, amount and location of excavation material, and storage of materials or equipment;
 - 2. For all proposed structures, spot ground elevations at the building corners and 20-foot or smaller intervals along the foundation footprint, or one foot contour elevations throughout the building site;
 - 3. Proposed locations of water supply, sanitary sewer, and utilities;
 - 4. Proposed locations of drainage and stormwater management facilities;
 - 5. Proposed grading plan;
 - 6. Base flood elevations and future-conditions flood elevations;
 - 7. Boundaries of the base flood floodplain and future-conditions floodplain;
 - 8. Location of the floodway, if applicable; and
 - 9. Certification of the above by a licensed professional engineer or surveyor.
- B. Building and foundation design detail, including but not limited to:

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1. Design plans certified by a licensed professional engineer or architect for all proposed structure(s).
 2. Elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all proposed structures;
 3. Certification that any proposed non-residential floodproofed structure meets the criteria in Chapter 700.
 4. For enclosures below the base flood elevation, location and total net area of flood openings as required in Chapter 700.
- C. Hard copies and digital files of computer models, copy of work maps, comparison of pre- and post-development conditions base flood elevations, future-conditions flood elevations, flood protection elevations, Special Flood Hazard Areas and regulatory floodways, flood profiles and all other computations and other information similar to that presented in the FIS;
- D. The approved floodplain management/flood damage prevention plan shall contain certification by the applicant that all development activities will be done according to the plan or previously approved revisions. Any and all development permits and/or use and occupancy certificates or permits may be revoked at any time if the construction and development activities are not in accordance with approved plans.
- E. All residential lots in a proposed subdivision shall have sufficient buildable area outside of the future conditions floodplain such that encroachments into the future-conditions floodplain for residential structures will not be required.
- F. All preliminary plats and site development plans will provide the elevations of proposed structures in accordance with this Chapter.
- G. All preliminary plats and site development plans shall be consistent with the need to minimize flood damage.
- H. All construction plans for land development shall show public utilities and facilities such as water, sanitary sewer, gas, and electrical systems located and constructed to minimize or eliminate infiltration of flood waters, and discharges from the systems into flood waters.
- I. All construction plans for land development include adequate drainage and stormwater management facilities per the requirements of Chapter 800 to reduce potential exposure to flood hazards.

Section 330-140. Structure Location Plans.

330-140 House Location Plan.

- A. *Size and description.* House Location Plans shall be drawn to scale and may be shown on a certified boundary survey of the lot or any other drawing showing the information required below. The Department may accept a House Location Plan drawn to the same scale as shown on the Final Plat where sufficient detail can be shown to support an adequate review and approval. The House Location Plan may be combined with a Residential Drainage Plan (RDP) if a RDP is required for the lot.
- B. *May be drawn by an individual.* It is not the intent of the Department that the House Location Plan be prepared by an authorized registered professional but may be done by the individual proposing the improvements on the lot. It is the intent, however, to receive a drawing with sufficient readability and accuracy to ensure that the proposed improvements will be constructed on the lot in conformance with the requirements of this UDO, or other regulations as applicable.

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- C. *List of what is to be shown.* House Location Plans shall show the following, as applicable:
1. Boundary lines of the lot, giving distances to the nearest one-tenth of a foot and bearing to the nearest minute.
 2. Location and names of all abutting streets or other rights-of-way.
 3. Minimum required front, side and rear building setback lines with dimensions, and notation of the existing zoning on the property.
 4. All easements, public water, sewer, or storm drainage facilities traversing or located on the property, septic tank, and septic tank drain field.
 5. Subdivision name, lot designation, land lot, district, and parcel number.
 6. North arrow and scale.
 7. Limit of the 100-year floodplain and any applicable buffers or special building setback lines.
 8. If the lot is located within the Chattahoochee River Corridor, the location of each area by vulnerability category and calculations of impervious surface and clearance by category, or other such data in accordance with the Certificate for the subdivision approved under the Metropolitan River Protection Act. Show also any buffer or setback required by the Metropolitan River Protection Act.
 9. All other applicable requirements of this UDO and conditions of zoning approval.
 10. Name, address, email address, and telephone number of the owner and the person who prepared the HLP.
- D. *Certificate of Occupancy.* If a lot is located in the Chattahoochee River Corridor, a Certificate of Occupancy shall not be issued for the structure or other improvements until conformance to the provisions or other requirements of the House Location Plan have been field verified by a survey prepared by a registered land surveyor and submitted to the Department.

330-140.2 Residential Drainage Plan (RDP).

- A. *Certified boundary survey required.* Prior to issuance of a Building Permit, Residential Drainage Plans shall be drawn to scale on a certified boundary survey of the lot and prepared by an authorized registered professional and be approved by the Department of Planning and Development. The Residential Drainage Plan may be combined with a House Location Plan (HLP) if an HLP is required for the lot. The requirements contained herein shall also apply to lots which formerly required SPED (Site Plan - Engineering Division) approval.
- B. *A list of what is required to be shown.* Residential Drainage Plans shall show the following, as applicable:
1. Boundary lines of the lot, giving distances to the nearest one-tenth of a foot and bearings to the nearest minute.
 2. Location and names of all abutting streets or other rights-of-way.

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3. The outline of all buildings, driveways, parking areas, swimming pools, recreational courts, patios, accessory structures, and other improvements existing or proposed on the property, and dimensions of buildings and distances between all structures and the nearest property lines as required to locate the major improvements on the lot.
4. All easements, public water or sewer facilities traversing or located on the property, and septic tank drain field.
5. Subdivision name, lot designation, land lot, and district.
6. North arrow and scale.
7. Contour lines based on sea level datum. These shall be drawn at intervals of not more than two feet and shall be based on a field survey. Proposed grading of the lot shall be shown along with the finished floor elevation of the lowest habitable floor of the house.
8. Stormwater features, including swales, pipes, stormwater management facilities and other structures, all drainage easements (DE), and directions of flow.
9. Floodplain features, including the limits of the flood hazard area, 100-year flood high water elevation, origin of the floodplain data, and any proposed modifications to the floodplain limits.
10. Sedimentation and erosion control measures to be taken or placed on the lot during construction.
11. Names, address, email address, and telephone number of the owner and person who prepared the RDP.
12. Seal, registration number, and date of expiration of the authorized registered professional who prepared the drainage improvements or modifications shown on the RDP.

330-140.3 Residential Drainage Study (RDS).

- A. A Residential Drainage Study (RDS) shall be conducted by the developer's or builder's authorized registered professional prior to issuance of a Certificate of Occupancy on those lots so noted on the Final Plat. The requirements for a RDS contained herein shall also apply to lots that formerly required SSED (Site Study - Engineering Division) approval. The grading and construction of the lot shall be field verified by the developer's or builder's authorized registered professional as being in conformance with grading plans and stormwater management studies approved for the subdivision. A Certificate of Occupancy shall not be issued for the structure until a written certification has been received from the developer's or the builder's authorized registered professional stating that the provisions or improvements required by the Residential Drainage Plan or as a result of the Residential Drainage Study have been field verified.

330-140.4 Certificate - Department approval. If an RDP or RDS is required because a stream or floodplain is on or adjacent to the lot, the notation on the development plans and plat shall be "RDP" or "RDS" as appropriate.

330-140.5 Swimming Pool Location Plan.

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- A. A Swimming Pool Location Plan is required for residential lots in order to obtain a building permit for a swimming pool. Its purpose is to ensure that the rear yard location and accessory structure setback requirements are met and that easements are kept free of encroachments.
- B. Size and description. Swimming Pool Location Plans shall be drawn to scale and may be shown on a certified boundary survey of the lot or any other drawing showing the information required below. The Department may accept a Swimming Pool Location Plan drawn to the same scale as shown on the Final Plat where sufficient detail can be shown to support an adequate review and approval.
- C. May be drawn by an individual. It is not the intent of the Department that the Swimming Pool Location Plan be prepared by an authorized registered professional but may be done by the individual proposing the pool on the lot. It is the intent, however, to receive a drawing with sufficient readability and accuracy to ensure that the proposed improvements will be constructed on the lot in conformance with the requirements of this UDO, or other regulations as applicable.
- D. *List of what is required to be shown:*
 - 1. Boundary lines of the lot with distances.
 - 2. Location and names of all abutting streets or other street rights-of-way.
 - 3. Minimum required front building setback lines with dimensions.
 - 4. Minimum required 5-foot accessory structure setback from side and rear property lines.
 - 5. Self-closing and self-latching gate equipped with a locking device.
 - 6. Pump, equipment structures and decking.
 - 7. Septic tank and drain field (if applicable).
 - 8. Height, type, and location of required pool fencing.
 - 9. The approximate outline of all buildings, driveways, swimming pools, recreational courts, patios, accessory structures, and other improvements, existing or proposed, on the property, and dimensions of buildings and distances between all structures and the nearest property lines.
 - 10. Location and dimensions of any water, sewer, drainage or other easements, stormwater management facilities, septic tank, and septic tank drain field located on the lot.
 - 11. Subdivision name, lot, and block designation.
 - 12. North arrow and scale.
 - 13. The 100-year floodplain limits, any applicable stream buffers, or other special building setback lines.
 - 14. Names, address, email address, and telephone number of the owner and person who prepared the plan.
 - 15. Any other applicable requirements of this UDO or conditions of zoning approval.

Chapter 340. Inspections

Section 340-10. Initiation of Development Activities.

340-10.1 Initial Activities Required.

- A. Following the issuance of any permit authorizing clearing, grubbing, grading or development of a site, a preconstruction conference shall be mandatory for all phases of construction and conducted before erosion and sediment control installation or any land disturbance takes place. Utility construction permits and retaining wall permits shall be issued prior to scheduling a pre-construction conference.
- B. The Department shall be contacted no less than 2 business days prior to scheduled start of construction to schedule the mandatory pre-construction conference. Attendees to include owner's representative, engineer, site work contractors, and utility contractors.
- C. Site development related activities prior to this required pre-construction conference shall be a violation of the permitted scope of work. A Notice of Violation and a Stop Work Order may be issued on site and all work must stop until the pre-construction conference has been completed and all work prior to the pre-construction conference inspected for compliance with the rules, appropriate standards, regulations, codes, and ordinances, then, if warranted corrections to illegal work completed before the work associated with the approved permit can proceed.

340-10.2 Erosion and Sediment Control Measures. Required preliminary erosion and sediment control measures must be installed in the field per the developer's authorized plans and inspected by the Department prior to actual grading or removal of vegetation. All erosion and sediment control measures shall be in place per State and County regulations as soon as or in conjunction with the commencement of activities and in continual coordination with the progress of the project and as per the authorized Erosion, Sedimentation and Pollution Control Plan.

- A. Preliminary erosion and sedimentation control measures must be installed and operational prior to major grading operations.
- B. Buffer areas required to be undisturbed per this UDO, conditions of zoning approval, per the *Metropolitan River Protection Act*, or any other applicable ordinance, or regulation shall be designated by approved protective tree fencing and shall be inspected by the Department prior to the commencement of any clearing, grubbing, grading, or development activities.

340-10.3 Tree Protection Areas. Prior to the initiation of land-disturbing activities and throughout the clearing, grubbing and grading process the following must be accomplished for a designated tree protection area in accordance with any approved Buffer and Landscape Plan or Tree Protection Plan for the property, as set forth in this UDO:

- A. For trees which are not to be disturbed or removed, required protective fencing, and tree protection area signage shall be established and maintained in place. These barriers must be maintained throughout the land disturbance process and shall not be removed until the final landscaping phase has begun.
- B. The tree protection areas shall not be encroached for any reason or be used for storage of earth and other materials resulting from or used during the development process.
- C. Construction site activities such as parking, materials storage, concrete washout, burning, etc., shall be arranged to prevent disturbance or damage within or to the tree protection areas.

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340-10.4 Stabilization for Erosion Control. If for any reason a lapse of 14 days occurs after initial land clearing, grubbing, and grading, or development activities have commenced, the developer and/or builder shall be responsible for reestablishing temporary vegetation cover of the site. If the lapse in construction activity extends beyond 30 days, permanent vegetative measures are required under the direction of the Department.

Section 340-20. Development Inspections.

340-20.1 Development Inspections. The developer or contractor shall request all inspections at least 2 business days prior to commencement of any development or construction activity for each of the phases below as authorized by any permit for site work or development. Inspections shall be made by the Department and passed prior to authorization for continuation of further activity or proceeding into new phases. Newly installed underground infrastructure including but not limited to; stormwater pipes and water and sewer lines must be installed per design standards and inspected prior to cover up of any portion.

The following items refer to construction activities that require approval before the next phase of construction occurs:

- A. *Development of the site.* Clearing, grubbing, grading or development of the site or any portion included under the permit.
- B. *Grading.* Installation of slope and grade stakes, erosion controls and detention facilities.
- C. *Road Construction.* The grading of areas for placement of the new roadway(s) shall be staked by the proper responsible parties as per the authorized plan.
- D. *Installation of storm drainage pipe, detention, or other storm water facilities.* Installation of storm drainage pipe, detention, or other stormwater management facilities require a pre-construction conference before commencement.
- E. *Installation of sanitary sewer and appurtenances and/or water main extensions and appurtenances.* Notification shall be made by the authorized utility contractor after obtaining a utility construction permit from the Department of Planning and Development.
- F. *Curbing of roadways.* Inspection shall be requested before the forms have been set (if used). Roadway width will be spot checked by string line between curb stakes. The developer or representative must be present for all "string line" related field inspections.
- G. *Sub-base or subgrade of streets.* After compaction, the subgrade shall be string-lined for depth and crown. The subgrade shall pass a roll test with no defects, to the satisfaction of the Department.
- H. *Street base.* The base will be string-lined for depth and crown and shall pass a roll test with no movement to the satisfaction of the Department.
- I. *Paving.* A Department inspector shall be on site during the paving process to check consistency, depth, and workmanship, as applicable. For asphalt paving, the temperature of the material will be spot-checked, and evidence provided of quantity, thickness, and mix of installation.
- J. *Water Line.* Shall install curb and gutter prior to installing the water lines.

340-20.2 Responsibility for Quality and Design. The completion of inspections by Gwinnett County officials or employees and authorization for work continuation shall not transfer responsibility for the quality of the work performed or materials used from the contractor or developer, nor imply or transfer acceptance of responsibility for project design or engineering from the professional corporation or individual under whose hand or supervision the plans were prepared.

Chapter 350. Development Design Standards

Section 350-10. Incorporation of Standard Drawings.

350-10.1 Department to Maintain Standard Drawings on File. The Department shall maintain on file for consultation and distribution a set of Standard Drawings, which may be updated administratively from time to time, illustrating details of construction and design of streets, stormwater management facilities, site improvements and other elements related to the development of land in accordance with this UDO and under the jurisdiction of the Department.

350-10.2 Standard Drawings to Illustrate Standards. The Standard Drawings shall illustrate minimum acceptable standards for land development activities authorized under this UDO but shall not supersede more restrictive prudent design requirements or good engineering practices as applied to specific situations on a case-by-case basis.

350-10.3 Standard Drawings Incorporated as Part of the Unified Development Ordinance. The Standard Drawings shall be treated as though a part of this UDO for application to the minimum standards for design and construction of improvements required herein and subject to the modification and waiver provisions of this UDO.

Section 350-20. Incorporation of the Gwinnett Countywide Trail Master Plan.

350-20.1 All development shall be consistent with the guidelines and policies of the Gwinnett Countywide Trails Master Plan.

350-20.2 The Gwinnett Countywide Trails Master Plan shall be treated as though a part of these regulations for application to the minimum standards for design, construction of improvements, and/or dedication of easements required herein and subject to the modification and waiver provisions of Section 340-40.

350-20.3 Where conflicts exist between the Gwinnett Countywide Trails Master Plan and this UDO, the recommendations within the Master Plan shall prevail.

Section 350-30. Design of Lots.

350-30.1 Building Setback Conformity. Building setback lines shall conform to the minimum setback requirements of Title 2 of this UDO except where a greater distance is required by the Gwinnett County Construction Code.

350-30.2 Lots.

- A. *Lots to conform to the Title 2 of this UDO.* Lots shall conform to requirements of this UDO. No lot shall be created that is of a lesser dimension than that required to meet the standards established in Title 2 of this UDO, unless a variance is granted. However, this provision shall not apply when a conforming lot is made non-conforming as a result of public acquisition.
- B. *Subdivisions shall be designed to minimize direct lot access to major thoroughfares.*
 1. Double frontage and reverse frontage lots shall be required for subdivisions along major thoroughfares where internal access can be provided. A no-access easement of at least ten feet in width, across which there shall be no right of access, shall be provided along the line of lots abutting such a traffic artery. When located along a major thoroughfare, the no-access easement shall be planted and/or screened as required by Chapter 62080 of this UDO, when the backs of homes are oriented toward the street.

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2. No-access easement planting or other screening treatments which are required by the UDO, or as a condition of zoning, shall be installed by the developer at no cost to Gwinnett County.
- C. *Flag lots prohibited.* No plat shall be approved on which is shown a flag lot, as defined in this UDO.
- D. *Side Lot Lines.* Side lot lines generally should be at right angles (90 degrees) to straight street lines or radial to curved street lines as much as practical. Side lot lines should be radial to the radius points of all cul-de-sacs. Variations of more than 10 degrees shall require modification approval from the Department and shall be approved when appropriate to the reasonable design pattern of the subdivision and efficient use of the land relative to topographic conditions.
- E. The Department may require notation that a House Location Plan (HLP) is required to be approved prior to issuance of a Building Permit on certain lots when particular care in locating the house or other improvements will be necessary. Such lots include, but are not limited to:
1. A lot which presents particular or unusual difficulties for a builder to meet minimum required building setbacks;
 2. A lot upon which is located an easement of unusual configuration;
 3. A lot containing floodplain;
 4. A lot upon which is located all or a part of a stormwater management facility;
 5. A lot upon which is located a buffer which was required by Title 2, and Title 3 of this UDO or as a condition of zoning approval;
 6. All duplex lots; and
 7. All lots within, or partially within, the Chattahoochee River Corridor, or containing a River Corridor Tributary Buffer Zone.
- F. The Department may require notation that a Residential Drainage Plan (RDP) is required to be approved prior to issuance of a Building Permit on certain lots where additional (site specific) engineering will be necessary to properly grade the lot or locate the building or other improvements. Such lots include, but are not limited to:
1. A lot containing floodplain where fill or other encroachment into the floodplain is planned or reasonably expected;
 2. A lot containing severe topographic features intersecting the building site;
 3. A lot containing a drainage easement with a pipe discharge or other facilities, or flow characteristics which may adversely affect the location of a building or other site improvement.
- G. The Department may require notation that a Residential Drainage Study (RDS) is required to be approved prior to issuance of a Building Permit on certain lots where particular attention to site grading will be necessary, but formal engineering is not needed. Such an RDS is conducted in the field where the effect of the site grading must be accomplished with adequate care so as not to create a drainage problem on neighboring property.

Section 350-40. Exceptions to Design of Lots.

350-40.1 Signage and Landscape Features. The creation of an unbuildable lot in a proposed subdivision for the exclusive purpose of subdivision identification signage or subdivision entrance landscape features is authorized only under the following circumstances (modification applications from the circumstances of this exception shall not be accepted):

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- A. The lot shall be located at an entrance to the subdivision as an "island" in the right-of-way of a local or minor collector street; and,
- B. A mandatory property owner's association shall be required for the subdivision for ownership and maintenance of the lot as common area; and,
- C. Right-of-way of a minimum width of 6 feet from back of curb shall be provided adjacent to the perimeter of the lot; and,
- D. Landscape plantings within the right-of-way shall not extend more than 2.5 feet above the street grade.

350-40.2 Stormwater Management and Utility Facilities. The creation of an unbuildable lot for the exclusive purpose of providing and maintaining a stormwater management or utility facility is authorized, provided that such a lot meets all applicable requirements set forth in this UDO and under the jurisdiction of the Department.

350-40.3 Open Space. The creation of an unbuildable lot for the exclusive purpose of providing and maintaining open space or conservation space for the enjoyment of the community is authorized.

Section 350-50. Access and Right-of-Way.

350-50.1 Project Access Improvements.

- A. Every developer of land shall provide the project access improvements included in this UDO as shall be appropriate to serve the project, in accordance with these regulations and other pertinent Codes, Ordinances, and regulations of Gwinnett County. Said improvements and associated lands shall be provided at no cost to Gwinnett County, and shall be dedicated or otherwise transferred, as required, to the public in perpetuity and without covenant or reservation, except as otherwise provided herein.
- B. For all business and industrial developments fronting a state highway, no land disturbance or building permits shall be issued until the approval of the Georgia Department of Transportation (DOT) has been obtained by the applicant on the entrances and exits, curb radii, drainage and other matters that are the appropriate concern of Georgia DOT.

350-50.2 Access.

- A. *Large parcels to provide future street access.* When land is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged and designed so as to allow for the opening of future streets and to provide access to those areas not presently served by streets.
- B. *Landlocking of adjacent property prohibited.* No development shall be designed so as to completely eliminate street access to adjoining parcels of land. Every development shall be designed to facilitate access to adjoining properties which are developed or anticipated to be developed in a manner substantially similar to the subject property. Locations of inter-parcel access shall be as required by and subject to the approval of the Department.
- C. *Private streets to be constructed pursuant to roadway construction standards.* Private streets as may be approved under the provisions of this UDO shall be constructed to the street construction standards of Gwinnett County, as contained in Chapter 360.

350-50.3 Vehicular Access Easements. Vehicular access easements may be provided from a public street indirectly via easement subject to the following:

- A. The easement shall be in a location and the access driveway shall have a width and alignment acceptable to the Department and the Department of Fire and Emergency Services.

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- B. The access easement serves a single-family residence on a lot which is otherwise a buildable lot of record, and which is sharing a common driveway with more than one other single-family residence.
- C. The sharing of a common driveway (or alley) by multiple residences.
- D. The access easement was lawfully established as such under the code, ordinances, or regulations of Gwinnett County prior to the adoption of this UDO.
- E. The access easement coincides with a private roadway or alley approved under the code, ordinances, or regulations of Gwinnett County.

350-50.4 Dedication of Street Right-of-Way. Right-of-Way for all public streets, existing and proposed, shall be dedicated in accordance with the street classifications as shown on the officially adopted Gwinnett County Long Range Road Classification Map or as required by Director or Designee of Gwinnett DOT.

350-50.5 Greenway Access Dedication of Easement and Construction Requirements. Access, dedication of easement and/or construction of greenway trails shall be provided in accordance with the prioritized greenway network map of the most currently approved Gwinnett Countywide Trails Master Plan, as follows:

- A. *Greenway Access.* All properties or assemblages of parcels abutting designated greenways as shown on the prioritized greenway network map of the Gwinnett Countywide Trails Master Plan shall provide at least one multi-use path to the programmed or existing greenway. The multi-use path shall be paved or constructed with materials approved by Gwinnett County, and the route segment shall be a minimum of 10 feet in width. Multi-use path locations shall be reviewed and approved by the Department of Community Services.
- B. *Greenway Construction and Easement Dedication.*
 - 1. Within flood plains and stream buffers, greenway easements shall be dedicated and constructed to provide public access to trails as shown on the prioritized greenway network map of the Gwinnett Countywide Trails Master Plan. Greenways shall be located so that the route is feasible for both construction and long-term maintenance. The specific location of the greenway shall be verified on the ground before approval and project release of the development. The amount of land required for greenway construction shall not exceed 5 percent of the land within the development excluding greenways located within a standard street right-of-way.
 - 2. For all other locations, as established by the prioritized greenway network map of the Gwinnett Countywide Trails Master Plan, dedication of easement shall be required for greenways lying outside of any floodplain or stream buffer or shall be reserved either for public access greenway easement, dedication and construction, or other terms negotiated with the County.
 - 3. In coordination with the Department of Community Services and the Director of Planning and Development, greenways with public access may be allowed to substitute for required sidewalks if the greenway alignment coincides with locations intended to be served by sidewalks.
- C. *Limitations.*
 - 1. Single-family residential zoning districts. The dedication or construction of greenways in single-family residential zoning districts is required for subdivisions that involve the creation of a new street. Existing single-family lots are exempt from greenway easement dedication and construction.
 - 2. All other zoning districts. Construction of the greenway is required in the following situations:
 - a. Whenever there is new development; or
 - b. Whenever alterations to existing development are 25 percent or greater of the total improvements on the site; or

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- c. Whenever new streets are constructed.
- D. *The construction and dedication of greenways* shall be in accordance with the approved Gwinnett Countywide Trails Master Plan design standards. Any deviation or modification of the construction standards contained herein shall be subject to the approval of a modification or waiver.

Section 350-60. Design of Blocks.

350-60.1 Length, Width, and Shape. The lengths, widths, and shapes of blocks shall be determined with regard to:

- A. Provision of adequate building sites suitable to the special needs of the type of use contemplated;
- B. Applicable zoning requirements as to maximum length of street, lot size and dimensions;
- C. Needs for convenient access, circulation, control, and safety of street traffic; and
- D. Limitations and opportunities of topography.

350-60.2 Pedestrian Access. In blocks over 500 feet long, an alley, sidewalks, pedestrian way, or pedestrian access easement, shall be provided through the block to other streets within the development.

Section 350-70. Residential Amenities, Open Space.

350-70.1 Residential Amenities and Common Areas.

- A. In subdivisions where land is required for open space use in accordance with this UDO, such land shall be deeded to a qualified Property Owners or Homeowner's Association, or other legal entity incorporated under the laws of Georgia upon the approval of the Final Plat containing said land. Said land shall be deeded with a restriction that the land shall be used exclusively for recreational purposes and shall be made available to all residents of the subdivision project on an equal basis. The qualified Property Association shall provide for the mandatory membership of all of the owners within the subdivision, and shall be responsible for the perpetuation, maintenance and function of the recreation areas and uses or facilities therein. The association shall have the authority and duty to assess its members for such maintenance and improvements as set forth in the instrument creating the association. All covenants shall be recorded simultaneously with the final subdivision plat.
- B. In multifamily rental or condominium projects, land provided for open space in accordance with these requirements shall be held in the ownership of the owner of the project.
- C. Gwinnett County may lease or sell land reserved for public parks to a qualified Property Owners Association with a deed restriction that the land be used exclusively for open space, common area or public recreational purposes in perpetuity. The organization of a qualified Property Owners Association and its adequate financing for the discharge of its responsibilities shall be assured through acceptable private deed covenants running with the land or other such documents as approved by the Boards of Commissioners of Gwinnett County.
- D. In a residential development, where usable open space is to be developed, permits for any amenities must be issued prior to 25 percent of the proposed residential units receiving a certificate of occupancy. All amenity areas must be completed prior to 75 percent of the proposed residential units receiving a certificate of occupancy.

350-70.2 Open Space in Big Haynes Creek Watershed Protection Area. Open space provided in projects located in the Big Haynes Creek Watershed Protection Area shall meet the following requirements:

- A. *Open Space shall be permanent and shall remain in its natural state*, undisturbed and unoccupied by any structures or impervious surfaces to include septic tanks and septic tank fields and except for

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approved access or utility crossings. Pedestrian access shall be subject to the approval of the Director. Buffers, floodplains, and wetlands may be used as open space.

- B. *Ownership Requirements.* Open Space provided in a development located in the Big Haynes Creek Watershed Protection Area shall be owned and maintained by the property owner, or in the case of subdivision, by a property owner's association. The association shall be established by the developer prior to or concurrent with the recording of the Final Plat of the subdivision. The association by laws shall include the following provisions:
1. Automatic (mandatory) membership of all purchasers of lots therein and their successors.
 2. Conditions and timing of transferring control of the association from the developer to the lot owners shall be specified which shall not exceed four years from the date of recording of the Final Plat of the subdivision
 3. Responsibility for maintenance, insurance, and taxes.
 4. Sharing of the costs of maintenance among the lot owners with shares defined by the association bylaws.
 5. Authority to place liens on the real property of members who fail to pay their dues or assessments.
 6. Prohibition of the dissolution of the association without the approval of the Board of Commissioners.
- C. *Maintenance.* The property owner, or the property owner's association, shall be responsible for the maintenance of open space. Open Space shall be kept in reasonable order and condition.

Chapter 360. Infrastructure, Streets, Sidewalks, Multi-Use Paths, and Greenways

Section 360-10. Street Classification and Right-of-Way Requirements.

360-10.1 Street Classifications.

- A. *Dedication of Street Right-of-Way.* Right-of-way for all existing and proposed public streets within a project shall be dedicated in accordance with the street classifications as shown on the officially adopted Gwinnett County Long Range Road Classification Map.
- B. *Street Improvements.* All streets and project access improvements shall be constructed or improved to the standards as established in the UDO. Roadway improvements shall be made in accordance with the street classifications as shown on the officially adopted Long Range Road Classification Map or the UDO as applicable, or as otherwise required by the Board of Commissioners.

360-10.2 Minimum Right-of-Way and Street Improvements.

- A. *Right-of-Way and Pavement Widths.* Minimum widths of street right-of-way and roadway pavement shall be as shown on Table 360.1 unless a modification is granted by the Director, except as follows:
 - 1. *New Local Residential Streets in OSC, TND and Mixed-Use Districts.* New local streets in subdivisions developed in the OSC District and in exclusively residential areas of TND, MU-N, MU-C and MU-R Districts shall be as follows:
 - a. Right-of-way width of new interior local streets.
 - i. Entrance Streets: at least 50 feet for a depth of 300 feet from the subdivision entrance (measured from exterior road right-of-way) after which street right-of-way width shall be at least 46 feet.
 - ii. Other Interior Streets: at least 44 feet.
 - iii. Right-of-Way Radii: at least 60 feet for cul-de-sac or "eyebrow" turnarounds.
 - b. Pavement width of new interior local streets.
 - i. Entrance Streets: at least 27 feet (measured to back of curb) for a depth of 300 feet from the subdivision entrance (measured from exterior road right-of-way) after which pavement width shall be at least 24 feet (measured to back of curb).
 - ii. Other Interior Streets: at least 24 feet (measured to back-of-curb).
 - iii. Pavement Radii: at least 50 feet for cul-de-sac or "eyebrow" turnarounds (measured to back of curb).
 - c. Additional right-of-way shall be provided to accommodate additional travel lanes, sidewalks, multi-use paths, trails and greenways, and underground utilities.
 - 2. *New Local non-residential streets in the MU-N, MU-C and MU-R Districts.*
 - a. New local non-residential streets developed in the mixed-use areas of TND, MU-N, MU-C and MU-R Districts shall meet the minimum right-of-way and roadway pavement widths for local non-residential street as shown in Table 360.1.
 - b. Additional pavement and right-of-way width.
 - i. Additional Travel Lanes: at least 11 feet of pavement width.

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- ii. On-Street Parallel Parking: at least 9 feet of pavement width.
- iii. On-Street Angled Parking: at least 18 feet of pavement width.
- iv. Right-of-Way: additional right-of-way shall be provided to accommodate additional travel lanes, sidewalks, underground utilities, multi-use paths, trails, and greenways located between lots and street right-of-way.

Table 360.1. Minimum Right-of-Way and Roadway Widths for New Streets and Project Access Improvements.

Street Category	Minimum Right-Of-Way ¹	Minimum Roadway ²
Principal Arterial	120' TO 150'	6 through lanes with median
Major Arterial	100' TO 120'	67'
		4 to 6 through lanes with median
Minor Arterial	80' TO 100'	52' TO 66'
		4 through lanes with median
Major Collector	80'	52'
Minor Collector	60' TO 80'	28'
Local Street Non-residential Non-residential Cul-De-Sac	60' ³	32'
	60' radius	50' radius
Local Street Residential — Urban Residential — Urban Cul-de-sac	50'	27'
	50' radius	40' radius
Local Street Residential - Rural ⁴ Residential — Rural Cul-de-sac ⁴	60' ⁵	24' ⁶
	60' ⁵ radius	40' radius

¹The greater right-of-way width shall apply under circumstances as described in Section 360-10.2.

²Roadway width dimensions are back-of-curb to back-of-curb except where noted.

³Utility easement shall be provided in a location and size as required by the Department of Water Resources.

⁴Subdivisions zoned RA-200.

⁵May be reduced to 50 feet if curb, gutter, and piped drainage system is provided.

⁶Measured to edge of pavement. Curb and gutter is not required in RA-200 subdivision. Roadway width may be reduced to 23 feet if curb and gutter is provided (27 feet total width).

B. Street Rights-of-Way.

1. The minimum width of street right-of-way shall be dedicated based upon the street classification as shown on the officially adopted Gwinnett County Long Range Road Classification Map and as contained in the UDO.
2. Additional street right-of-way width shall be required to be dedicated at intersections or other locations to accommodate required traffic safety improvements (e.g., deceleration lanes, turning lanes, storage lanes, medians, or realignments), , future projects identified in official planning documents, or within 500 feet of a major intersection and minimum right-of-way standards would be inadequate to accommodate the improvements.

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3. If a new street or thoroughfare is proposed by the officially adopted Gwinnett County Long Range Road Classification Map or the State of Georgia to adjoin or traverse the property, permits shall not be issued until the Department of Transportation has submitted the project to the Board of Commissioners for review in order to seek a determination if Gwinnett County should acquire the right-of-way or if a study of alternate routes should be undertaken.

Section 360-20. Requirements for New Streets and Roadways.

360-20.1 Construction Standards. Streets, whether public or private, shall be constructed or improved at least to the standards contained in this UDO in accordance with the category of said streets or as otherwise required by the Board of Commissioners.

360-20.2 General Layout Requirements.

- A. *Conformance.* The arrangement, character, extent, width, grade, and location of all streets shall conform at a minimum to the officially adopted Gwinnett County Long Range Road Classification Map and this UDO.
- B. *Local Streets and Minor Collectors.*
 1. Local streets shall be laid out so that their use by through traffic will be discouraged. Minor collectors shall be provided to channel through traffic movements within a development, where appropriate to the design and a major thoroughfare is not proposed by the officially adopted Gwinnett County Long Range Road Classification Map. Minor collectors also may be provided as central routes within large residential subdivisions, where appropriate to the design, based on project traffic demands exceeding 2,000 trips per day (ADT). Traffic calming measures for new local streets are required to encourage and maintain maximum vehicle operating speeds of 25 mph. In order to achieve this objective, the maximum length of roadway section between speed control points shall be 500 feet. Such design and construction should be in substantial conformance with the Gwinnett County Department of Transportation Traffic Calming Design Guide for traffic calming measures and requirements.
- C. *Cul-de-sac Streets.*
 1. Dead end streets designed to have one end permanently closed shall provide a cul-de-sac or other approved turnaround and may be no more than 600 feet in length. Additional length necessitated by topography or property configuration may be approved by the Director.
 2. The length of a cul-de-sac street shall be measured from the center of the cul-de-sac or other approved turnaround to the center of the intersection with another street, whether a through street or another cul-de-sac or dead-end street.
 3. Eyebrow cul-de-sac (half cul-de-sacs) will be allowed only at "right-angled" intersections having an interior angle between 80 degrees and 100 degrees.
 4. Cul-de-sacs shall conform to the layout and dimensional requirements as shown in the Standard Drawings maintained by the Department.
- D. *Substandard Streets.* In the event that a development has access to a substandard street (i.e., a dirt or gravel road), the following project access improvements shall be required:
 1. If the abutting substandard street provides access to the development and is dirt or gravel, the street shall be upgraded by the developer to a paved roadway from the project entrance to the nearest standard paved road along the route of access.

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2. Off-site project access improvements required under Subsection 360-20.2.D.1, above, and Chapter 360 shall at a minimum, result in a full-section roadway meeting the requirements of a local residential rural roadway (24 feet edge to edge of pavement, with drainage swale ditches as needed). Responsibilities shall be as follows:
 - a. The Developer shall design the road and provide the labor, equipment, and materials required for roadway improvements and necessary drainage improvements.
 - b. If the County desires the roadway to be improved to a standard greater than that for a local residential rural roadway, the County shall provide or pay the cost of the additional materials and labor.
 - c. All right-of-way required for these off-site improvements shall be acquired by the developer at no expense to the County.
 - d. In the event that access to a new development is through an existing local County-maintained Road, the Developer and/or Builder is responsible for any and all damages to the existing road. Developer and/or Builder may be required to document existing conditions of this access road prior to any construction, may be required to post a bond or some form of guarantee and make necessary repairs as deemed appropriate per the Director.
 3. Half Streets. Half-streets (new boundary streets having one-half of the minimum required right-of-way or pavement width) shall not be allowed nor access to same be permitted should it exist.
- E. *Improvements along State Highways.* For any development which abuts a state highway or other right-of-way controlled by the State of Georgia, improvements to the roadway and the location and design of any street or driveway providing access from the state highway shall comply with the standards and requirements of the Georgia Department of Transportation. A permit for the proposed access or improvements shall be required to have been approved by the Georgia Department of Transportation and incorporated into the construction drawings for the project prior to issuance of a development permit by the Department.
- F. *Dead End Streets.*
1. A dead-end street shall be provided to the boundary of a subdivision where necessary to provide access to a land-locked abutting property, for planned continuity of future circulation, for improved access for public safety vehicles, or for the extension of public water or other utilities to neighboring lands. Such dead-end streets shall be designed so as to allow their reasonable extension and shall be located so as to be reasonably incorporated into a street design for the neighboring property. The stub street requirement may be waived by the Director.
 2. Dead end streets on abutting property shall be extended into a proposed subdivision and incorporated into the street design of the development. This requirement may be modified by the Director in cases of serious topographical hardship or dissimilar zoning which would create unacceptable land use conflicts between the two developments. This modification may be conditioned on the provision of easements necessary for the extension of public utilities, the provision of cul-de-sac or other permanent turnaround on the dead-end street, or the removal of the dead-end street back to its nearest intersection.
 3. Where a dead-end street (other than a cul-de-sac) serves more than three lots, the developer shall be required to provide a temporary vehicular turnaround within the right-of-way. This requirement may be waived if extension of the dead-end street is approved and under construction prior to its inclusion in a Final Plat.

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4. Where a street dead ends at the property boundary and the street exceeds 1000 feet in length, a permanent cul-de-sac or other approved turnaround shall be required. In this situation, right-of-way to the property boundary shall be required, but the pavement shall not be extended to the property boundary beyond the edge of the paved cul-de-sac or other approved turnaround. In no case shall a dead-end street exceed 2000 feet in length unless approved by the Department of Transportation due to unusual topographic conditions or property configuration.
 5. Connections for future extension of all public utilities shall be constructed as part of the subdivision. Curb returns shall be constructed as part of the subdivision. Curb returns shall be provided to the future "stub" street roadway location, and curb and gutter shall be installed across the roadway stub at the right-of-way line (extended).
 6. The right-of-way for the "stub" street shall be dedicated as part of the Final Plat. Slope easements or construction easements, if required by the street design, shall be shown on the Final Plat.
- G. *Service Roads.* Where a development borders on or contains a railroad right-of-way, or limited access highway right-of-way or major thoroughfare, a public street may be required to be constructed and dedicated within the development approximately parallel to and on each side of such right-of-way.

360-20.6 Reserve Strips. Land in private ownership adjacent to public rights-of-way which could control or are intended to control access to streets, alleys, or public lands shall not be permitted unless their control is given to the County under ownership, dedication, or easement conditions approved by the County Attorney or acceptable to the Director. No development shall be designed so as to deny access to abutting properties.

360-20.7 Street Jogs.

- A. Street jogs shall either directly align or have offsets as shown in Table 360.3, as measured between centerlines of said streets.
- B. All Major Thoroughfares shall provide offsets as required by the Department, where alignment is not desirable or feasible, but in no case be spaced less than 600 feet apart as measured between centerlines of said streets.

Section 360-30. Project Access Improvements.

360-30.1 Project access improvements for single-family detached, single-family attached, and duplex residential subdivisions.

- A. When property that abuts upon an existing or proposed County road is to be developed or redeveloped as a single-family detached, attached, or duplex subdivision and the County street will provide access to the property, project access improvements to the County road (deceleration lanes, turn lanes, etc.) shall be provided by the developer as required herein. Two remote entrances shall be required for developments with more than 120 dwelling units unless an administrative modification is granted by the Department and an administrative variance is granted by the Gwinnett County Fire Marshall.
- B. A deceleration lane shall be required to be provided at each project driveway or subdivision street entrance that is provided street access to a Minor Collector Street or Major Thoroughfare. In the event a street has an existing or proposed median, and the developer desires to construct a median break to serve the subdivision, a left turn lane leading to the median break shall be required to be provided by the developer if approved by the Department of Transportation and shall meet the standards contained herein. The preferred spacing for median breaks shall be 2,000 feet between the centerlines of the openings, and the minimum spacing for median breaks shall be 1,000 feet between centerlines of the openings. Other factors will also be considered, such as distance to other median openings,

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adjacent land use, expected traffic volumes, and the resulting volume of U-turns that are likely to occur without the median opening. Meeting the spacing criteria is not, in itself, an indication that median openings will be allowed.

- C. Deceleration lanes shall have a length of 200 feet, with an additional 50-foot taper length, a pavement width of 12 feet (exclusive of curb and gutter) and shall be provided with curb and gutter. Additional right-of-way to accommodate the deceleration lane and an 11-foot shoulder measured from back of curb shall be dedicated by the developer to Gwinnett County at no cost. Associated stormwater infrastructure as deemed necessary by the construction of the deceleration lane shall also be required.
- D. A left turn lane shall be provided into each project driveway or subdivision street that accesses a Minor Collector or Major Thoroughfare in accordance with the Department of Transportation's "Criteria and Guidelines for Left Turn Lanes".
- E. Other project access improvements may be required by the Department upon the recommendation of the Department of Transportation in order to ensure adequate site access, pedestrian access, convenience and safety to the motoring public.
- F. The developer shall be responsible for the relocation of public or private utilities and stormwater infrastructure, as may be occasioned by the required Project Access Improvements.

360-30.2 Project Access Improvements for Multifamily and Non-residential Developments.

- A. When property that abuts upon an existing or proposed County road is to be developed or redeveloped for multifamily or non-residential uses and the County road will provide access to the property, project access improvements to the County road (deceleration lanes, turn lanes, etc.) shall be provided by the developer.
- B. A deceleration lane shall be required to be provided at each project driveway or subdivision street entrance, as applicable, that is provided street access to a Minor Collector Street or Major Thoroughfare. In the event a street has an existing or proposed median, and the developer desires to construct a median break to serve the project, a left turn lane leading to the median break shall be required to be provided by the developer if approved by the Department of Transportation and shall meet the standards contained herein. The preferred spacing for median breaks shall be 2000 feet between the centerlines of the openings, and the minimum spacing for median breaks shall be 1000 feet between centerlines of the openings. Other factors will also be considered, such as distance to other median openings, adjacent land use, expected traffic volumes, and the resulting volume of U-turns that are likely to occur without the median opening. Meeting the spacing criteria is not, in itself, an indication that median opening will be allowed.
- C. Deceleration lanes shall have a length of 200 feet, with an additional 50-foot taper length, pavement width of 12 feet (exclusive of curb and gutter) and shall be provided with curb and gutter. Additional right-of-way to accommodate the deceleration lane and an 11-foot shoulder shall be dedicated by the developer to Gwinnett County at no cost. Associated drainage improvements as deemed necessary by the construction of the deceleration lane shall also be required.
- D. A left turn lane shall be provided into each project driveway or subdivision street that accesses a Minor Collector or Major Thoroughfare in accordance with the Department of Transportation's "Criteria and Guidelines for Left Turn Lanes."
- E. Other project access improvements may be required by the Department upon the recommendation of the Department of Transportation in order to ensure adequate site access, pedestrian access, convenience and safety to the motoring public.
- F. The developer shall be responsible for the relocation of public or private utilities and stormwater infrastructure, as may be occasioned by the required Project Access Improvements.

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Section 360-40. Driveway Design Standards.

360-40.1 Angle and Improvements. Driveways shall generally intersect streets at right angles. The portion of a driveway located within a public right-of-way shall be paved. Driveways providing access to parking lots which contain five or more spaces shall be paved in accordance with the parking lot requirements in Chapter 240.

360-40.2 Driveway Design Standards. Driveways serving single-family detached or duplex residences may be no less than 10 feet wide at the right-of-way line and shall provide a radius to the back of curb or edge of pavement of the roadway of no less than 5 feet. Driveways shall provide a parking area of at least 18 feet deep measured from the edge of the sidewalk or curb if a sidewalk is not present or required. All other driveway curb cuts on public streets shall conform to the standards shown on the driveway details contained in the Standard Drawings in the Appendix of the UDO and by land use type as follows:

- A. *Driveway Detail 1 (32-foot Width, 25-foot Radius) for:*
 - 1. Commercial and Retail Uses (over 80,000 Square Feet).
 - 2. Office/Institutional/Cultural Uses (Over 100,000 Square Feet).
 - 3. Multifamily Residential Developments (Over 200 Units).
 - 4. Mobile or Manufactured Home Developments (Over 200 Lots).
 - 5. Service Stations.
- B. *Driveway Detail 2 (28-foot Width, 25-foot Radius) for:*
 - 1. Commercial and Retail Use Sites (80,000 Square Feet or Less).
 - 2. Office/Institutional/Cultural Use Complexes (100,000 Square Feet or Less).
 - 3. Multifamily Residential Developments (200 Units or Fewer).
 - 4. Mobile or Manufactured Home Developments (200 Lots or Fewer).
- C. *Driveway Detail 3 (32-foot Width, 40-foot Radius) for:*
 - 1. Industrial Sites.
- D. *Driveway Detail 4 (Optional Design with Island) for:*
 - 1. Private Commercial/Office Street Entrances.
 - 2. Private Entrances to Multifamily Residential Developments (Over 200 Units).
 - 3. Private Entrances to Mobile or Manufactured Home Developments (Over 200 Lots).
 - 4. All driveways and driveway curb cuts on State highways shall conform to Georgia Department of Transportation standards.

360-40.3 Auxiliary Lanes. Along any Major Thoroughfare, a deceleration lane, acceleration lane, larger turning radius, traffic islands, or other devices or designs may be required to avoid specific traffic hazards which would otherwise be created by the proposed driveway location.

360-40.4 Corner Sight Distance. All driveways approaching a Minor Collector or Major Thoroughfare shall provide adequate corner sight distance, and shall meet or exceed the following design standards:

- A. The sight distance criteria are based on the time required for a vehicle to make a left turn from a stop-controlled approach to the Highway (AASHTO Case B1). The time to execute the maneuver is based on recommendations contained in NCHRP Report 383, Intersection Sight Distance. The sight distances, for

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a two-lane road, are the distances traveled at the arterial speed during 7.5 seconds. The time is increased by 0.5 seconds for each additional lane to be crossed.

- B. The sight distances given in Table 360.2 are for undivided highways and streets. If the highway or street is divided, the effect of the median should be considered in determining the required sight distance. Based on the conditions, it may be feasible for the crossing maneuver to be done in two stages with a stop in the median. However, the intersection should only be treated in this manner if the signing and marking is accordingly provided. Otherwise, the sight distance requirements should be increased to account for the additional width that must be crossed. See AASHTO Green Book, Chapter 9 Intersections, for adjustments due to grades greater than 3 percent and design vehicles other than passenger cars.

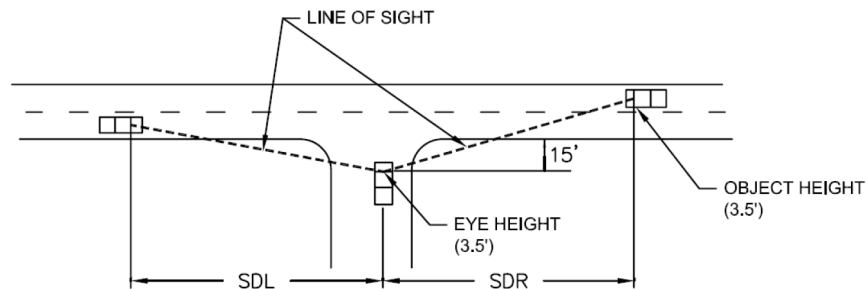


Table 360.2. Sight Distance.

SPEED, MPH	SIGHT DISTANCE (FEET)						
	2 Lane SDL=SDR	2 Lane SDL	3 Lanes SDR	3 Lanes SDL	4 Lanes SDR	4 Lanes SDL	5 Lanes SDR
25	280	280	295	280	310	295	335
30	335	335	355	335	375	355	400
35	390	390	415	390	440	415	465
40	445	445	475	445	500	475	530
45	500	500	530	500	565	530	600
50	555	555	590	555	625	590	665
55	610	610	650	610	690	650	730
60	665	665	710	665	750	710	795
65	720	720	765	720	815	765	860

360-40.5 Separation and Spacing. All driveways except those serving residential units on individual lots shall meet the following criteria:

- A. Minimum separation for driveways, public roads, and side streets:

Table 360.3. Minimum Separation for Driveways, Public Roads, and Side Streets.

Posted Speed MPH	Minimum Driveway Spacing
25	125
30	219
35	244

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40	294
45	369
50	419
55	444
60	494
65	550

- B. **Driveway Spacing.** Spacing shall be measured from centerline to centerline of driveways, public roads, or side streets. Where there is an arterial or major collector intersecting with a side street, the measurement may be taken from the edge of pavement or back of curb, as opposed to the centerline of the arterial/major collector. Greater separation may be required for safe operation of intersections and right or left turning lanes. Whenever possible, proposed driveways along one side of a street shall coincide with existing or proposed driveways on the opposite side of such street. If offset driveways cannot be avoided, the same driveway spacing criteria as given in Table 360.3 should be provided. Spacing shall be measured from centerline to centerline. If the Highway involved is a divided facility and the driveways do not align with a median crossover, the driveway spacing would only apply to the adjacent driveway on the same side of the Highway as provided in Table 360.3.
- C. **Maximum Number of Driveways.** Developments shall be limited to one driveway access on county-maintained roadways. Additional driveways may be permitted subject to the review and approval of the Gwinnett County Department of Transportation.
- D. **Interior Driveways.** The placement of the first interior drive which intersects the driveway from a county-maintained roadway should be as far as possible from the road for safe, more efficient operation. The distance between the roadway traffic and the first internal movement shall be a minimum of 200 feet as referenced in the Georgia Department of Transportation Regulations for Driveway Encroachment Control Manual, Figure 3-1.2. Lots less than 500 deep should maintain a minimum distance of 100 feet. The distance required should be maintained or increased so as to avoid interference with the mainline traffic flow for large sites with high volumes, heavy truck traffic, and on high volume roadways. If no other design alternatives exist and interior drives are proposed which do not meet minimum spacing, the left turning movement should be restricted with a raised barrier. Site planning should be done such that Interior Driveways accommodate the right of way at least 100 feet of storage.

Section 360-50. Street Intersections.

360-50.1 Angle of Intersection. Intersections shall generally be at right angles and shall not be at an angle of less than 85 degrees, unless approved by the Department, nor less than 80 degrees unless the intersection is signalized, in which case the angle of the intersection may be reduced subject to the review and approval of the Gwinnett County Department of Transportation.

360-50.2 Maximum Grade. Street intersections should be designed with a flat grade wherever possible, but in no case should the grade exceed 2 percent in normal situations (or 4 percent in topographical hardship situations on local streets).

360-50.3 Intersection Approaches: Horizontal Alignment.

- A. New local streets which approach an intersection with a street in a category higher than itself on a horizontal curve having a centerline radius less than 240 feet shall provide a tangent section of roadway at least 30 feet long. Minor Collectors approaching an intersection with a Major Thoroughfare on a horizontal curve having a centerline radius of less than 550 feet shall also provide the 30-foot tangent section. The tangent length shall be measured along the centerline of the street, from the

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right-of-way line of the intersecting street, extended, to the point of tangency with the centerline of the curve section.

- B. New Major Thoroughfares shall provide tangent sections at intersections with streets in equal or higher categories as needed to provide adequate stopping distances at their design speeds.

360-50.4 Intersection Approaches: Vertical Alignment.

- A. For intersections with local or minor collector streets, a leveling of the street at a grade not exceeding 2 percent shall be provided but no level approach distance is required for streets approaching at less than 7 percent, and a minimum 25-foot level approach distance shall be provided for streets approaching at a grade of 7 percent or more.
- B. As a street approaches an intersection with a major thoroughfare, there shall be a suitable leveling of the street at a grade not exceeding two percent and for a distance not less than the following minimums, as set forth in Table 360.4 below:

Table 360.4. Approach Distances at Major Intersections.

Approaching Street Category	Minimum Approach Distance
Principal Arterial	100 Feet
Major Arterial	100 Feet
Minor Arterial	100 Feet
Major Collector	75 Feet
Minor Collector	75 Feet
Local	50 Feet

**Distance of the approach is measured from edge of pavement of the intersecting street to the point of curvature in the approaching street.*

360-50.5 Intersection Radii. Intersection radii for roadways measured at back of curb and for the right-of-way lines shall be as set forth in Table 360.5 below. For intersecting streets of different classifications, the larger radii shall be provided. In all cases, adequate right-of-way shall be provided to maintain minimum of 11 feet from back-of-curb. Larger radii may be required for streets intersecting at angles less than 90 degrees.

Table 360.5. Intersection Radii.

Street Category	Roadway Radii	R/W Radii
Arterial	40 Feet	20 Feet
Major Collector	40 Feet	20 Feet
Minor Collector-Residential	25 Feet	9 Feet
Minor Collector-Non-residential	40 Feet	20 Feet
Local Residential	20 Feet	9 Feet
Local-Commercial or Office	25 Feet	11 Feet
Local-Industrial	40 Feet	25 Feet

**Intersecting right-of-way lines may be joined by an arc having the minimum radius shown, or by a miter which cuts across the right-of-way lines connecting the points where the required radius would have otherwise been tangent.*

360-50.6 Islands. Islands in street intersections shall conform to the design requirements of the Standard Drawings in the Appendix of the UDO. In no case shall anything in an island extend more than three feet above the street grade within the right-of-way, except traffic regulatory devices and other infrastructure erected or approved by Gwinnett County. No island shall be approved which contains less than 100 square feet.

360-50.7 Intersection Corner Sight Distance.

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- A. Intersections shall be designed with adequate corner sight distance for each street which approaches a street in an equal or higher street category (except an intersection of two local streets). Where necessary, backslopes shall be flattened and horizontal or vertical curves lengthened to provide the minimum required sight distance.
- B. The minimum corner sight distance shall meet the standards as shown in Table 360.2 Sight Distance.
- C. The sight distance criteria are based on the time required for a vehicle to make a left turn from a stop-controlled approach to the Highway (AASHTO Case B1). The time to execute the maneuver is based on recommendations contained in NCHRP Report 383, Intersection Sight Distance. The sight distances, for a two-lane road, are the distances traveled at the arterial speed during 7.5 seconds. The time is increased by 0.5 seconds for each additional lane to be crossed. The sight distances given in Table 360.2 are for undivided highways. If the highway is divided, the effect of the median should be considered in determining the required sight distance. Based on the conditions, it may be feasible for the crossing maneuver to be done in two stages with a stop in the median. However, the intersection should only be treated in this manner if the signing and marking is accordingly provided. Otherwise, the sight distance requirements should be increased to account for the additional width that must be crossed. See AASHTO Green Book, Chapter 9 Intersections, for adjustments due to grades greater than 3 percent and design vehicles other than passenger cars.

360-50.8 Obstructing Visibility at Intersections. In all zoning districts, no fence, wall, structure, shrubbery, or other obstruction to vision between the heights of 3 feet and 15 feet, except utility poles, light or street sign standards or tree trunks shall be permitted within 20 feet of the intersection of the right-of-way lines of streets, roads, highways, or railroads.

360-50.9 Turning Lanes at Intersections. Right turning lanes may be required to meet traffic demands or safety concerns. When provided, turning lanes shall meet the following criteria:

- A. Storage length — A minimum of 150 feet of storage length for turning lanes on any arterial roadway shall be used. A minimum of 100 feet of storage length for turning lanes on all collectors shall be used.
- B. Taper Length — The minimum taper length shall be 50 feet.
- C. Left turning lanes from arterial roads shall be subject to longer storage lengths and tapers and as determined on a case-by-case basis.

Section 360-60. Street Design Standards.

360-60.1 Street Grades and Design Speeds.

- A. Minimum grade for all Local and Minor Collector Streets shall be 1.5 percent. Minimum grades for all major collector and arterial streets shall conform to Georgia Department of Transportation standards and regulations.
- B. Minimum grade of less than 1.5 percent on a local street may be approved by the Department, based on adequate engineering designs, where at least 1.5 percent cannot reasonably be achieved due to topographical limitations imposed by the land. In such cases, a Record Drawing, and such computations as necessary shall be provided after construction to establish that the street will drain in accordance with this UDO. Street sections where unacceptable pooling, excessive spread at catch basins, or other hazardous conditions occur shall be reconstructed or otherwise improved to eliminate such conditions.
- C. Minimum vehicle design speeds and maximum grades allowable in Gwinnett County by street classification shall be as shown in Table 360.6.
- D. Maximum grade on any cul-de-sac turnaround shall be 6 percent.

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Table 360.6. Minimum Design Speeds and Maximum Grades.

Street Category	Maximum Grade	Design Speed
Principal Arterial	8%	60 MPH
Major Arterial	9%	50 MPH
Minor Arterial	10%	40 MPH
Major Collector	10%	40 MPH
Minor Collector	10%	30 MPH
Local	15%*	25MPH

**Grades between 11 percent and 15 percent shall not exceed a length of 150 feet and shall require an "as graded" survey prior to the installation of the curb or utilities. The distance shall be measured as the tangent length between points of curvature.*

360-60.2 Vertical Street Alignment.

- A. All changes in street profile grades having algebraic difference greater than one percent shall be connected by a parabolic curve having a minimum length (L) equal to the product of the algebraic difference between the grades in percent (A) and the design constant (K) assigned to the street according to its category (i.e., $L=KA$).
- B. Constant (K) values are shown in the Table 360.7 for both desirable and minimum acceptable ("hardship") conditions. In all cases, the "desirable" value shall be used, unless it cannot be achieved due to topographic conditions beyond the developer's control. In such hardship situations, the Department may approve a lesser value to the extent required by the hardship situation, but in no event less than the value shown in Table 360.7 as "minimum."

Table 360.7. Constant (K) Values for Vertical Curves.

Street Category	Crest Curves		Sag Curves	
	Minimum	Desirable	Minimum	Desirable
Principal Arterial	151	320	136	155
Major Arterial	84	170	96	110
Minor Arterial	44	80	64	70
Major Collector	44	80	64	70
Minor Collector	19	30	37	37
Local	12	20	26	26

360-60.3 Horizontal Street Alignment.

- A. All new streets shall adhere to the standards governing horizontal curvature and superelevation as set forth in Table 360.8 below:

Table 360.8. Horizontal Curves.

Street Category	Minimum Radio (Ft.)	Maximum Superelevation
Principal Arterial	1,333	0.06
Major Arterial	833	0.06
Minor Arterial	560	0.04
Major Collector	560	0.04
Minor Collector	300	0.04*
Local	181	0.00

**No superelevation will be allowed on Minor Collectors internal to residential subdivisions*

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- B. Superelevation for horizontal curves shall be calculated utilizing the following formula:

R = minimum radius curve

v = vehicle design speed (MPH)

e = rate of superelevation (decimal of a foot rise per foot roadway)

f = side friction factor

Vehicle Design Speed (v) 30 40 50 60

Side Friction Factor (f) .16 .15 .14 .12

- C. Widening section along existing streets shall be designed reflecting existing curvature and superelevation, if any, unless the existing street has been included in a specific design by the Gwinnett County Department of Transportation or Georgia Department of Transportation which calls for different standards, in which case the project will be coordinated with the overall design.
- D. Superelevation runoff. Roadway edge curves shall be provided for tangent runout (bringing edge from a normal crown to centerline elevation) and superelevation runoff (from the end of tangent runout to the point of design superelevation) in accordance with design standards of the Georgia Department of Transportation or other professional engineering standards.
- E. Tangents and compound curves. Between reverse horizontal curves there shall be not less than the minimum centerline tangents shown in Table 360.9 unless otherwise specified by the Georgia Department of Transportation. Compound radii curves are prohibited. At least the "desirable" length shall be provided unless hardship conditions of topography or property configuration will not allow lengths greater than those shown as "minimum." For compound circular curves, the ratio of the flatter radius to the sharper radius shall not exceed 1.5 to 1.

Table 360.9. Tangents.

Street Category	Minimum Tangent Length	Desirable Tangent Length
Principal Arterial	150	180 Feet
Major Arterial	125	150 Feet
Minor Arterial	100	120 Feet
Major Collector	100	120 Feet
Minor Collector	75	90 Feet
Local	50	60 Feet

Note: Minimum tangents are based on the distance traveled in 1.7 seconds at the design speed for each category of street. Desirable length is based on distance traveled in 2.0 seconds.

360-60.4 Horizontal and Vertical Clearances.

- A. *Horizontal clearances.*

1. A shoulder of no less than 11 feet from the back of curb or edge of pavement, appropriately graded and having gentle slopes of not more than 0.5 inch per foot and rounded cross-sectional design shall be maintained along all streets. Beyond the shoulder but within the right-of-way, slopes shall not exceed 1 foot of rise for each 2 feet of horizontal distance on a cut slope, and 1 foot of fall for each 3 feet of horizontal distance on a fill slope.
2. Along all public streets, a clear zone shall be provided per current AASHTO standards wherein nothing may be located above ground level except traffic/street signs, public utility structures, driveways, and mailboxes.

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3. At selected locations, such as the outside of a sharp curve, a wider clear zone with greater horizontal clearances provided to any roadside obstruction may be required.
 4. The Department of Transportation, in accordance with O.C.G.A. § 32-6-51, is authorized to remove or direct the removal of any sign, signal, device, or other structure erected, placed, or maintained on the right-of-way of a public road which because of its nature, construction, or operation constitutes a danger to or interferes with the vision of drivers of motor vehicles.
- B. *Vertical clearances.* Vertical clearance at underpasses shall be at least 14.5 feet over the entire roadway width.

Section 360-70. Street Construction Standards and Specifications.

360-70.1 Specifications. Unless otherwise specifically set forth herein, all of the materials, methods of construction, and workmanship for the work covered in reference to street construction shall conform to the latest specifications of the Georgia Department of Transportation.

360-70.2 Subgrade Preparation for All Streets.

- A. *Subgrade preparation* shall be in accordance with Georgia Department of Transportation specifications.
- B. *Removal of unsuitable material.* If any sections of the subgrade are composed of topsoil, organic, or other unsuitable or unstable material, such material shall be removed and replaced with suitable material and then thoroughly compacted as specified for fill or stabilized.
- C. *Compaction.* Fill shall be placed in uniform, horizontal layers not more than 8 inch thick (loose measurement). Moisture content shall be adjusted as necessary to compact material to 95 percent of maximum dry density except for the top 12 inches which shall be compacted to 100 percent of maximum dry density.
- D. *Brought to line and grade.* After the earthwork has been completed, all storm drainage, water, and sanitary sewer utilities have been installed within the right-of-way as appropriate, and the backfill in all such ditches thoroughly compacted, the subgrade shall be brought to the lines, grades, and typical roadway section shown on the plans.
- E. *Utility trenches to be compacted.* All utility crossings within the right-of-way must be installed prior to subgrade approval. All manhole covers must be flush with top of intermediate course if there is a delay in applying the final surface course for new roadway pavement. Manhole covers will be required to be adjusted flush when final surface course is installed. Utility trenches cut in the subgrade shall be backfilled as specified herein. Compaction tests at the rate of 1 per 150 feet of trench shall be provided to verify compaction.
- F. *Roll testing required.* The subgrade must pass roll testing prior to placement of the base material. The roll test of the subgrade and base material shall be observed and approved by a Department Development Inspector prior to paving.
- G. *Temporary traffic surface.* When the street is to be used for construction traffic before the paving work is completed, a layer of stone (except crusher run) shall be laid as a traffic surface. This material shall not be used as a part of the base material. It may be worked into the subgrade, or it shall be removed before the base course is set up for paving.
- H. *Provisions to drain low points.* Provisions shall be made to drain low points in the road construction when the final paving is delayed. A break in the berm section is required when the curbing has not been constructed. Drainage under the curb to side slopes after installation is required, using minimum four-inch diameter pipe sections. Vegetated or stabilized swales should be considered for managing

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road construction runoff. Swales shall be constructed in accordance with the Gwinnett County Stormwater Management Manual.

360-70.3 Project Access Improvement Standards.

- A. *Sections wider than 4 feet in width.* For sections 4 feet or greater in width, the section shall comply with the construction standards for new streets, in accordance with the street's category as shown on the officially adopted Gwinnett County Long Range Road Classification Map. The base course must pass roll testing prior to paving. If a delay is expected, then the base must be sealed and retested prior to paving.
- B. *Sections less than 4 feet in width.* For sections less than 4 feet in width, 6 inches of class "B" concrete shall be poured flush with the adjacent pavement surface and dyed black. A minimum of 8 inches of Graded Aggregate Base shall be provided below the widening section.

360-70.4 New Local and Minor Collector Streets.

- A. *The following standards* shall apply to new local and minor collector streets in residential subdivision and non-residential projects.
 - 1. The base course shall consist of at least 8 inches of graded aggregate base. After being thoroughly compacted and brought to proper section, an intermediate course of 2 inches of 19 mm Superpave shall be applied.
 - 2. The final asphaltic surface course of 1.25 inches of 9.5 mm Superpave Type II shall be applied.
 - 3. If a delay in paving is anticipated, then the base course shall be primed the same day it is compacted and cured in accordance to Georgia DOT standards.
 - 4. Upon the final acceptance of the final surface course, a maintenance bond for a period not to exceed 18 months following the date of approval of Development Conformance shall be required.
- B. *Local residential-rural streets.* Where allowed, local residential-rural streets may install streets without curb and gutter. In such cases, the road base shall be extended 1 foot beyond the edge of pavement, and the shoulders shall extend eight feet from the edge of pavement to a standard ditch section on each side (see Standard Drawings in the Appendix of this UDO). Otherwise, the roadway shall comply with the standards for new residential subdivision streets set forth in Section 360-70.4.A.

360-70.5 New Major Thoroughfares. Minor collectors or greater shall be constructed in accordance with designs prepared by Gwinnett County or Georgia DOT, or, if no design has been prepared, to the following standards:

- A. *Arterials Pavement Section:*
 - 1. 10 inches GAB.
 - 2. 4 inches of 25mm Superpave.
 - 3. 2 inches of 19mm Superpave.
 - 4. 1.5 inches of 9.5mm Type II Superpave (volumes less than 10,000 ADT), OR;
 - 5. 1.5 inches of 12.5mm Superpave (volumes greater than 10,000 ADT).
- B. *Collectors Pavement Section:*
 - 1. 10 inches GAB.
 - 2. 4 inches of 19mm Superpave.

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3. 1.5 inches of 9.5mm Type II Superpave (volumes less than 10,000 ADT), OR;
4. 1.5 inches of 12.5mm Superpave (volumes greater than 10,000 ADT).

Section 360-80. Curbs and Gutters.

360-80.1 Curb and Gutter Required. All new streets and Project Access Improvements shall be provided with curb and gutter except in subdivisions zoned RA-200, where swale ditches may be provided in lieu of curb and gutter. All gutters shall drain smoothly with no areas of ponding.

360-80.2 Residential Curbing. Residential curbing shall meet the following requirements:

- A. Concrete shall be Class "B" (as defined by Georgia Department of Transportation) and have a minimum strength of 3,000 PSI at 28 days.
- B. Typical minimum section shall be 6" × 24" × 12".
- C. Vertical curbing only. Rollback curbing may be specified in townhouse on the garage side the townhouse street,

360-80.3 Industrial or Commercial Curbing. Industrial or commercial curbing shall meet the following requirements:

- A. Concrete shall be Class "B" (as defined by Georgia Department of Transportation) and have a minimum strength of 3,000 PSI at 28 days.
- B. Typical minimum section shall be 8" × 24" × 14".
- C. Vertical curbing only.

360-80.4 Collector and Arterial Curbing. Collector and Arterial curbing shall meet the following requirements:

- A. Concrete shall be Class "B" (as defined by Georgia Department of Transportation) and have a minimum strength of 3,000 PSI at 28 days.
- B. Typical minimum section shall be 8" × 30" × 14".
- C. Vertical curbing only.

360-80.5 Construction Methods.

- A. Curb and gutter shall be set true to line and grade, be field staked, and finished to the section shown on the plans. Along the Project Access Improvements of a road which the Department of Transportation has identified for resurfacing within one year of the new construction, the grade of the new gutter shall be placed 1 inch above the Project Access Improvement pavement grade in areas where drainage will not be adversely affected.
- B. Line and grade shall be field staked for grades less than two percent and grades over 12 percent, and within 100 feet in both directions from all low points.
- C. One-half inch expansion joints or premolded bituminous expansion joint material shall be provided at all structures and radius points and at intervals not to exceed 250 feet in the remainder of the curb and gutter.
- D. Inferior workmanship or unprofessional construction methods resulting in unacceptable curb and gutter will be cause for rejection of the finished work.
- E. Disturbed areas along all curbing shall be backfilled, stabilized, and grassed.

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Section 360-90. Sidewalk Requirements.

360-90.1 Sidewalks. Sidewalks and curb ramps shall be constructed in all new development or redevelopment along all abutting or internal streets, existing or new, private, or public. Whenever a discrepancy occurs between the design and construction standards of this UDO and any state or federal regulation, then the most restrictive shall apply.

360-90.2 Sidewalk and curb ramp installation and timing. Sidewalks and curb ramps shall be installed as follows:

- A. *Developers shall connect proposed sidewalks* on developed property to the adjacent property's sidewalks.
- B. *Residential subdivision projects.* Sidewalks and curb ramps, where required, shall be installed on new internal streets (both sides including "eyebrow" turnarounds and cul-de-sacs) and on abutting external streets (abutting side).
- C. *Residential subdivision developer's responsibility.* Developers shall install sidewalks and curb ramps on abutting external streets, "passive" recreation areas, common area and open space prior to the approval of the Final Plat. Sidewalks on "active" recreation area lots shall be installed prior to issuance of a Certificate of Occupancy.
- D. *Homebuilder responsibility.* Homebuilders shall install sidewalks, and curb ramps not required to be installed by developers, on residential lots prior to release of the Certificate of Occupancy for a home.
- E. *Non-residential and non-subdivision projects.* Sidewalks shall be installed on new internal streets (both sides including cul-de-sac and "eyebrow" turnarounds) and on abutting external streets (abutting side) by the lot owner or developer prior to the issuance of a Certificate of Occupancy.
- F. *Performance surety.* Performance surety for sidewalks and ramps not yet installed must be approved by the Director. The surety shall be in an amount acceptable to the County.
- G. *Escrow alternative.* The cost of sidewalk installation may be set aside in escrow with the Department of Transportation if proposed road improvements by the County may impact the location of a sidewalk or if the sidewalk cannot be constructed due to topographic or utility constraints. Costs shall be set at a linear rate by Gwinnett DOT and are subject to include construction, acquisition, and engineering costs for sidewalk projects within the County.

360-90.3 Sidewalk design and construction standards. Sidewalks shall be constructed in accordance with the requirements of this section. The Director is authorized to grant Modifications upon specific application due to topographic or drainage difficulty as well as alternative design proposals after receiving a recommendation from the Department of Transportation.

- A. *Width.* Sidewalks shall be at least 4 feet wide on new internal subdivision streets and at least 5 feet wide on abutting external streets with the following exceptions:
 - 1. Sidewalks shall be at least 5 feet wide on new internal streets or drives within the Senior Oriented Residence District (R-SR) and Office-Residential District (O-R).
 - 2. Sidewalks shall be at least 5 feet in width on new local non-residential streets and 5 feet in width for new local residential streets in the TND and Mixed-Use Districts (MU-N, MU-C and MU-R) and shall conform with this Section and any additional requirements of Sections 210-190 through 210-225.
- B. *Setback.* Sidewalks shall be located at least 2 feet from the back of curb. The area between the curb and the sidewalk shall consist of grass or landscaping and shall be consistent with the requirements of

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this UDO. Where no curb exists, or if road improvements are proposed for installation by the County, sidewalks, including appropriate storm-water infrastructure, shall be constructed in a location acceptable to the Gwinnett County Department of Transportation.

- C. *Cross slope.* Sidewalks shall be constructed with a cross slope of 0.25 inch per foot. Sidewalks shall maintain this cross slope at driveway crossings or transition the sidewalk to a driveway with ramps and detectable warnings.
- D. *Material.* Class "B" concrete (as defined by Georgia Department of Transportation) with a minimum strength of 2,200 PSI at 28 days.
- E. *Final stabilization.* Disturbed areas resulting from sidewalk construction shall be backfilled, stabilized, and grassed or landscaped.
- F. *Georgia Department of Transportation controlled roads.* Sidewalks located in the right-of-way of roads under the jurisdiction of the Georgia Department of Transportation shall be constructed in accordance with Georgia Department of Transportation design and construction standards.
- G. *Sidewalk curb ramp design and construction standards.* Intersection radius curb ramps shall be provided at street intersections. Straight ramps may be provided at intersections of curbed driveways and at streets without sidewalks. Curb ramps shall meet the requirements of the *Americans with Disabilities Act*.
- H. *Damage repair.* Damage to roads, sidewalks, curbs, and ramps caused by construction or development activity shall be repaired at no cost to the County within 30 days or prior to issuance of a Certificate of Occupancy, whichever is earlier.

Section 360-100. Multi-Use Path Requirements.

360-100.1 Multi-use paths shall be provided along all arterial streets. Also, where a proposed development is shown with roadway frontage along a roadway that is classified as being within the Gwinnett Countywide Trails Master Plan, the developer shall be responsible for the construction of a minimum 12-foot trail along the road frontage. The developer/builder shall coordinate with the Department of Transportation for location and approval. Where provided multi-use paths shall comply with the provisions of this section as well as the provisions contained in Chapter 360 of this UDO and shall meet the following requirements:

360-100.2 Width. Multi-use trails and paths shall be a minimum of 12 feet in width.

360-100.3 Material and construction details.

- A. A multi-use path that is constructed in a floodplain, adjacent to a stream, or adjacent to undisturbed land shall be asphalt or concrete or approved alternative such as pervious asphalt, or pervious pavement. In all other cases, a multiuse path shall be concrete.
- B. Multi-use paths shall be designed to minimize direct auto-pedestrian and/or auto-conflicts by such means as striping and signs.
- C. Multi-use paths shall be connected to crosswalks at intersections where applicable.

Section 360-110. Greenway Requirements.

360-110.1 Greenways shall be designed and developed in coordination with the Gwinnett Countywide Trails Master Plan Trails Master Plan. Greenways, where provided, shall comply with the provisions of this section as well as the provisions contained in Chapter 360 of this UDO and shall meet the following requirements:

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- A. For width, materials, and design standards, refer to the Gwinnett Countywide Trails Master Plan Update.
- B. Construction Obligation. The greenway shall be constructed by the developer prior to issuance of a Certificate of Occupancy, or in the case of residential subdivisions, prior to the approval of the Final Plat.
 - 1. *Residential subdivision developer's responsibility.* Where required, developers shall install greenways on open space, common area and abutting external streets, prior to the approval of the Final Plat. Greenways on "active" recreation area lots shall be installed prior to issuance of a Certificate of Occupancy.
 - 2. *Homebuilder responsibility.* Homebuilders shall install greenways not required to be installed by developers on building lots prior to release of the Certificate of Occupancy for a home.
 - 3. *Non-residential projects.* Greenways, where required, shall be installed prior to the issuance of a Certificate of Occupancy.
 - 4. *Performance surety.* Performance surety for greenways not yet installed must be approved by the Director. The surety shall be in an amount and form acceptable to the County.

360-110.2 Greenway Maintenance and Liability.

County Maintenance. The County will accept maintenance responsibility similar to its maintenance for County-owned park property, for a greenway if the Director of Community Services or designee finds all of the following:

- A. The applicant requests that the County assume the responsibilities
- B. The greenway lies within an easement or right-of-way granted to the County for trail purposes
- C. The greenway has been constructed to County standards
- D. The greenway is physically continuous for at least 1/4-mile along the designated route. This requirement for a minimum length of route segment or route spur will be waived if the primary network greenway has not been made part of a physically continuous segment of at least 1/4-mile within two years after completion of the segment under consideration.
- E. If the applicant desires to use a private security force to patrol the greenway area, the owner has signed an agreement holding the County harmless from all claims, suits, or actions of any nature, caused, or arising out of the actions of the private security force, its subcontractors, agents, or employees

360-110.3 Owner/Applicant maintenance. The owner/applicant retains maintenance responsibilities unless these responsibilities are accepted by the County. Where the applicant retains maintenance responsibilities, the greenway must be maintained at a level at least equal to those design standards as required by the Gwinnett Countywide Trails Master Plan.

Section 360-120. Traffic Control Devices.

360-120.1 Traffic Control Signs. Street signs, traffic control signs, and devices such as striping and signalization, shall be provided through payment of fees to the Department of Transportation for the installation thereof.

360-120.2 Street Name Signs. Public street name signs shall have a green background with white legends mounted on channelized posts. Private street name signs shall have a blue background with white legends mounted on channelized posts. Alternate post material shall be subject to the review and approval of the Department of Transportation. The posts and signs will be furnished and installed by the County at all street

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intersections. The developer (or homeowners association in the event an alternate signpost is chosen at a later date) shall pay the County's costs.

360-120.3 Traffic Signals and Signs. All traffic signals and signs shall conform to the Manual on Uniform Traffic Control Devices (no decorative traffic control devices will be allowed) or as per Gwinnett County Department of Transportation.

360-120.4 Striping Requirements. All newly constructed streets having four or more lanes (including auxiliary lanes) and existing streets being widened with one or more additional lanes shall be striped or the payment of said striping costs shall be required from the Developer by the Department of Transportation prior to the Approval of Development Conformance for the project. Striping shall be accomplished with paint meeting Georgia Department of Transportation standards conforming to the Manual on Uniform Traffic Control Devices.

360-120.5 Payment of Fees. Payment for materials and installation of street name and traffic control signs in new developments shall be required by the Department of Transportation prior to the approval of the Final Plat for new subdivision streets and the Approval of the Development Conformance for all other developments.

Section 360-130. Traffic Calming Devices.

360-130.1 Subdivision streets shall be designed in accordance with the Gwinnett County Traffic Calming Guide. The maximum length of roadway section between speed control points, as defined by the Traffic Calming Guide, shall be 500 feet.

360-130.2 The traffic-calming plan is subject to review and approval by the Department of Transportation. The Director of the Department of Transportation may grant modifications.

Section 360-140. Private Streets and Alleys.

360-140.1 Private Streets and Alleys Permitted.

- A. Application for approval of private streets shall be considered by the Board of Commissioners. Notwithstanding other provisions of the UDO, the Board of Commissioners may impose conditions on the approval of private streets to ensure the health, safety, and welfare of the general public and to mitigate potential problems with private streets.
- B. Alleys intended to serve as private access route in the rear of buildings shall be permitted, constructed, and maintained as private driveways, and in substantial conformance with the UDO Design Guidelines. Application for approval of such private alleys may be considered by the Director of Department of Planning and Development.

360-140.2 General Provisions.

- A. It shall be unlawful for any person, firm, or corporation to construct a new private street or alley, or alter an existing private street or alley, or to cause the same to be done without first obtaining a development permit, for such construction or alteration, from the Department.
 - 1. All private streets shall be constructed to the roadway construction standards for public streets as required by the UDO and contained herein. All private alleys shall be designed and constructed as private driveways as required by the UDO. No permit for a private street or alley shall be issued unless the proposed roadway improvements are in conformity with the standards and requirements for public streets and the applicable provisions of the UDO.
 - 2. For setback purposes, front setbacks shall be measured as if the streets were public streets, or as approved by individual variances. Rear setbacks of lots adjacent to alleys shall be a minimum of 5 feet measured from the rear property line of such lot.

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3. The subdivider/developer shall comply with the Department of Fire and Emergency Services general order for security gate access if a gated development is proposed.
4. All provisions of the UDO regarding roadways, water lines, sewer lines, stormwater facilities and their appurtenances, including the design, submittal of plans, required improvements, etc., shall apply to all developments with private streets or alleys approved pursuant to this section.
5. The subdivider/developer shall comply with the standards and requirements of the Department of Water Resources for the installation of water and sanitary sewer mains within private developments/subdivisions.
6. The subdivider/developer shall establish a mandatory property owners association, with bylaws and/or covenants which shall include the following:
 - a. Mandatory membership of all purchasers of lots therein and their successors
 - b. Responsibility for maintenance, insurance, and taxes
 - c. Equitable sharing of the cost of maintenance
 - d. Authority to place liens on the real property of members who fail to pay their dues or assessments
7. No Final Plat or development permit involving any private street shall be approved unless said Final Plat or development permit conforms to the requirements of this section.

360-140.3 Street Names and Address Assignments for Private Streets.

- A. Proposed names for private streets shall follow the same rules as for public streets.
 1. The subdivider of land involving a private street shall install street signs with the street name and designation "private," as approved by the Department.
 2. Address assignments will be in accordance with this UDO.

360-140.4 Easements for Private Streets or Alleys.

- A. Easements for private streets shall be designated on Final Plats as general purpose public access and utility easements, along with the name of said street. Said easement shall at minimum be of the same width as that required for the right-of-way of a public street as shown on the Long Range Road Classification Map for the type of public street (local, collector, etc.) most closely resembling the proposed private street.
- B. In cases where alleys are intended to serve as private service or access route, either with or without utility easement, for more than two properties, then the alleys shall have a minimum easement width of 20 feet and shall be designated on Final Plats as private access and utility easement, as applicable, and on its own discrete parcel to be dedicated to a private property association.
 1. Easements for private streets and alleys shall not be included in any calculation of minimum lot size as established by this UDO.
 2. In the cases of private streets where roadway improvements are not required (i.e., exemption plat, minor subdivision), the general purpose public access and utility easement for the private street shall be shown in a manner on the plat such that each lot fronting the private street extends to the centerline of the private street. No lot shall be permitted to be divided by the general purpose public access and utility easement required and established for a private street.
 3. In the cases of private streets where roadway improvements are required, the general purpose public access and utility easement for a private street shall be drawn as its own discrete parcel to be dedicated to a private homeowners association (i.e., not shown to be a part of any lot).

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360-140.5 Maintenance.

- A. Gwinnett County shall not maintain, repair, resurface, rebuild, or otherwise improve streets, signs, drainage improvements, or any other appurtenances within general purpose public access and utility easements established for private streets or alleys.
1. Gwinnett County assumes full responsibility for the repair and maintenance of the water and/or sanitary sewer mains and appurtenances and any areas disturbed by repair or maintenance efforts will be restored to as near to its original condition as is feasible. Permanent repairs to the streets shall be made by the homeowners associations or other entity having maintenance responsibility for the development. Driveways and sidewalks will be repaved, sodded or landscape areas will be graded, smoothed, reseeded or resodded where appropriate. Maintenance responsibility by Gwinnett County for individual sanitary sewer stubs shall extend to the end of the standard six-inch stub, and to the water meter for individual water lines.
 2. A private maintenance covenant recorded with the Clerk of the Superior Court shall be required for any private street, alley and other improvements within general purpose public access and utility easements established for private streets and alleys. The covenant shall set out the distribution of expenses, remedies for non-compliance with the terms of the agreement, rights to the use of easements, and other pertinent considerations. The covenant shall specifically include the following terms:
 - a. The covenant shall establish minimum annual assessments in an amount adequate to defray costs of ordinary maintenance and procedures for approval of additional needed assessments. The covenant shall also specify that the funds from such assessments will be held by a homeowners or property owners association in cases of a subdivision fronting on a private street or containing a private alley.
 - b. The covenant shall specify that the property owners association shall be responsible for the maintenance and repair of the stormwater drainage system and all common areas within the development.
 - c. The covenant shall include a periodic maintenance schedule.
 - d. The covenant for maintenance shall be enforceable by any property owner served by the private street or alley.
 - e. The covenant shall establish a formula for assessing maintenance and repair costs equitably to property owners served by the private street or alley.
 - f. The covenant shall run with the land.
 3. The Board of Commissioners may, at its discretion, as a condition of approving private streets, require a performance bond and/or maintenance bond be submitted by the subdivider and held by a homeowners or property owners association, or the Board may require that the subdivider pay an amount of money as recommended by the Director into an escrow account or other suitable account for the construction, maintenance and repair of private streets and stormwater management improvements, to be drawn from by the homeowners or property owners association as the need may arise.

360-140.6 Specifications for Final Plats Involving Private Streets. No Final Plat involving a private street shall be approved by the Department for recording unless and until it shall contain the following on the face of the plat:

- A. Deed book and page reference to the recorded covenant required in Section 360-120.5 Maintenance, as listed above.

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1. "Gwinnett County has no responsibility to build, improve, maintain, or otherwise service the private streets, drainage improvements, and other appurtenances contained within the general public purpose access and utility easement or easements for private streets shown on this plat."
2. "Grant of Easement. The general purpose public access and utility easement(s) shown on this plat for private street(s) is hereby granted and said grant of rights shall be liberally construed to provide all necessary authority to the County, and to public or private utility companies serving the subdivision, for the installation and maintenance of utilities, including, but not limited to electric lines, gas lines, telephone lines, water lines, sewer lines, cable television lines, and fiber optic cables, together with the right to trim interfering trees and brush, together with a perpetual right of ingress and egress for installation, maintenance, and replacement of such lines.

Signature of Property Owner Date

3. "Certificate of Dedication." All water and sewer lines installed within the general purpose public access and utility easement(s) shown on this plat for private street(s) are hereby dedicated to Gwinnett County.

360-140.7 Requirement for Purchaser's Acknowledgement of Responsibilities for Private Street and/or Alley.

- A. Prior to the sale or as a condition of the closing of a real estate transaction involving any lot served by a private street or alley in Gwinnett County, the purchaser of said lot shall execute a notarized Purchaser's Acknowledgement of Private Street and/or Alley Construction and Drainage Maintenance Responsibilities set forth below. A copy of the purchaser's acknowledgement shall be retained by the subdivider or seller and shall be required to be submitted as a condition of a Building Permit for a principal building on said lot:

"Purchaser's Acknowledgement of Private Street and/or Alley and Drainage Maintenance Responsibility."

(I) (We) have read the Declaration of Covenant which pertains to the lot that is the subject of this real estate transaction _____(insert address or attach legal description). (I) (We) understand that the Declaration of Covenant applies to the lot that (I am) (we are) purchasing and requires (me) (us) to provide a specified percentage or amount of the financing for the construction and maintenance of any private street (and/or alleys) and drainage facilities serving the lot which (I am) (we are) purchasing, and that owners of other lots in this plat may sue and recover for those costs which this covenant requires (me) (us) to pay, plus their damages resulting from (my) (our) refusal to contribute, plus reasonable attorney's fees. (I) (we) further understand that the County has no obligation to assist with the maintenance and improvement of the private street or alley, drainage facilities, and other appurtenances within the general purpose public access and utility easement for the private road serving the lot in question. (I) (we) understand that a copy of this purchaser's acknowledgement shall be required as a condition of the issuance of a building permit for a principal building on the lot (I am) (we are) purchasing.

_____	_____	_____	_____
Purchaser	Date	Purchaser	Date

Chapter 370. Street Lighting

Section 370-10. Responsibility for Street Lighting on Public Roads.

Except as otherwise provided for in this UDO, the responsibility for providing street lighting for the public streets, roads, highways, and sidewalks in the unincorporated area of the County rests with the Board of Commissioners. No street or roadway lighting of the public streets, roads, highways, or sidewalks in the unincorporated area of the County is permitted unless provided for by the Board of Commissioners.

Section 370-20. Street Lighting in Overlay Zoning Districts.

In addition to the requirements of Chapter 370, street lighting for overlay districts shall also meet the requirements of Chapter 220. Should a conflict arise between the requirements of Chapter 220 and this Chapter 370, the requirements of Chapter 220 shall take precedence.

Section 370-30. Specifications.

Unless otherwise specifically set forth herein, all of the materials, methods of construction, and workmanship for the work covered in reference to street construction shall conform to the latest specifications of the Georgia Department of Transportation (Georgia DOT).

Section 370-40. Installation of Street Lights.

The installation and operation of lighting fixtures located within the rights-of-way of any public street, road, highway, sidewalk, or alley in the unincorporated areas of the County or fixed to any pole, lamppost, standard or other supporting device, which is located within such rights-of-way, will comply the following procedures:

- A. Plans and specifications for the proposed installation showing compliance with the standards in this Chapter shall be submitted to the Director of the Department of Transportation or a designee thereof for approval. No installations will be made without this approval.
- B. Roadway or street lighting luminaries or fixtures installed within the public rights-of-way as "security lights" or for the purpose of lighting areas other than the public streets shall require the approval of the Director of the Department of Transportation or a designee thereof before installation of such lights.
- C. Fixtures for illuminating areas adjoining the public streets, roads, and the like, such as parking areas and driveways, shall be mounted in such a manner as to ensure that the light pattern is kept off the public roadway. When street or roadway lighting luminaries are to be used for security lighting, they will be mounted on the side of the pole that is opposite from the public street and will be mounted to ensure that the lateral light distribution pattern is parallel to the street and the vertical light distribution at the initial light source is perpendicular to the street.
- D. If lighting fixtures of a type other than those in the classification of street or roadway luminaries are to be used or if the proposed lighting is to be installed outside of public rights-of-way, the plans and specifications submitted shall be sufficiently detailed to clearly show that such shall be installed and operated in such a manner to prevent glare from being a hazard to or interfering with the normal use of the public rights-of-way.

Section 370-50. Street Lights for New Subdivisions.

370-50.1 Street lights shall be provided by the developer in new subdivisions which propose the construction of a new street to be dedicated to the County or which propose lot access to existing County streets.

370-50.2 Prior to the approval of a Final Plat, the developer shall submit a copy of the approved Subdivision Development Plan to the Traffic and Operations Division of the Department of Transportation. The Traffic and Operations Division shall prepare a street light design drawn on the Subdivision Development Plan based upon the requirements of this Chapter 370. The design shall be forwarded to the appropriate power provider and the developer shall pay the power provider the appropriate cost for materials and installation. Proof of payment to the power provider shall be required.

370-50.3 All fixtures and poles shall meet the requirements of the County and all maintenance shall be the responsibility of the power provider. Fixtures shall be mounted a minimum of 16 feet above the ground. For subdivisions with street trees, fixtures shall be mounted a maximum of 14 feet above the ground. The County, in addition to other requirements, may require a light to be located at street intersections within the development.

370-50.4 Upon acceptance of the street light installation by the County, the power provider shall submit monthly bills to the Traffic and Operations Division of the Department of Transportation for payment which will be assessed to the individual lots.

Chapter 380. Public Utilities Installation

Section 380-10. Placement of Utilities.

380-10.1 Underground Utilities to be in Right-of-Way or Easement. All authorized public underground utilities shall be located within the right-of-way of a public street or within an easement designated for such use. Within a public street right-of-way, placement of the various authorized utilities (power, gas, cable TV, water, and sewer) shall conform to the specific locations designated for such use by Gwinnett County, as illustrated in the Standard Drawings in the Appendix of this UDO.

380-10.2 Private Underground Utilities Require Department Approval if in the Right-of-Way. No other underground utilities, such as private lawn sprinkler systems, yard lighting, etc., shall be installed within a public right-of-way or easement except by authorization of the Operations and Maintenance Section of the Gwinnett County Department of Transportation Gwinnett County. Such authorization, if issued, shall require the applicant to assume all repair costs of the applicant's facilities should they be damaged during the course of installation, maintenance, or repair of any roadway facilities or any of the public utilities authorized to occupy said right-of-way or easement.

380-10.3 Easements.

- A. *Dedication requirement.* Temporary construction easements and permanent easements for public utilities, stormwater infrastructure or other public facilities shall be dedicated to Gwinnett County in accordance with County requirements.
- B. *Cleared, opened, and stabilized.* Drainage easements are required for any part of the stormwater infrastructure system or undisturbed drainage features which are designed to carry existing or proposed stormwater runoff. Drainage easements for improved ditches, pipe construction, and stormwater facilities shall be cleared, opened, and stabilized at the time of development to control surface water run-off (See also Chapter 800). Run-off slope and side slopes shall be specified by the authorized registered professional, according to good engineering practice. Drainage easements for stormwater that convey water shall be provided according to the minimum requirements found in Table 380.1 below, conform to County Standards, and centered over the conveyance system. The minimum easement width shall be based on the pipe diameter (span) plus 2 feet plus 2 times the pipe invert depth. This value shall be rounded up to the nearest 5 feet. For pipes exceeding 16 feet in depth, a pre-submittal conference shall be held with the County to determine what additional requirements may be required.

Table 380.1. Easement Width for Stormwater Infrastructure.

Pipe Size (In)	Maximum Pipe Invert Depth (Ft.)												
	4	5	6	7	8	9	10	11	12	13	14	15	16
15	20	20	20	20	20	25	25	30	30	30	35	35	40
18	20	20	20	20	20	25	25	30	30	30	35	35	40
24	20	20	20	20	20	25	25	30	30	30	35	35	40
30	20	20	20	20	25	25	25	30	30	35	35	35	40
36	20	20	20	20	25	25	25	30	30	35	35	35	40
42		20	20	20	25	25	30	30	30	35	35	40	40
48		20	20	20	25	25	30	30	30	35	35	40	40

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54			20	25	25	25	30	30	35	35	35	40	40
60			20	25	25	25	30	30	35	35	35	40	40
66				25	25	30	30	30	35	35	40	40	40
72				25	25	30	30	30	35	35	40	40	40

- C. *Width of permanent sanitary sewer easements.* Permanent sanitary sewer easements shall be no less than 20 feet in width when no other parallel utilities are located therein. When warranted, temporary construction easement widths shall be determined by the authorized registered professional.
- D. *Provision for common sanitary/drainage easement.* A common easement for sanitary sewer and drainage purposes may be allowed if the pipes are parallel and at least 10 feet is provided between pipes (on center). The easement width shall be equal to the width shown in Table 380.1 plus the width distance separating the pipes (minimum of 10 feet).
- E. *Watercourse easements.* Drainage easements shall be provided where a development is traversed by or contains a watercourse, impoundment, detention facility, improved channel, floodplain, natural stream, or channel. It shall conform substantially to the flooding limits of the 100-year storm based on fully developed conditions per the Gwinnett County Unified Plan but shall be no less than 20 feet in width.
- F. *Off street right-of-way easements.* Drainage easements off the street right-of-way shall be clearly defined on the Final Plat. The property owner will be required to keep the easement free of obstruction in such a way as to assure the maximum designed flow at all times. The property owner shall not alter any drainage improvements without the prior written approval from the County. Structures shall not be constructed or erected in an easement without the prior written approval from the County. Driveways shall cross an easement as close to perpendicular as practical. Property owners may plant landscaping in an easement that is piped; however, the County is not responsible for replacing the landscape material located in the easement when it is removed to maintain the drainage system.
- G. *Cleared easements to be grassed.* All drainage, sewer, access, or other easements that were required to be cleared shall be fine graded and grassed within 10 days of completing construction work. The use of sediment control measures may be required to protect the area until a comprehensive vegetative cover is obtained.

Section 380-20. Water Supply Systems.

Refer to Gwinnett County, Georgia, Code of Ordinances, Part II, Chapter 106, Utilities.

Section 380-30. Cross-Connection Control and Backflow Prevention.

Refer to Gwinnett County, Georgia, Code of Ordinances, Part II, Chapter 106, Utilities.

Section 380-40. Disposal of Sanitary Waste.

Refer to Gwinnett County, Georgia, Code of Ordinances, Part II, Chapter 106, Utilities.

Section 380-50. Private Wastewater Disposal.

Refer to Gwinnett County, Georgia, Code of Ordinances, Part II, Chapter 106, Utilities.

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Section 380-60. Sewer Construction Standards.

Refer to Gwinnett County, Georgia, Code of Ordinances, Part II, Chapter 106, Utilities.

Section 380-70. Water and Sanitary Sewer Installation Standards

380-70.1 Installation and Compaction Required before Pavement or Base. All water and sanitary sewer utilities and stormwater infrastructure facilities within the curbs shall be installed and the ditches backfilled and thoroughly compacted before any pavement or base is installed. A minimum of 95 percent compaction is required.

380-70.2 After Base Installed, Utilities to be Bored. Once the base has been placed, all further installation of utilities under the roadway shall be bored or otherwise comply with Section 380-80.

380-70.3 Manholes Flush with Finished Grade. All utility manholes and valve boxes shall be brought flush to the finished grade within the roadway section. If there is a delay in applying the final surface course for new roadway pavement, then the utility manholes and valve boxes shall be brought flush with the finished grade of the intermediate course of the roadway pavement.

380-70.4 Standard Drawings Apply. All utility locations shall adhere to the details found in the Standard Drawings in the Appendix of this UDO.

Section 380-80. Street Cuts.

380-80.1 Review and Approval by the Gwinnett County Department of Transportation. All utility construction plans within County right-of-way shall be reviewed and approved by the Gwinnett County Department of Transportation before construction begins. Street cuts shall not be allowed unless deemed absolutely necessary due to the presence of rock, the need to tap into an existing line beneath the road surface, or other circumstance which makes boring impossible or infeasible.

380-80.2 Fees Required.

- A. No street cut shall be authorized until such Street Cut Fees have been paid.
- B. All street cut repairs must be inspected and approved prior to the release of street cut fees.

380-80.3 Trenches to be Backfilled.

- A. If approved, all trenches shall be backfilled and compacted the same day the trench is opened.
- B. Trenches under the paving shall be returned to 95 percent compaction.
- C. Trenches elsewhere shall be returned to 90 percent compaction.
- D. See Section 360-70.2 for trench compaction and test requirements.

380-80.4 Trenches under Paving. All trenches under paving shall be concreted with 8 inches of Class "A" concrete base and 2 inches of 9.5 mm Superpave Type II wearing course asphalt is to be spread.

- A. The paving cut shall be widened to a minimum of 9 inches beyond the edges of the trench.
- B. The edges of the paving cut shall be smooth.
- C. If the final course of asphalt has been completed prior to the street cut, then milling and inlay of the surrounding area will be required. Limits of mill and inlay are subject to Gwinnett County Department of Transportation approval.

380-80.5 Utility Extension Information.

- A. Contact the Department of Water Resources or the Department of Planning and Development for public utility extension information from the existing to the proposed development.

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- B. Contact Gwinnett County Department of Transportation at least 24 hours in advance of closure of traffic lanes. All lane closures must meet Manual on Uniform Traffic Control Devices (MUTCD) guidelines.

Chapter 400. Soil Erosion, Sedimentation, and Pollution Control

Section 400-10. Title and Purpose.

The real potential exists for excessive quantities of soil to erode from areas that are undergoing land disturbance. The resulting sediment could clog storm sewers and road ditches, add mud to streams and silt lakes, rivers, and reservoirs. Excessive sediment limits the use of water for most beneficial purposes. Sediment choked streams are unsightly and their reduced channel capacity can result in flooding and associated damages, including the threat to the public health and safety. Therefore, it is the purpose of this chapter is to effectively contain soil erosion and sedimentation on the parcels where land is being disturbed by requiring provisions for water disposal and the protection of soil surfaces prior to, during, and after the land disturbance in order to promote the safety, public health, convenience, and general welfare of the citizens of Gwinnett County.

400-10.1 In the interpretation and application of Chapter 400 of this UDO, all provisions shall be:

1. Considered as minimum requirements.
2. Liberally construed in favor of Gwinnett County.
3. Deemed neither to limit nor repeal any other powers granted under state statutes.

Section 400-20. Exemptions.

This Chapter shall apply to any land-disturbing activity undertaken by any person on any land except for the following:

400-20.1 Surface mining, as the same is defined in O.C.G.A. § 12-4-72, The *Georgia Surface Mining Act* of 1968.

400-20.2 Granite quarrying and land clearing for such quarrying.

400-20.3 Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities which result in minor soil erosion.

400-20.4 The construction of single-family residences, when such construction disturbs less than one acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and not otherwise exempted under this paragraph; provided, however, that construction of any such residence shall conform to the minimum requirements set forth in Sections 400-30.1, 400-30.2, and 400-30.3 of this UDO, O.C.G.A. § 12-7-6, and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a buffer zone between the residence and any state waters classified as trout streams pursuant to O.C.G.A. § 12-5-20 et seq. In any such buffer zone, no land disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from the banks of the trout waters. For primary trout waters, the buffer zone shall be at least 50 horizontal feet, and no variance to a smaller buffer shall be granted. For secondary trout waters, the buffer zone shall be at least 50 horizontal feet, but the Director of the Environmental Protection Division may grant variances to no less than 25 feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the buffer shall be at least 25 horizontal feet, and no variance to a smaller buffer shall be granted. The general provision and minimum requirements of 400-30.1 and the minimum requirements of Sections 400-30.2 and 400-30.3 of this UDO, O.C.G.A. § 12-7-6(b) and the buffer zones provided by this section shall be enforced by the Department.

400-20.5 Agricultural operations as defined in O.C.G.A. § 1-3-3 to include raising, harvesting, or storing of crops; feeding, breeding, or managing livestock or poultry; producing or storing feed for use in the production of

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livestock, including, but not limited to, cattle, calves, swine, hogs, goats, sheep, and rabbits, or for use in the production of poultry, including, but not limited to, chickens, hens, ratites, and turkeys; producing plants, trees, fowl, or animals; or the production of aquacultural, horticultural, dairy, livestock, poultry, eggs, and apiarian products.

400-20.6 Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a buffer, as established in Subsections 400-30.3.O. and 400-30.3.P of this UDO, no other land disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three years after completion of such forestry practices.

400-20.7 Any project carried out under the active technical supervision of the Natural Resources Conservation Service of the United States Department of Agriculture. This excludes those land-disturbing activities undertaken by a person who has requested technical advice only rather than active participation from the Natural Resources Conservation Service;

400-20.8 Any project involving 5,000 square feet or less of disturbed area; provided, however, that this exemption shall not apply to any of the following activities:

1. Any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre or; Within 200 feet of the bank of any state waters, and for purposes of this paragraph, "state waters" excludes channels and drainage ways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year-round; provided, however, that any person responsible for a project which involves 5,000 square feet or less of disturbed area and which is within 200 feet of any such excluded channel or drainage way, must prevent sediment from moving beyond the boundaries of the property on which such project is located. The provisions of this paragraph shall not apply to those projects specifically exempted by Sections 400-20.1 through 400-20.7 and Sections 400-20.9 through 400-20.10 of this section.

400-20.9 Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Georgia Department of Transportation, the Georgia Highway Authority, the State Road and Tollway Authority, or the Gwinnett County Department of Transportation; provided, however, that construction or maintenance projects of the Georgia Department of Transportation or the State Road and Tollway Authority which disturb one or more contiguous acres of land shall be subject to the provisions of O.C.G.A. § 12-7-7.1; except where the Georgia Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the local issuing authority, the local issuing authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;

400-20.10 Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the local issuing authority shall enforce

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compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and,

400-20.11 Any public water system reservoir.

Section 400-30. Requirements for Erosion and Sedimentation Control Using Best Management Practices.

400-30.1 General Provisions. Excessive soil erosion and resulting sedimentation can take place during land disturbing activities. Therefore, plans for those land-disturbing activities that are not exempted by this Chapter shall contain provisions for the application of soil erosion, sedimentation and pollution control measures and practices. These provisions shall be incorporated into the Erosion, Sedimentation, and Pollution Control Plans. Soil erosion, sedimentation and pollution control measures and practices shall conform to the requirements of Sections 400-30.2 and 400-30.3. The application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed and continually maintained to prevent or control erosion, sedimentation and pollution during all stages of any land-disturbing activity in accordance with the requirements of this UDO and the NPDES general permit.

400-30.2 Minimum Requirements/Best Management Practices (BMP's).

- A. Best Management Practices as set forth in Sections 400-30.2 and 400-30.3 shall be required for all land disturbing activities. Proper design, installation, and maintenance of Best Management Practices shall constitute a complete defense to any action by the Director of the Environmental Protection Division or to any other allegation of noncompliance with Subsection B of this Section or any substantially similar terms contained in a permit for the discharge of stormwater issued pursuant to O.C.G.A. § 12-5-30(f), the *Georgia Water Quality Control Act*. As used in this section, the terms "proper design" and "properly designed" mean designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. § 12-7-6(b).
- B. A discharge of stormwater runoff from disturbed areas where Best Management Practices have not been properly designed, installed, and maintained shall constitute a separate violation of any land disturbance permit issued by Gwinnett County or of any state general permit issued by the Environmental Protection Division of the Georgia Department of Natural Resources pursuant to O.C.G.A. § 12-5-30(f), the *Georgia Water Quality Control Act*, for each day on which such discharge results in the turbidity of receiving waters being increased by more than 25 nephelometric turbidity units (NTU's) for waters supporting warm water fisheries or by more than ten nephelometric turbidity units (NTU's) for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines issued by the Director of the Environmental Protection Division of the Georgia Department of Natural Resources. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than 5 acres.
- C. Failure to properly design, install, maintain, or remove Best Management Practices shall constitute a violation of any land disturbance permit issued by Gwinnett County or of any state general permit issued by the Environmental Protection Division of the Georgia Department of Natural Resources pursuant to O.C.G.A. § 12-5-30(f) for each day on which such failure occurs.
- D. The Director of the Environmental Protection Division of the Georgia Department of Natural Resources may require, in accordance with regulations adopted by the Georgia Board of Natural Resources, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land-disturbing activities occur.

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400-30.3 Additional Minimum Requirements. The rules and regulations, ordinances or resolutions adopted pursuant to O.C.G.A. § 12-7-1 et seq. for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and Best Management Practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation which are consistent with, and no less stringent than the state general permit, and those practices contained in the *Manual for Erosion and Sediment Control in Georgia* published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, shall be observed by all land disturbers and plan preparers, as well as the following:

- A. Stripping of vegetation, regrading, and other development activities shall be conducted in a manner so as to minimize erosion.
- B. Cut-fill operations must be kept to a minimum.
- C. Development plans must conform to topography and soil type so as to create the lowest practical erosion potential.
- D. Whenever feasible, natural vegetation shall be retained, protected, and supplemented.
- E. The disturbed areas and the duration of exposure to erosive elements shall be kept to a practicable minimum.
- F. Disturbed soil shall be stabilized as quickly as practicable.
- G. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development. The disturbed area shall be stabilized with temporary vegetation or mulch if land-disturbing activity temporarily ceases for more than 14 calendar days.
- H. Permanent vegetation and structural erosion control measures shall be installed as soon as practicable. The disturbed area shall be stabilized with permanent vegetation if land-disturbing activity ceases for more than 30 calendar days.
- I. To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of this Chapter and O.C.G.A. § 12-7-1 et seq.
- J. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills.
- K. Cuts and fills may not endanger adjoining property.
- L. Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners.
- M. Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any case, that such crossings shall be kept to a minimum;
- N. Land-disturbing activity plans for erosion, sedimentation and pollution control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on-site or preclude sedimentation of adjacent waters beyond the levels specified in Section 400-30.2b.
- O. Except as provided in Subsection P of this section, there is established a 25-foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director of the Environmental Protection Division determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the Director of the Environmental Protection Division

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pursuant to O.C.G.A. § 12-2-8, or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; or along any ephemeral stream. As used in this paragraph, the term "ephemeral stream" means a stream: that under normal circumstances has water flowing only during and for a short duration after precipitation events; that has the channel located above the ground-water table year-round; for which ground water is not a source of water; and for which runoff from precipitation is the primary source of water flow. Unless exempted as along an ephemeral stream, the buffers of at least 25 feet established pursuant to O.C.G.A. § 12-5-440 shall remain in force unless a variance is granted by the Director of the Environmental Protection Division as provided in this paragraph. The following requirements shall apply to any such buffer:

1. No land-disturbing activities shall be conducted within a buffer and it shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed.
 2. Once the final stabilization of the construction site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.
 3. Exception: Any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.
 4. The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented:
 - a. Stream crossings for water lines; or,
 - b. Stream crossings for sewer lines; and,
 - c. Prior to action by the Director of the Environmental Protection Division, buffer variance requests along state waters with drainage areas greater than 20 acres shall be reviewed for approval or denial by the director using the same buffer variance criteria as adopted by the Board of the Georgia Department of Natural Resources.
- P. There is established a 50-foot buffer as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any state waters classified as "trout streams" pursuant to O.C.G.A. § 12-5-20 et seq, except where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as trout streams which discharge an average annual flow of 25 gallons per minute or less shall have a 25-foot buffer or they may be piped, at the discretion of the landowner, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources providing for notice to the Environmental Protection Division or the County of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream landowner's property, and the landowner must comply with the buffer requirement for any adjacent trout streams. The Director of the Environmental Protection Division may grant a variance from such buffer to allow land-disturbing activity, provided that adequate erosion control measures are incorporated in the

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project plans and specifications and are implemented. The following requirements shall apply to any such buffer:

1. No land-disturbing activities shall be conducted within a buffer and it shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed.
2. Once the final stabilization of the construction site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.
3. Exception: Any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and,
4. The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented:
 - a. Stream crossings for water lines; or,
 - b. Stream crossings for sewer lines.

Section 400-40. Proof or Presumption of Violation by Injury.

The fact that land-disturbing activity for which a land disturbance permit has been issued results in injury to the property of another shall neither constitute proof of, nor create a presumption of, a violation of the standards provided for in this UDO or the terms of a land disturbance permit.

Section 400-50. Permit Application and Plan Requirements.

400-50.1 General. The property owner, developer and designated planners and engineers shall review the general development plans and detailed plans of Gwinnett County that affect the tract to be disturbed and the area surrounding it. They shall review the UDO and any other ordinances, regulations, or permits that regulate the development of land within the unincorporated areas of Gwinnett County. However, the operator is the only party who may obtain a land disturbance permit.

400-50.2 Application Requirements.

- A. *Land Disturbance Permit Required.* Land-disturbing activities within the jurisdictional boundaries of Gwinnett County shall not be conducted by any person without first obtaining a land disturbance permit from the Gwinnett County Department of Planning and Development to perform such activity and providing a copy of the NOI submitted to the Environmental Protection Division if applicable. If land is to be disturbed or developed in phases, then a separate land disturbance permit shall be required for each phase.
- B. *Application Submittal.* The application for a permit shall be submitted to the Gwinnett County Department of Planning and Development and shall include the applicant's Erosion, Sedimentation, and Pollution Control Plan accompanied by supporting data as necessary. Plans shall include, as a minimum, the data specified in Section 400-30.2 and 400-30.3. Erosion, Sedimentation, and Pollution

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Control Plans, together with supporting data, shall demonstrate affirmatively that the land-disturbing activity proposed will be carried out in such a manner that the provisions of Sections 400-30.2 and 400-30.3 will be met. Applications for a permit will not be accepted unless accompanied by a full set of the applicant's Erosion, Sedimentation, and Pollution Control Plans. All applications shall contain a certification stating that the plan preparer, or the designee thereof, visited the site prior to creation of the plan in accordance with the Environmental Protection Division Rule 391-3-7.10.

- C. *Fees.* A land disturbance permit fee, in an amount as established by the Board of Commissioners, shall be charged for each acre or fraction thereof in the project area. In addition to the land disturbance permit fee, fees shall be assessed pursuant to O.C.G.A. § 12-5-23(a) (5), provided that such fees shall not exceed \$80.00 per acres of land-disturbing activity, and these fees shall be calculated and paid by the primary permittee as defined in the state general permit for each acre of land-disturbing activity included in the planned development or each phase of development. All applicable fees shall be paid prior to issuance of the land disturbance permit. In a jurisdiction that is certified pursuant O.C.G.A. § 2-7-8(a), half of such fees levied shall be submitted to the Georgia Environmental Protection Division; except that any and all fees due from an entity that is required to give notice pursuant to O.C.G.A. § 12-7-17(9) and (10) shall be submitted in full to the Georgia Environmental Protection Division regardless of the existence of a Local Issuing Authority in the jurisdiction. The local issuing authority with plan review authority shall approve or disapprove a revised plan within 35 days of receipt.
- D. *Review by County Departments.* After having received a complete land disturbance permit application, having reviewed same by the Department of Planning and Development, and finding it to be in compliance with all titles of this UDO, the requirements of Chapter 400 and any variances required by Subsections 400-30.3.O. and 400-30.3.P. are obtained, the Department of Planning and Development shall issue the land disturbance permit.
- E. *Permit Suspension, Revocation, or Modification.* The land disturbance permit may be suspended, revoked, or modified by the Department of Planning and Development, as to all or any portion of the land affected by the plan, upon finding that the holder or the holder's successor in the title is not in compliance with the approved Erosion, Sedimentation, and Pollution Control Plan or that the holder or the holder's successor in title is in violation of this Chapter. A holder of a land disturbance permit shall notify any successor in title to the holder as to all or any portion of the land affected by the approved plan of the conditions contained in the permit. If a permit applicant has had two or more violations of previous permits of this Chapter, of this ordinance section or of the Erosion and Sedimentation Act, as amended, within three years prior to the date of filing the application under consideration, the local issuing authority may deny the permit application.

400-50.3 Plan Requirements.

- A. Plans shall be prepared as outlined in Chapter 330 of this UDO.

Section 400-60. Inspections.

400-60.1 The Department will periodically inspect the sites of land-disturbing activities for which land disturbance permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures and practices required in the plan are effective in controlling erosion and sedimentation. Also regulated by Gwinnett County are both primary; secondary, and tertiary permittees as such terms are defined in the state general permit. Primary permittees shall be responsible for installation and maintenance of best management practices where the primary permittee is conducting land-disturbing activities. Secondary permittees shall be responsible for installation and maintenance of best management practices where the secondary permittee is conducting land-disturbing activities. Tertiary permittees shall be responsible for installation and maintenance where the tertiary permittee is conducting land-disturbing activities.

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400-60.2 The Director shall have the power to conduct such investigations as reasonably deemed necessary to carry out the duties as prescribed in this ordinance, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigation and inspecting the sites of land-disturbing activities.

400-60.3 Entry or access shall not be refused by any person to any authorized representative or agent of the Department who requests entry for the purpose of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties.

Section 400-70. Violations, Enforcement, and Penalties.

Any action or inaction that violates the provisions of this Chapter 400 shall be subject to the enforcement actions and penalties identified in Chapter 120 of this UDO.

Section 400-80. Education and Certification Required.

400-80.1 Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on their level of involvement with the process, as developed by the Georgia Soil and Water Conservation Commission in consultation with the Environmental Protection Division (EPD) of the Department of Natural Resources and the stakeholder advisory board created pursuant to O.C.G.A. § 12-7-20.

400-80.2 For each site on which land-disturbing activity occurs, each entity or person acting as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion and sedimentation control activities on behalf of said entity or person and meets the applicable education or training certification requirements developed by the Georgia Soil and Water Conservation Commission present on site whenever land-disturbing activities are conducted on that site. A project site shall herein be defined as any land disturbance site or multiple sites within a larger common plan of development or sale permitted by an owner or operator for compliance with the state general permit.

400-80.3 Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons to meet the requirements of this ordinance.

400-80.4 If a state general permittee who has operational control of land-disturbing activities for a site has met the certification requirements of O.C.G.A. § 12-7-19(b)(1), then any person or entity involved in land-disturbing activity at that site and operating in a subcontractor capacity for such permittee shall meet those educational requirements specified in O.C.G.A. § 12-7-19(b)(4) and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

Section 400-90. Variance and Appeal.

400-90.1 Variance and Appeal.

- A. A variance from the requirements of this chapter or of the decision or interpretation of the Director shall be submitted by the property owner on an application form as prescribed by the Department, along with such fees as may be established from time-to-time by the Board of Commissioners.
- B. The suspension, revocation, or modification with condition of a permit by the Department of Planning and Development upon finding that the holder is not in compliance with the approved erosion and sediment control plan; or that the holder is in violation of permit conditions; or that the holder is in violation of this chapter of the UDO; shall entitle the person submitting the plan or holding the permit to a hearing before the Board of Construction Adjustments and Appeals to be scheduled in their

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normal course of business after receipt by the Department of Planning and Development of written notice of appeal.

- C. The property owner shall state clearly why the requirements of this chapter cannot be met or why the interpretation or decision of the Director is in error.
- D. The Director shall transmit a copy of the appeal application to all affected County departments, including the Soil and Water Conservation District, soliciting their respective recommendations and coordinate the recommendations of each respondent. The other responses together with the director's recommendation shall be forwarded to the Board of Construction Adjustments and Appeals, with the exception of appeals from buffer variance request decisions, for final action in their normal course of business.
- E. Buffer variance appeals shall be decided upon by the Soil and Water Conservation District in their normal course of business whose decision shall be final. An appeal in conflict with the provisions of the Georgia Erosion and Sedimentation Act, O.C.G.A. § 12-7-1 et seq., shall not be considered or approved by the Board of Construction Adjustments and Appeals.
- F. After final action by the Board of Construction Adjustments and Appeals, the Director shall transmit a copy of said action to the Soil and Water Conservation District of Gwinnett County and to the property owner.
- G. Any person aggrieved by a decision or order of Gwinnett County, after exhausting his or her administrative appeals, shall have the right to appeal de novo to the Superior Court of Gwinnett County.

Chapter 500. Riparian Buffers

Section 500-10. Stream Buffer Protection.

500-10.1 Applicability.

- A. Chapter 500 of this UDO shall apply to all land development activity on property containing a stream protection area as defined in Chapter 110 of this UDO. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established under State law and approval or exemption from these requirements do not constitute approval or exemption from buffer requirements established under State law or from other applicable local, State or Federal regulations.
- B. After April 1, 2005, this Section 500-10 shall apply to new subdividing, land development, and platting activities

500-10.2 Grandfather Provisions. This Section 500-10 of the UDO shall not apply to the following types of applications, but such work shall be subject to the provisions of stream buffer protection regulations in effect at the time of the subject application:

- A. Work consisting of the repair, maintenance or replacement within the same disturbed area of any lawful use of land that is zoned and approved for such use on or before the effective date of this UDO.
- B. Any lawful land development activity that is under construction, has a valid permit, or has submitted a valid and complete application for a permit as of April 1, 2005, which has not expired.
- C. Any lawful land development activity that has not been submitted for approval, but that is part of a larger approved master development plan, such as a house in a subdivision, building in an office park, or planned greenway, which has a valid master plan development permit and a partially or wholly recorded plat prior to April 1, 2005.

500-10.3 Exemptions.

- A. The following specific activities are exempt from this Section 500-10, however any activity within a state waters' buffer must meet State requirements:
 - 1. Activities for the purpose of building one of the following:
 - a. A perpendicular stream crossing by a driveway, transportation route including but not limited to bike paths and pedestrian trails, or utility line.
 - b. Public water supply intake or public wastewater outfall structures.
 - c. Land development necessary to provide access to a property.
 - d. Public access facilities that must be on the water including boat ramps, docks, foot trails leading directly to the water body, fishing platforms and overlooks.
 - e. Unpaved foot trails and paths.
 - f. Activities to restore and enhance stream bank stability, vegetation, water quality and/or aquatic habitat, so long as native vegetation and bioengineering techniques are used.
 - g. Stormwater outfalls to the stream, by pipe or channel, necessary to protect the buffer from erosion caused by high flow velocities due to steep slopes.
 - 2. Public sewer line installation in easements running parallel with the stream where necessary, except that all easements (permanent and construction) and land disturbance within a state

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waters' buffer must meet State requirements. This includes such impervious cover as is necessary for the operation and maintenance of the utility, including but not limited to manholes, vents and valve structures. This exemption shall not be construed as allowing the construction of roads, bike paths or other transportation routes in such easements, regardless of paving material, except for access for the uses specifically cited in Subsection 500-10.3A.1., above.

3. Land development activities within a dedicated transportation right-of-way existing at the time this UDO takes effect or approved under the terms of this UDO.
 4. Within an easement of any utility existing at the time this UDO takes effect or approved under the terms of this UDO, land-disturbing activities and such impervious cover as is necessary for the operation and maintenance of the utility, including but not limited to manholes, vents and valve structures.
 5. Emergency work necessary to preserve life or property. However, when emergency work is performed under this subsection, the person performing it shall report such work to the Department of Planning and Development on the next business day after commencement of the work. Within 10 business days thereafter, the person shall apply for a permit and perform such work within such time period as may be determined by the Department of Planning and Development to be reasonably necessary to correct any impairment such emergency work may have caused to the water conveyance capacity, stability or water quality of the protection area.
 6. Forestry and silviculture activities on land that is zoned for forestry, silvicultural or agricultural uses and are not incidental to other land development activity. If such activity results in land disturbance in the buffer that would otherwise be prohibited, then no other land-disturbing activity other than normal forest management practices will be allowed on the entire property for three years after the end of the activities that intruded on the buffer.
- B. Exemption of these activities does not constitute an exemption for any other activity proposed on a property.

500-10.4 Land Development Requirements.

- A. Buffer and setback requirements.
1. All land development activity subject to this UDO shall meet the following requirements:
 - a. An undisturbed buffer shall be maintained for 50 feet, measured horizontally, on both banks (as applicable) of the stream as measured from the top of the stream bank. The land forming the bank is also considered part of the buffer for purposes of this UDO.
 - b. An additional setback shall be maintained for 25 feet, measured horizontally, beyond the undisturbed buffer, in which all impervious cover shall be prohibited including, but not limited to, buildings, parking areas, driveways, and concrete retaining walls. Grading, filling and earthmoving shall be minimized within the setback.
 - c. No septic tanks or septic tank drain fields shall be permitted within the buffer or the setback.
- B. Any land development activity within a buffer established hereunder or any impervious cover within a setback established hereunder is prohibited unless a variance is granted pursuant to Subsection 500-10.4C below.
- C. Variance Procedures. Variance requests from the requirements of this Section 500-10 shall be submitted on an application form as prescribed by the Director of the Department of Planning and Development or the Director's designee, along with such fees as shall be established by the Board of Commissioners. The Director of the Department of Planning and Development or the Director's

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designee shall coordinate the review of each variance request with all other affected County departments and shall forward such comments or recommendations as may be received to the Board of Construction Adjustments and Appeals for action in their normal course of business. This section describes how to apply for a variance from this chapter, however any activity within a state waters' buffer must meet State requirements. Variances may be granted in accordance with the following provisions:

1. The Board of Construction Adjustments and Appeals shall grant no variance from any provision of this UDO without first conducting a public hearing on the application for variance and authorizing the granting of the variance by an affirmative vote of the Board of Construction Adjustments and Appeals. The Department of Planning and Development shall give public notice of each such public hearing in the local organ of Gwinnett County at least once a week for two consecutive weeks before it is heard. The Department of Planning and Development shall require that the applicant post a sign giving notice of the proposed variance and the public hearing at least 15 days prior to the date of the hearing. The sign shall be of a size and posted in right-of-way.
2. No application or reapplication for a variance affecting the same stream segment on a property shall be heard within 12 months from the date of last action by the Board of Construction Adjustments and Appeals unless such 12- month period is waived by the Board of Construction Adjustments and Appeals, and in no case may such application or reapplication be reconsidered in less than six months from the date of last action by the Board of Construction Adjustments and Appeals.
3. Variances will not be considered when, following adoption of this UDO, actions of any property owner of a given property have created conditions of a hardship on that property. Variances will be considered only in the following cases:
 - a. The applicant provides evidence that impacts to the buffer have been avoided or minimized to the fullest extent practicable.
 - b. The project involves the construction or repair of a structure that, by its nature, must be located within the buffer. Such structures include dams and detention/retention ponds.
 - c. Paved recreational foot trails and viewing areas, providing that impacts to the buffer are minimal; or
 - d. The proposed land-disturbing activity within the buffer will receive a permit from the United States Army Corps of Engineers (USACE) under Section 404 of the Federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, and the Corps of Engineers has received a mitigation plan to be implemented as a condition of such a permit. In addition, land-disturbing activities in the buffer that are outside the USACE's jurisdiction must be mitigated.
 - e. The buffer intrusion is mitigated using the procedure established in the Gwinnett County Stormwater Management Manual.
 - f. A valid and complete application for rezoning of the property is submitted prior to the effective date of this UDO and approval of the rezoning by the Board of Commissioners occurs after the effective date of this UDO, and the variance request is consistent with the intent of this UDO factoring into account the property owner's reliance on standards in effect at the time of the rezoning.
4. At a minimum, a variance request shall include the following information:
 - a. A site map that includes locations of all streams, wetlands, floodplain boundaries and other natural features, as determined by field survey;

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- b. A description of the shape, size, topography, slope, soils, vegetation and other physical characteristics of the property;
 - c. A dated site plan that shows the locations of all existing and proposed structures and other impervious cover, the limits of all existing and proposed land disturbance, both inside and outside the buffer and setback. The exact area of the buffer to be affected shall be accurately and clearly indicated;
 - d. Documentation that impacts to the buffer have been avoided or minimized to the fullest extent practicable;
 - e. A calculation of the total area and length of the proposed intrusion;
 - f. A stormwater management site plan, if applicable;
 - g. Proposed mitigation, if any, for the intrusion. If no mitigation is proposed, the request must include an explanation of why none is being proposed;
 - h. A description of the project, with details of the buffer disturbance, including estimated length of time for the disturbance and justification for why the disturbance is necessary;
 - i. Any other reasonable information related to the project that the Department of Planning and Development may deem necessary to effectively evaluate the variance request;
 - j. A copy of the permit application, supporting documentation, and proposed mitigation plan as submitted to the United States Army Corps of Engineers under Section 404 of the Federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, if applicable;
 - k. A copy of the permit application, supporting documentation, and proposed mitigation plan as submitted to the Georgia Environmental Protection Division for a variance from the state waters' buffer; and
 - l. A buffer mitigation plan in accordance with the procedure outlined in the Gwinnett County Stormwater Management Manual.
5. The following factors will be considered in determining whether to issue a variance:
- a. The shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.
 - b. The locations of all streams on the property, including along property boundaries as determined from field inspection.
 - c. The location and extent of the proposed buffer or setback intrusion.
 - d. Whether alternative designs are possible which require less intrusion or no intrusion.
 - e. The long-term and construction water-quality impacts of the proposed variance.
 - f. Whether issuance of the variance is at least as protective of natural resources and the environment.
 - g. The value of mitigation activities as calculated in accordance with the Gwinnett County Stormwater Management Manual.
6. Administrative variances may be considered for projects which have water quality impacts which have been determined equal to or less than 0.1 units for the entire project site or development area.

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500-10.5 Special Buffer Regulations and Requirements. In addition to the other provisions of Section 500-10, the following requirements shall apply. Whichever provisions are more restrictive or impose higher protective standards for human health or the environment shall take precedence.

The Grandfather Provisions, Exemptions, and Variance Procedures Sections of Section 500-10, Stream Buffer Protection, do not apply to this subsection. Applicable exemptions and variances are given below.

- A. *Big Haynes Creek and Alcovy River Watershed protection requirements.* This Section of this UDO is adopted pursuant to Georgia Department of Natural Resources Rules for Environment Planning Criteria for water supply watersheds (O.C.G.A 391-3-16).
1. Stream buffer zone/impervious surface setbacks shall meet minimum criteria for Large Water Supply Watersheds (O.C.G.A 391-3-16 (6)).
 - a. Roadways, bridges and drainage structures may encroach upon required buffers and setbacks where such structures are necessary to provide access. Such roadways and bridges shall cross streams perpendicularly where reasonably possible. The number of such stream crossings and associated structures shall be minimized to the greatest extent possible.
 - b. Limited minor land disturbances, such as trails and picnic areas are exempt.
 2. Lots of record. All lots or parcels of record as of the October 28, 1997, in the Big Haynes Creek Watershed and November 28, 2000, in the Alcovy River Watershed and all lots or parcels which have been submitted by way of preliminary plat and approved by the Department of Planning and Development in accordance with the provisions of Title 2 of this UDO, as of October 28, 1997, within the Big Haynes Creek Watershed and November 28, 2000, within the Alcovy River Watershed, that are made unbuildable by the buffer and setback provisions, may still be developed on a case-by-case basis. Requests for development of these lots shall be made to the Director of the Department of Planning and Development as Administrative Variances. If development is allowed, the maximum possible impervious surface setback and stream buffer width, given the configuration of the lot, shall be maintained.
 3. Limitation on variances. Variances from the provisions of Subsection A (Big Haynes Creek and Alcovy River Watershed Protection Requirements) are prohibited except as provided by Subsection A.2.
- B. *Chattahoochee Corridor.*
1. Vegetation shall be left in its natural state, and impervious surfaces shall not be permitted, for a distance of 50 horizontal feet as measured from both banks of the Chattahoochee River and its impoundments, and for a distance of 35 horizontal feet as measured from both banks of all other flowing stream channels within the Chattahoochee Corridor, except for footpaths, designated public access areas, river or stream crossings by transportation facilities, public water supply intake structures, public wastewater treatment plant outfalls and utility line crossings.
 2. Subject and in addition to the restrictions set forth in Subsection 500-10.5B.1. herein, impervious surfaces and structures shall not be permitted within, on or over any land that is 150 horizontal feet or less from either bank of the Chattahoochee River and its impoundments, except for footpaths, designated public access areas, river or stream crossings by transportation facilities, public water supply intake structures, public wastewater treatment plant outfalls and water supply and sewerage manholes that are designed and built at grade, unless it is determined by the Atlanta Regional Commission, after consideration by a Committee of the Atlanta Regional Commission as authorized by the Atlanta Regional Commission, and based in part upon the affidavit of, and substantial evidence submitted by, a registered professional engineer qualified in water quality and hydrology that the impervious surfaces and structures will not be harmful to

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the water and land resources of the Chattahoochee Corridor, will not significantly impede the natural flow of flood waters and will not result in significant land erosion, stream bank erosion, siltation or water pollution.

3. Not including the impervious surfaces and structures that are excepted above, any impervious surfaces or structures that, in the judgment of the Atlanta Regional Commission, must legally be permitted within, on or over any land that is 150 horizontal feet or less from either bank of the Chattahoochee River and its impoundments on lots of record as of March 16, 1973, for the portion of the Chattahoochee Corridor between Buford Dam and the downstream limit of the City of Atlanta water intake, which were designated by the local governing authority for a single-family detached residential use, shall meet the following standard: For each one foot incursion into the 150 foot impervious surface buffer, one foot of natural vegetation shall be added to the 50 foot natural vegetation buffer. In the event that the Atlanta Regional Commission determines that legal, physical, biological, or hydrologic conditions on the site prevent the addition of all the required natural vegetation, substitute measures satisfactory to the Atlanta Regional Commission shall be taken to provide an equivalent level of land and water resource protection.

500-10.6 Additional Information Requirements for Development on Buffer Zone Properties. Any permit applications for property requiring buffers and setbacks hereunder must include the following:

- A. *A site plan showing:*
 1. The location of all streams on the property.
 2. Limits of required stream buffers and setbacks on the property.
 3. Buffer zone topography with contour lines at no greater than 2-foot contour intervals.
 4. Delineation of forested and open areas in the buffer zone.
 5. Detailed plans of all proposed land development in the buffer and of all proposed impervious cover within the setback.
- B. *Description.* A description of all proposed land development within the buffer and setback.
- C. *Documentation.* Any other documentation that the Department of Planning and Development may reasonably deem necessary for review of the application and to ensure that the buffer and landscaping requirements are addressed in the approval process. All buffer and setback areas must be recorded on the final plat of the property following plan approval.

500-10.7 Responsibility. Neither the issuance of a development permit nor compliance with the conditions thereof, nor with the provisions of this UDO shall relieve any person from any responsibility otherwise imposed by law for damage to persons or property; nor shall the issuance of any permit hereunder serve to impose any liability upon Gwinnett County, its officers or employees, for injury or damage to persons or property.

500-10.8 Inspection.

- A. The Department of Planning and Development may cause inspections of the work in the buffer or setback to be made periodically during the course of work and shall make a final inspection following completion of the work. The permittee shall assist representatives of the department in making such inspections. The Director of the Department of Planning and Development or the Director's designee shall have the authority to conduct such investigations as he or she may reasonably deem necessary to carry out the duties as prescribed in this UDO, and for this purpose to enter at reasonable time upon any property, public or private, for the purpose of investigating and inspecting the sites of any land development activities within the protection area.

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- B. No person shall refuse entry or access to any authorized representative or agent who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out official duties.

500-10.9 Violations, Enforcement, and Penalties. Any action or inaction that violates the provisions of Section 500-10 shall be subject to the enforcement actions and penalties identified in Chapter 120 of this UDO.

500-10.10 Administrative Appeal and Judicial Review.

- A. *Administration.* This Chapter of the UDO shall be administered, interpreted, and enforced by the Director of the Department of Planning and Development or the Director's designee.
- B. *Administration appeal.* Appeals of the interpretation by the Director of the Department of Planning and Development or the Director's designee of the requirements of this Chapter of the UDO shall follow the procedures outlined in Section 270-90 of this UDO.

500-10.11 Fees.

- A. Application filing, permit, inspection, and other fees shall be established from time-to-time by the Board of Commissioners.
- B. Permit fees, if any, shall be submitted as a prerequisite to issuance of the permit. Nonpayment as a result of submission of a check having insufficient funds on account, or for any other reason, shall cause the permit to be voided and re-issuance subject to penalty as may be established by the Board of Commissioners.
- C. Application fees, if any, shall be submitted with the application and upon acceptance of said submission for review and consideration shall not be refundable. Failure to pay a required application fee shall cause the application to be returned to the applicant without acceptance for review or consideration by the County.
- D. Following the approval of development plans, and prior to authorization to begin construction, the developer shall provide the Department of Water Resources with mitigating fees. Such fees shall not be refundable following issuance of a development permit, except upon approval of the Board of Commissioners.

Section 500-20. Other Riparian Buffers.

500-20.1 Wetlands.

- A. Section 500-20.1 of this UDO shall apply to all new land development activity, not part of a previously approved master plan, on property containing wetlands as defined in Chapter 110 of this UDO with undisturbed designation. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established under State law and approval or exemption from these requirements does not constitute approval or exemption from buffer requirements established under State law or from other applicable local, State or Federal regulations.
- B. Construction Buffer Requirements. A temporary construction buffer shall be maintained for 10 feet, measured horizontally, from the outer most perimeter of areas delineated as undisturbed wetlands.

500-20.2 Lakes.

- A. *Section 500-20.2 of this UDO shall apply to all new land development activity, not part of a previously approved master plan, on property containing a lake defined in Chapter 110 of this UDO. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established under State law and approval or exemption from these requirements do not*

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constitute approval or exemption from buffer requirements established under State law or from other applicable local, State or Federal regulations.

- B. *Undisturbed Buffer Requirements.* An undisturbed State Waters buffer shall be maintained for 25 feet, measured horizontally, from the water surface edge and including banks with wretched vegetation.
- C. *Construction Buffer Requirements.* A temporary construction buffer shall be maintained for 10 feet, measured horizontally, from the undisturbed State water buffer.

Chapter 600. Buffers, Landscaping, and Tree Protection General Provisions

Section 600-10. Intent.

Chapters 600 through 640 of this UDO shall apply to all properties or portions thereof located within the unincorporated areas of Gwinnett County, Georgia, to the extent of the provisions contained herein. The Board of Commissioners hereby finds that the protection and preservation of trees, the planting of new trees and other landscape material, and the provision of buffers between dissimilar uses as part of the land development process is a public purpose and provides for the public health and general welfare.

Section 600-20. Purpose.

600-20.1 The purpose of Chapters 600 through 640 of the UDO is to preserve and enhance the County's natural environment. This is accomplished through the preservation, protection and planting of trees and other landscape material, particularly those trees recognized herein as canopy and small trees, and the provision of natural and/or planted buffers between dissimilar uses as part of the land development process, as required by Title 2 of this UDO.

600-20.2 Chapters 600 through 640 of the UDO are intended to further the County's policy that all development sites where trees are most commonly removed will achieve upon project completion a uniform standard related to tree coverage, landscaping, and buffers. In addition, trees are recognized for their importance in shading and cooling, noise and wind reduction, prevention of soil erosion, production of oxygen, dust filtration, fostering air quality through carbon dioxide absorption, providing wildlife habitat, and contributing to the aesthetic and economic value of real property.

600-20.3 Chapters 600 through 640 of the UDO are also intended to further the County's policy of encouraging all individuals or firms who propose to develop land, and which are required to meet the requirements of this UDO, to consider the use of water-efficient landscaping principles and techniques (xeriscaping).

Chapter 610. Buffers

Section 610-10. Applicability.

610-10.1 Buffers shall be required between dissimilar districts or uses in accordance with the provisions of Title 2 of this UDO or as a condition of zoning, special use, or variance approval as provided in Chapter 270.

610-10.2 Buffers shall be established and maintained along required property lot lines in accordance with the landscaping policies and standards of this Chapter and any additional specifications that may be established by the Department of Planning and Development and approved by the Board of Commissioner

Section 610-20. Standards for Permanent Buffers.

610-20.1 Requirements.

- A. In the event the buffer includes a utility or pipeline easement, a minimum buffer of no less than 20 feet in width will be required outside the easement. In no case will the buffer be less than 20 feet.

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- B. In cases in which both a buffer and landscape strip are required along the same lot line, the width of the required landscape strip shall be counted as part of the required buffer width. When a landscape strip tree is within the buffer it may be counted toward Tree Density Units.

610-20.2 Buffer Screening.

- A. Buffers shall meet minimum screening requirements. Screening and/or buffers shall be required for purposes of obscuring features such as but not limited to, dumpsters, rear entrances, utility, and maintenance structures, and loading facilities.
- B. Buffers shall be natural, undisturbed, and free of encroachments except as authorized by a condition of zoning, special use or variance approval, or as authorized herein, and shall contain the existing tree cover and vegetation as well as any supplemental plantings or replanting's as may be required.
- C. Buffers shall be of such nature and density so as to screen activities, structures and uses on the property from view from the normal level of a first story window on an abutting lot and shall further provide a year-round effective visual screen.
- D. Screening shall be established within any buffer along the entire length of the property lines. However, this screening requirement may be adjusted in order to observe the sight distance required in this UDO or as a condition of zoning, special use, or variance approval or as approved by the Director.
- E. Buffers required adjacent to side property lines shall extend to a street right-of-way line unless otherwise required by the Director in order to observe the sight distance requirements contained in this UDO, or as authorized by a condition of zoning, special use, or variance approval.
- F. In situations where the required buffer width is partially or completely contained within an existing easement (e.g., power, or natural gas transmission, etc.), the screening requirements of this UDO shall be met outside of the easement area per Section 610-20.1.A.
- G. Additional screening shall be required where a nonresidential use abuts a public street across from a residential district. For specifics on additional screening, see Section 610-20.5. However, this screening requirement may be adjusted in order to observe the sight distance required in this UDO or as a condition of zoning, special use, or variance approval or as approved by the Director.

610-20.3 Buffer Plan Standards and Structure Setbacks.

- A. All buffers shall be designated on the appropriate permit application(s) and indicated on the required site plan or final subdivision plat.
- B. All proposed improvements including, but not limited to, driveways, dumpsters, parking facilities, pavement, or retaining walls will be located a minimum of 5 feet from any buffer.

610-20.5 Non-Vegetative Screening.

- A. Non-vegetative materials used to satisfy the screening requirements of this UDO, in addition to the use of existing vegetation and/or supplemental plantings, may consist of walls, fences, earthen berms or any combination thereof.
- B. If walls or fences are to be used, their placement and installation shall be such so as to cause minimal disturbance of existing vegetation and located so as to provide an effective visual screen.

610-20.6 Supplemental Plantings.

- A. Buffers in which vegetation is non-existent or is inadequate to meet the screening requirements of this UDO shall be supplemented with trees and shrubs to provide an effective year-round visual screen and shall be planted per the ratios as specified in paragraph G. below.

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- B. Buffers required as a condition of zoning, variance, or waiver, whether they are an enhanced or a landscaped buffer, shall be planted per the ratios as specified in paragraph G. below.
- C. Buffer plantings shall consist of a combination of evergreen and deciduous trees and evergreen shrubs adaptable to the region. Deciduous trees shall be a minimum of 2 inches in caliper and evergreen trees shall be a minimum of 6 feet in height at time of planting. All shrubs shall be of a large growing species and chosen from the approved Gwinnett County Shrub Species List, listed in Section 4.0 of the Appendix, shall be a minimum of 3 feet in height at time of planting, and shall be a species which will achieve a height of at least 10 feet at maturity.
- D. Trees, shrubs, grasses, and ground covers identified in the Gwinnett County Prohibited Plant Species List in Section 4.0 of the Appendix are invasive plant species and shall not be planted in buffers.
- E. No genus of tree shall comprise more than 33 1/3 percent of plantings in any buffer. Calculations are required to be shown on Tree Preservation and/or Tree Replacement Plan.
- F. Leyland Cypress, *Cuppressus leylandii* may be used in supplemental replanting in buffers but shall not exceed 33 1/3 percent of total buffer trees. Leyland Cypress trees are not allowed to fulfill regulatory density requirements but may be used for screening purposes.
- G. Trees planted in buffers shall be small, medium, or large trees chosen from the Gwinnett County Tree Species List in Section 4.0 of the Appendix. Shrubs planted in buffers shall meet the specifications as outlines in paragraph C. above. Both trees and shrubs shall, at a minimum, meet the following ratios. Calculation results shall be rounded up:
 - A. Qty. one (1) large hardwood tree per 2,000 sq. ft.
 - B. Qty. one (1) large evergreen tree per 1,000 sq. ft.
 - C. Qty. one (1) small or medium ornamental tree per 700 sq. ft.
 - D. Qty. one (1) large evergreen shrub per 200 sq. ft.
- H. Example 1: The requirement is for an enhanced buffer that is 450 lineal feet and 50 ft. in width in which 70% of the buffer is heavily wooded and 30% is sparse and devoid of vegetation. Therefore 6,750 sq. ft. of buffer area must be planted with the following quantity of plants:
 - 1. $6,750/2,000 = 3.375 = 4$ large hardwood trees
 - 2. $6,750/1,000 = 6.75 = 7$ large evergreen trees
 - 3. $6,750/700 = 9.64 = 10$ small or medium ornamental trees
 - 4. $6,750/200 = 33.75 = 34$ large evergreen shrubs
- I. Example 2: The requirement is for a landscaped buffer that is 450 lineal feet and 50 ft. in width. Therefore 22,500 sq. ft. of buffer area must be planted with the following quantity of plants:
 - 1. $22,500/2,000 = 11.25 = 12$ large hardwood trees
 - 2. $22,500/1,000 = 22.5 = 23$ large evergreen trees

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3. $22,500/700 = 32.14 = 33$ small or medium ornamental trees
4. $22,500/200 = 112.5 = 113$ large evergreen shrubs (deciduous shrubs in a landscaped buffer may comprise a maximum of 25% of the shrubs)

J. Supplemental plantings shall be spaced and installed to allow for proper plant growth and maintenance.

610-20.7 Disturbance or Encroachments.

- A. Ditches, swales, storm water conveyance facilities, storm water detention ponds, sanitary sewer conveyance facilities, similar facilities, and any associated easements, shall not encroach into a buffer except that necessary access and utility crossings (e.g., storm water or sanitary sewer pipes) may encroach into the buffer as near to perpendicular as practical.
- B. Driveways and sidewalks shall not encroach into a buffer except that necessary access crossings may encroach into the buffer as near to perpendicular as practical.
- C. Supplemental plantings or replanting's of vegetation, or authorized non-vegetative screening devices may encroach into a buffer provided there is minimal disturbance of any significant existing vegetation.
- D. Fences are authorized in a buffer provided minimal disturbance occurs. Live trees shall not be removed for the placement of the fence.
- E. Land disturbance is authorized per Director approval in areas of a buffer that are devoid of significant vegetation provided that the final grade and replanting of vegetation meet the screening requirements contained herein.
- F. Dying, diseased or dead vegetation may be removed from a buffer provided minimal disturbance occurs. Vegetation thus removed shall be replaced where necessary to meet the screening requirements contained herein.
- G. Greenway paths or trails as identified in the official Gwinnett Trails Countywide Trails Plan are authorized in the buffer. The greenway path or trail shall be located so as to minimize encroachment in the buffer. In cases where there is not adequate existing vegetation to provide an effective year-round visual screen, supplemental plantings shall be planted between the greenway and the property line. When the greenway does not allow adequate space to supplemental plant inside the buffer, vegetation may be planted outside of the buffer.

610-20.8 Protection during Land-Disturbing Activities.

- A. During authorized land-disturbing activities, undisturbed buffers shall be clearly demarcated and protected prior to commencement of, and during, construction.
- B. The method of demarcation and protection used shall be in accordance with best management practices.

Section 610-30. Standards for Construction Buffers.

610-30.1 Where Required. Construction buffers shall only be required where specifically provided as a condition of zoning, special use or variance approval.

610-30.2 Time Constraints. Construction buffers shall only be in effect during the construction period of a project and shall terminate upon project completion. In the case of a residential subdivision, a construction buffer shall terminate upon each individual lot with the issuance of a Certificate of Occupancy for the principal dwelling.

610-30.3 Disturbance or Encroachments.

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- A. Construction buffers shall be natural, undisturbed, and free of encroachments except as authorized by a condition of zoning, special use or variance approval, or as authorized herein.
- B. The encroachment of ditches, swales, storm water conveyance facilities, stormwater management facilities, sediment basins, sanitary sewer conveyance facilities, similar facilities, and any associated easements, into a construction buffer shall not be authorized except that necessary access and utility crossings (e.g., stormwater or sanitary sewer pipes), and natural bottom detention ponds (sediment basins must be located outside of the construction buffer) and their appurtenant structures which require no grading and removal of trees, may encroach upon the construction buffer.
- C. If the construction buffer on a residential lot is devoid of existing trees and vegetation, and a tree survey is submitted to document this situation prior to conducting land-disturbing activities (including clearing) on the lot, then the Department may authorize the encroachment of a building or structure into the construction buffer for a distance not to exceed 10 feet.

610-30.4 Protection during Land-Disturbing Activities.

- A. During authorized land-disturbing activities, construction buffers shall be clearly demarcated and protected prior to commencement of, and during, construction.
- B. The method of demarcation and protection used shall be in accordance with best management practices.

Chapter 620. Landscape Regulations

Section 620-10. Applicability.

620-10.1 Nonresidential, Multi-family developments; and areas of commercial and civic uses of Traditional Neighborhood (TND) zoning districts shall provide for and maintain landscape plantings on-site as follows:

- A. A Landscape Strip at least 10 feet in width adjacent to any street right-of-way abutting the property and running the length of the entire property frontage.
- B. Trees are required for parking lots with five off-street parking spaces or more and may be planted in areas adjacent or internal to off-street parking lots.
- C. Other landscape Strips, if required, by a condition of zoning, special use or variance approval.

620-10.2 The Director is hereby authorized to grant a modification of up to 20 percent of the 10-foot landscape strip width provided the strip is not required by a condition of zoning, special use, modification, variance, or waiver approval.

620-10.3 Topping trees is not allowed. Trees removed or having had their tops cut after compliance with this UDO shall be replaced with the equivalent inches of removed trees.

- A. Trees removed due to death, disease, or insect infestation shall be replaced in accordance with the minimum standards contained in Chapter 630.
- B. Appropriate pruning and healthy tree management shall be according to the standards as followed by the International Society of Arboriculture.

620-10.4 Residential Subdivisions. Residential subdivisions shall provide for and maintain landscape plantings on site as set forth in Section 620-60 and 620-70; and in the following circumstances:

- A. In no-access easements that are required by this UDO along the line of double frontage lots abutting upon a major thoroughfare.

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- B. As required by a condition of zoning, special use, modification, variance, or waiver approval.

Section 620-20. Landscape Strip Planting Requirements.

620-20.1 Minimum Requirements for Landscape Strips.

- A. Landscape Strips shall be provided in conformity with the Guidelines for Landscape Strips provided in the UDO Section 4.0 of the Appendix and all other requirements of this Chapter 620.
- B. Landscape strips shall be provided as required by Section 620-10.1.
- C. Driveway widths and other ingress and egress areas may be subtracted from the landscape strip lineal feet calculation.
- D. Utility easement widths that run perpendicular shall not be subtracted from the landscape strip lineal feet calculation. Utility easements that run parallel to the landscape strip shall be located outside of the landscape strip.
- E. Shrubs planted to meet regulatory requirements shall be selected from the Shrub Species List, in Section 4.0 of the Appendix.
- F. Trees, shrubs, grasses, and ground covers listed in the Prohibited Plant Species List in Section 4.0 of the Appendix are invasive plant species and shall not be used to meet landscape strip requirements.

620-20.2 Ten-Foot-Wide Landscape Strips.

- A. Proposed developments, other than single-family detached developments in single-family residential districts, shall include at a minimum a 10-foot-wide landscape strip. The landscaping and shrub plantings within or adjacent to the strip shall contain as follows:
 - 1. One tree for each 40 linear feet of strip length shall be provided. Deciduous trees shall be at least 2 inches caliper and evergreen trees shall be 6 feet in height at time of planting. Trees shall be a species native or suitable to this region as provided in the Tree Species List in Section 4 of the Appendix.
 - 2. One evergreen shrub, for each 4 linear feet of strip length shall be provided. Each shrub shall be a species native or suitable to this region as provided in the Shrub Species List in Section 4.0 of the Appendix.
- B. Trees and shrubs required herein may be planted and spaced singly or in groups so long as the total number of trees and shrubs are achieved
- C. The remaining ground area shall be sodded, seeded or hydroseeded with turf, and/or planted with groundcover species and/or provided with other landscaping material, or any combination thereof.

620-20.3 Five-Foot-Wide Landscape Strips.

- A. If required by zoning, landscape strips which are required to be 5 feet in width shall contain landscaping and plantings within or adjacent to the strip as follows:
 - 1. One tree for each 50 linear feet of strip length shall be provided. Deciduous trees shall be at least 2 inches caliper and evergreen trees shall be at least 6 feet in height at time of planting. Trees shall be a species native or suitable to this region as provided in the Tree Species List as in Section 4.0 of the Appendix.
 - 2. One evergreen shrub for each 8 linear feet of strip length shall be provided. Each shrub shall be a species native or suitable to this region as provided in the Shrub Species List in Section 4.0 of the Appendix.

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- B. Trees and shrubs required herein may be planted and spaced singly or in groups so long as the total number of required trees and shrubs are achieved.
- C. The remaining ground area shall be sodded, seeded or hydroseeded with turf, and/or planted with groundcover species and/or provided with other landscaping material, or any combination thereof.

(Ord. No. UDOA2014-00001(GCID No. 2014-0548), 7-22-14)

620-20.4 Landscape Strips Wider than 10 Feet. Tree and shrub quantities in landscape strips that are required to be wider than 10 feet by a condition of zoning, special use, variance or waiver approval shall be proportional in width to the requirements listed above for 10-foot wide landscape strips (e.g. a 20 foot wide landscape strip would require two trees for every 40 linear feet of strip length and two shrubs, quadruple row spaced, for each 4 linear feet of strip length).

620-20.5 Encroachments into Landscape Strips. Required Landscape Strips shall not be encroached upon by parking spaces, driveway surfaces or stormwater management facilities except that driveway crossings and sidewalks may traverse such strip as near to a perpendicular alignment as practical. Ground signs, walls and the two foot by eight-foot concrete pad used for benches and trash receptacles in Overlay Districts may be located in such strip.

Section 620-30. Off-Street Surface Parking Lot Planting Requirements.

620-30.1 Quantity, Spacing and Planting Standards.

- A. Off-street surface parking lots which are required to contain more than five parking spaces shall contain landscaping and plantings as follows:
 - 1. Trees shall be provided and maintained adjacent to, and in the interior portions of, parking lots in a ratio of one tree for each seven parking spaces. In addition, every parking space shall be within 60 feet of the trunk of a tree.
 - 2. Deciduous trees shall be at least 2 inches caliper and evergreen trees shall be at least six feet in height at time of planting. Canopy trees listed in the Tree Species List in Section 4.0 of the UDO Appendix, shall be selected, planted, and maintained. Any plantings beyond the minimum requirements may come from any of the Tree Species Lists included in Section 4.0 of the UDO Appendix.
- B. The minimum planting area or island for each canopy tree shall be at least 400 square feet. If shared with other trees, 100 square feet for each additional tree shall be added.
- C. Trees shall be planted in areas surrounding the perimeter of the parking lot and/or shall be planted in planting areas or islands internal to the parking lot. Trees may be planted and spaced singly or in groups. Each planting area or island shall not be less than four feet in width in any direction.
- D. The use of at-grade planting areas in parking lots to promote stormwater runoff treatment and to supplement irrigation needs is encouraged; provided that the trees planted there will not be adversely impacted, and that the system is designed by a licensed, professional civil engineer in accordance with the Gwinnett County Stormwater Management Manual.
- E. Newly planted trees and existing trees subjected to construction impacts typically need supplemental watering when rainfall is inadequate. Commercial project applicants should be prepared to discuss how trees are to be watered during their establishment or transition period, and to possibly note on the plan the proposed method of irrigation.

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- F. Parking lot islands, peninsulas and medians must have clean, cultivated soil to a total depth of two and one-half (2½) feet. Native subsoil is acceptable in parking lot islands, peninsulas, and medians if the entire area is amended with appropriate soil improvements and thoroughly tilled.
- G. Ground areas shall be sodded, seeded or hydro-seeded with grass and/or planted with groundcover species, and/or provided with other landscaping material, or any combination thereof.
- H. Paved or striped islands greater than 50 square feet shall not be allowed. These areas shall contain landscape plantings.
- I. Parking lot lights and light poles are prohibited in landscape islands containing trees and are allowed in landscape islands containing shrubs.
- J. The Director is hereby authorized to grant a modification of tree species in cases where parking lot trees are located under power easements.

Section 620-40. Street Tree Requirements in Non-residential Zoning Districts.

- A. Street trees shall be provided by the developer in non-residential zoning districts under the following conditions:
 - 1. In Overlay Districts along the right-of-way of the streets listed in Section 220-30.3D.4.
 - 2. In zoning districts MU-N, MU-C, and MU-R.
 - 3. As a condition of zoning.
- B. When street trees are required in non-residential zoning districts the following regulations shall apply:
 - 1. Street trees shall be located along the property frontage, either inside or outside of the right-of-way, in no case closer than 11 feet to the edge of pavement or back of curb. When the street trees are proposed inside the right-of-way, they shall be located outside of the clear zone per the current edition of the AASHTO Roadside Design Guide subject to Department of Transportation approval.
 - 2. One tree per 50 linear feet of property frontage (both sides of street) shall be provided.
 - 3. Street trees in Overlay Districts shall be selected from the Large Tree Species list in the UDO Appendix and shall be 3 inches caliper at time of planting.
 - 4. Street trees shall be spaced as evenly as possible along the property frontage to create a unified and repetitive tree canopy at maturity with consideration given to lighting, underground utility placement, and utility easements.
 - 5. Underground utilities are required when planting street trees.
 - 6. Provide a minimum 200 square feet planting area per street tree. When 200 square feet of planting area is not possible, for example, in a streetscape setting, tree pits shall be utilized.
- C. Prior to the issuance of a development permit a street tree plan shall be submitted for review and approval.
 - 1. Street tree plan must show compliance with the above requirements and include details for hardscape, paver stones, landscape area, ground cover, tree grates, tree pits, and soil composition.
 - 2. Street tree plan shall be reviewed and approved by the GCDOT for County maintained roads and by the GDOT for State Highways.
- D. Street trees shall be planted as follows:

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1. The owner/developer shall be responsible for planting of street trees on common area prior to the approval of the Final Plat.
 2. The lot owner/developer shall be responsible for the planting of street trees in front of the affected lots prior to the issuance of a Certificate of Occupancy.
- E. Street trees shall be cared for and maintained by the owner of the property on which they are located, except in developments where the property owners association provides maintenance and care.
 - F. A Right-of-Way Encroachment Maintenance Agreement shall be provided by the developer for street trees located within the right-of-way.
 - G. A maintenance responsibility statement shall be provided on the Final Plat that describes who is responsible for the maintenance and replacement of street trees and trees located in common areas.
 - H. When a Final Plat is not required the maintenance responsibility statement shall be provided on the Site Development Plan.
 - I. Street tree maintenance shall include replacement and pruning as necessary. Pruning and tree management shall be in accordance with standards of the International Society of Arboriculture.
 - J. The Director is hereby authorized to grant a modification for street tree location and genus and species variation.

Section 620-50. Tree Requirements in Single Family Attached Residential Zoning Districts.

In single family attached residential zoning districts developers shall comply with this Section by providing 16 Tree Density Units per acre as indicated in Section 630-30.5.

Section 620-60. Tree Requirements in Single Family Detached Residential Zoning Districts R-75 MOD, R-60, TND, R-SR, or R-ZT.

In single-family detached residential zoning districts listed above developers and homebuilders shall comply with this Section by planting street trees or two trees per lot and by providing 16 Tree Density Units per acre as indicated in Section 630-30.5.

- A. When the lot trees option is selected in order to comply with this Section, individual lot trees shall be provided or preserved on each lot within the subdivision.
- B. When the street tree option is selected in order to comply with this Section, street trees shall be provided.
- C. Sixteen Tree Density Units per acre shall be provided.

Section 620-65. Tree Requirements in Single-Family Detached Residential Zoning Districts R-100 CSO, R-75 CSO and OSC.

In single-family detached residential zoning districts listed above developers and homebuilders shall comply with this Section by planting street trees and by providing 16 Tree Density Units per acre as indicated in Section 630-30.5.

- A. Street trees shall be provided. Refer to Section 620-75.B for street tree requirements.
- B. Sixteen Tree Density Units per acre shall be provided.

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Section 620-70. Tree Requirements in Single Family Detached Residential Zoning Districts RA-200, R-100, R-75, or R-100 MOD.

In single family detached residential zoning districts listed above, developers and homebuilders shall comply with this Section by planting street trees, by planting two trees per lot, and by providing 16 Tree Density Units per acre as indicated in Section 630-30.5.

- A. Individual lot trees shall be provided or preserved on each lot within the subdivision.
- B. Street trees shall be provided.
- C. Sixteen Tree Density Units per acre shall be provided.

Section 620-75. Tree Requirements in Residential Zoning Districts

Prior to the issuance of a development permit a Tree Preservation and/or Replacement Plan shall be submitted for review and approval that shows compliance with the tree requirements.

- A. When planting lot trees in residential districts the following regulations shall apply:
 - 1. Two trees per lot shall be provided or preserved in the front, side, or rear yard provided trees are not located in utility easements, drainage easements, or septic drain fields.
 - 2. Homebuilder shall be responsible for planting or preserving the individual lot trees prior to the issuance of a Certificate of Occupancy.
 - 3. Lot trees shall be selected from the Tree Species List in the UDO Appendix and shall be at least 2-inch caliper at time of planting.
- B. When planting street trees in residential zoning districts the following regulations shall apply:
 - 1. Underground utilities are required.
 - 2. One tree per 50 linear feet of street (both sides of street) shall be provided.
 - 3. Street trees shall be located outside of the street right-of-way, within 5 feet of the right-of-way.
 - 4. Street tree spacing in residential subdivisions where street trees are required shall be spaced at about 35-40 feet centers and located a minimum of 30-50 feet from intersecting streets and a minimum of about 40 feet from streetlights as depicted in the UDO Appendix Section 4.0, unless otherwise indicated in this UDO.
 - 4. Street trees shall be selected from the Tree Species List in the UDO Appendix and shall be at least 3-inch caliper at time of planting.
 - 5. Maximum allowable genus of street trees shall be 33 percent of entire subdivision or one genus per street.
 - 6. Prior to permit issuance an overall street tree plan shall be submitted for review and approval that indicates the location; size; genus, species, and variety; genus percentages, and planting details. The street tree plan may be a part of the Tree Preservation and/or Replacement Plan.
 - 7. The developer shall be responsible for the planting of street trees on common area and conservation space lots prior to the approval of the Final Plat.
 - 8. The homebuilder shall be responsible for the planting of street trees in front of the affected individual lots prior to the issuance of a Certificate of Occupancy.
 - 9. Street tree planting shall be delayed from June through August.

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10. Street trees shall be maintained and cared for by the property owner except in subdivisions in which the property owner's association provides maintenance and care. Maintenance shall include replacement and trimming as necessary. Pruning and tree management shall be in accordance with standards of the International Society of Arboriculture.
- C. When 16 Tree Density Units per acre is required, the following regulations shall apply:
1. Density may be achieved by preserving existing trees, planting new trees, or a combination of the two methods.
 2. Prior to permit issuance of a development permit a Tree Preservation and/or Replacement Plan shall be submitted, for review and approval that shows compliance with the tree requirements.
 3. Trees planted to meet the two trees per lot and/or street tree requirement may be counted toward the tree density unit requirement.
 4. New trees shall be selected from the Gwinnett County Tree Species List in the UDO Appendix and shall be a minimum of 2-inch caliper at time of planting. Existing trees shall be a minimum of 3 inches in diameter.
 5. Preserved trees counted toward meeting the Tree Density Units shall be protected with Tree Protection Fence at the dripline or critical root zone (whichever is greater) prior to the start of construction.
- D. A maintenance responsibility statement shall be provided on the Final Plat that describes who is responsible for the maintenance and replacement of lot trees, street trees, and trees located in common areas.

Section 620-80. No Access Easement Screening Requirements.

620-80.1 When no-access easements are required by the UDO the developer may choose from the following:

- A. Six-foot-high opaque fence.
- B. A single row of evergreen trees spaced no greater than 10 feet apart.

620-80.2 When a 5-foot landscape strip with a 6 feet in height screening wall (Type 4 landscape strip) is required for a no-access easement as a condition of zoning the developer shall provide the following:

- A. Planted with a single row of street trees spaced every 50 linear feet of landscape strip and small evergreen shrubs spaced one shrub for every 8 linear feet of landscape strip.

620-80.3 When a 10-foot landscape strip with a 10 feet in height masonry screening wall (Type 5 landscape strip) is required for a no-access easement as a condition of zoning the developer shall choose from the following:

- A. Planted with a single row of street trees spaced every 40 linear feet and evergreen shrubs that reach 10 feet in height at maturity spaced every 6 linear feet; or,
- B. Planted with a single row of evergreen trees at least 6 feet in height at time of planting and spaced no greater than 10 feet apart; or,
- C. Contain such other landscaping treatments or grade changes that will produce a partial screening effect as authorized by the Director.

Chapter 630. Tree Preservation and Replacement Regulations

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Section 630-10. Applicability and Exemptions.

630-10.1 Applicability. This Chapter shall apply to any activity on real property which requires the issuance of a Development or Land Disturbance Permit except as otherwise excluded in accordance to Table 630.1 Summary of Applicability and Exemptions at the end of this section, or as described herein. In applicable cases where the Gwinnett County Board of Commissioners has approved a streetscape plan, its provisions shall supersede the minimum requirements of those set forth in Section 630-20.4.B.

630-10.2 Grandfathered Projects.

- A. In no event shall any grandfather clause be extended to permits that have not started and expired or are unfinished and expired for a greater time period than 24 months from the date of enactment of this UDO.
- B. For those projects where a development permit was issued and where development was completed prior to the effective date of this UDO and is proceeding with additional development on a portion of the property see Section 630-90 for re-development thresholds.

630-10.3 Horticultural or Agricultural Operations.

- A. All land-disturbing activities associated with plant or tree nurseries and botanical gardens shall be exempt from the terms and provisions of this Chapter in relation to those trees which are being grown for relocation and continued growth in the ordinary course of business, or for some public purpose.
- B. All land-disturbing activities associated with orchards of trees in an active commercial operation shall be exempt from the terms and provisions of this Chapter for bona fide agricultural purposes only.

630-10.4 Removal of Disease or Insect Infestation. Upon the written advice of the Gwinnett County Cooperative Extension Service, the Georgia Forestry Commission, or a certified arborist, in accordance with commonly accepted forestry practices and a finding of disease or insect infestation, the Director may authorize the removal of trees to prevent the transmission of disease or infestation, to prevent the danger of these trees falling, or to prevent potential injury to life and property. The owner/developer, prior to the removal of these trees, shall notify the Director, identifying the location of the property where the infested trees are and shall submit to the Director the written finding of the County Extension Service, Georgia Forestry Commission, or certified arborist. The applicant shall also meet the site requirements below.

- A. The property shall be required to meet a Tree Density Standard of 24 units per acre upon completion of authorized removal of diseased or insect infested trees. If applicable, a Tree Preservation and/or Tree Replacement Plan may be required to show compliance with 24 tree density units per acre.
- B. Specimen trees that meet the identification criteria and are not diseased or insect infested shall be preserved and protected as outlined in Section 630-70.
- C. The owner/developer shall use the recommended Best Management Practices (BMP's) as established by the Georgia Forestry Commission.

630-10.5 Site Requirements for Limited Land-Disturbing Activities.

- A. Permits authorizing limited land-disturbing activities shall be required to follow these additional site requirements:
 - 1. In zoning districts other than RA-200, properties which are not under the authorization of a Final Plat, and which exceed 1 acre in size, disturbance shall be authorized only in accordance with the issuance of a land disturbance permit and shall require the submittal and approval of a Tree Preservation and/or Replacement Plan.

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2. A 50-foot undisturbed buffer (not a zoning buffer) shall be provided and maintained along the entire perimeter of the property, including road frontages, during the land-disturbing activity, except for authorized access crossings.
3. The property shall be required to meet a Tree Density Standard of 24 units per acre upon completion of authorized land-disturbing activities. The 50-foot perimeter buffer and specimen trees may be counted toward meeting the 24 tree density units per acre.
4. The owner/developer shall use the recommended Best Management Practices (BMP's) as established by the Georgia Forestry Commission.

630-10.6 Tree Thinning. Upon the written advice and findings of the County Extension Service, Georgia Forestry Commission, or a certified arborist, the thinning of trees (selective cutting only) in zoning districts other than RA-200, solely for the purpose of good forestry management, if permitted per zoning condition, shall require the submittal and approval of a land disturbance permit and a Tree Preservation and/or Replacement Plan. The applicant shall also meet the following requirements:

- A. A 50-foot undisturbed buffer (not a zoning buffer) shall be provided and maintained along the entire perimeter of the property, including road frontages, during the land-disturbing activity, except for authorized access crossings.
- B. The property shall be required to meet a Tree Density Standard of 24 units per acre upon completion of authorized land-disturbing activities. The 50-foot perimeter buffer and specimen trees may be counted toward meeting the 24 tree density units per acre. If applicable, a Tree Preservation and/or Replacement Plan may be required to show compliance with 24 tree density units per acre.
- C. Specimen trees that meet the identification criteria shall be preserved and protected as outlined in Section 630-70.
- D. The owner/developer shall use the recommended Best Management Practices (BMP's) as established by the Georgia Forestry Commission.

630-10.7 Timber Harvesting. Timber harvesting (selective cutting or clear-cutting) for pulpwood or sawtimber shall be exempt within the RA-200 zoning district. In other zoning districts, properties which are not under the authorization of a Final Plat, and which exceed 1 acre in size, timber harvesting shall be authorized only in accordance with the issuance of a land disturbance permit and shall require the submittal and approval of a Tree Preservation and/or Replacement Plan, and shall also meet the following requirements:

- A. A 50-foot undisturbed buffer (not a zoning buffer) shall be provided and maintained along the entire perimeter of the property, including road frontages, during the land-disturbing activity, except for authorized access crossings.
- B. The property shall be required to meet a Tree Density Standard of 24 units per acre upon completion of authorized land-disturbing activities. The 50-foot perimeter buffer and specimen trees may count towards meeting the 24 tree density units per acre.
- C. Specimen trees that meet the identification criteria shall be preserved and protected as outlined in Section 630-70.
- D. The owner/developer shall use the recommended Best Management Practices (BMP's) as established by the Georgia Forestry Commission.

TABLE 630.1 Summary of Applicability and Exemptions.

Project Type	Type of Construction	Applicability
Grandfathered Projects	In no event shall any grandfather clause be extended to permits that have not been	Exempt (see 630-10.2.)

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	started and expired, or are unfinished and expired, for a greater time period than 24 months from the date of enactment of this UDO. For those projects where a development permit was issued and where development was completed prior to the effective date of this UDO and is proceeding with additional development on a portion of the property see Section 630-90 for re-development thresholds.	
Horticultural or Agricultural Operations	Land clearing for clearly agricultural purposes, including Plant or Tree Nurseries; Orchards	Exempt (see 630-10.3.)
Diseased or Insect Infested Trees	Removal upon advice and written finding of County Cooperative Extension Service, Georgia Forestry Commission, or Certified Arborist.	TP/RP Required (see 630-10.4.)
Tree Thinning	Thinning of trees (selective cutting) in zoning districts other than RA-200 solely for the purpose of good forestry management, utilizing recommended BMP's of the Georgia Forestry Commission, upon the advice and written findings of the County Extension Service, Georgia Forestry Commission, or Certified Arborist.	TP/RP Required (see 630-10.6.)
Timber Harvesting	Properties which are not under the authorization of a Final Plat which exceed 1 acre in size, timber harvesting shall be authorized only in accordance with the issuance of a land disturbance permit.	TP/RP Required (see 630-10.7.)
Private or Public Utilities, and County Greenways	Land clearing for utilities and greenways and construction of private or public utilities or greenways	Exempt (see 630-20.3.)
Residential Lots or Subdivisions	Clearing, Clearing and Grubbing, Grading, Development or Building Permit	Two trees per lot and street trees and TP/RP meeting 16 TDU's *(see 630-20.4.)
Residential Recreation Areas, Multifamily and Non-residential Individual Sites	Clearing or clearing and grubbing only.	TP/RP required (see 630-20.2.)
	Grading or Development Permit	TP/RP required (see 630-20.2.)
	Building Permit	Covered by TP/RP as approved by LDP (see 630-20.2)

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Section 630-20. Permit Requirements.

630-20.1 Land Disturbance Permit Required. Land-disturbing activities shall not commence until such activities have been authorized by issuance of an appropriate land disturbance or development permit under the provisions of this UDO. Once a Final Plat has been recorded, land-disturbing activities on residential lots shall not occur until a lot disturbance permit for a specific lot has been obtained.

630-20.2 Tree Preservation and/or Replacement Plan Required.

- A. For projects not exempt from the provisions of this Chapter, as described in Section 630-10, a Tree Preservation and/or Replacement Plan shall be submitted along with the Tree Canopy Calculation, and the other documents required by the UDO for the issuance of a Clearing, Clearing and Grubbing, Grading, or Development Permit.
- B. Tree Preservation and/or Replacement Plans, including the Tree Canopy Calculation, and related documentation shall be reviewed by the Department for conformance to the provisions of this Chapter along with and at the same time as all other plans required for a requested land disturbance permit under the provisions of the UDO.
- C. Clearing, grading and development activities shall conform in all respects with the approved Tree Preservation and/or Replacement Plan. Any revisions to the proposed development of a property, and any changes reflected in a subsequently submitted permit application, shall be shown on a revised Tree Preservation and/or Replacement Plan and be approved as part of the new or revised permit prior to the commencement of such changed activities.

630-20.3 Limited Land Disturbing Projects. Projects which propose only limited development activities may be issued a land disturbance permit without a Tree Preservation and/or Replacement Plan under the following circumstances:

- A. Private or public utility easements and County greenways on public access easements and private or public utility easements shall not be required to submit a Tree Preservation and/or Replacement Plan if the proposed land-disturbing activities are strictly limited to those directly related to the placement of required soil erosion and sedimentation controls, the installation of public or private utilities, the installation of County greenways on public access easements and private or public easements, or other required improvements expressly required by the County or by a condition of zoning, special use, modification, waiver or variance approval.
- B. Residential recreation areas, individual multifamily residential and attached townhomes (not on individual lots), and non-residential projects (not involving the subdivision of the property) may not be allowed to undertake activities limited to clearing, or clearing and grubbing only, without approval of a Tree Preservation and/or Replacement Plan. Additional areas may be designated by the Department to remain undisturbed as may be reasonably required with consideration given to the proposed use of the property, as well as adjacent properties, in accordance with the Gwinnett County Unified Plan.
- C. The limits of clearing or clearing and grubbing shall be established no closer to the boundaries of all said undisturbed areas than the driplines of the trees that are located within said areas.
- D. For any property for which a Tree Preservation and/or Replacement Plan was not required prior to issuance of a land disturbance permit under the provisions of Subsection 630-20.2, all areas required to be undisturbed shall be provided with protective tree fencing along the limits of clearing or grading which adjoin existing trees in accordance with the provisions found in Subsection 630-50.2. These measures shall be in place prior to beginning clearing or grading activities and shall be maintained throughout the land-disturbing period.

Section 630-30. Tree Density Requirements.

630-30.1 Tree Density Standard.

- A. On each property for which a Tree Preservation and/or Replacement Plan is required, existing trees shall be retained and new trees shall be planted such that the property shall attain or exceed a Tree Density Standard of 16 Tree Density Units per acre, or 20 Tree Density Units per acre as specified in the Overlay Districts, or 24 Tree Density Units per acre for limited land-disturbing activities (Sections 630-10.4, 5, 6 and 7).
- B. Trees, both existing and new, shall be reasonably distributed throughout the site, with emphasis on tree groupings to achieve aesthetic results following professional landscaping standards. Trees, including street trees, may be retained, or planted for credit within a public street right-of-way.
- C. Trees located in a stream buffer may be counted toward fulfilling the Tree Density Standard provided the acreage within the stream buffer is included in the calculations used to fulfill the Tree Density Standard.
- D. Trees, both existing and new, located in a temporary construction buffer may be counted toward fulfilling the Tree Density Standard provided the acreage within the temporary construction buffer is included in the calculations used to fulfill the Tree Density Standard.
- E. If a specimen tree's Critical Root Zone (CRZ) falls outside of the buffer partial credit may be obtained toward fulfilling the Tree Density Standard. See Section 630-30.5 in this UDO.

630-30.2 Buffer Exclusion in Fulfilling the Tree Density Standard.

- A. Existing trees proposed to be retained and preserved, and new trees proposed to be planted, in order to meet the buffer requirements as required per Table 610.1, as required by the Supplemental Use Standards, or as a condition of Zoning, Special Use, Variance, or Waiver approval shall not be considered in fulfilling the requirements of Tree Density Standard for the project.
- B. The acreage within the buffer shall be excluded from the overall acreage used to calculate the Tree Density Standard.

630-30.3 Easement Exclusion. Properties possessing natural gas, petroleum or electric power transmission easements, or major sanitary sewer main (greater than 8 inches in diameter) or water main (greater than 16 inches in diameter) distribution easements, may exclude the land area contained in the easement from the total acreage of the property in fulfilling the Tree Density Standard provided that no improvements (e.g., parking lots, tennis courts, driveways, greenways, stormwater management facilities, etc.) are proposed within the easement. If any improvements are proposed within the easement, then the land area so used within the easement for the improvements, plus an additional 10-foot of land area surrounding the improvements, shall be included in the total acreage of the property to fulfill the Tree Density Standard.

630-30.4 Lake and Pond Exclusion. Properties with a lake or pond greater than 1 acre in size may exclude the land area contained in the lake or pond from the total acreage of the property in fulfilling the Tree Density Standard.

630-30.5 Tree Density Standard Calculation. The Tree Density Standard shall be calculated by summing the following credits and dividing by the total acreage of the project included within the limits of the permit application (but excluding any acreage included within a zoning buffer and other land area allowed to be excluded by this Chapter).

- A. *Existing trees.*

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1. Credit for existing trees proposed to be preserved on the site shall be calculated by multiplying the diameter of the tree times the units assigned in Table 630.2. Credit for Existing Trees. Credit shall be given for all trees preserved on a property having a diameter of 3 inches or more, except trees located in a required zoning buffer. Tree sample areas of similar vegetation of 50 square feet or larger may be used as a method of measuring Tree Density Units.
- B. *New trees.*
1. Credit for new trees proposed to be replaced on the site shall be calculated based on the units assigned in Table 630.4, Credit for Replacement Trees. Credit shall be given for all new trees replaced on a property except for trees 1 inch or less in caliper and new trees planted in a required zoning buffer. Deciduous trees shall be a minimum 2 inches in caliper and evergreen trees shall be a minimum of 6 feet in height. New multi-trunked trees shall only be given credit by measuring the single largest trunk and not the cumulative total of the various trunks. Tree-form shrubs shall not be given credit for satisfying the required Tree Density Standard.
- C. *Specimen trees.*
1. Credit for specimen trees preserved on the site shall be calculated based on the units assigned in Table 630.3, Credit for Specimen Trees. When multi-trunked specimen trees split below diameter at breast height the trunk shall be measured at the narrowest point below the split.
 2. The Critical Root Zone (CRZ) shall include no less than the minimum area beneath a tree that must be left undisturbed. The CRZ is a concentric circle centering on the specimen tree's trunk with a radius equal in feet to 1.5 times the number of inches of the trunk's diameter at breast height (4.5 feet) or the dripline, whichever is greater. For example, the CRZ for a 24-inch diameter tree trunk is a 36-foot radius concentric circle from the trunk of the tree. However, if the dripline extends further than the 36-foot circle that dripline shall take precedence.
 3. Credit shall be given for all specimen trees preserved on a property except for those located in a required zoning buffer where partial credit may be given. A specimen tree located within a buffer with a CRZ extending beyond the buffer is allowed partial credit toward Tree Density Units. The partial credit is based on the percentage of CRZ that is outside of the buffer. For example: a 30-inch specimen tree's CRZ extends by 20 percent over the buffer line then the developer receives 20 percent of the credit for a 30-inch existing specimen tree ($19.6 \times .20 = 3.92$ TDU's).
 4. To determine the percentage of CRZ outside of the buffer, measure the area of the CRZ circle. Then measure the area of CRZ outside of the buffer. Divide the smaller number into the larger number and that is the percentage of CRZ. For example: a specimen tree's CRZ is 6,000 square feet, 1,200 square feet is outside of the buffer. Divide 1,200 by 6,000 and the answer is .2 or 20 percent of the CRZ is outside of the buffer.
- D. *Additional credits shall be granted under the following circumstances:*
1. Existing trees to be preserved within a 100-year floodplain shall be granted a bonus credit of 50 percent of the units assigned in Table 630.2 unless the tree is located within a required zoning buffer.
- E. *Genus percentage for overall site.*
1. There shall be no more than 33 percent of any one genus of tree for overall site. Provide calculations on the Tree Preservation and/or Tree Replacement Plan.

630-30.9 Trees Selected for Planting.

- A. Replacement trees proposed to be planted for credit toward meeting the minimum required Tree Density Standard on a property shall comply with the following:

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1. The spacing of replacement trees must be compatible with spatial site limitations and with responsible consideration towards species size when mature.
2. Trees selected for planting shall be a species listed in the Gwinnett County Tree Species List in Section 4 of the UDO Appendix. Standards for transplanting shall be in keeping with those established by the International Society of Arboriculture, as included in the "Tree and Shrub Transplanting Manual," latest edition. Refer to the American Association of Nurserymen publication "American Standard for Nursery Stock" (ANSI Z60, 1973) for plant material quality specifications. Refer to the "Manual of Woody Landscape Plants" (Michael Dirr, 1983, Castle Books) for information on tree species site requirements.
3. Trees selected for planting must be free from injury, pests, disease, nutritional disorders, or root defects, and must be of good vigor, so as to assure a reasonable expectation of survivability.

Table 630.2. Credit for Existing Trees (measured at 4.5 feet above the ground).

<i>Conversion from tree diameter in inches to tree density units for trees remaining on site*</i>							
DIA.	UNITS	DIA.	UNITS	DIA.	UNITS	DIA.	UNITS
3	.75	15	3.6	27	12.0	39	24.9
4	.90	16	4.2	28	12.9	40	26.1
5	1.05	17	4.8	29	13.8	41	27.6
6	1.35	18	5.4	30	14.7	42	28.8
7	1.50	19	6.0	31	15.6	43	30.3
8	1.65	20	6.6	32	16.8	44	31.8
9	1.8	21	7.2	33	17.7	45	33.0
10	1.95	22	7.8	34	18.9	46	34.5
11	2.1	23	8.7	35	20.1	47	36.0
12	2.4	24	9.3	36	21.3	48	37.8
13	2.7	25	10.2	37	22.5	49	39.3
14	3.3	26	11.1	38	23.7	50	40.8

* Tree diameter for existing trees is measured at 4.5 feet above the ground. Tree diameter fractions may be "rounded up" if 0.5 inches or greater or "rounded down" if less than 0.5 inches.

Table 630.3. Credit for Specimen Trees (measured at 4.5 feet above the ground).

<i>Conversion from specimen tree diameter in inches to specimen tree density units for specimen trees on site*</i>							
DIA.	UNITS	DIA.	UNITS	DIA.	UNITS	DIA.	UNITS
12	3.2	24	12.4	36	28.4	48	50.4
13	3.6	25	13.6	37	30.0	49	52.4
14	4.4	26	14.8	38	31.6	50	54.4
15	4.8	27	16.0	39	33.2	51	56.4
16	5.6	28	17.2	40	34.8	52	58.4
17	6.4	29	18.4	41	36.8	53	60.4
18	7.2	30	19.6	42	38.4	54	62.4
19	8.0	31	20.8	43	40.4	55	64.4
20	8.8	32	22.4	44	42.4	56	66.4
21	9.6	33	23.6	45	44.0	57	68.4
22	10.4	34	25.2	46	46.0	58	70.4
23	11.6	35	26.8	47	48.0	59	72.4

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*Tree diameter for existing trees is measured at 4.5 feet above the ground.

** Multi-trunked specimen trees shall be measured at the narrowest point below the split.

Table 630.4. Credit for Replacement Trees (measured at 6 inches above the ground).

<i>Conversion from tree caliper to tree density units for proposed replacement trees*</i>			
Caliper	Units	Caliper	Units
2	.5	9	1.5
3	.6	10	1.7
4	.7	11	1.9
5	.9	12	1.1
6	1.0	13	2.3
7	1.2	14	2.5
8	1.3	15	2.7

*Tree caliper for new replacement trees is measured at 6 inches above the ground. Tree caliper fractions may be "rounded up" if 0.5 inches or greater or "rounded down" if less than 0.5 inches. New planted multi-trunked trees shall be given credit by measuring the single largest trunk only. Tree-form shrubs shall not be given credit.

Section 630-40. Tree Canopy Calculation Requirement.

630-40.1 The tree canopy calculation requirement is required for all new developments and existing developments adding structural or site improvements. Pre-construction and post construction calculations shall be provided on the Tree Preservation/ Replacement Plan and shall include the total net increase or decrease in canopy area for the site. There is no minimum or maximum tree canopy percentage required at this time.

630-40.2 Tree Canopy Calculation Method.

- A. The pre-construction tree canopy shall be calculated by assigning square feet of canopy to each existing tree based on the Tree Species List in Section 4.0 of the UDO appendix. Stands of three or more existing trees can be computed with polygons and canopy area noted in terms of square feet.
- B. The post construction tree canopy shall be calculated by assigning square feet of canopy to each tree proposed and each tree preserved on the Tree Species List in Section 4.0 of the UDO Appendix. Existing trees whose critical root zone is protected during construction activities are counted toward meeting the post construction tree canopy calculations. Stands of three or more existing trees can be computed with polygons and canopy area noted in terms of square feet. Include existing and proposed buffer trees, landscape strip trees, parking lot trees and any tree preserved or replaced within the site in the tree canopy calculation.
- C. Add the total square feet of canopy. Convert the total site acreage to square feet. Calculate the total square feet of canopy as a percentage of the total square feet for the site.

Example of Tree Canopy Calculation.

Qty	Botanical Name	Canopy Area in square feet	Total Canopy area in square feet
10	Fraxinus pennsylvanica	491	4,910
27	Juniperus virginiana	79	2,133
14	Quercus coccinea	1,590	22,260
8	Nyssa aquatica	1,256	10,048

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23	Pinus taeda	491	11,293
6	Existing oak hardwoods	1,800 (avg.)	10,800
	Existing (mixture of softwoods and hardwoods)	polygon	23,400
4.0 Acres		TOTAL	84,844
	Total site acreage		174,240
	Percentage of total site covered by canopy	84,844 divided by 174,240	49%

Section 630-50. Tree Preservation and Replacement Requirements.

The following guidelines and standards shall apply to trees proposed to be preserved for credit toward meeting the minimum required Tree Density Standard on a property and to all boundary trees extending into permitting property.

630-50.1 Tree Protection Areas.

- A. The root system is generally within the dripline or Critical Root Zone. To protect these critical roots, a Tree Protection Area shall be established around each tree or group of trees to be retained.
- B. The Tree Protection Area shall include no less than the total area beneath the tree canopy as defined by the dripline or Critical Root Zone of the tree or group of trees collectively.
- C. Site Utility and Grading Plans shall clearly indicate that the Tree Protection Areas will not be disturbed.
- D. Construction site activities such as parking, materials storage, concrete washout, burnhole placement, etc., shall be arranged so as to prevent disturbances within Tree Protection Areas.

630-50.2 Protective Barriers.

- A. Protective tree fencing shall be installed between buffers, Tree Protection Areas and areas proposed to be cleared, graded, or otherwise disturbed on the site, prior to any land disturbance.
- B. All Tree Protection Areas shall be designated as such with "tree save area signs" posted in addition to the required protective fencing. Signs requesting subcontractor cooperation and compliance with tree protection standards are recommended for site entrances.
- C. All Tree Protection Areas must be protected from soil sedimentation intrusion through the use of silt screens or other acceptable measures placed up-slope from the tree protection area.
- D. All protective tree fencing, and all erosion control barriers must be installed prior to and maintained throughout the land-disturbing and construction process and should not be removed until final landscaping is installed.

630-50.3 Encroachment. If encroachment into a Tree Protection Area occurs causing irreparable damage to the trees, the Tree Preservation and/or Replacement Plan shall be revised to compensate for the loss. Under no circumstances shall the developer be relieved of responsibility for compliance with the provisions of this Chapter of the UDO, nor shall plan revision activities stop the Department from instituting action for violation of this Chapter of the UDO.

Section 630-60. Tree Species List Requirements.

Tree species lists for small, medium, or large trees are found in Section 4.0 of the Appendix. The Director is authorized to administratively add and delete species from the list. Except as specifically approved by the Director

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as a modification, only the trees listed in Section 4.0 of the Appendix shall be given credit towards meeting the requirements of Chapters 610, 620, 630, and 640.

Section 630-61. Shrub Species List Requirements.

Allowed shrub species lists are found in Section 4.0 of the Appendix. Except as specifically approved by the Director as a modification, only the approved shrubs listed in Section 4.0 of the Appendix shall be given credit towards meeting regulatory requirements of Chapters 610, 620, 630 and 640. The Director is authorized to administratively add and delete species from the list.

Section 630-62. Prohibited Plant Species List.

The Gwinnett County Prohibited Plant Species List contains trees, shrubs, ground covers, vines and grasses that are defined as exotic plants that are serious to minor problems in Georgia natural areas based on the Georgia Exotic Pest Plant Council. The plants on Gwinnett County Prohibited Plant Species List are invasive plant species and shall not be used for meeting regulatory requirements. The Director is authorized to administratively revise the list based on current information from the Georgia Exotic Pest Plant Council.

Section 630-70. Specimen Trees.

630-70.1 Specimen trees are required to be preserved. For preliminary site visit criteria refer to Section 630-70.4 of this UDO. For plan preparation guidelines for the Specimen Tree Survey and Specimen Tree Concept Plan refer to Section 320-20 of this UDO.

630-70.2 A Specimen Tree Survey Plan is required to be submitted to the Department for all development that does not meet the exemptions listed in Section 630-70.8 below prior to the Specimen Tree Concept Plan submittal and shall be prepared by a certified arborist, authorized registered professional or registered forester. In cases where there is phasing of development a Specimen Tree Survey Plan and a Specimen Tree Concept Plan is required for the entire property boundaries prior to the Final Plat for the first phase. Any tree that meets the identification criteria for tree size in Section 630-70.3 below is considered a specimen tree and shall be shown on the Specimen Tree Survey Plan. Any tree that meets the identification criteria for tree size and condition in Section 630-70.3 shall be shown on the Specimen Tree Concept Plan. In general, the Specimen Tree Survey Plan shows where the existing specimen trees that meet the identification criteria for size are located, and the Specimen Tree Concept Plan shows where the existing specimen trees that meet the identification criteria for size and condition are located in relation to the preliminary plan design. For plan preparation guidelines for the Specimen Tree Survey and the Specimen Tree Concept Plan refer to Section 320-20 of this UDO.

630-70.3 Specimen Tree Identification.

A. Identification Criteria.

1. *Tree Size:* Tree must meet size criteria in number 1. and in number 2. below tree must meet conditions a. through e. Conditions f. and g. are optional.
 - a. Large Hardwood: 28-inch diameter or larger
 - b. Large Softwood: 30-inch diameter or larger
 - c. Small Native Flowering: 12-inch diameter or larger
 - i. The list below indicates small native flowering specimen tree types:
 - Cercis canadensis, Eastern Redbud
 - Cornus florida, Flowering Dogwood
 - Amelanchier arborea, Serviceberry

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- Oxydendrum arboretum, Sourwood

2. *Condition.*

- a. A life expectancy of greater than 10 years.
- b. A sound and solid trunk with no extensive decay or hollow, and less than 20 percent radial trunk dieback.
- c. No more than one major and three minor dead limbs (hardwoods only).
- d. No major insect problem.
- e. No major pathological problem (fungus, virus etc.).
- f. Exceptional quality.
- g. Of historical significance.

630-70.4 Site Visit.

- A. Prior to the submission of specimen tree survey developer's certified arborist, authorized registered professional, or registered forester shall visit the site:
 1. Locate and flag specimen trees that meet the size criteria with green and white striped tape.
 2. Number specimen trees that meet the size criteria with tree ID tags.
 3. Prepare Specimen Tree Survey Plan (Section 320-20.1).
 4. Submit the Specimen Tree Survey to the Department of Planning and Development.

630-70.5 Specimen Tree Stands.

- A. Specimen tree stands are required to be preserved. If groupings of trees are designated as specimen tree stands, they are required to be preserved and shown on the Specimen Tree Survey Plan and Specimen Tree Concept Plan. Specimen tree stands shall be marked as listed above in Section 630-70.4.
- B. Identification Criteria (meeting one or more of the following):
 1. Contiguous group of trees that contain one or more specimen trees and the specimen trees are interlocked with other members of the stand in such a manner as to endanger the specimen tree if other members of the stand were to be removed.
 2. Stand of historical significance.
 3. Exceptional aesthetic quality or striking characteristics.
 4. Unique, of a rare or unusual species.

630-70.6 Specimen Tree Preservation:

- A. Additional density credit will be given for the preservation of specimen tree(s) given tree preservation is followed per the guidelines listed below and in this Chapter. Credit for any successfully saved and maintained specimen tree is listed in Table 630.3, Credit for Specimen Trees.

630-70.7 Specimen Tree Protection.

- A. Specimen trees identified as preserved on the Specimen Tree Concept Plan shall have tree protection fence at the Critical Root Zone or dripline, whichever is greater, after the pre-construction meeting and prior to any land disturbance.
- B. The layout of utility lines, easements, and grading shall be outside the Critical Root Zone or dripline.

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- C. There shall be no parking, construction material storage, bury pits, concrete or gravel wash out, within Critical Root Zones, driplines, and Tree Save Areas.
- D. Critical Root Zone or dripline of specimen tree(s) and Tree Save Areas shall remain undisturbed with the following exceptions:
 - 1. Thinning is allowed and may include manual removal (no motorized/ wheeled or track vehicles) of non-specimen trees. Stumps may be ground provided there is no grading disturbance.
 - 2. The manual removal of the following plants is allowed: Kudzu, Pueraria lobata; Bamboo spp.; Japanese Honeysuckle, Lonicera japonica; Japanese Climbing Fern, Lygodium japonicum; Mimosa, Albizia julibrissin; Multiflora Rose, Rosa multiflora; Autumn Olive, Elaeagnus umbellata, Chinese Privet, Ligustrum sinense; Chinese Tallow Tree, Sapium sebiferum. A Commercial Applicator License and a Pesticide Contractor License are required by the contractor if the use of herbicides is necessary for noxious plant material removal.
 - 3. Non-vegetative material may be removed manually.
 - 4. Thinning and clearing of any vegetative material in the Critical Root Zone shall be done in the landscape installation phase of development.
- E. The tree protection fence shall be placed at the dripline or Critical Root Zone of the trees.
- F. Tree protective fencing shall be located at the dripline or the Critical Root Zone prior to any land disturbance. A certified arborist shall conduct a site visit after the pre-construction meeting and prior to any land disturbance to inspect tree protection fencing.
- G. Specimen trees and clearing limits shall be shown on the Site Development Plan, Grading Plan, Erosion, Sedimentation and Pollution Control Plan, Utility Plan, and Tree Preservation and/or Tree Replacement Plan.
- H. The top vegetative cover within the Critical Root Zone or dripline shall remain undisturbed. Mulch may be applied if the certified arborist, authorized registered professional or registered forester finds it will benefit the tree. If mulch is applied, it shall be aged hardwood mulch, and it shall be applied at the landscape installation phase of the project.
- I. Tree protection fencing shall be a minimum of four feet in height and be one of the three options listed below:
 - 1. Orange mesh type fabric or polyethylene laminar safety fencing.
 - 2. Two inch by 4-inch wood posts and 1 inch by 4-inch wood rails.
 - 3. Chain link fence, minimum 4 feet in height.
- J. Tree protection fences must have signage that reads "Stay Out", and "Tree Save", posted on fence every 20 feet with a minimum of four signs.
- K. Specimen trees and stands of specimen trees shall be protected from silt.
- L. Type S silt fencing must be placed along the outer uphill edge of Tree Protection Zones where land disturbance is taking place.
- M. A stop work order will be issued if a project is found to be out of compliance with the requirements of this Chapter.

630-70.8 Specimen Tree Exemptions. The following are exempt from a Specimen Tree Survey Plan and Specimen Tree Concept Plan:

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- A. Small sites (1 to 2 acres in size) in which it is clearly visible from one vantage point that there are no specimen trees on site are not required to submit a Specimen Tree Survey Plan or Specimen Tree Concept Plan. The Department of Planning and Development shall require a letter from the developer's certified arborist, authorized registered professional or registered forester certifying there are no specimen trees on site.
- B. A site that has been previously graded or cleared under a development permit or land disturbance permit and in which there are no specimen trees on site is not required to submit a Specimen Tree Survey Plan or Specimen Tree Concept Plan. The Department of Planning and Development shall require a letter from the developer's certified arborist, authorized registered professional or registered forester certifying there are no specimen trees on site.
- C. Private or public utility easements and County greenways on public access easements, and private or public utility easements shall not be required to submit a Specimen Tree Survey Plan or Specimen Tree Concept Plan if the proposed land-disturbing activities are strictly limited to those directly related to the placement of required utilities or placement of County greenways and the installation of private or public utilities, and County greenways on public access easements, private or public utility easements.

630-70.9 Specimen Tree Critical Root Zone (CRZ) Disturbance.

- A. A maximum of 30 percent of disturbance is allowed within the Critical Root Zone given specific circumstances. Specific circumstances include and are not limited to sidewalks, boardwalks, and paths. Any proposed disturbance shall be reviewed and approved by the Director. Credit may be given for the specimen tree when the Critical Root Zone is disturbed up to 25 percent. Credit is listed in Table 630.3 (Credit for Specimen Trees) and is as follows:
 - 1. 0 — 10 percent disturbance to the CRZ may receive 100 percent credit.
 - 2. 10.1 — 15 percent disturbance to the CRZ may receive 75 percent credit.
 - 3. 15.1 — 20 percent disturbance to the CRZ may receive 50 percent credit.
 - 4. 20.1 — 25 percent disturbance to CRZ may receive 25 percent credit.
 - 5. Any proposed disturbance to the specimen tree's CRZ from 25.1 to 30 percent may receive credit based upon what type of disturbance is proposed. Any proposed disturbance and specialty cut slopes shall be reviewed by the Director.
 - a. For example: Given a 36-inch specimen tree whose critical root zone is proposed to be disturbed by 15.4 percent: Table 630.3 assigns a 36-inch specimen tree 28.4 tree density units (TDU's). That tree may receive credit for 50 percent of 28.4 TDU's which is equivalent to 14.2 TDU's.
- B. When critical root zone disturbance exceeds 30 percent, the Director is hereby authorized to determine recompense.
- C. In the event a specimen tree's Critical Root Zone has experienced unauthorized impact and the disturbance is documented by photos, the Director is hereby authorized to determine recompense.

630-70.10 Recompense/Specimen Tree Removal with Director Approval.

- A. Director Approval is required for removal of specimen trees. The Director is hereby authorized to make a determination whether a specimen tree may be removed.
 - 1. If a specimen tree previously identified on the Specimen Tree Concept Plan to be preserved cannot be preserved due to site constraints, the developer shall submit to the Director a statement of hardship alleging a necessity for removal of the specimen tree and site design alternatives. Examples of hardship include, but are not limited to, a tree's proximity to overhead

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transmission lines and topography after site design options have been exhausted. Hardship factors require due justification and shall include documentation.

- a. Plans to be submitted to the Director showing hardship justification shall include the following:
 - i. Specimen Tree Survey Plan.
 - ii. Existing and proposed contours.
 - iii. Limits of Disturbance
 - iiii. Specimen Tree Concept Plan.
- B. The Director is hereby authorized to determine recompense requirements when a specimen tree requires removal based on site constraints. Recompense requirements shall not count toward existing specimen Tree Density Units.
- C. If specimen tree removal is approved by the Director, recompense Tree Density Units generated from removal of a specimen tree(s) shall not be counted toward any landscape requirement such as parking lot, landscape strip, or buffer trees.
- D. If specimen tree removal is approved by the Director, and if the existing Tree Density Units remaining post construction exceed the required Tree Density Units per acre requirement, recompense Tree Density Units may count toward any additional existing Tree Density Units.
- E. The Director is hereby authorized to make a final determination whether a tree is a specimen tree or whether it has historical significance.
- F. Trees shown on plan and planted on site for recompense shall be a minimum of 2 inches in caliper or greater, or a minimum of 6 feet in height or greater at time of planting and may be hardwood or softwood or a combination thereof.
- G. Trees planted for recompense shall be included in the overall percentage of genus calculations for the site. Refer to Subsection 630-30.5.E.

630-70.11 Recompense/Specimen Tree Removal without Director Approval.

- A. If a specimen tree is removed without prior approval from the Director, the penalty to replace that tree is two times the Tree Density Units of the specimen tree removed. Replacement tree(s) shall be 3 inches caliper or greater.
- B. If a specimen tree is removed without Director Approval with no residual evidence of its condition with the exception of the trunk, the diameter of the trunk will determine if the tree was of specimen quality. Required recompense units shall be two times the Tree Density Units of the specimen tree removed. Replacement trees shall be 3 inches caliper or greater.
- C. If there is evidence that a specimen tree is removed without plan approval and there is no residual evidence of its condition or trunk diameter, recompense requirements shall be a minimum of two 28-inch hardwood trees. The property owner will be required to plant 34.4 Tree Density Units on site in addition to other site density and landscape requirements.

630-70.12 Specimen Tree Options. The following are suggested guidelines for successful specimen tree preservation.

- A. *Specimen Tree Value.* At the option of developer and contractor a value of the tree can be computed and displayed on the tree protection fence during construction. Once the value is computed it can be written down on a weatherproof placard and placed on the tree protection fencing. The monetary replacement value of a specimen tree can be computed in two different ways.

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- B. *The "replacement" value of the tree is defined as the cost to replace a tree. Compute the value by taking the diameter of the specimen tree and match it to the existing credit unit value for that tree. The result is the total number of credit units attributed to the specimen tree. For this example, the tree was removed without prior Director approval, therefore the Tree Density Unit for the specimen tree must be multiplied by two. Take the total and divide by .6 (a 3-inch caliper replacement tree is worth .6 units). The result is the number of trees necessary to replace the specimen tree. Multiply the number of trees needed by the cost of the tree including planting, labor, and materials. The result is the total cost to replace the specimen tree or "the value" of the specimen tree.*
- C. *Example, Given: a 36-inch diameter oak tree.*
1. Credit Value = 28.4 Credit Units
 2. A 3-inch caliper replacement tree = .6 credit units (See Table 630.3)
 3. 28.4 times 2 equals 56.8
 4. 56.8 divided by .6 = 94.66 replacement trees needed
 5. $95 \times \$250.00$ (estimated cost) = \$23,750 = Value of the tree

Section 630-80. Tree Bank for Alternative Compliance.

630-80.1 Purpose

The intent of the requirements of this Section is to ensure that a minimum number of trees are replaced and/ or preserved on newly developed or redeveloped sites. The Tree Bank is an alternative option and may be used in the event the site tree density or recompense tree density unit requirements cannot be met on-site due to hardship. Hardship must be documented by the developer and presented to the Director before the Tree Bank may be used.

Trees required by this Ordinance such as but not limited to parking lot, landscape strip, landscape setbacks, landscape frontages, street frontage buffer, supplemented buffer, and no access easement plantings must be planted on site and shall not utilize the Tree Bank.

630-80.2 Monetary Compensation for Trees. A developer may choose to provide the Gwinnett County Department of Planning and Development with monetary compensation for trees. If the Tree Bank is chosen, then the following criteria shall be observed:

- A. Provide tree density calculations on the Tree Preservation / Tree Replacement Plan including the total number of Tree Density Units that cannot be met on-site.
- B. Multiply the Tree Density Units that cannot be met on-site by the Monetary Compensation Value. The Department is authorized to determine the current Monetary Compensation Value for tree density units. To determine the tree bank monetary compensation, multiply this value times the Tree Density Units deficit to determine the dollar amount to be paid.
- D. The monies collected for the Tree Bank may be used for:
 1. Projects that collect data needed for management of urban community forests such as tree canopy mapping, assessments, tree management plans, and urban heat island mapping.
 2. Street tree planting programs.
 3. Community initiatives for the planting of trees.
 4. Food forest projects.
 5. Removal of invasive species.
 6. Educational purposes.

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7. Creation and/or updates to tree and landscape related regulations.
 8. Matching funds for any grants associated with the above items.
- E. The funds may be used by the Departments of Planning and Development, Community Services, and Support Services, community improvement districts, and neighborhood associations for the project types in 630-80.2D. Projects may be on public or private land as may be approved by the department.

Section 630-90. Redevelopment.

630-90.1 For redeveloped sites the Department of Planning and Development strongly recommends the developer, authorized registered professionals, design professionals and staff schedule a pre-submittal meeting with the department to discuss the potential of the site and any issues that may be present on the site.

630-90.2 Redeveloped sites shall comply with the buffer and specimen tree requirements as set forth in Chapter 610 and Section 630-70 respectively and provide compliance with parking lot, landscape strip and Tree Density Unit requirements.

630-90.3 Where the scope of a project results in disturbance, removal, and replacement of 25.1 percent or greater of the site area, a Tree Preservation and/or Tree Replacement Plan is required. The plan shall show landscape strip planting, parking lot trees, Tree Density Units, buffers and shall comply with the requirements of Chapters 600, 610, 620, 630 and 640 of this UDO.

630-90.4 Where the scope of a project results in disturbance, removal, and replacement of 25 percent or less of the site area, a Tree Preservation and/or Tree Replacement Plan is required. The plan shall include the existing and proposed landscape conditions that verify compliance with Chapters 600, 610, 620, 630 and 640 of this UDO.

- A. At a minimum the plan must show the following existing and proposed elements with intent to comply:
1. Buffers.
 2. Landscape strips.
 3. Parking lot trees.
 4. Tree Density Units.
 5. Tree Save Areas.
- B. Director shall review the proposed Tree Preservation and/or Tree Replacement Plan.

630-90.5 Disturbance as stated above in Redevelopment Section 630-90 shall include a building replacement where the footprint of the building counts toward the site disturbance.

Section 630-100. Water-Efficient Design Considerations.

630-100.1 It is the policy of Gwinnett County to encourage individuals or firms who prepare the plans and plats required by this UDO to consider the use of water-efficient landscaping principles and techniques as one of the criterion to be used in plant selection and design.

630-100.2 Principles and Techniques of Water-Efficient Landscaping (Xeriscaping). The recommended principles and techniques to be considered are as follows:

- A. *Proper Location and Design.* Locating plants where they will naturally thrive and not require excessive water and maintenance to survive, as well as grouping plants by water needs, and limiting and concentrating high water using plants.

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- B. *Turf Selection.* Limiting turf areas, and selecting turf grasses that can survive the variable rainfall conditions in this region.
- C. *Efficient Watering.* Once plants are established, avoid watering during periods of normal rainfall and during droughts, watering every week to 10 days or less depending on the drought tolerance of the plants.
- D. *Soil Improvements.* Loosening and breaking up the soil beyond the immediate planting area to allow better water absorption and to promote deep roots.
- E. *Mulching.* Using mulch to hold moisture in the soil which helps maximize the benefits of watering as well as preventing weeds.
- F. *Plant Selection.* Selecting plants native or suitable to the region according to their watering requirements and optimum locations.
- G. *Maintenance.* Maintaining the landscape to maximize water conservation such as increasing mowing heights and avoiding fertilizing during dry spells.

Section 630-110 Artificial Materials Prohibited.

630110.1 Only live plant material may be used to fulfill the requirements of this UDO.

Section 630-120. Warranty, Maintenance Surety, and Performance Surety.

630-120.1 All trees and landscape materials planted to meet the requirements of this UDO shall conform to the warrant and surety requirements of Chapter 1000.

630-120.2. Continuing Maintenance.

- A. The owner, occupant, tenant, and respective agent of each, if any, shall be jointly and severally responsible for the perpetual maintenance and protection of buffers, trees and landscape plantings required by this UDO.
- B. The Department is hereby authorized to order diseased, infested, dying, dead or damaged landscaping required herein to be replaced.
- C. Buffers that, over a period of time, lose their screening ability shall be replanted to meet the requirements of Section 610-20.
- D. Replacement trees and landscaping shall be in accordance with the applicable provisions of this UDO.
- E. Owner of the property or property owners association as the designated responsible party for the landscaping, shall provide continued proper maintenance, repair, and replacement of all landscaping materials and areas in accordance with the approved plan for perpetuity. Maintenance shall include weeding, cultivating, mulching, trimming, pruning, watering, and fertilizing as needed. Maintenance should begin immediately after planting.
- F. Indemnification and maintenance agreements for developments must be recorded with the Gwinnett or Georgia Department of Transportation, as appropriate, prior to plan approval for landscaping and related site amenities within the right-of-way.

Section 630-130. Enforcement.

Enforcement of this Chapter shall be consistent with the terms of Chapter 120 of the UDO.

Chapter 700. Floodplain Management

Section 700-10. General Provisions.

700-10.1 Findings.

- A. The flood hazard areas of Gwinnett County are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- B. Flood hazard areas can serve important stormwater management, water quality, streambank protection, stream corridor protection, wetland preservation and ecological purposes when permanently protected as undisturbed or minimally disturbed areas.
- C. Effective floodplain management and flood hazard protection activities can:
 - 1. Protect human life and health.
 - 2. Minimize damage to private property.
 - 3. Minimize damage to public facilities and infrastructure such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains.
 - 4. Minimize expenditure of public money for costly flood control projects associated with flooding and generally undertaken at the expense of the general public.
- D. Article IX, Section II of the Constitution of the State of Georgia and O.C.G.A. § 36-1-20(a), have delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, Gwinnett County, Georgia, establishes this set of floodplain management and flood hazard reduction policies for the purpose of regulating the use of flood hazard areas. It is determined that the regulation of flood hazard areas and the prevention of flood damage are in the public interest and will minimize threats to public health and safety, as well as to private and public property.

700-10.2 Requirements. The requirements of Chapter 700 shall be applicable to all Areas of Special Flood Hazard within the jurisdiction of Gwinnett County.

700-10.3 Purpose. It is the purpose of Chapter 700 to protect, maintain, and enhance the public health, safety, environment, and general welfare and to minimize public and private losses due to flood conditions in flood hazard areas, as well as to protect the beneficial uses of floodplain areas for water quality protection, streambank and stream corridor protection, wetlands preservation and ecological and environmental protection by provisions:

- A. Restricting or prohibiting uses or activities which are dangerous to health, safety, and property due to flooding or erosion hazards, or which increase flood heights, velocities, or erosion.
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction or renovation.
- C. Limiting the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters.
- D. Controlling filling, grading, dredging and other development which may increase erosion or flood damage.

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- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters, or which may increase flood hazards to other lands.
- F. Protecting the stormwater management, water quality, streambank protection, stream corridor protection, wetland preservation and ecological functions of natural floodplain areas.

700-10.4 Flood Area Maps and Studies. For the purposes of defining and determining "Area of Special Flood Hazard," "Areas of Future-conditions Flood Hazard," "Areas of Shallow Flooding," "Base Flood Elevations," "Floodplains," "Floodways," "Future-conditions Flood Elevations," "Future-conditions Floodplains," potential flood hazard or risk categories as shown on FIRM maps, and other terms used in Chapter 700, the following documents and sources may be used for such purposes and are adopted by reference thereto:

- A. The Flood Insurance Study (FIS) dated September 26, 2006, or most current study, with accompanying maps and other supporting data and any revision thereto.
- B. Other studies which may be relied upon for establishment of the base flood elevation (BFE) or delineation of the base or one percent (100-year) floodplain and flood-proned areas, including:
 - 1. Any flood or flood related study conducted by the United States Army Corps of Engineers, the United States Geological Survey or any other local, State, or Federal Agency applicable to Gwinnett County.
 - 2. Any base flood study conducted by a licensed professional engineer in the State of Georgia which has been prepared utilizing FEMA approved methodology and approved by the Department of Planning and Development.
- C. Other studies which may be relied upon for establishment of the future conditions flood elevation or delineation of the future conditions floodplain and flood-proned areas, including:
 - 1. Any flood or flood related study conducted by the United States Army Corps of Engineers, the United States Geological Survey or any other local, state, or federal agency applicable to Gwinnett County.
 - 2. Any future-conditions flood study conducted by a licensed professional engineer in the State of Georgia which has been prepared utilizing FEMA approved methodology and approved by the Department of Planning and Development.
- D. The repository for public inspection of the FIS, accompanying maps and other supporting data is located at the following location:

Gwinnett County Department of Water Resources
Central Facility
684 Winder Highway
Lawrenceville, GA 30045

700-10.5 Interpretation.

- A. In the interpretation and application of Chapter 700 all provisions shall be:
 - 1. Considered as minimum requirements.
 - 2. Liberally construed in favor of Gwinnett County.
 - 3. Deemed neither to limit nor repeal any other powers granted under state statutes.
- B. Where interpretation is needed as to the exact location of floodplain or floodway boundaries (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Department shall make the necessary interpretation based on data submitted by the

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applicant. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Chapter 700.

- C. Where flood plain elevations have been defined, the floodplain shall be determined based on flood elevations rather than the area graphically delineated on the floodplain maps.

700-10.6 Drainage Easement Establishment. On behalf of the public, a drainage easement is hereby established for the sole purpose of preserving and protecting the free flow of surface waters inside the future conditions flood contour elevations and along all watercourses. Where debris has accumulated in such a manner as would increase the need for flood protection, raise the flood level, or increase the risk of hazardous inundation of adjacent communities or jurisdictions, the County is hereby authorized to enter upon such watercourse and clear or remove such debris or obstructions as are hazardous to the public safety. The cost thereof shall be charged to the owner of the property where such debris and/or obstruction was generated. Where erosion has occurred in such a manner as would endanger a building or a structure, the County is hereby authorized to enter upon such watercourse and stabilize the channel for public safety. The cost thereof shall be charged to the owner of the property where the erosion has occurred and/or caused the erosion.

700-10.7 Establishment of Development Permit. A development permit shall be required in conformance with the provisions of this UDO prior to the commencement of any clearing, grading, or development activities adjacent to, within, or affecting a future conditions floodplain.

700-10.8 Compliance. No structure or use of land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of Chapter 700 and other applicable regulations.

700-10.9 Compatibility with Other Regulations. Chapter 700 is not intended to modify or repeal any other ordinance, rule, regulation, statute, easement, covenant, deed restriction or other provision of law. The requirements of Chapter 700 are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law, and where any provision of Chapter 700 imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control.

700-10.10 Warning and Disclaimer of Liability. The degree of flood protection required by Chapter 700 is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. Chapter 700 does not imply that land outside the special flood hazard or flood prone areas or uses permitted within such areas will be free from flooding or flood damages. Chapter 700 shall not create liability on the part of Gwinnett County or on the part of any officer or employee thereof for any flood damages that results from reliance on this Chapter, or any administrative decision lawfully made thereunder.

700-10.11 Duties and Responsibilities of Ordinance Administrator. As the administrator of Chapter 700, the duties of the Director of the Department of Planning and Development or the Director's designee shall include, but shall not be limited to:

- A. Review all development applications and permits to assure that the requirements of Chapter 700 have been satisfied and to determine whether proposed building sites will be reasonably safe from flooding.
- B. Require that copies of all necessary permits from governmental agencies from which approval is required by federal or state law, including but not limited to Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334, be provided and maintained on file.
- C. When base flood elevation data or floodway data have not been provided, then the Director or Director's designee shall require the applicant to obtain, review and reasonably use any base flood elevation and floodway data available from a federal, state, or other sources in order to meet the requirements of Sections 700-20 and 700-30 and provisions of 700-40 herein.

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- D. Review and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all new or substantially improved structures.
- E. Review and record the actual elevation, in relation to mean sea level to which any substantially improved structures have been flood-proofed.
- F. When flood-proofing is used for a non-residential structure, the director or director's designee shall review the design and operational maintenance plan and obtain certification of design criteria from a registered professional engineer or architect.
- G. Notify affected adjacent communities and the Georgia Department of Natural Resources (GA DNR) prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
- H. Where interpretation is needed as to the exact location of boundaries of the special flood hazard area (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions) the director or director's designee shall make the necessary interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Chapter 120. Where floodplain elevations have been defined, the floodplain shall be determined based on flood elevations rather than the area graphically delineated on the floodplain maps.
- I. All records pertaining to the provisions of Chapter 700 shall be maintained in the office of the Director or Director's designee and shall be open for public inspection.
- J. Coordinate all FIRM revisions with the GA DNR and FEMA.
- K. Review variance applications.

700-10.12 Severability. If the provisions of any section, subsection, paragraph, subdivision, or clause of Chapter 700 shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of Chapter 700.

Section 700-20. Permit Procedures and Requirements.

700-20.1 General Permit Procedures. An application for a development permit on any property where a special flood hazard area is located or is proposed to be altered or disturbed in any way shall include, but not be limited to, the following in addition to the requirements of Section 330 of this UDO: plans drawn to scale of the property showing the floodplain, floodway and the nature, location, dimensions, and elevations of existing or proposed structures, fill, storage of materials, and drainage facilities.

700-20.2 Permit Application Requirements.

- A. No owner or developer shall perform any development activity on a site where an Area of Special Flood Hazard or Area of Future-conditions Flood Hazard is located without first meeting the requirements of this ordinance prior to commencing the proposed activity.
- B. Unless specifically excluded by this Chapter, any landowner or developer desiring a permit for development activity shall submit to Gwinnett County a permit application on a form provided for that purpose.
- C. No permit will be approved for any development activities that do not meet the requirements, restrictions, and criteria of this Chapter.

700-20.3 Encroachments.

- A. Application Procedure.

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1. An application for a development permit which proposes any encroachment into, or alteration of a floodway shall, in addition to the requirements of Chapter 330 of this UDO, require submittal to the Department of complete plans and engineering calculations as required by Chapter 700 for "no rise" certification.
 2. The Department shall review and authorize such floodway encroachments prior to the issuance of a development permit and shall obtain from the applicant an engineering "no-rise" certification signed by a professional engineer stating that the proposed development will not create any change to the pre-project base flood elevations, floodway elevations, or floodway widths.
 3. If the applicant proposes to revise the floodway boundaries or base flood elevations, no permit authorizing an encroachment into or the alteration of the floodway shall be issued by the Department until an affirmative Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Amendment (CLOMA), whichever is applicable, is issued and "no rise" certification is approved by the Department.
 4. An application for a map revision shall be submitted first to the Department. Record drawings and calculations shall be required to be provided to the Department by the applicant at the time of completion of the floodway encroachment.
 5. Payment of any review fees associated with the review and approval of the encroachment shall be the responsibility of the applicant. Final plats or certificates of occupancy shall not be issued by the Department until an affirmative Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA), whichever is applicable, is issued.
- B. Flood Levels Resulting from Floodway Encroachments. Located within Areas of Special Flood Hazard are areas designated as floodway. A floodway may be an extremely hazardous area due to velocity flood waters, debris, or erosion potential. In addition, floodways must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights. Therefore, the following provisions shall apply:
1. Encroachments are prohibited, including but not limited to fill, new construction, substantial improvements, and other developments, within the regulatory floodway except for activities specifically allowed in Subsection 700-20.2.B.2 below.
 2. Encroachments for bridges, culverts, roadways, and utilities within the regulatory floodway may be permitted provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the encroachment shall not result in any increase to the pre-project base flood elevations, floodway elevations, or floodway widths during the base flood discharge. A registered professional engineer must provide supporting technical data and certification thereof.
- C. In areas where the floodplain has been established but the base flood elevation (BFE) and/or the floodway has not been established on FIS maps, no encroachments into areas of special flood hazard, including fill or structures, shall be authorized unless certification by a registered professional engineer is provided to the Department demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the floodplain more than 0.01 foot at any point. The study shall be submitted as a revision/amendment to the FIS maps showing the BFE and the floodway. Approval of the revision/amendment must be received before the final plat can be approved or a certificate of occupancy can be issued.

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- D. In areas beyond the limits of study on the flood boundary and floodways maps or FIRM, which contains a watercourse, and have greater than 100 acres of surface drainage area above the property, no increase in flood elevations off-site shall be authorized.

700-20.4 Engineering Study Requirements. An engineering study is required (as appropriate to the proposed development activities on the site) when a base flood or future conditions floodplain is located on the property proposed for development. This study shall be prepared by a currently registered professional engineer in Georgia and made a part of the application for a development permit. This information shall be submitted to and approved by the Department prior to the approval of any permit that would authorize the development. The engineering study shall contain, but not be limited to:

- A. Description of the extent to which any watercourse or floodplain will be altered or relocated as a result of the proposed development.
- B. Any report that must be submitted for review, in accordance with this Section, must use a step-backwater analysis approved by the Department. Cross-sections (which may be supplemented by the applicant) and flow information from the existing FIS will be obtained whenever available. Where applicable, computations will be shown duplicating FIS results and then computations will be rerun with the proposed modifications to determine the new base flood and future conditions flood profiles.
- C. Floodplain storage calculations based on cross-sections (at least one every 100 feet) showing existing and proposed floodplain conditions must be provided to show that future conditions floodplain storage capacity will not be diminished by the development.
- D. If changes to the base flood or future conditions flood elevation are proposed, profiles of the channel showing the existing and proposed base flood and future conditions flood elevations must be provided.
- E. The study shall include a preliminary plat, grading plan, or site plan, as appropriate, which shall clearly define all future conditions floodplain encroachments.
- F. The floodway shall be determined when any encroachment in the floodplain is proposed, or a detailed study is performed to determine flood profiles.
- G. Detailed flood studies in areas where the floodplain has been established but the Base Flood Elevation (BFE) and/or the floodway has not been established and in areas beyond the limits of study on the FIRM, which may contain a watercourse, and have greater than 100 acres of surface drainage area above the property, shall be submitted showing the base flood elevations, future conditions flood elevations, and the floodway. Approval of the study must be received before the final plat of the affected lots can be approved or a Certificate of Occupancy can be issued.

700-20.5 Floodplain Management Plan and Plat Requirements. An application for a development project with any Area of Special Flood Hazard or Area of Future-conditions Flood Hazard located on site shall include a floodplain management/flood damage plan. This plan shall include the following items:

- A. Site plan drawn to scale, which includes but is not limited to:
 - 1. Existing and proposed elevations of the area in question and the nature, location, and dimension of existing and/or proposed structures, earthen fill placement, amount and location of excavation material, and storage of materials or equipment;
 - 2. For all proposed structures, spot ground elevations at the building corners and 20-foot or smaller intervals along the foundation footprint, or one foot contour elevations throughout the building site;
 - 3. Proposed locations of water supply, sanitary sewer, and utilities;
 - 4. Proposed locations of drainage and stormwater management facilities;

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5. Proposed grading plan;
 6. Base flood elevations and future-conditions flood elevations;
 7. Boundaries of the base flood floodplain and future-conditions floodplain;
 8. Location of the floodway, if applicable; and
 9. Certification of the above by a licensed professional engineer or surveyor.
- B. Building and foundation design detail, including but not limited to:
1. Elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all proposed structures;
 2. Design plans certified by a licensed professional engineer or architect for all proposed structure(s).
- C. Hard copies and digital files of computer models, copy of work maps, comparison of pre- and post-development conditions base flood elevations, future-conditions flood elevations, flood protection elevations, Special Flood Hazard Areas and regulatory floodways, flood profiles and all other computations and other information similar to that presented in the FIS;
- D. The approved floodplain management/flood damage prevention plan shall contain certification by the applicant that all development activities will be done according to the plan or previously approved revisions. Any and all development permits and/or use and occupancy certificates or permits may be revoked at any time if the construction and development activities are not in accordance with approved plans.
- E. All residential lots in a proposed subdivision shall have sufficient buildable area outside of the future conditions floodplain such that encroachments into the future-conditions floodplain for residential structures will not be required.
- F. All preliminary plats and site development plans will provide the elevations of proposed structures in accordance with this Chapter.
- G. All preliminary plats and site development plans shall be consistent with the need to minimize flood damage.
- H. All construction plans for land development shall show public utilities and facilities such as water, sanitary sewer, gas, and electrical systems located and constructed to minimize or eliminate infiltration of flood waters, and discharges from the systems into flood waters.
- I. All construction plans for land development include adequate drainage and stormwater management facilities per the requirements of Chapter 800 to reduce potential exposure to flood hazards.

700-20.6 Building Permit Requirements. Prior to the issuance of a building permit for a site which contains or is adjacent to the floodplain, a drawing which shows the elevation of the proposed lowest floor of the building, including basement, the limits of the floodplain, and the highest future conditions flood elevation and base flood elevation (100-year) adjacent to the building, must be submitted to the Department for approval. If the proposed development is located in multiple flood zones or multiple base flood elevation cross the proposed building site, the higher or more restrictive base flood elevation or future condition elevation and development standards shall take precedence at the building site. Proposed grading encroachments must be shown on this drawing. Elevations shall be referenced to an accurate topographical reference (e.g., a recorded final plat whereon the future conditions and the base floodplain is shown).

700-20.6 Other Permits or Approvals.

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- A. Copies of any additional federal or state permits or approvals as may be required by the Corps of Engineers, Georgia Department of Natural Resources, FEMA, or others shall be provided by the developer upon their approval and maintained on file in the Department of Planning and Development.
- B. The Department shall notify adjacent communities and the Georgia Department of Natural Resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).

700-20.7 Construction Stage. For all new construction and substantial improvements on sites with a floodplain management/ flood damage prevention plan which may be shown on a Residential Drainage Plan, the permit holder shall provide to Gwinnett County a certified as-built Elevation Certificate, or Floodproofing Certificate for non-residential construction, including the lowest floor elevation or floodproofing level immediately after the lowest floor or floodproofing is completed. A final Elevation Certificate shall be provided after completion of construction including final grading of the site. Any lowest floor certification made relative to mean sea level shall be prepared by or under the direct supervision of a licensed land surveyor or professional engineer and certified by the same. When floodproofing is utilized for non- residential structures, said certification shall be prepared by or under the direct supervision of a licensed professional engineer or architect and certified by same using the FEMA Floodproofing Certificate. This certification shall also include the design and operation/maintenance plan to assure continued viability of the floodproofing measures.

Any work undertaken prior to submission and approval of the certification shall be at the permit holder's risk. No framing inspection shall be completed or approved by the Department until such required certification is received and verified by the Department. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being allowed to proceed. Failure to submit the survey or failure to make said corrections required thereby shall be cause to issue a stop work order for the project.

Section 700-30. Standards for Development.

700-30.1 Definition of Floodplain Boundaries.

- A. Studied "A" zones, identified in the Gwinnett County Flood Insurance Study identified in Section 700-10.4 shall be used to establish base flood elevations whenever available.
- B. For all streams with a drainage area of 100 acres or greater, the base flood elevation and future conditions flood elevation shall be determined from the FIRM and FIS or provided by the Department. If base flood elevation and future conditions flood elevation data is not available, then it shall be determined by a registered professional using FEMA approved methodology. The method of analysis shall be subject to the approval of the Department.
- C. The boundaries or limits of the floodplain shall be within 0.5 feet vertical accuracy on the development plan containing existing topographic information.

700-30.2 Definition of Floodway Boundaries.

- A. The width of a floodway shall be determined from the FIS or FEMA approved flood study. For all streams with a drainage area of 100 acres or greater, the regulatory floodway shall be provided by the Department. If floodway data is not available from the Department, then it shall be determined by a registered professional engineer using a method approved by FEMA and the Department.
- B. Following a pre-design conference with the Department, the boundaries or limits of the floodway shall be shown on the development plan containing existing topographic information.

700-30.3 General Standards.

- A. No development shall be allowed within any Area of Special Flood Hazard or Area of Future-conditions Flood Hazard that could result in any of the following:

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1. Raise the base flood or future conditions flood elevation equal to or more than 0.01 foot.
 2. Reduce the base flood or future conditions flood storage capacity.
 3. Change the flow characteristics of the waters of the base flood or future conditions flood as they pass both the upstream and the downstream boundaries of the property. Verification shall be provided via a step-backwater analysis.
 4. Create hazardous or erosion-producing velocities or result in excessive sedimentation.
- B. Any development within any Area of Special Flood Hazard or Area of Future-conditions Flood Hazard allowed under 700-30.3 shall also meet the following conditions:
1. Compensation for storage capacity shall occur between the average ground water table elevation and the base flood elevation for the base flood, and between the average ground water table elevation and the future-condition flood elevation for the future-conditions flood. Compensation shall occur within the boundaries of ownership of the property being developed, or within a permanent, recorded flood control easement (which shall be a part of the Departmental record) and shall be within a reasonable proximity to the location of the encroachment. Acceptable means of providing required compensation include: lowering of natural ground elevations within the floodplain; or lowering of adjoining land areas to create additional floodplain; or raising of the future conditions flood elevation within the boundaries of ownership of the property being developed. All cut areas are to be graded to a slope of no less than two percent. In no case shall any required compensation be provided via bottom storage or by excavating below the elevation of the top of the natural (pre-development) stream channel unless such excavation results from widening or relocation of the stream channel.
 2. Cut areas shall be stabilized to a slope of no less than 2.0 percent;
 3. Verification of no-rise conditions, flood storage volumes, and flow characteristics shall be provided via a step-backwater analysis meeting the requirements of 700-20.4;
 4. Effective transitions shall be provided such that flow velocities occurring on both upstream and downstream properties are not increased or decreased;
 5. All proposed development shall have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed to minimize or eliminate flood damage.
 6. Any significant physical changes to the base flood floodplain shall be submitted as a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Amendment (CLOMA), whichever is applicable. The CLOMR submittal shall be subject to approval by the County using the FEMA Community Concurrence forms before forwarding the submittal package to FEMA for final approval. The responsibility for forwarding the CLOMR to FEMA and for obtaining the CLOMR approval shall be the responsibility of the applicant. Within six months of the completion of development, the applicant shall submit as-built surveys and plans for a final Letter of Map Revision (LOMR).
- C. All subdivision proposals shall identify the Area of Special Flood Hazard and Areas of Future-conditions Flood Hazard therein and provide base flood elevation data and future-conditions flood elevation data.
1. All residential lots in a subdivision proposal shall have sufficient buildable area outside of the future-conditions floodplain such that encroachments into the future-conditions floodplain for residential structures will not be required; and
 2. All subdivision plans will provide the elevations of proposed structures in accordance with Section 700-20.5.

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700-30.4 Maintenance Requirements. The property owner shall be responsible for continuing maintenance as may be needed within an altered or relocated portion of a floodplain on his property so that the flood-carrying or flood storage capacity is not diminished. Gwinnett County may direct the property owner (at no cost to the County) to restore the flood-carrying or flood storage capacity of the floodplain if the owner has not, in the opinion of the County pursuant to the approved plans and floodplain report on file with the Department, performed satisfactory maintenance.

Section 700-40. Provisions for Flood Damage Reduction.

700-40.1 General Standards. All new construction and substantial improvement of structures adjacent (residential or non-residential) to special flood hazard areas shall comply with the applicable requirements of the Gwinnett County Construction Code and the following:

- A. Buildings/structures, including manufactured homes, shall not be allowed within the limits of the future-conditions floodplain;
- B. Buildings/structures shall be constructed with materials and utility equipment resistant to flood damage;
- C. Buildings/structures shall be constructed by methods and practices that minimize flood damage;
- D. Electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities shall be constructed or located three (3) feet above the base flood elevation or one (1) foot above the future-conditions flood elevation, whichever is higher, so as to prevent water from entering or accumulating within the components during conditions of flooding;
- E. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
- G. New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
- H. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
- I. Other public utilities such as gas and electric systems shall be located and constructed to avoid impairment to them, or public safety hazards from them, during flooding;
- J. New development shall include adequate drainage and stormwater management facilities per requirement of Gwinnett County to reduce exposure to flood hazards;
- K. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
- L. When only a portion of a parcel is located within a flood zone or the future-conditions floodplain, all new and substantially improved structures on the parcel shall meet requirements of Chapter 700;
- M. Any alteration, repair, reconstruction, or improvement to a structure which is not compliant with the provisions of Chapter 700, shall be undertaken only if the non-conformity is not furthered, extended, or replaced.

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- N. If the proposed development is located in multiple flood zones, or multiple base flood elevations cross the proposed site, the higher or restrictive base flood elevation or future condition elevation and development standards shall take precedence;
- O. Subdivision proposals and other proposed new development, including manufactured home parks, shall be reasonably safe from flooding:
 - 1. All such proposals shall be consistent with the need to minimize flood damage within the flood prone area;
 - 2. All public utilities and facilities, such as sewer, gas, electrical, and water systems shall be located and constructed to minimize or eliminate flood damage; and
 - 3. Adequate drainage shall be provided to reduce exposure to flood hazards.

700-40.2 Structures and Buildings Authorized in the Floodplain.

A. *Residential Buildings.*

- 1. *New construction.* New construction of principal residential structures shall not be allowed within the limits of the future-conditions floodplain.
- 2. *Substantial improvements.* For substantial improvements to all or part of an existing principal residential buildings, the requirements of Sections 700-20.1 through 700-20.3 and Sections 700-30.1 et seq., shall apply and the elevation of the lowest floor, including basement and access to the building, shall be elevated at least three feet above the level of the highest base flood elevation (100-year) adjacent to the building or at least 1 foot above the future conditions flood elevation whichever is highest. Openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with Section 700-40.4 titled "Elevated buildings".

B. *Non-Residential Buildings.*

- 1. *New construction.* New construction of principal non-residential structures shall not be allowed within the limits of the future future-conditions floodplain.
- 2. *Substantial improvements.* Substantial improvements to all or part of an existing principal non-residential buildings may be authorized by the Department to be flood proofed in lieu of being elevated, in accordance with Section 700-40.4 titled "Elevated buildings", provided that all areas of the building less than 1 foot above the base flood elevation or below the future conditions flood elevation, whichever is highest, are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify to the Department that the standards of this subsection are satisfied and shall provide the Department a flood proofing certificate including flood proofing level immediately after flood proofing is completed. The certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The requirements of Sections 700-20.1 through 700-20.3 and Sections 700-30.1, et seq., shall also apply.

C. *Accessory and non-habitable buildings and structures.* Accessory and non-habitable structures (i.e., barns, sheds, gazebos, and other similar structures) which are permitted to be located within the limits of the floodplain under the provisions of Title 2 of this UDO shall be designed and constructed of flood resistant materials to pass all floodwater and be anchored to prevent flotation, collapse, or lateral movement of the structure in a manner consistent with Chapter 700.

D. *Drainage structures and impoundments.* Drainage structures and impoundments may be authorized provided they are designed and constructed pursuant to the requirements of this UDO, are approved by the Department, and are consistent with the requirements of Chapter 700. Detention facilities may

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be located within the future conditions floodplain if the future conditions flood storage capacity is not reduced by the dam and water impounded behind the dam as required in Section 700-30.3.A.

- E. *Standards for Recreational Vehicles.* All recreational vehicles placed on sites must either:
1. Be on the site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached structures or additions).
 - 2B. The recreational vehicle must meet all the requirements for residential buildings including the anchoring and elevation requirements.
- F. *Standards for Manufactured Homes.*
1. New manufactured homes shall not be allowed to be placed within the limits of the future-conditions floodplain.
 2. Manufactured homes placed and/or substantially improved in an existing manufactured home park or subdivision shall be elevated so that either:
 - i. The lowest floor of the manufactured home is elevated no lower than three (3) feet above the level of the base flood elevation, or one (1) foot above the future-conditions flood elevation, whichever is higher; or
 - ii. The manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least an equivalent strength) of no less than 36 inches in height above grade.
 3. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement in accordance with standards of Section 700-40.1(K).

700-40.3 Structures and Buildings Authorized Adjacent to the Future Conditions Floodplain.

- A. *Residential buildings.* For new construction or substantial improvement of any principal residential building or manufactured home, the elevation of the lowest floor, including basement and access to the building, shall be at least three feet above the level of the highest base flood (100-year) elevation adjacent to the building or at least 1 foot above the future conditions flood elevation whichever is highest. Should solid foundation perimeter walls be used to elevate the structure, openings sufficient to automatically equalize the hydrostatic flood forces on exterior walls shall be provided in accordance with Section 700-40.4.
- B. *Non-residential buildings.* For new construction or substantial improvement of any principal non-residential building, the elevation of the lowest floor, including basement and access to the building, shall be at least 1 foot above the level of the highest base flood (100-year) elevation adjacent to the building or at least as high as the future conditions flood elevation whichever is highest. Should solid foundation perimeter walls be used to elevate the structure, openings sufficient to automatically equalize the hydrostatic flood forces on exterior walls shall be provided in accordance with Section 700-40.4.

700-40.4 Elevated Buildings. All new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by foundation and other exterior walls shall be designed so as to be an unfinished or flood resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of flood water.

- A. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

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1. Provide a minimum of two openings having a total net area of not less than 1 square inch for every square foot of enclosed area subject to flooding.
 2. The bottom of all openings shall be no higher than 1 foot above grade.
 3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions.
- B. So as not to violate the "lowest floor" criteria of Section 700-40.1.A or Section 700-40.1.B, the unfinished or flood resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area.
- C. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

700-40.5 Building Standards for Residential Single-lot Developments on Streams without Established Base Flood Elevations and/or Floodway (A-Zones). For a residential single-lot development not part of a subdivision that has areas of special flood hazard, where streams exist but no base flood data have been provided (A-zones), the Director shall review and reasonably use any available scientific or historic flood elevation data, base flood elevation and floodway data, or future conditions flood elevation data available from a federal, state, local or other source, in order to administer the provisions and standards of Chapter 700.

If data is not available from any of these sources, the following provisions shall apply:

- A. No encroachments, including structures or fill material, shall be located within an area equal to twice the width of the stream or 50 feet from the top of the bank of the stream, whichever is greater.
- B. In special flood hazard areas without base flood elevation or future conditions flood elevation data, new construction and substantial improvements of existing structures shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three feet above the highest adjacent grade at the building site. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with Section 700-40.6.

700-40.6 Building Standards for Areas of Shallow Flooding (AO-Zones). Areas of Special Flood Hazard may include designated "AO" shallow flooding areas. These areas have base flood depths of one (1) to three (3) feet above ground, with no clearly defined channel. In these areas the following provisions apply:

- A. All new construction and substantial improvements of residential and non-residential structures shall have the lowest floor, including basement, elevated to no lower than one (1) foot above the flood depth number in feet specified on the Flood Insurance Rate Map (FIRM), above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least three (3) feet above the highest adjacent grade. Flood openings sufficient to facilitate automatic equalization of hydrostatic flood forces shall be provided in accordance with standards of Section 700-40.4;
- B. New construction and substantial improvement of a non-residential structure may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to the specified FIRM flood level plus one (1) foot above the highest adjacent grade, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A licensed professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice, and shall provide such certification to the (ordinance administrator) using the FEMA Floodproofing Certificate along with the design and operation/maintenance plan; and
- C. Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

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Section 700-50. Variances.

700-50.1 Variance Procedures.

- A. Requests for variances from the requirements of Chapter 700 shall be submitted to the Department. All such requests shall be heard and decided in accordance with the procedures outlined in the Gwinnett County Stormwater Management Manual and as set forth by the O.C.G.A. § 5-4-1 when certiorari shall lie. At a minimum, such procedures shall include notice to all affected parties and the opportunity to be heard.
- B. Any person adversely affected by any decision of a request for variance shall have the right to appeal the decision to the Board of Construction Adjustments and Appeals in their normal course of business. At a minimum, such procedures shall include notice to all affected parties and the opportunity to be heard.

700-50.2 Evaluation of Variance Requests.

- A. In passing upon variance applications for relief from the provisions of Chapter 700, all technical evaluations, all relevant factors, all standards specified in other sections of this Chapter, and the items listed in the Gwinnett County Stormwater Management Manual shall be provided for review.
- B. Upon consideration of the factors listed in the Gwinnett County Storm Sewer Pipe Standards and the stated purposes of Chapter 700, such conditions to the granting of a variance as the Board of Construction Adjustments and Appeals deems necessary or appropriate, consistent with the purposes of this Sections may be attached to the variance.
- C. Variances shall not be approved within any designated floodway if any increase in flood levels outside the boundaries of ownership of the property being developed or drainage easement during the future conditions or the base flood discharge would result.
- D. Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of Chapter 700 are met, no reasonable alternative exists, and the development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.
- E. Any person requesting a variance shall, from the time of the request until the time the request is acted upon, submit such information and documentation as deemed necessary to the consideration of the request.
- F. Variances shall not be issued "after the fact."

700-50.3 Historic Structures. Variances from the requirements of Chapter 700 may be approved for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation and provided further that the requirements of Section 700-50.4 herein are met.

700-50.4 Conditions for Variance Approval.

- A. Variances shall only be approved upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and in the instance of a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
- B. Variances shall only be issued upon a finding of the following:
 - 1. A showing of good and sufficient cause.

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2. A determination that failure to grant the variance would result in exceptional hardship.
 3. A determination that the granting of the variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- C. No variance from the provisions of Chapter 700 may be approved which would allow a structure or use of land otherwise prohibited in the flood hazard area under the provisions of Title 2 of this UDO.
- D. Any person to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation of the proposed lowest floor and stating that the cost of flood insurance will be commensurate with the increased risk to life and property resulting from the reduced lowest floor elevation.

700-50.5 Records and Reports. The Department shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

Chapter 800. Stormwater Management¹

Section 800-10. Stormwater Management General.

800-10.1 Stormwater management is intended to lessen the impacts of urbanization on the natural hydrology of the site. The goal is to reduce the amount of stormwater runoff and pollutants that are released, provide for natural on-site control and treatment of runoff, and optimize the location of stormwater management facilities. These goals are met through runoff reduction or water quality, channel protection, overbank flood protection and extreme flood protection.

800-10.2 Runoff reduction practices shall be sized and designed to retain the first 1-inch of rainfall on the site to the maximum extent practicable. Runoff reduction practices are stormwater best management practices, BMP's, used to disconnect impervious and disturbed pervious surfaces from the stormwater drainage system to reduce the post-construction stormwater runoff rates, volumes, and pollutant loads. Runoff Reduction shall be used where practical, prior to using water quality standards. If the Runoff Reduction requirements cannot be met in whole or part, then the water quality standards shall be used to treat the remainder.

800-10.3 Stormwater management systems shall be designed to detain or treat the runoff from 85% of the storms that occur in an average year and reduce the average annual post-development total suspended solids loadings by 80% in order to meet the water quality requirement. The water quality requirement can be waived if the entire 100% of runoff reduction is provided. Water quality and runoff reduction can also be provided in conjunction in order to meet the water quality requirements outlined in the Gwinnett County Stormwater Management Manual.

800-10.4 The increase in the frequency and duration of bankfull flow conditions in stream channels due to urban development is the primary cause of stream bank erosion and the widening and downcutting of stream channels. In order to reduce the effects from urban development within the stream channels, channel protection must be provided. Stream channel protection shall be provided using the following three approaches:

- A. 24-hour extended detention storage of the 1-year 24-hour return frequency storm event
- B. Erosion prevention measures such as energy dissipation and velocity control
- C. Preservation of the applicable stream buffer

800-10.5 Stormwater management facilities shall be designed so that their peak release rates, when combined with those of all bypass areas in the same basin, produce peak flow rates and flow velocities at the site's boundary line no greater than those which occurred at the same location for pre-developed conditions. A downstream analysis may warrant a development to over-detain to protect downstream properties or may even warrant reduction/elimination of detention due to the timing of peak discharges within the watershed as outlined in Sections 800-50.2 and 800-50.3

800-10.6 The positive effects of stormwater management via on-site stormwater management facilities diminish rapidly as the distance downstream from the point of discharge increases, and the smaller the facility's contribution is, as a percentage of the total runoff contributing to downstream flow, the shorter the distance downstream that the benefits are realized. Because of these limitations, on-site stormwater treatment is effective

¹Editor's note(s)—Ord. No. UDOA2020-00003(GCID: 2020-0962) , Exh. A, adopted Oct. 6, 2020, repealed the former Ch. 800, §§ 800-10—800-100, and enacted a new Ch. 800 as set out herein. The former Ch. 800 pertained to similar subject matter and derived from Ord. No. UDOA2019-00005(GCID2019-0295) , Exh. A, adopted March 19, 2019.

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at controlling flooding only when flow from the facility is a significant percentage of the total flow at the point of interest, and only if the point of interest is immediately downstream. The concepts of immediately downstream and significant percentage of total flow are inseparable. The portion of a receiving watercourse (one which receives and conveys runoff from a site) which lies downstream from the site to the point where the area of the site is 10 percent of the total drainage area, shall generally be considered to constitute that portion of the watercourse which is immediately downstream.

800-10.7 Peak flow rate control shall normally be provided only for the 2-year, 5-year, 10-year, and 25-year frequency storm events in order to meet the requirements of overbank flood protection. The 100-year event shall be provided when failure to do so would result in flooding of other habitable dwellings, property damage, or public access and/or utility interruption (extreme flood protection).

800-10.8 Trout stream protection, when required, can be achieved by using the appropriate stormwater BMP's outlined in the Gwinnett County Stormwater Management Manual. A temperature increase greater than 2°F is not allowed within a trout stream.

Section 800-20. Stormwater Management Documentation.

800-20.1 The purpose of Stormwater management documentation is to support the development of the project site using Best Management Practices (BMP's) and diligent engineering. The report must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual and is required for all developments. The report shall be certified by a qualified registered professional registered in the State of Georgia.

800-20.2 A stormwater management analysis shall identify the locations and quantities of stormwater runoff entering and exiting the site for both pre-and post-developed conditions. Analysis of the off-site properties shall anticipate future development in addition to addressing existing conditions.

800-20.3 For the purposes of these regulations, the words "downstream" and "analysis" shall have the following meanings. The analysis of downstream conditions in the report shall address each and every point or area along the project site's boundaries at which runoff will exit the property. The analysis shall focus on the portion of the drainage way "immediately" downstream from the project. This area shall extend downstream from the project to a point in the drainage basin where the project area is 10 percent of the total basin area. The analysis shall be in accordance with the Gwinnett County Stormwater Management Manual.

800-20.4 The following criteria shall be evaluated by the authorized registered professional preparing the Stormwater Management Report, and in determining whether stormwater treatment is required for any portion of any site:

- A. Existing land uses downstream.
- B. Anticipated future land uses downstream.
- C. Magnitude of increase in peak flows due to development.
- D. Presence of existing drainage problems.
- E. Capacity of existing and anticipated drainage systems.
- F. Creation of concentrated flows where none had occurred previously.
- G. Availability of feasible locations for stormwater management facilities.
- H. Existing flows generated off-site which pass through the project site.
- I. The nature of the receiving watercourse.

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800-20.5 When a development uses an existing facility where the last approved certification and record drawing of the facility was over 18 months prior to the new development's submittal, the authorized registered professional shall provide one of the following:

- A. A new survey, drawing and certification showing that the outlet structure is constructed as approved on the as-built plan and the flood storage and water quality volume of the facility is equal to or greater than the volume required when the facility was approved.
- B. Construction plans and calculations showing that the outlet structure will function as designed and the flood storage and water quality volume of the facility will be equal to or greater than the volume required when the facility was approved once proposed maintenance has been performed.
- C. A new record survey, drawing, study, and certification showing that the facility meets the development requirements when the facility was approved.
- D. Current inspection of existing stormwater management structures with deficiencies noted
- E. BMP Landscaping Plans if required at time of BMP construction.

800-20.6 All design related to stormwater shall be in accordance with the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards.

800-20.7 A certified record survey of each facility shall be prepared by an authorized registered professional currently registered in the State of Georgia. A certified record drawing of the facility shall be prepared based upon this survey. The authorized registered professional shall certify that the facility functions hydraulically as designed. Documentation demonstrating the required testing outlined in the Gwinnett County Stormwater Management Manual for the proposed stormwater BMP shall also be provided. The record drawing shall be submitted to the Department at least one week prior to the issuance of a Certificate of Occupancy or Final Plat approval (as appropriate for the project). Record drawings of off-site facilities shall be recorded at least one week prior to the recording of the Final Plat.

800-20.8 The applicant shall certify and provide documentation that all other applicable environmental permits have been acquired for the site prior to approval of the stormwater management report.

Section 800-30. Stormwater Runoff Quality/Reduction.

800-30.1 Stormwater runoff quality/reduction can be provided through runoff reduction, water quality, or any combination of the two. The applicant shall provide runoff reduction in accordance with the requirements of the Gwinnett County Stormwater Management Manual. To the extent Runoff Reduction has been determined to be infeasible for all or a portion of the site using the Planning and Development Practicability Policy, then water quality shall apply for the remaining runoff from a 1.2-inch rainfall event. The design professional shall schedule a meeting with Planning and Development when requesting removal or reduction of the runoff reduction requirement.

800-30.2 All projects, unless exempt pursuant to Section 800-90.1, that meet one or more of the following criteria, shall provide water quality treatment or runoff reduction as outlined in the Gwinnett County Stormwater Management Manual.

- A. New development that involves the creation or addition of 5,000 square feet or more of impervious cover.
- B. New development that involves land-disturbing activities of 1 acre or more.
- C. Redevelopment (excluding routine maintenance and exterior remodeling) that creates, add, or replaces 5,000 square feet or greater of new impervious surface area or that involves land disturbing activity of 1 acre or more.

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- D. New and redevelopment of land development activities that are part of a subdivision or other common plan of development and the sum of all associated impervious surface area or land disturbing activities that are being developed as of such development meets or exceeds the thresholds in A and B above.
- E. Runoff from any new development or redevelopment, regardless of size, that is defined by the Director of Water Resources, or their designee, to be a hotspot land use or activity shall be adequately treated and addressed through the use of structural stormwater controls, nonstructural practices, and pollution prevention practices.
- F. Linear transportation projects that exceed the threshold in (A) or (B) above.

800-30.3 Requirements for a certified record survey and applicable addendum as necessary to the Stormwater Management Report shall be the same for water quality facilities as for stormwater management facilities in Section 800-20.7.

800-30.4 Stormwater management facilities shall not be embedded within each other.

Section 800-40. Stream Channel Protection.

800-40.1 Stream channel protection shall be provided by using all of the following three approaches:

- A. 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event. This standard is intended to reduce the frequency, magnitude, and duration of post-development bankfull flow conditions. The volume to be detained is also known as the channel protection volume (CPv).
- B. Erosion prevention measures, such as energy dissipation and velocity control to prevent downstream erosion and stream bank damage.
- C. Preservation of the applicable stream buffer. Stream buffers not only provide channel protection but also water quality benefits and protection of streamside properties from flooding.

800-40.2 Channel protection volume is not required for post-development discharges less than 2.0 cfs at each individual discharge location for the 1-yr storm event.

800-40.3 The use of nonstructural site design practices and runoff reduction practices can reduce the channel protection volume by a proportional amount.

800-40.4 Channel protection criteria may be waived for sites that discharge into larger streams, rivers, wetlands, lakes, estuaries, or tidal waters where the reduction in the smaller flows will not have a negative impact on the stream banks or channel integrity.

800-40.5 Stormwater management facilities shall not be embedded within each other.

Section 800-50. Stormwater Peak Flow Design Criteria.

800-50.1 Whenever a stormwater management report indicates that an adverse impact from stormwater runoff is expected to result from the development of a property, that project shall be provided with stormwater management facilities that provide storage (i.e., detention, extended detention, or retention) as discussed in the Gwinnett County Stormwater Management Manual. The meaning of "adverse impact" shall apply when pre-development flows did not cause difficulties and post-development flows do. Difficulties shall include, but not be limited to, situations where 25-year velocities exceed the non-erosive velocity of the stream, habitable structures are shown to be subject to increased depth of flooding for any frequency up to and including the regulatory flood, and stormwater facilities that cannot carry the design storm in accordance with these regulations.

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800-50.2 Stormwater management facilities required in Section 800-50.1 shall be provided, unless the authorized registered professional certifies and provides certified documentation supporting the conclusion to the Director that at least one of the following is true and correct as applicable.

- A. The non-detained, post-development runoff will leave the project site as sheet flow and will not have an adverse impact upon downstream properties. The increase for a 25-year storm should not exceed 1 cfs over a length perpendicular to the flow of 100 feet.
- B. The effect of stormwater treatment would be to concentrate flows where sheet flow had occurred under pre-developed- conditions, and any impact of increased sheet flows upon downstream properties would be less adverse than that which would result from the concentrated flows from a stormwater management facility even if energy dissipation devices were employed.
- C. The undetained flow will pass through downstream properties, in drainage easements obtained by the developer, to an existing stormwater treatment facility, which has been designed to manage the upstream property's runoff, or to the point in the downstream analysis (see Section 800-20.3) which shows that stormwater treatment is not required.
- D. Where the site runoff will flow directly into a stream or lake without crossing off-site properties:
 - 1. 24-hour detention of the one-year storm is not required per section 800-40.4. In this case, the post-development peak flows in the receiving channel may exceed pre-development flows by the smaller value of up to 0.1 percent of the pre-development flows or 3 cfs in the downstream analysis.
 - 2. Only peak detention for the two-year through the 25-year storm, Overbank Flood Protection, is not required if the downstream analysis using timing of the hydrographs shows no adverse impact from the exit of the site to the point immediately downstream from the project in the drainage basin where the project area is 10 percent of the total drainage basin area.

800-50.3 Should the authorized registered professional conclude that overbank flood protection and extreme flood protection may not be necessary because of anticipate compliance with Section 800-50.2, rigid compliance with all of the following criteria is mandatory:

- A. A stormwater management report shall always be required whether stormwater detention is required.
- B. If the applicant proposes to show that, the stormwater treatment requirement may be eliminated for all or a portion of a project, then a pre-submittal conference with the Department staff is required prior to preparation and submittal of construction plans for the project.
- C. At the pre-submittal conference with the staff, the consultant shall be prepared to discuss the downstream analysis findings as follows:
 - 1. The affected stream must be analyzed downstream from the project to a point where the project area is 10 percent of the total drainage basin. The analysis must include all culverts, obstructions, existing and potential erosion problems, elevations of existing improvements, and any other existing modifications to natural conditions.
 - 2. If the existing downstream conditions are overburdened by the pre-developed flows in the stream, then stormwater treatment shall be required unless the developer elects to eliminate the downstream overburdened conditions at his or her expense when the development occurs.
- D. If there are any existing drainage complaints downstream, then stormwater treatment shall be required unless the developer elects to minimize the conditions causing the complaint at his or her expense when the development occurs.
- E. Even if the overbank flood protection and the extreme flood protection requirements are waived water quality and channel protection are still required as outlined in sections 800-30 and 800-40.

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800-50.4 All stormwater management facility hydrologic and hydraulic analysis and design calculations shall be certified by the qualified registered professional. The design shall be in accordance with the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards.

800-50.5 All stormwater management facilities designed to treat peak flow, water quality or a combination of the two shall control the peak flow rates associated with storms having 2-year, 5-year, 10-year, and 25-year return frequencies so that flows from the developed site do not exceed those associated with pre-development conditions at the project boundary nor increase the peak flows downstream from the project to the point in the drainage basin where the project area is 10 percent of the total basin. Where adverse impacts, as defined in Section 800-50.1, occur during the 100-year storm, the 100-year storm shall also be regulated.

800-50.6 The hydrologic methodology used for any given project shall conform to the Gwinnett County Stormwater Management Manual.

800-50.7 Runoff coefficients and runoff curve numbers used for pre- and post-development conditions shall be consistent with those shown in the Gwinnett County Stormwater Management Manual.

800-50.8 The USGS Method shall be used to check the magnitude of peak flows.

800-50.9 Calculations shall be provided showing how all times of concentration or lag times were computed, both for pre- and post-developed conditions. Likewise, adequate support must be provided for all composite runoff coefficients or curve numbers used.

Section 800-60. Stormwater Management Facility Location and Easement Criteria.

800-60.1 For the purpose of this UDO, a stormwater management facility shall be deemed to consist of the total area of the approved stormwater BMPs outlined in the Gwinnett County Stormwater Management Manual. The stormwater BMPs outlined in the Gwinnett County Stormwater Management Manual are intended to be used in a series or as a standalone, where applicable, to meet the requirements outlined within the Gwinnett County Stormwater Management Manual and Chapter 800 of the UDO. If multiple BMPs are used to meet the stormwater requirements, then all BMP's will be marked a stormwater management facility.

800-60.2 Stormwater management facilities, to the greatest extent feasible, shall be located to minimize the amount of flow generated on the project that bypasses the facility.

800-60.3 No portion of any stormwater management facility shall disturb any required (as opposed to voluntary) buffer, landscape strip, or tree protection area, except that natural bottom stormwater management ponds and its appurtenant structures, which require no grading and removal of trees, may encroach into a required construction buffer.

800-60.4 No portion of a private stormwater management facility shall encroach upon a public right-of-way.

800-60.5 Stormwater management facilities may be located within utility easements or rights-of-way, or encroach upon utility easements or rights-of-way, upon receipt by the Department of written permission from both the property and utility owners.

800-60.6 Stormwater management facilities may be constructed within open space areas required under this UDO, if the following criteria are met:

- A. Ownership of the area will be held by a Qualified Property Owner's Association, Homeowners Association, or other private parties.
- B. Permanent structures, such as buildings and swimming pools, will not be constructed within the boundaries of the stormwater management facility.
- C. Stormwater management facilities within recreation areas will be approved only if the design of the area includes recreation amenities such as ball fields, tennis courts, grassed open areas or other similar

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improvements. The intent is to provide recreation facilities with stormwater treatment as a secondary feature.

- D. Permanent stormwater treatment features shall not interfere with the intended use of the recreation amenity, (i.e., a ditch or large swale shall not traverse a ball field, an inlet structure shall not be in a tennis court, etc.).

800-60.7 If a residential subdivision is provided with an on-site stormwater management facility not located within an open space area as specified in Section 800-60.6 above, then a mandatory property owners' association shall be established for the ownership and maintenance of all stormwater BMP's within a residential subdivision. All stormwater BMP's which are placed on an individual private parcel, or which crosses multiple private lots must be located within a private drainage easement, which will include access to the right-of-way, to be maintained by the HOA. If the project is provided with an off-site stormwater treatment facility, a mandatory property owners' association shall be established for its maintenance. The association bylaws shall be recorded concurrently with the recording of a Final Subdivision Plat.

- A. The following stormwater BMP's must be located on a separate lot, owned by the HOA, if not located on a recreation area lot as specified in Section 800-60.6:
 - 1. Bio-retention Areas
 - 2. Dry/Dry Extended Ponds
 - 3. Stormwater Ponds
 - 4. Stormwater Wetlands
 - 5. Submerged Gravel Wetlands
 - 6. Multi-purpose Detention Areas

800-60.8. Residential Stormwater Management Facilities.

- A. In a residential subdivision, the following stormwater management facilities are not permitted:
 - 1. Oil-Grit Separator
 - 2. Organic Filter
 - 3. Proprietary Devices
 - 4. Sand Filters
 - 5. Underground Detention (except in the R-IF zoning district and mixed-use zoning districts, if authorized by the Director)
 - 6. Or any additional BMP's deemed unacceptable by Planning & Development.

800-60.9 A non-residential subdivision is not required to locate an on-site stormwater management facility on a separate lot. The property owners served by a stormwater management facility that provides runoff reduction, water quality, channel protection, overbank flood protection, extreme flood protection or any combination for more than one property owner or is located off-site shall enter into a maintenance agreement acceptable to the County for the facility's maintenance. However, if desired by the developer, the facility may be located on a separate lot if it is owned and maintained by a mandatory property owners' association.

800-60.10 In a residential subdivision, a private drainage easement at least 20 feet in width in accordance with the UDO section 1000-10.3B shall be required to provide access to all linear stormwater BMPs from a public street. The private drainage easements are to be shown on the subdivision's recorded plat and clearly labeled as a private drainage easement to be maintained by the HOA.

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800-60.11 Stormwater management facility access easement requirements for stormwater BMPs shall, at a minimum, meet the requirements outlined in the Gwinnett County Stormwater Management Manual.

800-60.12 Stormwater BMP's must be designed and installed as outlined in the Gwinnett County Stormwater Management Manual.

800-60.13 For every type of stormwater treatment facility, a planned safe flow path must be provided for conveyance of flows of water in excess of those for which the stormwater treatment facility was designed. In many instances, this function can be provided through installation of an emergency spillway. Emergency spillways are usually excavated open channels, either vegetated or paved with reinforced concrete.

800-60.14 Stormwater management facility maintenance requirements are as follows:

- A. The detention storage capacity or function of any stormwater management facility whether natural or man-made, shall not be removed or diminished without the express approval of the Department.
- B. In a residential subdivision, it shall be the responsibility of the Qualified Property Owner's Association, Homeowners Association, or other private parties to maintain the operational characteristics of any stormwater management facility constructed on their property for stormwater management pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt, or debris.
- C. In a non-residential subdivision or project served by a stormwater management facility that provides stormwater management for more than one property or by an off-site facility, the property owners shall enter into a maintenance agreement with the County for maintenance of the operational characteristics of the facility pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt, or debris.
- D. In a non-residential project with an on-site stormwater management facility which serves only that project, the property owner shall be responsible to maintain the operational characteristics of the facility pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt or debris as outlined in the Gwinnett County Stormwater Management Manual
- E. Where no maintenance agreement has been recorded, it shall be the responsibility of the property owner to maintain the operational characteristics of any facility constructed on their property for stormwater management pursuant to County requirements, to keep the access drive free of obstructions, and to maintain the facility free of obstruction, silt, or debris.
- F. Prior to the issuance of a Development Permit, the owner shall submit a detailed schedule of long-term maintenance and inspection activities. This schedule of activities shall be incorporated into a maintenance agreement to be entered into between the County and the owner. The schedule shall describe all maintenance and inspection activities and the parties responsible. The maintenance agreement shall be in a form acceptable to the County and shall be recorded in the deed records of the Clerk of Superior Court of Gwinnett County.

800-60.15 Stormwater management facilities shall be constructed in accordance with plans reviewed and approved by the Department and shall be in place and inspected prior to the initiation of other improvements. If the stormwater management is planned to be handled by a lake a stormwater BMP which shall provide runoff reduction, or any other stormwater management system as determined by Planning and Development, a temporary stormwater management facility shall be provided and shall remain in place until such time as the stormwater management facility has become effective in providing stormwater management. The construction shall be in accordance with the Gwinnett County Stormwater Management Manual.

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800-60.16 Upland Area Easements in non-residential subdivisions that are claimed as undisturbed upland areas for the site shall be recorded in an easement acceptable to the County. These areas shall be left in a natural, undisturbed condition except for walking trails.

800-60.17 Prior to or concurrent with the recording of a Final Plat for a subdivision, or issuance of a Certificate of Occupancy for a non-subdivision project, the developer, shall meet the surety requirements of Chapter 900 and provide acceptable surety such as a bond or letter of credit, as determined by Planning & Development, providing for the stormwater management facility(ies) for a period of not less than 18 months. At the end of 18 months, the County may require the surety to be renewed due to anticipated improvements caused by such concerns as future construction activity within the project limits in the drainage basin. The surety for a facility shall be renewed until:

A. The surface water drainage area within the project has undergone final stabilization and all planned site construction activity has been completed.

B. All stormwater runoff in the surface water drainage area within the project is coming from undisturbed or stabilized areas.

C. All stormwater facilities and infrastructure construction has been completed and permanent vegetation is established.

D. If a temporary stormwater management facility is still in use at the end of the site construction, then the surety shall remain in place until the accumulation of acreage of undeveloped lots, lots with no completed permanent structure and no final stabilization, within the surface water drainage area within the project is less than 10 percent of the total area of the common development draining to the facility.

E. Two months prior to surety release, the permanent stormwater management facility shall be installed and cleaned out, as necessary. A new record survey, drawing and certification showing that the volume of the facility is equal to or greater than the volume shown in the record survey, drawing and certification when the facility was approved shall be submitted. Documentation demonstrating the required testing outlined in the Gwinnett County Stormwater Management Manual for the proposed stormwater BMP shall also be provided. As an alternative, a new record survey, drawing and certification showing that the facility complies with this UDO as specified in Section 800-20.7. shall be submitted. If deficiencies are found, the developer shall be required to update the stormwater BMP to comply with the approved development plans.

800-60.18 The methodology used for an underground or rooftop stormwater management facility design shall conform to the Gwinnett County Stormwater Management Manual and the Gwinnett County Storm Sewer Pipe Standards. In the case of rooftop stormwater treatment, permissible structural loads and weatherproofing shall be governed by the Georgia State Building Code as may be amended by the County.

Section 800-70. Dams.

800-70.1 New Dams Subject to the Requirements of The Georgia Safe Dams Act and Rules for Dam Safety. Dams proposed to be 25-feet or more in height and proposed to have a maximum storage volume of 100 acre-feet or more and are determined to be a Category I dam as defined by the Georgia Safe Dams Program shall be subject to the requirements of the Georgia Safe Dams Act, the Rules for Dam Safety adopted by the Georgia Department of Natural Resources and the USDA Soil Conservation Service's Technical Release No. 60 "Earth Dam and Reservoirs". The developed shall obtain necessary approvals and permits from the Environmental Protection Division of the Georgia Department of Natural Resources for the project and the dam prior to securing a Development Permit from the Department.

800-70.2 New Dams Subject to Regulation by Gwinnett County. Dams proposed to be nine feet or more in height, but less than 25 feet in height, in combination with an impounding capacity proposed to be 20 acre-feet or

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more at maximum water storage elevation, but less than 100 acre-feet, or dams determined Category II dams by the Georgia Safe Dams Program shall be subject to the following:

- A. If the developer elects not to construct the new dam to the design standards for new dams as contained in the Rules for Dam Safety, then a dam breach analysis for the dam shall be submitted with the construction plans for review and authorization prior to securing a Development Permit from the Department. The professional engineer shall use the computer model such as "DAMBRK" for the dam breach analysis.
- B. Should the new dam not meet the design standards for new dams as contained in the Rules for Dam Safety, then only the following uses and structures shall be permitted within the dam breach zone:
 1. Agriculture that requires no structures for human habitation within the dam breach zone including forestry, livestock raising, and agricultural and forestry access roads.
 2. Fences.
 3. Roads, driveways, and parking areas.
 4. Utility poles, towers, pipelines, water treatment outfalls and facilities, or similar facilities and structures.
- C. If the developer elects to construct the new dam in accordance with the design standards for new dams as contained in the Rules for Dam Safety, then new development shall be permitted within the dam breach zone. However, the dam shall meet the design standards for new dams as contained in the Rules for Dam Safety if development currently exists or is proposed in the dam breach zone.
- D. Construction plans for new dams defined herein shall be submitted to Gwinnett County for review for the project and the dam prior to securing a Development Permit from the Department.
- E. For any dam that is proposed not to meet the design standards for new dams as contained in the Rules for Dam Safety, the developer shall obtain a dam breach easement, recorded with the Clerk of Superior Court, from any offsite property owner where it is proposed for the dam breach zone to extend off the property where the dam is being constructed. The developer shall also cause a dam breach easement to be recorded upon the property being developed.

Prior to recording of a Final Plat or issuance of a Certificate of Occupancy, as appropriate, an as-built certification from a professional engineer shall be submitted to the Department. The certification shall state that the dam is constructed in accordance with the provisions of these regulations as well as the authorized construction plans. If the project is for the development of a subdivision, the developer shall also establish a legal entity, acceptable to Gwinnett County, such as a mandatory Property Owners Association, at time of recording of the Final Plat, responsible for the maintenance of the dam and its impoundment.

800-70.3 Existing Dams. Existing dams that are located on a project site and will remain after construction is complete, shall comply with the provisions of this Chapter and all referenced chapters and sections as if they were new dams.

800-70.4 Existing Category II Dams. When an existing Category II dam may be reclassified to a Category I dam because of a proposed development downstream of the dam, the following shall be provided by the developer for review by the Georgia Safe Dams Program. The following information shall be provided:

- A. Location of the Category II dam and the proposed development.
- B. A surveyed cross-section of the stream valley at the location of the proposed development including finished floor elevations.

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- C. A dam breach analysis must establish the height of the floodwave in the downstream floodplain. A professional engineer shall complete the dam breach analysis in accordance with the Safe Dams Program Quality Assurance Program.

Section 800-80. Stormwater Management Practices for Redevelopment Projects.

800-80.1 Stormwater management for redevelopment projects must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual. For redevelopment, the pre-developed conditions may take into account the existing conditions unless the existing development causes a negative impact on downstream property. The standards within this section apply to all redevelopment sites that meet the criteria in section 800-30.2.

800-80.2 The purpose of a stormwater management analysis is to support the redevelopment of the project site using Best Management Practices and diligent engineering. The report must follow the guidelines set forth in the Gwinnett County Stormwater Management Manual and is required for all redevelopment projects. A qualified registered professional in the State of Georgia shall certify the analysis. The analysis shall be in accordance with the criteria specified in Section 800-20.

800-80.3 Water quality treatment of stormwater runoff for the purposes of water quality shall be in accordance with the criteria specified in the Gwinnett County Stormwater Management Manual under the following conditions:

- A. Water quality treatment must be met for the entire site when the disturbed area is more than 50 percent of the property.
- B. Water quality treatment must be met for the improvements on the site only when the disturbed area is less than 50 percent of the property.

800-80.4 Channel protection and stormwater treatment for a redeveloped project site shall be provided in accordance with the criteria specified in the Gwinnett County Stormwater Management Manual under the following conditions:

- A. Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three approaches:
 - 1. Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer.
 - 2. Erosion prevention measures such as energy dissipation and velocity control.
 - 3. 24-hour extended detention storage of the one-year, 24-hour return frequency storm event (channel protection volume).
- B. Downstream overbank flood and property protection shall be provided by controlling (attenuating) the post-development peak discharge rate to the pre-developed conditions which may take into account the existing conditions unless the existing development cause a negative impact on downstream property or the 25-year, 24-hour return frequency storm event.
- C. Extreme flood and public safety protection shall be provided by controlling and safely conveying the 100-year, 24-hour return frequency storm event such that flooding is not exacerbated.
- D. For receiving water with trout stream designation, the stormwater management plan must address the protection of the trout waters.

800-80.5 Existing stormwater management facilities used for a redevelopment project must have a recorded maintenance agreement and must meet one of the following criteria:

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- A. Where water quality treatment for a proposed redevelopment is to be provided in an existing detention facility, water quality treatment must be provided for the original project area. A modification to the 25-year detention requirement may be granted for retrofitting the stormwater management facility to meet current water quality regulations. Granting a modification will meet the intent and purpose of these regulations when:
 - 1. The detention requirements of the current regulations are provided in the facility for the 1-year, 2-year, 5-year and 10-year storm. For a retrofitted facility, the volume of the 1-year storm shall be based on the original project area being detained instead of the total area draining to the facility.
 - 2. The water quality requirements of the current regulations are provided for the original project area in the facility.
 - 3. The 25-year ponding limits create a hardship if no modification is granted.
 - 4. The outlet structure meets the requirements of the current regulations.
- B. Where water quality is treated in a regional stormwater management facility approved between April 27, 1999, and January 1, 2001, all lots within the treated area shall either conform to the original permit requirements and water quality regulations at the time of approval or conform to the current water quality regulations. A volume verification confirming facility maintenance in accordance with the original design shall be certified by an authorized registered professional and submitted to the Department for review and approval.
- C. Where stormwater detention is treated in a regional detention facility approved before April 27, 1999, all lots within the treated area shall conform to current water quality and channel protection regulations. A volume verification confirming facility maintenance in accordance with the original design shall be certified by an authorized registered professional and submitted to the Department for review and approval.

Section 800-90. Exemptions.

800-90.1 Exemptions from the Gwinnett County Stormwater Management Manual Standards are listed below:

- A. Land disturbing activity conducted by local, state, authority, or federal agencies, solely to respond to an emergency need to protect life, limb, or property or conduct emergency repairs;
- B. Land disturbing activity that consists solely of cutting a trench for utility work and related pavement replacement;
- C. Land disturbing activity conducted by local, state, authority, or federal agencies, whose sole purpose is to implement stormwater management or environmental restoration
- D. Repairs to any stormwater management system deemed necessary by the Director;
- E. Agricultural practices as described O.C.G.A. 12-7-17(5) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in (A) or (B);
- F. Silvicultural land management activities as described O.C.G.A. 12-7-17(6) within areas zoned for these activities with the exception of buildings or permanent structures that exceed the threshold in (A) or (B);
- G. Installations or modifications to existing structures solely to implement Americans with Disabilities Act (ADA) requirements, including but not limited to elevator shafts, handicapped access ramps and parking, and enlarged entrances or exits.

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800-90.2 Gwinnett County Department of Transportation should reference the Gwinnett County Stormwater Management Manual to determine stormwater management requirements for each project.

- A. If such requirements are ascertained to be infeasible to implement in certain site development or transportation projects due to one or more of the factors listed below, a Determination of Infeasibility Report shall be submitted to the Department of Planning and Development for review, along with the associated set of proposed plans. Factors affecting infeasibility include:
 - 1. Additional cost of 10 percent or greater of the total project costs, including right of way acquisition, construction, and utility relocation costs.
 - 2. Project delay of 180 days or greater due to implementation of post-construction controls.
 - 3. Loss of habitat for endangered or threatened species.
 - 4. Significant damage to a cultural resource, such as a historical site, archaeological site, or cemetery.
 - 5. Significant damage to a community resource, such as a park, wildlife refuge, trail, or school.
 - 6. Implementation would result in the displacement of a residence or business.
 - 7. Implementation would result in the violation of a State or Federal law, regulation, or standard.
- B. The Determination of Infeasibility Report must be prepared by an authorized registered professional and include the following sections based on the applicable affecting factor(s):
 - 1. Written narrative justifying limitations.
 - 2. Summary of proposed additional costs.
 - 3. Projected number of days for delays.
 - 4. Vicinity map showing site limitations.

Chapter 810. Stormwater Conveyance Systems

Section 810-10. General Requirements.

810-10.1 Drainage Improvements Required. Stormwater conveyance systems, which may include but are not limited to culverts, storm drainage pipes, catch basins, drop inlets, junction boxes, headwalls, gutter, swales, channels, and ditches, shall be provided for the protection of public right-of-way and private properties adjoining project sites and/or public rights-of-way. Stormwater conveyance systems that are designed to carry runoff from more than one parcel, existing or proposed, shall meet the requirements of this UDO.

810-10.2 Design Criteria—General. All stormwater conveyance systems design calculations shall be certified by the authorized registered professional (refer to Section 800-20):

- A. Methods to calculate stormwater flows shall be in accordance with the Gwinnett County Stormwater Management Manual.
- B. All portions of a stormwater conveyance system shall be analyzed using the same methodology.
- C. Run-off coefficients used for the Rational Method and runoff Curve Numbers used for the SCS Method shall be consistent with those shown in the Gwinnett County Stormwater Management Manual.

810-10.3 Design Criteria—Conveyance Systems. Conveyance system design is to be in accordance with the methods contained in the Gwinnett County Stormwater Management Manual. The 100-year ponding limits at and upstream of the culvert shall be shown on the Development Plans and on the Final Plat (if applicable).

Section 810-20 Collection System Guidelines.

810-20.1 Outlet Location — Conveyance Systems.

- A. Outlet structures (such as headwalls) shall not be located closer to the project site's property line with an adjoining property than the greater of the distance necessary to construct velocity protection or a flow distance equal to six pipe diameters. For non-circular conduits, this distance shall be six times the rise dimension of the conduit.
- B. The invert elevation of a piped conveyance system outlet shall be no more than two feet above the elevation of the bottom of the receiving watercourse.

810-20.2 Energy Dissipation. The maximum post-developed flow velocity at the project site's downstream property line with an adjoining tract shall not exceed the maximum pre-developed flow velocity. Calculations shall be required to support this velocity standard.

810-20.3 Concentrated Flows.

- A. The discharge of concentrated flows of stormwater into public roadways shall be avoided as practicable. In no case shall such concentrated flows, including flows from swales, ditches, draws, driveways, or piped systems, exceed the allowable peak flow rates in Table 810.1 below

Table 810.1. Maximum Flows into Streets.

Street Classification	Allowable Peak Flow Rate For a 2-Year Storm
Local	2.0 cfs
Minor Collector	1.0 cfs
Other	0.5 cfs

- B. In residential subdivisions, the drainage area contributing to the peak flow along any property line between lots within 50 feet of the building setback line for either lot shall not exceed 2 acres, unless contained within a piped drainage system or maintained in a natural watercourse. The stormwater conveyance shall be in a drainage easement.

Section 810-30. Walls.

810-30.1 When permanent grades are proposed with a resulting slope steeper than one foot vertical for every three feet of horizontal, resulting wall height (measured from top of footing to top of wall) will exceed four feet, or surcharge loading will be applied to the back side of the wall, then an appropriate earth retaining structure shall be designed and permitted. The wall may be constructed of concrete, masonry, segmental block or wire basket units, or other appropriate structural materials. Walls that do not exceed six feet in height may also be constructed of timber. Retaining Wall design shall be in compliance with the current Georgia State Minimum Standard Building Code- and ASCE/SEI 7-16. As applicable, wall design shall also comply with ACI 318-18 (Concrete Wall), TMS 402-16 (Masonry Wall), NCMA Design Manual for Segmental Walls (Modular Wall), and/or ANSI/AWC NDS-2018 (Wood Wall). Walls exceeding six feet in height shall be designed and drawings shall be prepared by a Georgia Registered Professional Engineer.

810-30.2 Walls and wall foundations or supports shall be located in such a fashion as to not encroach upon existing or proposed drainage easements, drainage courses, or floodplains. Walls shall be constructed so that the zone of influence from the wall shall not encroach upon the area of potential excavation to maintain, service or replace a utility facility such as stormwater, sanitary sewer, or water facility. Grading on each side of the wall shall be designed so that the wall will not encumber the natural flow of stormwater surface runoff. Walls and wall

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supports shall be located at a distance from easements to allow for anticipated future maintenance of the easement while still maintaining the structural integrity of the wall.

810-30.3 Retaining/detention pond walls of any height that are proposed for the purpose of stormwater management must be designed by a Georgia Registered Professional Engineer and must be permitted. Walls shall be designed for hydrostatic loading under full pond conditions and retained backfill soil under dry pond conditions. The hydrological design must allow for a freeboard dimension and emergency overflow capacity that meets the requirements outlined in the Gwinnett County Stormwater Management Manual. The overflow device should be placed above the projected 100-year flood elevation within the detention area. Detention area and wall calculations are required submittals to Gwinnett County Planning and Development.

810-30.4 Retaining walls constructed in or adjacent to a residential subdivision shall comply with the following:

- A. For proposed developments with a residential component, no greater than 50% of a stormwater management facility perimeter may be walled without approval from the Director of Planning & Development.
- B. Retaining Walls along the perimeter of a stormwater management facility where the top of wall elevation exceeds the surface elevation and which face a habitable structure and/or a public right-of-way, private access easement or other means of access, shall be screened. The screening shall include native vegetation supplemented as necessary via a preserved landscape strip at least 20-ft in width, a planted landscape strip at least 15-ft in width and the wall may be faced with brick or stone. The strip shall be located a minimum of 10-ft from the face of wall. Vegetation shall be maintained by the property owner on non-residential properties, or a qualified homeowner's association on residential properties or a property owner's association.
- C. Retaining walls which face the property line of a residential property or properties shall be located a minimum of 1.5 times the height of the retaining wall from the property line or within the building setbacks of the property/lot. The wall setback area shall be landscaped with native vegetation to screen the wall from the adjacent property.

810-30.5 Any construction that may impact or be within the right-of-way of an existing or proposed water or sanitary sewer easement must be approved by the utility providing service.

Chapter 900. Development Conformance, Sureties, and Maintenance

Section 900-10. Development Conformance, Sureties and Maintenance, in General.

900-10.1 Prerequisite to Final Plat, Certificate of Completion, or Certificate of Occupancy. The submittal and acceptance of a Certificate of Development Conformance shall be a prerequisite to the approval of a Final Plat or issuance of a Certificate of Occupancy or Certificate of Completion for any project, or portion thereof, included in a Development Permit, except for single-family and two-family structures. The approval shall reflect the certification by the owner, being the subdivider or developer, that all site work and construction has been accomplished according to the terms of the approved plans and permits, and that all improvements intended for maintenance, supervision and/or dedication to the public are in compliance with appropriate standards, regulations, codes, and ordinances. Such approval shall be revoked in cases of fraud or whenever unauthorized changes are made to the site without the benefit of required permits.

900-10.2 Submission Requirements. Upon completion of the project as authorized for construction by the development permit, the subdivider/developer, shall file the following items with the Director:

- A. A Certificate of Development Conformance in a form as required by the Director, accompanied by an executed Development Performance and Maintenance Agreement and related surety bonds, or other surety forms, as appropriate and acceptable to the Director.
- B. Record drawings of all stormwater management facilities.
- C. Modifications to the limits of the 100-year floodplain (if any).
- D. An "as-built" hydrology study for the project with the actual parameters from the record drawing of the stormwater management facilities.
- E. A record drawing of the sanitary sewer facilities shall also be prepared and submitted to the Plan Review Section for review and approval. If the owner is a corporation, the documents shall be executed by the President, or Vice-President, be affixed by a corporate seal, and either the corporate secretary shall attest to the signature and affix the corporate seal, or a Certificate of Corporate Resolution shall also be submitted.

900-10.3 Certificate of Development Conformance Approval Process.

- A. Following final inspection and approval of all record drawings, the Director shall require an executed Certificate of Development Conformance from the subdivider/developer.
- B. Final approval by the Director shall not be shown on the Certificate of Development Conformance until all requirements of these and other applicable regulations have been met.
- C. Once the Department has approved the Certificate of Development Conformance and after all maintenance and performance bonds are released, the Director or designee shall certify by signature on the original of the Certificate of Development Conformance that all of the requirements of this UDO and the conditions of zoning approval have been met, and that all other affected departments have approved the development or Final Plat.
- D. For developments with private streets, all required improvements and installations must be completed in accordance to the applicable rules and regulations of Gwinnett County.

900-10.4 Project Closeout and Continuing Maintenance.

- A. *Development Performance and Maintenance Agreement.* Based on the approved Certificate of Development Conformance, the owner shall file a Development Performance and Maintenance Agreement with the Department, along with any required Certificate of Corporate Resolution and performance or maintenance surety, as a prerequisite to the approval of a Final Plat or issuance of a

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Certificate of Occupancy for any part of a project included in the development permit, except for single-family and two-family residential structures. The Development Performance and Maintenance Agreement shall be in a form as required by the Director, and shall include the following:

1. Maintenance surety shall be filed to warrant to the County that all newly completed street improvements including but not limited to street pavement, curbing, sidewalks, water and sewer lines, appurtenances, stormwater facilities, wall(s), berms, and required landscaping within the right-of-way shall be maintained in compliance with the standards and rules and regulations of Gwinnett County. Such surety shall:
 - a. Be conditioned upon the faithful maintenance by the principal, being the subdivider, owner or developer of the public streets and drainage facilities within public streets or easements, in compliance with this UDO and all other applicable rules and regulations within a specified time, not less than 18 months;
 - b. Be payable to, and for the indemnification of the County;
 - c. Be an amount equal to 50 percent of the cost of construction of the work required, as calculated based on yearly contract prices or County contracts, where applicable;
 - d. Be with a surety company entered and licensed to do business in the State of Georgia; and
 - e. Be in a form acceptable to the Director or to the County Attorney.
 2. A Performance surety shall be filed to warrant to the County that all improvements and installations required for the Development Permit or Final Plat approval, but not yet completed, shall:
 - a. Be conditioned upon the faithful performance by the principal, being the subdivider, owner or developer of all work required to complete all improvements and installation for the development, or approved portion thereof, in compliance with this UDO and all other rules and regulations within a specified time, not to exceed 12 months, unless an extension for additional time is granted;
 - b. Be payable to, and for the indemnification of, the County;
 - c. Be in an amount equal to the cost of construction of the work required plus an additional 50 percent of said costs, as calculated based on the yearly contract prices or County contracts, where available;
 - d. Be with surety by a company entered and licensed to do business in the State of Georgia; and,
 - e. Be in a form acceptable to the Director or the County Attorney.
- B. *Continuing Maintenance.* The surety principal, being the subdivider, owner, or developer, shall be responsible for maintaining the public streets and drainage facilities within public rights-of-way or easements for the surety period after the date of approval of the Certificate of Development Conformance. Repairs shall be made for any deficiencies identified within the surety period or the bonds shall be called to complete same.
- C. *Indemnification.* Indemnification of the County against any and all liability for damages arising as a result of errors or omissions in the design or construction of the development for a period of ten years. If liability is subsequently assigned or transferred to a successor in title or other person, a copy of such legal instrument shall be filed with the Clerk to Superior Court.
- D. *Transfer of Land Ownership during the Maintenance and/or Performance Agreement Time Period.* No person, firm, partnership, association, corporation, estate, trust, developer, subdivider or any other

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owner or agent shall transfer title of any property by reference to, exhibition of, or any other use of any map or plat illustrating the subdivision of land of which there are active maintenance or performance bonds without first providing to Gwinnett County, as beneficiary, a newly executed Development Performance and Maintenance Agreement from the new owner or developer. All required performance or maintenance sureties acceptable to Gwinnett County shall accompany the new Agreement as deemed necessary.

900-10.5 Maintenance and Performance Surety.

- A. The maintenance surety and the performance surety, required from the subdivider, owner/developer or the contractor employed by the owner/developer, may be in the form of cash deposited with the County, or a surety bond, or letter of credit from a bank or other financial institution in a form acceptable to the Director or County Attorney.
 1. The surety bond shall be issued by a surety company authorized by law to do business in the State of Georgia pursuant to a current certificate of authority to transact surety business by the Commissioner of Insurance.
 2. The letter of credit shall be an irrevocable letter of credit issued by a bank or savings and loan association, as defined in O.C.G.A Code Section 7-1-4.
 3. The cash escrow shall be in the form of cashier's check issued to Gwinnett County by a bank or savings and loan, as defined in O.C.G.A Code Section 7-1-4
- B. The performance surety and maintenance surety shall, in all cases, be provided in an amount as required in Section 900-90.4 as applicable. All cost estimates which form the basis of the bond value shall be as prepared by or acceptable to the Department.
- C. The Maintenance Bond period shall not be less than 18 months from the date of approval of the Certificate of Development Conformance for the installation of the public streets and drainage facilities improvements within the right-of-way unless an extension for an additional 12 months is requested by the subdivider or developer and granted by the Director. The Performance Bond period of application shall not exceed 12 months unless an extension of an additional 12 calendar months has been requested by the subdivider or developer and granted by the Director.
- D. If a period of 18 months elapses from the commencement of the maintenance period for any subdivision and defects, noncompliance, or violations still exist to the extent that the subdivision has not been accepted by the County, the County is authorized to withhold issuance of any and all permits or to refuse inspections to any subdivider/person on the project in dispute or any other project in which the subdivider/person may have a financial interest, or both, who violates or fails to comply with this UDO.

900-10.6 Maintenance Agreement for Water and Sanitary Sewer Installation. An Owner and Developer Agreement required from the subdivider, owner/developer or the contractor employed by the owner/developer, for sanitary sewer installation and water main installation is required by the Department of Water Resources. The Owner and/or developer agree that they or their contractor will maintain the installation for a period of one year from the date of final approval by correcting all defects or deficiencies in material and workmanship. The Owner and/or Developer further agree that the warranty period shall be extended an additional four years when the defects are a direct result of the installation of non-specified materials or the application of non-specified construction practices or methods.

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Section 900-20. Warranty, Surety and Maintenance for Trees and Landscape Materials.

900-20.1 Upon final installation of new trees, shrubs or other landscape material planted to meet the requirements of this UDO, and following acceptance by the Department in accordance with the procedures set forth herein, the owner shall either provide proof of warranty or post a Maintenance Bond or other acceptable surety, warranting the new trees, shrubs, or landscape material for a period of no less than one year. This section shall not apply to individual residential lot trees or street trees.

900-20.2 *Inspection.*

- A.** The Department shall perform an inspection of the plantings and landscape materials required by this UDO prior to expiration of the one-year warranty or maintenance period. The owner shall be notified of any replacements or restoration that must be made to maintain compliance with this UDO.
- B.** Required landscape material found to be dead or near death shall be replaced prior to release by the Department of the warranty or maintenance surety. In no case shall replacement be delayed greater than 30 days from notification unless a performance bond is posted with the Department.

900-20.3 *Performance Surety.*

- A. Compliance Prior to Certificate of Occupancy or Final Plat Approval.** In the event that new trees proposed to be planted to achieve the Tree Density Standard as set forth in the Tree Regulations contained herein, or other trees or landscape material required to be planted as set forth in this Chapter, are not installed upon application for a Certificate of Occupancy or Final Plat approval as appropriate to the project, then a Performance Bond or other acceptable surety shall be posted with the Department in accordance with the performance bonding requirements and provisions of this UDO.

900-20.4 Compliance upon Permit Completion or Expiration. Properties where a permit is issued to conduct land-disturbing activities that do not require the issuance of a Certificate of Occupancy or the approval of a Final Plat, or said activities as authorized are completed or the permit expires, shall comply with the Tree Density Standard of Section 630-30, and as follows:

- A. *Clearing, Clearing and Grubbing, or Grading Only Permits***
 - 1. Replacement trees proposed to be planted to achieve the Tree Density Standard of Section 630-30 which are not planted upon completion or prior to expiration of a clearing, clearing, and grubbing, or grading permit, shall be planted within 30 days of the completion or expiration of said permit unless a performance bond is posted with the Department.
- B. *Development Permits***
 - 1. Replacement trees proposed to be planted to achieve the Tree Density Standard of Section 630-30 which are not planted upon expiration, as opposed to completion, of a development permit shall be planted within 30 days of expiration of said permit unless a performance bond is posted with the Department.

Section 900-30. Additional Requirements for Stormwater Facilities

900-30.1 Prior to or concurrent with the recording of a Final Plat for a subdivision, or issuance of a Certificate of Occupancy for a non-subdivision project, the developer, shall provide acceptable surety such as a bond or letter of credit, as determined by Planning & Development, providing for the stormwater management facility(ies) for a period of not less than 18 months. At the end of 18 months, the County may require the surety to be renewed due to anticipated improvements caused by such concerns as future construction activity within the project limits in

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the drainage basin. A renewed surety may be required up to a total maximum of 10 years. The surety for a facility shall be renewed during the ten-year period until:

- A. The surface water drainage area within the project has undergone final stabilization and all planned site construction activity has been completed.
- B. All stormwater runoff in the surface water drainage area within the project is coming from undisturbed or stabilized areas.
- C. All stormwater facilities and infrastructure construction have been completed and permanent vegetation is established.
- D. If a temporary stormwater management facility is still in use at the end of the site construction, then the surety shall remain in place until the accumulation of acreage of undeveloped lots, lots with no completed permanent structure and no final stabilization, within the surface water drainage area within the project is less than 10 percent of the total area of the common development draining to the facility.
- E. Two months prior to surety release, the permanent stormwater management facility shall be installed and cleaned out, as necessary. A new record survey, drawing and certification showing that the volume of the facility is equal to or greater than the volume shown in the record survey, drawing and certification when the facility was approved shall be submitted. Documentation demonstrating the required testing outlined in the Gwinnett County Stormwater Management Manual for the proposed stormwater BMP shall also be provided. As an alternative, a new record survey, drawing and certification showing that the facility complies with this UDO as specified in Section 800-20.7. shall be submitted. If deficiencies are found, the developer shall be required to update the stormwater BMP to comply with the approved development plans.

Chapter 1000. As-Builts

Section 1000-10. As-Built Drawings.

1000-10.1 As-built drawings shall show the location, vertical and horizontal alignment, and finished elevations (top and inverts, as appropriate) of the improvements listed below:

- A. Drainage system pipes and channels.
- B. Bridges or culverts.
- C. Stormwater management facilities.
- D. Sanitary sewer system. (In accordance with the requirements of the Gwinnett County Department of Water Resources.)
- E. Water system. (In accordance with the requirements of the Gwinnett County Department of Water Resources.)
- F. Streets. {Street centerlines showing angles of deflection and standard curve data of intersection, radii, length of tangents and arcs, and degree of curvature with basis of curve data. Also indicate pavement width and pavement structure (individual thickness of wearing course, binder course, base, and/or sub-base).}
- G. Curb and gutter, sidewalks, multi-purpose trails, bicycle facilities, and recreation improvements on property dedicated to the public.
- H. Signage in public rights-of-way and other public dedicated areas.
- I. Any other improvements subject to maintenance by the County.

1000-10.2 As-built drawings as required above shall bear the stamp and certification of a Professional Engineer or Registered Land Surveyor.

1000-10.3 An as-built survey is required for sites located within the Chattahoochee River Corridor and subject to the Metropolitan River Protection Act after construction is completed prior to issuance of a Certificate of Occupancy and shall be prepared by a Registered Land Surveyor. The as-built survey shall include the requirements of the House Location Plan in Subsection 320-140.5.C. and in addition shall require the following to be shown on the survey:

- A. Land Vulnerability Categories;
- B. Impervious surfaces including but not limited to house footprint, garage, driveway, deck(s), patio(s), gazebo, swimming pool, retaining walls, and entry sidewalks;
- C. Clearing limits;
- D. Calculations for impervious and cleared square feet, including allowances and as-built;
- E. Stream buffers and impervious surface setbacks.

Section 1000-20. Stormwater As-Built Plan Review Process.

All constructed stormwater infrastructure improvements, including but not limited to new, replaced, or extended conveyance systems, shown on Final Plats shall be as-built and submitted prior to recording for review and

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approval by the Stormwater, Water and Sewer Plan Review Section of the Department. The design and construction of such system shall comply with the current policy and procedures of the Department and in accordance with the following documents as applicable: Gwinnett County Storm Sewer Pipe Standards and The Gwinnett County Standard Drawings.

Section 1000-30. Water and Sewer As-Built Plan Review Process.

All constructed improvements, including but not limited to the extension, replacement, or new installation of any portion of the water distribution system or sanitary sewer system, shall be submitted for review and approval by the Stormwater, Water and Sewer Plan Review Section of the Department. The design and construction of such improvements shall comply with the current policy and procedures of the Gwinnett County Department of Water Resources and in accordance to the following documents as applicable: The Sanitary Sewer Installation Regulations and Specifications, also known as the Sanitary Sewer Standards Manual and the DWRSSS; The Sanitary Sewer Pump Station and Force Main Design and Construction Standards for Developer Installed Systems; The Water Main Design and Sanitary Sewer Design and Construction Standards and Specifications and the Gwinnett County Backflow Prevention Manual.

Chapter 1010. Subdivisions

Section 1010-10. Subdivision Exemptions.

1010-10.1 General Requirements. For the purpose of the UDO the types of activities contained in this Section shall be considered subdivisions but exempt from the "procedures" and "required public improvements" portions of this Unified Development Ordinance, except as noted. Each such subdivision shall be drawn in accordance with Final Plat standards pursuant to the requirements of this Unified Development Ordinance and shall be submitted in an appropriate format and the appropriate fees to the Department for review and approval. Upon approval, the Director shall authorize the recording of the plat with the Clerk of Superior Court of Gwinnett County and grant the issuance of building permits pursuant to the Codes and Ordinances of Gwinnett County.

1010-10.2 Recombinations. The combination or recombination of all of two or more buildable lots of record, where the total number of lots is not increased and the resultant lots or parcels are in compliance with Title 2 of this Unified Development Ordinance.

1010-10.3 Minor Subdivision.

- A. The division of a buildable lot of record into 5 or fewer lots, provided:
1. Each proposed lot complies with all requirements of Title 2 of this Unified Development Ordinance, unless variances are granted as permitted within this UDO, and is limited to single-family detached residential uses.
 2. All project related slope and utility easements as well as necessary street right-of-way shall be provided at no cost to the County as determined by the Department based upon the officially adopted Long Range Road Classification Map.
 3. Each lot thus created may not be re-subdivided as a minor subdivision.
 4. Each proposed lot shall comply with the requirements of the Water and Sewer Plan Review Section of the Department of Planning and Development, as appropriate, whose approval shall be required prior to approval of the Exemption Plat by the Department.
 5. Each proposed lot shall comply with the requirements of the Environmental Health Section, as appropriate, whose certification of approval shall be required prior to approval of the Exemption Plat by the Department.
 6. Each proposed lot shall comply with the requirements of the Department of Transportation, as appropriate, whose approval shall be required prior to approval of the Exemption Plat by the Department.
 7. The Director is authorized to grant a modification from the 5-lot maximum exemption for subdivision with a minimum lot size of 0.5 acre; provided, however, modifications shall not be granted to exceed a total of 7 exempt lots. The Director may impose conditions of approval upon any modification thus granted as may be necessary to ensure the general public welfare.

1010-10.4 Final Plat of Non-Residential Lots. The division of land in any non-residential, commercial, office or industrial subdivision where the purpose of the subdivision is for platting purposes only, where there are no required or proposed improvements, shall comply with the provisions of Section 1010-40 Non-residential Final Plat Specifications for "Platting Only" Purposes, provided that the following provisions are met:

- A. Each lot complies with all applicable requirements of Title 2 and Title 3 of the UDO and is limited to commercial, office or industrial use.
- B. Each lot abuts an existing street right-of-way.

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- C. All project related slope and utility easements as well as necessary street right-of-way shall be provided at no cost to the County as determined by the Department based upon the officially adopted Long Range Road Classification Map.
- D. Each lot complies with the utility and stormwater requirements of the Department of Water Resources, as appropriate, whose signature of approval shall be required prior to the Final Plat approval by the Department.
- E. Each lot complies with the requirements of the Environmental Health Section, as appropriate, whose signature of approval shall be required prior to Final Plat approval of the Department.
- F. Each lot complies with the requirements of the Fire Plan Review and Building Plan Review Sections of the Department, as appropriate, whose signature of approval shall be required prior to the Final Plat approval of the Department.
- G. All existing buildings and structures shall be shown on the plat and shall meet the dimensional standards of the applicable zoning district, unless a variance or waiver is approved for each non-standard condition.
- H. Applicable easement agreements for shared access or facilities between lot owners are recorded and copies provided to the Department.

1010-10.6 Non-residential Project Management. The creation of a lot for recording within an overall non-residential development, provided:

- A. The overall non-residential development is being undertaken as a single multi-phase or multi-use project under the unified control of a single developer, is zoned for such use or development, and an overall Preliminary Plat for the entire project has been approved by the Department.
- B. The proposed subdivision is clearly intended to transfer title for financing or building management purposes and not for the sale of the property for future development, to the satisfaction of the Director.
- C. The proposed lot has been approved by the Department to be provided permanent vehicular access by private drive. Said access shall be established by easement or acceptable covenant prior to or concurrently with recording of the Final Plat.
- D. The proposed lot must encompass a principal structure which has been granted a building permit and which is under construction or has been completed.
- E. The Final Plat shall be drawn to include the entirety of the overall development and shall clearly identify those lots to be recorded, those lots previously recorded and the remainder of the development which shall be labeled "not included." All easements, dedications, etc., shall be shown as appropriate or as required. Each lot shall be consistent with the zoning approved for the overall development and the applicable requirements of Title 2 of this Unified Development Ordinance.

1010-10.7 Amnesty Lots. The designation of a lot as a buildable lot of record if the lot was recorded between June 2, 1970, and the effective date of this Unified Development Ordinance but not reviewed and approved under the provisions of the Subdivision Regulations in effect at that time, provided:

- A. The Exemption Plat is limited to one individual lot and no property which adjoins the lot is, or has been, owned by the applicant in whole or in part.
- B. The lot meets all requirements of Title 2 of this Unified Development Ordinance, and the applicant demonstrates to the satisfaction of the Director that approval of the lot will not create nonconformity to the requirements of Title 2 of this Unified Development Ordinance on any other portion of the original property from which the lot was subdivided.

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- C. The lot abuts upon an existing public street.
- D. All project related slope and utility easements as well as necessary street right-of-way shall be provided at no cost to the County as determined by the Department based upon the officially adopted Long Range Road Classification Map.
- E. The lot shall comply with the requirements of the Water and Sewer Plan Review Section of the Department of Planning and Development, as appropriate, whose approval shall be required prior to approval of the Exemption Plat by the Department.
- F. The lot shall comply with the requirements of the Environmental Health Section, as appropriate, whose certification of approval shall be required prior to approval of the Exemption Plat by the Director.
- G. A Record Survey certified by a Land Surveyor currently registered in the State of Georgia shall be submitted to and approved by the Department showing the lot.

Section 1010-20. Final Plat Approval Process.

The subdivision of lots where there is a development permit issued for construction of new street(s) and related utility, stormwater and infrastructure improvements shall comply with the following provisions for Final Plat approval prior to the recording of such lots.

1010-20.1 When the applicable provisions of the UDO have been complied with, the subdivider may submit to the Department an application for Final Plat approval.

1010-20.2 The Director shall indicate on a review copy of the plat or in a written memorandum all comments related to compliance of the Final Plat with this UDO, conditions of zoning approval, and the regulations of other County departments and State agencies as appropriate. The Director shall have final staff authority to determine the applicability of any and all comments under Title 2 and Title 3 of the UDO or conditions of zoning approval.

1010-20.3 The Director may not approve any Final Plat whereon is shown or by which is otherwise created a lot which would present particularly severe and unusual difficulties for construction of a building, which would clearly require a variance to be reasonably usable, or which is otherwise "unbuildable" due to the presence of floodplain, unusual configuration, lack of Environmental Health Section approval, or for any other justified reason.

1010-20.4 Lots which would appear to be buildable under certain circumstances and would require further study or additional information before a building permit could be issued, but which present problems or unusual difficulties which can reasonably be addressed or overcome by the lot owner, may be included in the Plat with the appropriate notation of the steps necessary to allow issuance of a building permit.

1010-20.5 The subdivider shall be responsible for compliance with all codes, regulations, and zoning requirements and for the satisfaction of all of the comments of the Director.

1010-20.6 Final approval by the Director shall not be shown on the Final Plat until all requirements of these and other applicable regulations have been met, and the Director shall require an executed Certificate of Development Conformance and an executed Development Performance and Maintenance Agreement from the subdivider. The Agreement, when applicable, shall be accompanied by a bond, letter of credit or other acceptable surety providing for the maintenance of all installations and improvements required by this UDO in the subdivision for a period not to exceed 18 months following the date of approval of the Certificate of Development Conformance.

The Director shall further determine that either:

- A. All improvements and installation to the subdivision required for approval of the Final Plat under the rules and regulations of Gwinnett County have been completed in accordance with the appropriate specifications; or

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- B. All of the stormwater drainage and management facilities, water and sewer utilities, private utilities (power, gas, cable, etc.), or proof of payment for private utilities, street base and curbing construction required for approval of the Final Plat have been properly installed and completed and, for those required improvements not yet completed (grassing, required landscaping, sidewalks, entrance monuments, final street topping etc.) a performance bond shall have been filed by the subdivider with the Development Performance and Maintenance Agreement.
- C. Payment for materials and installation of streetlights, traffic control, and street name signs shall be made to the Department of Transportation prior to approval of the Final Plat. Payment of the cost of striping major thoroughfares or required signalization if required and not completed by the developer shall also be received by the Department of Transportation prior to approval of the Final Plat.
- D. Payment of the required plat review and authorization fees shall be made to the Department of Planning and Development prior to approval of the Final Plat.

1010-20.7 Once the Department has approved the Final Plat and all other affected departments and agencies of government as required have certified compliance, the Director shall certify by signature on the original of the plat that all of the requirements of the UDO and the conditions of zoning approval have been met, and that all other affected departments have approved the plat. The Final Plat shall not be deemed approved until it has been signed by the Director and where use of septic tanks is proposed, by a duly authorized representative of the Environmental Health Section.

1010-20.8 Once the Final Plat has been certified, the Director shall authorize it to be recorded with the Clerk of the Superior Court of Gwinnett County. The subdivider shall provide the Department an electronic copy of the recorded plat.

1010-20.9 Periodically, but no less often than once each month, the Director shall submit a listing of all approved Final Plats to the Board of Commissioners for ratification of acceptance of all dedications.

Section 1010-30. Procedures for Revising Final Plats.

1010-30.1 When it becomes necessary or desirable to revise a recorded Final Plat, the subdivider shall prepare a letter to the Director documenting the reason for and extent of the revision and drawing(s) that contain the subject revisions along with a review fee determined by the Board of Commissioners. The revised plat shall contain a new signature block, be dated with the current date, be drawn at an appropriate scale and contain notation(s) indicating the nature, location and number of the revision, the previously recorded subdivision name, date and book and page number of the revision(s). The subdivision name, date and book and page number of the original or previously recorded recording shall be noted on the new plat; and the new plat drawings shall be designated as "Revised Final Plat".

1010-30.2 All revisions shall be recorded on the original Final Plat, and a statement to that effect shall be noted on the Final Plat.

1010-30.3 If necessary, corresponding revisions to construction drawings, as-built drawings, engineering data and reports also shall be prepared, labeled appropriately, submitted, reviewed, and certified by the Director, and filed in the Department along with a review fee determined by the Board of Commissioners.

1010-30.4 The Director shall forward the proposed plat revision, Final Plat and any related documentation to the appropriate departments or agencies that would be involved in checking the accuracy of the revision. After receipt of approval from such other departments or agencies, the Director shall certify the Revised Final Plat and submit it to the Board of Commissioners for ratification.

1010-30.5 The subdivider shall be responsible of re-recording the certified revised plat with the Clerk of the Superior Court and provide a copy of recorded plat to the Department.

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Section 1010-40. Non-residential Final Plat Specifications for "Platting Only" Purposes.

The subdivision of non-residential lots for the purpose of platting only, where there are no improvements proposed, shall conform to the provisions of Section 1010-40 and all requirements of Georgia Law, including but not limited to O.C.G.A § 15-6-67 and latest amendments regarding recordation of maps and plats specifications.

1010-40.1 Size. The Final Plat shall be clearly and legibly drawn in black ink on good legible reproducible paper or approved print material. The scale of the Plat shall be 100 feet to 1 inch (1"= 100') or larger. Sheet size shall not exceed 24 inches by 36 inches.

1010-40.2 Certified Boundary Survey. The Final Plat shall be based on a certified boundary survey delineating the entirety of the property contained within the Final Plat and tied to a point of reference (tie point) with the same degree of accuracy as the boundary survey itself. The survey shall have an accuracy of no less than 1 in 10,000 feet.

1010-40.3 The Final Plat "for platting only" purposes shall contain the following information:

- A. Title or name of the Final Plat, subdivision name, unit number, land district, land lot number and parcel(s) of the parent tract(s) and the proposed tracts.
- B. Name, address, email address, and telephone number of owner of record, and the subdivider (if not the owner).
- C. Name, address, and telephone number and registration number of the land surveyor and professional firm associated with the Final Plat.
- D. Date of plat preparation and date of the field survey, graphic scale, north arrow; notation as to the reference of bearings to magnetic, true north or grid north, and indication whether bearings shown are calculated from angles turned.
- E. Location sketch of tract showing major surrounding features.
- F. Name of former subdivision, if any or all of the Final Plat has been previously recorded.
- G. Case number and date of approval for any applicable rezoning, special use permit, variance, modification, or waiver affecting the property.
- H. Location and dimension of any buffer, landscape strip, special setback, no-access easement, etc.
- I. Boundary lines of the tract, to be indicated by a heavy line, giving distances to the nearest one-hundredth foot and bearings to the nearest second. Bearing and distance to designated tie point shall be shown. The Plat shall have a closure precision of 1 foot in no less than 10,000 feet.
- J. Municipal or County jurisdictional lines approximately tied to the lines of the subdivision by distance and angles when such lines traverse or adjoin the subdivision; land lot lines traversing or adjoining the subdivision shall also be indicated.
- K. Locations, widths, and names of all streets and alleys within and immediately adjoining the plat, the location and widths of all internal public crosswalks, and all other public rights-of-way.
- L. Street center lines showing angles of deflection and standard curve data including radii, length of arcs and tangents between curves, point of curvature (PC) and point of tangency (PT).
- M. Lot lines with dimensions to the nearest one-tenth of a foot and bearings to the nearest second, and radii of rounded corners, as necessary to delimit each lot.
- N. Building setback lines along streets with dimensions.

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- O. When lots are located on a curve or when side lot lines are at angles other than 90 degrees, the lot width measured in accordance with the provisions of Title 2 of the UDO may be required to be shown, if deemed necessary by the Department for clarity.
- P. Lots numbered in numerical order and blocks lettered alphabetically.
- Q. Location and size of all drainage pipe, the location and size of all stormwater management facilities, and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- R. The location and size of all public sanitary sewer lines and manholes and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- S. The location and size of all public water lines and fire hydrants and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- T. Location of any areas to be reserved, donated, or dedicated to public use with notes stating their purpose and limitations. Location of any areas to be reserved by private deed covenant for common use of all property owners or dedicated to a property owner's association.
- U. Accurate location, material, and description of monuments and markers (all monuments shall be in place prior to approval of the Final Plat).
- V. All information required under the Georgia Metropolitan River Protection Act for recording of plats, if applicable.
- W. Extent of the 100-year floodplain and a floodplain chart showing the area within and outside the floodplain for each lot containing any portion of the 100-year floodplain. Origin of the floodplain data shall be indicated.
- X. Street address numbers, lot or tract number designations, and parcel identification numbers of the proposed tracts.
- Y. All other notes or notations as may be required by the Department.
- Z. Certificates and statements specified in Section 1010-40.6.

1010-40.4 Reserved.

1010-40.5 Warranty or Right-of-Way Deeds. If any lands shown on the Final Plat are proposed for dedication to Gwinnett County, including street rights-of-way or easements, a Warranty Deed transferring title to said land in fee simple, in a form acceptable to the Director, shall be submitted with the Final Plat application.

1010-40.6 Certificates. Each Final Plat shall bear the following certificates or statements printed or stamped thereon as follows:

A. *Final Registered Land Surveyor's Certificate:*

It is hereby certified that this plat is true and correct as to the property lines and all improvements shown thereon and was prepared from an actual survey of the property made by me or under my supervision; that all monuments shown hereon actually exist, and their location, size, type, and material are correctly shown. The field data upon which this plat is based has a closure precision of 1 foot in _____ feet and an angular error of _____ per angle point and was adjusted using _____ rule. This plat has been calculated for closure and is found to be accurate within 1 foot in _____ feet and contains a total of _____ acres. The equipment used to obtain the linear and angular measurements herein was _____.

By: _____

REGISTERED GEORGIA LAND SURVEYOR

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REG NO _____ DATE OF EXPIRATION _____

B. *Owners Acknowledgment and Declaration:*

STATE OF GEORGIA, COUNTY OF GWINNETT

The owner of the land shown on this plat and whose name is subscribed hereto, in person or through a duly authorized agent, acknowledges that this plat was made from an actual survey, and dedicates by this Acknowledgment and Declaration to the use of the public forever all streets, sewer collectors, lift stations, drains, easements, and other public facilities and appurtenances thereon shown.

SIGNATURE OF SUBDIVIDER DATE SIGNED

PRINTED OR TYPED NAME OF SUBDIVIDER

SIGNATURE OF OWNER DATE SIGNED

PRINTED OR TYPED NAME OF OWNER

C. *Final plat approval:*

The Director of the Department of Planning and Development certifies that this plat complies with Title 2 and Title 3 of the Gwinnett County Unified Development Ordinance (UDO) and that it has been approved by all other operational County departments, as appropriate. This plat is approved.

DATED THIS _____ DAY OF _____, 20__.

DIRECTOR, DEPARTMENT OF PLANNING AND DEVELOPMENT

D. *Environmental Health Section Certification (for subdivisions served by septic tanks):*

The lots shown hereon have been reviewed by the Environmental Health Section of the Gwinnett County Board of Health and with the exception of lots _____ are approved for development. Each lot is to be reviewed by the Environmental Health Section of the Gwinnett County Board of Health and approved for septic tank installation prior to the issuance of a Building Permit.

DATED THIS _____ DAY OF _____, 20__.

BY: _____

TITLE: _____

ENVIRONMENTAL HEALTH SECTION

E. *Public Notice - Drainage:*

NOTE: Gwinnett County assumes no responsibility for overflow or erosion of natural or artificial drains beyond the extent of the street right-of-way, or for the extension of culverts beyond the point shown on the approved and recorded subdivision plat. Gwinnett County does not assume responsibility for the maintenance of pipes in drainage easements beyond the County right-of-way.

Stream Buffer Easements are to remain in a natural and undisturbed condition.

NOTE: Structures are not allowed in drainage easements.

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Section 1010-50. Survey Monuments.

360-50.1 Lot Corner Survey Monuments. All corners shall be marked with an iron rebar or pin, at least one-half inch in diameter and 18 inches long and driven so as to extend no less than 1 inch above the finished grade.

Section 1010-60. Assignment of Names and Addresses.

1010-60.1 Subdivision or Development Names.

- A. Proposed subdivision or development names must be reviewed and approved prior to the issuance of a Development Permit. Names will be reviewed by the Department upon submittal of the Subdivision Development Plan or Site Development Plan.
- B. Proposed names shall not duplicate or too closely approximate, phonetically, the name of any other subdivision or development in Gwinnett County or its municipalities except for extensions of existing subdivisions or developments.
- C. Subdivision and development names may be reserved if submitted and approved along with the Concept Plan for the project.

1010-60.2 Street Names.

- A. Proposed street names for public or private streets must be reviewed and approved prior to approval of a Development Permit or recording of a Final Plat. Street names may be reserved through approval as shown on an approved Concept Plan or Subdivision Development Plan for the subdivision.
- B. Street names shall consist of a root name of the subdivider or developer's choosing and a suffix designation (such as "Street", "Avenue", "Drive", etc.), and shall be followed by a quadrant suffix. Directional prefixes (i.e., "North", "South") and the prefixes "old" or "new" shall not be used.
- C. All streets shall bear the proper quadrant suffix appropriate to its location within the County (i.e., NE, NW, SE, and SW), as determined by the Department.
- D. A proposed street that is obviously in alignment with another already existing and named street shall bear the name of such existing street, unless this requirement is waived by the Department of Transportation.
- E. Except within the same development, no proposed street name shall duplicate (be spelled the same or be phonetically the same) as an existing street name within Gwinnett County regardless of the use of such suffix designations as "Street", Avenue", "Boulevard", "Drive", "Place", "Way", "Court", or however otherwise designated. In the same subdivision, a root name may not occur more than twice.
- F. All street root names, and suffix designations are subject to the approval of the Department. Obscene or otherwise unacceptable language, abbreviations, contractions, or initials may not be used.
- G. Root names shall consist of no more than 13 characters including spaces. Letters not occurring in the English alphabet, hyphens, and numerals shall not be used.

1010-60.3 Street Address Assignments.

- A. A street address number will be assigned prior to issuance of a Building Permit. For any new structure proposed on a property which has not been assigned an address, a street number will be assigned upon confirmation or establishment of the property as a buildable lot of record under the requirements of this UDO. Unless a public or private street is proposed, an overall development located on one buildable lot of record shall be issued a single street address. The property owner shall be responsible for numbering/lettering individual buildings, suites, and units.

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- B. Subdivisions. House numbers will be assigned prior to Exemption Plat or Subdivision Development Plan is approved for the property. . Block number assignments shall also be designated for abutting major street name signs at this time.
- C. For each of the plans listed below projects will be numbered after the developer submits the Site Development Plan or Subdivision Development Plan to the Department of Planning and Development.
 - 1. Commercial/Industrial projects or buildings.
 - 2. Apartment projects.
 - a. One number shall be assigned to the apartments when the project is located on one parcel.
 - 3. Condominium projects.
 - a. Individual units shall be numbered consecutively if located along public or private streets.
 - b. Units in the "stacked-flat" configuration shall use the same numbering approach as applies to an apartment project.

Section 1010-70 Final Plat Specifications.

The subdivision of lots where there are proposed streets and related utility, stormwater, and infrastructure improvements in accordance with an approved development permit shall conform to the provisions of Section 1010-70 and all requirements of Georgia Law, including but not limited to O.C.G.A § 15-6-67 and latest amendments regarding recordation of maps and plats specifications.

1010-70.1 Size. The Final Plat shall be clearly and legibly drawn in black ink on good legible reproducible paper or approved print material. The scale of the Final Plat shall be 100 feet to 1 inch (1"=100') or larger. Sheet size shall not exceed 24 inches by 36 inches.

1010-70.2 Certified Boundary Survey. The Final Plat shall be based on a certified boundary survey delineating the entirety of the property contained within the Final Plat and tied to a point of reference (tie point) with the same degree of accuracy as the boundary survey itself. The survey shall have an accuracy of no less than 1 in 10,000 feet.

1010-70.3 Conformity to Subdivision Development Plan. The Final Plat shall substantially conform to the Subdivision Development Plan, and it may constitute only that portion of the approved Subdivision Development Plan which the subdivider proposes to record at any one time, provided that such portion conforms to the requirements of this UDO, and said portion is not inconsistent with the public health, safety, or welfare. Any substantial deviation from the Subdivision Development Plan shall require revision and reapproval of the Subdivision Development Plan.

1010-70.4 The Final Plat shall contain the following information:

- A. Name of the subdivision, unit number, land district, and land lot number.
- B. Name, address, email address, and telephone number of owner of record, and the subdivider (if not the owner).
- C. Name, address, email address, and telephone number of each professional firm associated with the portion of the subdivision within the Final Plat (engineer, surveyor, landscape architect, etc.).
- D. Date of plat drawing, graphic scale, north arrow; notation as to the reference of bearings to magnetic, true north or grid north, and indication whether bearings shown are calculated from angles turned.
- E. Location sketch of tract showing major surrounding features.
- F. Name of former subdivision, if any or all of the Final Plat has been previously recorded.

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- G. Case number and date of approval for any applicable rezoning, special use permit, variance, modification, or waiver affecting the property.
- H. Location and dimension of any buffer, landscape strip, special setback, no-access easement, etc.
- I. Boundary lines of the tract, to be indicated by a heavy line, giving distances to the nearest one-hundredth foot and bearings to the nearest second. Bearing and distance to designated tie point shall be shown. The Plat shall have a closure precision of 1 foot in no less than 10,000 feet.
- J. Municipal or County jurisdictional lines approximately tied to the lines of the subdivision by distance and angles when such lines traverse or adjoin the subdivision; land lot lines traversing or adjoining the subdivision shall also be indicated.
- K. Locations, widths, and names of all streets and alleys within and immediately adjoining the plat, the location and widths of all internal public crosswalks, and all other public rights-of-way.
- L. Street center lines showing angles of deflection and standard curve data including radii, length of arcs and tangents between curves, point of curvature (PC) and point of tangency (PT).
- M. Lot lines with dimensions to the nearest one-tenth of a foot and bearings to the nearest second, and radii of rounded corners, as necessary to delimit each lot.
- N. Building setback lines along streets with dimensions.
- O. When lots are located on a curve or when side lot lines are at angles other than 90 degrees, the lot width measured in accordance with the provisions of Title 2 of this UDO may be required to be shown, if deemed necessary by the Department for clarity.
- P. Lots numbered in numerical order and blocks lettered alphabetically.
- Q. Location and size of all drainage pipe, the location and size of all stormwater management facilities, and the location, dimensions and purpose of any easements, including construction or slope easements if required.
- R. The location and size of all public sanitary sewer lines and manholes and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- S. The location and size of all public water lines and fire hydrants and the location, dimensions, and purpose of any easements, including construction or slope easements if required.
- T. Location of any areas to be reserved, donated, or dedicated to public use with notes stating their purpose and limitations. Location of any areas to be reserved by private deed covenant for common use of all property owners or dedicated to a homeowner's association.
- U. A statement of private covenants if any shall be recorded on the plat; otherwise, if covenants are separately recorded provide a statement as follows:

This plat is subject to the covenants set forth in the separate document(s) attached hereto dated _____, which hereby become a part of this plat, and which were recorded and signed by the owner.
- V. Accurate location, material, and description of monuments and markers (all monuments shall be in place prior to approval of the Final Plat).
- W. Certificates and statements specified in Section 1010-70.7.
- X. All information required under the Georgia Metropolitan River Protection Act for recording of plats, if applicable.

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- Y. Extent of the 100-year floodplain and a floodplain chart showing the area within and outside the floodplain for each lot containing any portion of the 100-year floodplain. Origin of the floodplain data shall be indicated.
- Z. Street address numbers and block number designations for street names on abutting streets, where appropriate.
- AA. Individual lots shall be designated HLP (House Location Plan), RDP (Residential Drainage Plan) and/or RDS (Residential Drainage Study) if such are required by the Department to be approved prior to issuance of a Building Permit.
- BB. All lots shall be labeled with minimum floor elevations, drainage flow arrows and designated as either a slab, basement, or slab/basement.
- CC. All other notes or notations as may be required by the Department.

1010-70.5 Warranty Deed. If any lands are shown on the Final Plat for dedication to Gwinnett County including street rights-of-way or easements, a Warranty Deed transferring title to said land in fee simple, in a form acceptable to the Director, shall be submitted with the Final Plat application.

1010-70.6 Property Owner's Association/Homeowner's Association. If any lands are shown on the Final Plat for dedication to a Property Owners Association in order to meet minimum park or open space requirements of the UDO, a copy of the deed of transfer for such dedication and a copy of the instrument of incorporation of the Property Owners Association/Homeowner's Association shall be submitted with the Final Plat application.

1010-70.7 Certificates. Each Final Plat shall bear the following certificates or statements printed or stamped thereon as follows:

A. *Final Registered Land Surveyor's Certificate:*

It is hereby certified that this plat is true and correct as to the property lines and all improvements shown thereon and was prepared from an actual survey of the property made by me or under my supervision; that all monuments shown hereon actually exist, and their location, size, type, and material are correctly shown. The field data upon which this plat is based has a closure precision of 1 foot in _____ feet and an angular error of _____ per angle point and was adjusted using _____ rule. This plat has been calculated for closure and is found to be accurate within 1 foot in _____ feet and contains a total of _____ acres. The equipment used to obtain the linear and angular measurements herein was _____.

By: _____

REGISTERED GEORGIA LAND SURVEYOR

REG NO _____ DATE OF EXPIRATION _____

B. *Owners Acknowledgment and Declaration:*

STATE OF GEORGIA, COUNTY OF GWINNETT

The owner of the land shown on this plat and whose name is subscribed hereto, in person or through a duly authorized agent, acknowledges that this plat was made from an actual survey, and dedicates by this Acknowledgment and Declaration to the use of the public forever all streets, sewer collectors, lift stations, drains, easements, and other public facilities and appurtenances thereon shown.

SIGNATURE OF SUBDIVIDER DATE SIGNED

PRINTED OR TYPED NAME OF SUBDIVIDER

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SIGNATURE OF OWNER

DATE SIGNED

PRINTED OR TYPED NAME OF OWNER

- C. *Final Plat Approval:* The Director of the Department of Planning and Development certifies that this plat complies with Title 2 and Title 3 of the Gwinnett County Unified Development Ordinance (UDO) and that it has been approved by all other operational County departments, as appropriate. This plat is approved subject to the provisions and requirements of the Development Performance and Maintenance Agreement executed for this project between the Owner and Gwinnett County. Acceptance of constructed greenways, if shown on the final plat, is hereby expressly excluded from approval and maintenance, and shall not be accepted by the County until said greenway is completed in its entirety and verified that it has been built to standards as set forth in the UDO.

- D. *Environmental Health Section Certification (for subdivisions served by septic tanks):*

The lots shown hereon have been reviewed by the Environmental Health Section of the Gwinnett County Board of Health and with the exception of lots _____ are approved for development. Each lot is to be reviewed by the Environmental Health Section of the Gwinnett County Board of Health and approved for septic tank installation prior to the issuance of a Building Permit.

DATED THIS _____ DAY OF _____, 20__.

BY: _____

TITLE: _____

ENVIRONMENTAL HEALTH SECTION

PRINTED OR TYPED NAME OF OWNER

- E. *Public Notice - Drainage:*

NOTE: Gwinnett County assumes no responsibility for overflow or erosion of natural or artificial drains beyond the extent of the street right-of-way, or for the extension of culverts beyond the point shown on the approved and recorded subdivision plat.

NOTE: Stream Buffer Easements are to remain in a natural and undisturbed condition.

NOTE: Structures are not allowed in drainage easements.

- F. *Fee-simple layout plan for single-family detached lots less than 7,500 square feet:* Every Final Plat for a subdivision proposing single-family detached houses on fee-simple ownership lots less than 7,500 square feet shall contain the following statement:

NOTE: Lot layout plan is required on each lot to be approved by the Department of Planning and Development prior to a Building Permit being issued. This lot layout plan must be drawn to scale on a copy of a certified boundary survey of the lot. It must show all proposed improvements and easements on the lot and must indicate compliance with the requirements of Title 2 of this UDO and conditions of zoning approval. It shall be the builder's responsibility to ensure that the house is staked out on the site to match the approved lot layout plan.

- G. *House Location Plans (HLP):* On any Final Plat containing a lot for which a House Location Plan approval is required prior to issuance of a Building Permit (see Section 330-20), the following statement shall be included:

HLP - HOUSE LOCATION PLAN

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A House Location Plan shall be required to be approved by the Department of Planning and Development prior to issuance of a Building Permit on those lots labeled "HLP". A House Location Plan is a scale drawing submitted by the builder at the time of the permit application. It is not required that this plan be prepared by an authorized registered professional. The purpose of this plan is to ensure that the house is properly located on the lot.

- H. *Residential Drainage Plan (RDP) or Study (RDS)*: On any Final Plat containing a lot for which a Residential Drainage Plan (RDP) or Residential Drainage Study (RDS) is required, the following statements shall be included, as applicable:

A Residential Drainage Plan (RDP) [or Residential Drainage Study (RDS)] must be approved by the Stormwater Plan Review Section of the Department of Planning and Development prior to issuance of a Building Permit on those lots labeled "RDP" or "RDS" respectively.

A Residential Drainage Study (RDS) must be conducted by the builder's design professional and approved by the Building Permits Section prior to issuance of a Certificate of Occupancy on those lots so noted on the Final Plat.