Appendix A Specification of Documents

Section 100 Preliminary Plat

The applicant for a standard subdivision development shall submit a completed Development Review application and fee, along with four copies of the proposed Preliminary Plat. The plat shall meet the requirements of Article 8 and other standards required by the Department. The standards for plat preparation shall include, but not be limited, to:

- A. Name, address, and phone number of designer of subdivision plat.
- B. Name, address, and phone number of owner of record and the developer of subdivision, if different.
- C. Proposed name of subdivision with phase numbering if applicable. List any previously assigned project names.
- D. Date of plat preparation with space for revision dates.
- E. North arrow, identified as magnetic, true or grid.
- F. Sheet size shall be thirty-six (36) inches wide and twenty-four (24) inches long or as approved by the Director. If the complete plat cannot be shown on one sheet, it may be shown on more than one sheet with an index map on a separate sheet.
- G. Graphic and numeric scale of one (1) inch equals 100 feet or as approved by the Director.
- H. Appropriate legend of symbols used on plat.
- I. Zoning district of land to be subdivided, including rezoning case number and any conditions and approval of any conditional uses or variances.
- J. Exact boundary lines of the tract indicated by a heavy line giving lengths and bearings. Provide date and source of survey.
- K. Location map showing the subdivision in relation to the surrounding area at a minimum scale of one inch to 2,000 feet. Include city and/or county jurisdictional boundaries, tax map and parcel number, and district and land lot.
- L. Landmarks such as railroads, highways, bridges, creeks, etc. as applicable.
- M. Man-made or historic structures and cultural features existing within and adjacent to the proposed development.
- N. Location of natural features including streams and water courses with direction of flow.
- O. Limits of 100-year floodplain and FEMA number and date of panel, and floodplain statement. If none, note indicating such.
- P. Article and Section of this Ordinance relating to type of subdivision.

- Q. Note as to provision of water supply and sewer disposal.
- R. Existing sanitary sewers, water mains, storm drains and culverts (size and type), and other underground facilities or utilities within easements or rights-of-way on or within 300 feet of the tract to be subdivided.
- S. Adjoining property information, including zoning district(s), subdivision name, lot arrangement and/or adjoining property owners' names, rights-of-way and easements within 300 feet of subdivision.
- T. Topographic contours at the following intervals:

<u>Ground</u>	<u>Slope</u>	Slope Interval (feet)			
Flat:	0-2%	2			
Rolling:	Over 2%	5			

- U. Proposed lot layout including building setback lines with approximate dimensions of lots, and land to be reserved or dedicated for public use, any land to be used for purposes other than single-family dwellings.
- V. Number of lots with lot numbers and block letters.
- X. Proposed streets, including right-of-way and pavement width.
- Y. Proposed storm water detention area.
- Z. Total acreage, density, minimum dwelling size and minimum lot size of project.

Section 110 Certification of Preliminary Subdivision Plat

Certification of Approval of the Preliminary Plat shall be inscribed on the plat as follows:

Pursuant to the Land Development Ordinance of Walton County, Georgia, all the requirements of preliminary subdivision approval having been fulfilled, this preliminary plat has been approved. The final plat must be recorded or a development permit must be issued within six months of the approval of the preliminary plat or the approval will expire and be null and void.

Director, Walton County Planning and Development Dept.	Date

Section 120 Final Plat Specifications

The Final Plat shall conform substantially to the Preliminary Plat and it may constitute only that portion of the approved Preliminary Plat, which the developer proposes to record and develop at any one time. The applicant shall submit three (3) copies of the Final Plat for review. The plat shall meet the requirements of Article 8 and other standards required by the Department. The standards for plat preparation shall include, but not be limited, to:

- A. Name, address, and phone number of designer of subdivision plat.
- B. Name, address, and phone number of owner/developer of subdivision.
- C. Date of plat preparation with space for revision dates.
- D. North arrow, identified as magnetic, true or grid.
- E. Sheet size shall be 24 inches wide and 36 inches long or as approved by the Director. If the complete plat cannot be shown on one sheet, it may be shown on more than one sheet with an index map on a separate sheet.
- F. One reduced copy of Final Plat at 15 inches by 18 inches on multiple sheets, including an index sheet, if required for legibility.
- G. One copy of the original tracing or reproducible print thereof drawn in permanent ink or equivalent on drafting cloth or film.
- H. Graphic and numeric scale of one (1) inch equals 100 feet or as approved by Director.
- I Appropriate legend of symbols used on plat.
- J. Name of subdivision with phase numbering, if applicable.
- K. Name of former subdivision if any or all of the proposed subdivision has been previously subdivided.
- L. Exact boundary lines of the tract determined by a field survey, to be indicated by a heavy line, giving distances to the nearest one-tenth (1/10) foot and angles to the nearest minutes, which shall be balanced and closed with an error of closure not to exceed one to five thousand (1:5,000). The error of closure shall be stated.
- M. Accurate bearings, and distances to the nearest existing street lines, benchmarks or other permanent monuments (not less than three) and description of monuments and markers.
- N. Location map at a minimum scale of one (1) inch equals 2,000 feet showing the development in relation to the immediately surrounding area and generally including well known landmarks such as railroads, highways, bridges, creeks, etc. and city and/or county jurisdictional boundaries, tax map and parcel number and district and land lot lines, if applicable.
- O. Location of adjoining property lines and the names of owner(s) of record and/or the location of adjoining subdivision lines and names.
- P. Total number of lots, total acreage and density.
- Q. Lot lines with dimensions to the nearest one tenth (1/10) foot and bearings to the nearest minute; necessary internal angles; arcs and chords, and tangent or radii of rounded corners. Building setback lines with dimensions shall be shown.
- R. Lot labels including lot numbers and block letters.
- S. Zoning district rezoning case number, date of approval and any conditions. Indicate compliance with all conditions of zoning. Variances or conditional use approvals

- obtained on the property should be shown with the case number, date of approval and conditions. Note any approved waivers from this Ordinance.
- T. Show the location, size, and type (natural or planted) of required buffers or other landscaping or screening measures in conformance with the requirements of the Tree Protection Plan and Landscape Plan as detailed in Article 12, Part 2, Section 100 C and Appendix C of this Ordinance.
- U. Exact locations, widths, and names of all streets and public access ways and rightsof-way within and immediately adjoining the platted property.
- V. Street names and addresses.
- X. Street centerlines showing angles of deflection, angles of intersections, radii, length of tangents and arcs, and degree of curvature with basis of curve date.
- Y. Soils overlay where on-site sewer system is proposed.
- Z. Topography by contours at vertical intervals of no more than five feet as determined by a field survey.
- AA. Exact location and dimensions of natural features, including streams and watercourses with direction of flow.
- BB. Show required stream buffers, stream greenways and stream setbacks adjoining State Waters or perennial streams.
- CC. Indicate source (FEMA map panel number and date) elevation and location of 100-year floodplain. If none, include note indicating such with data source and date. Include floodplain (including detention pond) lot chart.
- DD. Show location and type of all easements, including slope easements, if required, and public service utility right-of-way lines. Any areas to be reserved, donated, or dedicated to public use and sites for uses other than single-family residential purposes. Include designations stating the purpose or proposed use, area, and any use limitations of such areas, and any deed covenants reserving areas for common use by all property owners.
- EE. Label all storm drain system structures on plat, showing pipes with invert elevations. Note on the plat who is responsible for maintenance of storm drain system out of the right-of-way, including ponds, lakes and/or detention/ retention facilities.
- FF. Indicate who is responsible for the maintenance of open space, common areas, and private streets.
- GG. Show the location of all sanitary sewer and drainage structures, their dimensions and purpose. Show all pipe crossings.
- HH. Any private covenants to be recorded with the plat shall be attached.
- II. Provide any other data or information needed to show compliance with this Ordinance.

Section 130 Site Construction Plans

The site construction plans shall show the following information (The various plans may be combined where appropriate and clarity can be maintained):

- A. An Erosion and Sedimentation Control Plan prepared in accordance with the requirements of the Article 11, Part 3.
- B. Storm water Management Plan prepared in conformance with Article 11, Part 1, Section 140.
- C. Sewage Disposal Plans, as follows:
 - 1. Sanitary Sewer Plans, including the profiles and other information as may be required by the sewer provider.
 - 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 Health Department.
- D. Street Widening and Construction Data:
 - 1. Centerline profiles and typical roadway sections with pavement specifications and utility locations of all proposed streets. Profiles, and plans where required, shall be drawn on standard plan and profile sheet with plan section showing street layout, pavement and right-of-way width, curvature, and required drainage facilities. Typical roadway sections with pavement specifications and location of utilities shall be provided for deceleration and acceleration lanes and street widenings.
 - Where sanitary sewers or storm drains are to be installed within a street, the grade, size, location and invert elevation of manholes shall be indicated on the road profile.
 - 3. Profiles covering roadways that are extensions of existing roadways shall include: elevations at 50-foot intervals for a minimum of 200 feet to provide continuity consistent with the standards required by this Ordinance.
- E. Tree Protection and Landscape Plan prepared in accordance with Article 12, Part 2 100 C and Appendix C.
- F. Water System Plans, indicating proposed water main size and location, with fire hydrants on the site and fire flow data, if required. 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.
- G. Location, height, and size for all freestanding signs to be erected on the site and indication of whether lighted or unlighted.
- H. Location of all known existing landfills and proposed on-site bury pits (State EPD permit and Walton County approval may be required.)
- I. Such additional information as may be reasonably required to permit an adequate evaluation of the project.

J. Encroachments

Where construction is proposed on adjacent property, an encroachment agreement or easement shall be submitted to the Department prior to the issuance of the development permit.

K. Certificates

The following certifications shall be in the form and substance approved by the Department and inscribed directly on the Final Plat when applicable:

- 1. Engineer's Certification.
- 2. Surveyor's Certification.
- 3. Owner's certification for either public or private streets.
- 4. Certification of final plat approval for recording.
- 5. Certification of the Walton County Fire Department.
- 6. Certification of the Walton County Health Department.
- 7. Certificate of the Water System and/or sanitary sewer system provider.
- L. Documentation of federal permits, if applicable.

Section 140 Residential Structure Location Plans

When required by Article 8 of this Ordinance, the Structure Location Plan for residential lots shall be prepared in conformance with the following minimum standards:

- A. Structure Location Plans shall be prepared, signed and sealed by Land Surveyor, professional Engineer, or Landscape Architect registered in the State of Georgia, drawn to scale and may be shown on a certified boundary survey of the lot or any other drawing showing the information required below.
- B. The Structure Location Plan shall be 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 Ordinance, or other regulations as applicable.
- C. Structure 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 bearings 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 or buffer lines with dimensions and notation of the existing zoning on the property.
 - 4. The location of all buildings with finished floor elevations, 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.

- 5. All easements, public water, sewer or storm drainage facilities traversing or located on the property, septic tank, and septic tank drain field.
- 6. Subdivision name, lot designation, land lot, and district.
- 7. North arrow and graphic and numeric scale.
- 8. Limit of the 100-year floodplain, wetland areas, streams, historic structures and any applicable buffers or special building setback lines.
- 9. All other applicable requirements of this Ordinance or conditions of zoning approval.
- 10. Name, address, and telephone number of the owner and the person who prepared the Structure Location Plan.
- 11. Existing and proposed grades, and erosion and sediment control measures as needed.
- D. A Certificate of Occupancy shall not be issued for the structure or other improvements until conformance to the provisions or other requirements of the Structure Location Plan have been field verified by the Department or by a foundation survey prepared for the builder.
- E. The Structure Location Plan shall contain the following note. If the Structure Location Plan is required because of flood plain on the lot, the language contained in brackets must be included; otherwise, it should be deleted from the signature block.

"This Structure Location Plan has been reviewed for general compliance with this Ordinance and is approved for issuance of a building permit for the residential structure and other improvements shown hereon.(No framing inspection will be approved until a flood elevation certificate has been received by the Department.) This approval is granted with the provision that no Certificate of Occupancy shall be issued until conformance to this Structure Location Plan has been field verified by the Building Official or has been verified by an as-built foundation survey prepared by a Registered Land Surveyor or Professional Engineer."

Appendix B Storm Water Drainage Maintenance Policies

Section 100 Area of Responsibility

The County shall be responsible for the maintenance of the drainage system within the right of way on dedicated Streets in Unincorporated Walton County.

Section 110 Drainage Easements

A. Definition

1. Development Regulations

An easement is defined as a "Recorded authorization for a specified purpose by a property owner for the use of any designated part of the real property by another entity."

A drainage easement is used by upstream property owners to allow the flow of storm water from upstream properties to downstream properties.

A Restatement of the Law

A property owner cannot alter a drainage path that will have an effect on his neighbor's property (i.e., increase or decrease flood flows or increase flood elevations). This means that downstream property owners must accept water that flows on their property from their neighbors and that upstream property owners cannot change the flow of water onto their downstream neighbors.

B. Maintenance Responsibility

1. Easements with Open Channel Flow

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.

Recorded Easements with Pipe

Pipe systems on commercial or residential property are the property owners' responsibility.

3. Emergency Authorization

The County may conduct emergency maintenance operations on drainage systems where emergency conditions exist and where drainage easements have been recorded. Emergency maintenance shall constitute the removal of trees and other debris, which in the judgment of the County, would create a condition potentially dangerous to life or the public road system. The property owner shall reimburse the County for emergency maintenance on drainage systems. The cost of such maintenance shall become a lien on real property.

4. County Construction Policies

- a. In grassed areas affected by County construction, the County will reseed with a similar type of grass. Where seed is not available, the homeowner will be compensated using a settlement agreement. The County does not guarantee the survival of the grass. The maintenance of the grass is the property owner's responsibility.
- The County will repair any pavement damaged by County personnel or construction.
- c. The County will not replace trees or shrubs whose drip line is in the County right of way, or drainage easements that are cut down or do not survive as a result of construction. Trees and shrubs outside these limits that are damaged will be replaced with nursery stock. The County does not guarantee the survival of the plants. Maintenance of the plant material is the property owner's responsibility.
- d. Fences that obstruct the flow of water are not allowed across drainage easements with open swales/ditches. The County will remove and put back an existing fence that is removed from a piped drainage easement, temporary construction easement or for maintenance or construction purposes. The County is not required to replace or repair other structures in a drainage easement or in the County right of way. A drainage easement that is damaged may be restored to their previous state immediately prior to construction.

C. Detention Facilities

The detention storage capacity or function of any detention basin, pond or other impoundment, whether natural or man-made, shall not be removed or diminished without the express approval of Walton County.

D. Storm Water Drainage Maintenance Policies

It shall be the responsibility of the property owner to maintain the operational characteristics of any facility constructed on their property for storm water detention pursuant to County requirements and to maintain the facility free of obstruction, silt or debris.

E. Ditches Inside the Right-of-Way

Ditches inside the right-of-way should not be piped unless the ditch and shoulder will not fit in the right-of-way and other erosion control measures have been tried and have failed, or a pipe system is deemed necessary by Walton County to improve traffic safety.

F. Driveway Pipes

 Driveway pipes in a County right-of-way are the County's responsibility if Walton County approved the installation. The County will clean them out when necessary. The County will replace a pipe if it is damaged and poses a potential safety hazard, or the pipe causes a potential traffic hazard by flooding the street.

The County does not replace pipes that only cause a nuisance to the homeowner.

- 2. If a driveway pipe located in the County right-of-way causes flood damage to a residential home, the County will saw cut the driveway, remove the pavement debris, install the pipe, and backfill the driveway with granular material if all of the following conditions are met:
 - a. The property owner must purchase the type, size, and length of pipe required by the County.
 - b. The property owner is responsible for replacing the portion of the driveway pavement removed for installation.
 - c. Walton County has determined that the installation of a larger culvert will not adversely affect other property owners, will contribute to solving the flooding problem and is technically feasible to install.
 - d. Driveway pipes on private property are private problems.
 - e. The County is not responsible for installing or providing driveway pipes.

G. Driveway Curb Cuts

Driveway curb cuts are the property owner's responsibility. If water is going down a driveway causing a property owner flooding problems, it is the property owner's responsibility to solve the problem. The County will not raise a driveway to prevent storm runoff from flowing down it.

H. Burv Pits

The County shall not be responsible for bury pits.

I. Water Ponding on Street Surfaces

The County will eliminate standing water in the street only if the County deems the water as a potential traffic safety hazard or of the County determines that the benefit derived from extended pavement life exceeds the cost of fixing the problem.

Appendix C Vegetation Protection and Replacement Administrative Guidelines

Section 100 Purpose

The purpose of these standards is to facilitate the preservation and/or replacement of trees as part of the land development process within unincorporated Walton County as required in Article 12, Part 2 of the Comprehensive Land Development Ordinance.

Section 110 Definitions

All words in these standards have their customary dictionary definition except as specifically defined herein. The words "shall" and "must" are mandatory, and the words "may" and "should" are permissive.

- CALIPER: American Association of Nurserymen standard for trunk measurement of nursery stock. Caliper of the trunk shall be taken 6 inches above the ground for up to and including 4 inches caliper size, and 12 inches above the ground for larger sizes.
- CAMBIUM: Tissue within the woody portion of trees and shrubs which gives rise to the woody water and nutrient conducting system, and the energy substrate transport system in trees. Cambium growth activity results in a tree's radial development, i.e., increase in diameter.
- CAMBIAL DIEBACK: The irreparable radial or vertical interruption of a tree's cambium, usually caused by mechanical damage, such as "skinning bark"; or from excessive heat.
- CONIFEROUS: Belonging to the group of cone-bearing evergreen trees or shrubs.
- CRITICAL ROOT ZONE: The rooting area of a tree established to limit root disturbances. This zone is generally defined as a circle with a radius extending from a tree's trunk to a point no less than the furthest crown drip line. Disturbances within this zone will directly affect a tree's chance for survival.
- CROWN DRIP LINE: A vertical line extending from the outer surface of a tree's branch tips down to the ground.
- DBH: Diameter-at-breast-height is a standard measure of tree size, and is a tree trunk diameter measured in inches at a height of $4-\frac{1}{2}$ feet above the ground. If a tree splits into multiple trunks below $4-\frac{1}{2}$ feet, then the trunk is measured at its most narrow point beneath the split.
- DECIDUOUS: Not persistent; the shedding of leaves annually.
- FEEDER ROOTS: A complex system of small annual roots growing outward and predominantly upward from the system of "transport roots". These roots branch four or more times to form fans or mats of thousands of fine, short, non-woody tips. Many of these small roots and their multiple tips are 0.2 to 1mm or less in diameter, and less than 1 to 2 mm long. These roots constitute the major fraction of a tree's

root system surface area, and are the primary sites of absorption of water and nutrients.

- MAJOR WOODY ROOTS: First order tree roots, originating at the "root collar" and growing horizontally in the soil to a distance of between 3 and 15 feet from the tree's trunk. These roots branch and decrease in diameter to give rise to "rope roots." The primary function of major woody roots includes anchorage, structural support, the storage of food reserves, and the transport of minerals and nutrients.
- ROOT COLLAR: The point of attachment of major woody roots to the tree trunk, usually at or near the ground line and associated with a marked swelling of the tree trunk.
- ROOT RESPIRATION: An active process occurring throughout the feeder root system of trees, and involving the consumption of oxygen and sugars with the release of energy and carbon-dioxide. Root respiration facilitates the uptake and transport of minerals and nutrients essential for tree survival.
- ROPE ROOTS: An extensive network of woody second order roots arising from major woody roots, occurring within the surface 12 to 18 inches of local soils, and with an average size ranging from .25 to 1 inch diameter. The primary function of rope roots is the transport of water and nutrients, and the storage of food reserves.
- SOIL COMPACTION: A change in soil physical properties which includes an increase in soil weight per unit volume and a decrease in soil pore space. Soil compaction is causes by repeated vibrations, frequent traffic and weight. As related to tree roots, compacted soil can cause physical root damage, a decrease in soil oxygen levels with an increase in toxic gasses, and can be impervious to new root development.
- TRANSPORT ROOTS: System or framework of tree roots comprised of major woody roots and rope roots.
- TREE DENSITY FACTOR: A unit of measure used to prescribe and calculate required tree coverage on a site. Unit measurements are based upon tree size.

Section 120 Tree Protection and Tree Planting

The following guidelines and standards shall apply to trees proposed to be retained for credit toward meeting the minimum required tree density standard on a property:

A. Tree Protection Areas

The root system within the drip line is generally considered to be the critical root zone. To protect these critical root zones, a tree protection area shall be established around each tree or group of trees to be retained.

- 1. The tree protection area shall include no less than the total area beneath the tree canopy as defined by the drip line of the tree or group of trees collectively.
- 2. Layout of the project site utility and grading plans shall avoid disturbance of the tree protection area.

3. Construction site activities such as parking, materials storage, concrete washout, burn hole placement, etc., shall be arranged so as to prevent disturbances within tree protection areas.

B. Protective Barriers

- 1. Protective tree fencing, staking or continuous ribbon shall be installed between tree protection areas and areas proposed to be cleared, graded or otherwise disturbed on the site, prior to any land disturbance.
- 2. All tree protection areas are recommended to be designated as such with "tree save area signs" posted in addition to the required protective fencing, staking or continuous ribbon. Signs requesting subcontractor cooperation and compliance with tree protection standards are recommended for site entrances.
- 3. 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 areas.
- 4. All protective tree fencing, staking or continuous ribbon and all erosion control barriers must be installed prior to and maintained throughout the land disturbance and construction process, and should not be removed until final landscaping is installed.

C. Encroachment

If encroachment into a tree protection area occurs which causes irreparable damage to the trees, the Tree Protection 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 Ordinance, nor shall plan revision activities stop the Department from instituting action for violation of this Ordinance.

- D. New trees proposed to be planted for credit toward meeting the minimum required tree density standard in a property shall comply with the following guidelines and standards:
 - 1. The spacing of new trees must be compatible with spatial site limitations and with responsible consideration towards species size when mature.
 - 2. Species selected for planting must be ecologically compatible with the specifically intended growing site. 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, or similar publications.
 - 3. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or roots defects, and must be of good vigor, so as to assure a reasonable expectation of survivability.
- E. Upon final installation of new trees planted under the requirements of this Ordinance, and following acceptance by the Department, the owner/developer shall warrant the new trees and provide for the replacement of those which do not survive for a period of no less than one year.

Section 130 General Criteria for the Determination of Specimen Trees or Stands of Trees

A. Specimen Tree

- 1. Any tree in fair or better condition which equals or exceeds the following diameter sizes:
 - a. Large hardwoods (e.g. oaks, hickories, yellow poplars, sweet gums, etc.) 30" dbh.
 - b. Large softwood (e.g. pines, deodar cedars, etc.) 36" dbh.
 - c. Small trees (e.g. dogwoods, redbuds, sourwoods, etc.) 12" dbh.
- 2. A tree in fair or better condition must meet the following minimum standards:
 - a. A life expectancy of greater than 15 years.
 - b. A relatively 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 several minor dead limbs (hardwoods only).
 - d. No major insect or pathological problems.
- 3. A lesser-sized tree can be considered a specimen if it is a rare or unusual species of exceptional quality or of historical significance.
- 4. A lesser size tree can be considered a specimen if it is specifically used by a builder, developer, or design professional as a focal point in a project of landscape.
- B. Specimen tree stands A contiguous grouping of trees which has been determined to be of high value. Determination is based upon the following criteria:
 - 1. A relatively mature even aged stand.
 - 2. A stand with purity of species composition or of a rare or unusual nature.
 - 3. A stand of historical significance.
 - 4. A stand with exceptional aesthetic quality.

Appendix D Traffic Study Standards

Section 100 Traffic Study Required

A traffic impact study is required when applying for certain types of re-zonings, conditional use permits and preliminary plat approvals as specified in Article 8, Section 120 of the Comprehensive Land Development Ordinance. Three (3) copies of the final traffic impact study must accompany rezoning, conditional use permits, preliminary plat applications for the proposed developments. Applications for developments which require traffic studies must be accompanied by copies of the final traffic impact study before the application deadline or they will be declared incomplete.

Section 110 Preliminary Conference

An applicant proposing a development which requires a traffic study should arrange a preliminary conference with the Director to discuss how the traffic impact study requirements apply. This discussion will cover subjects such as trip generation, distribution, and assignment assumptions, the County's road classification map, planned road improvements, and other approved developments nearby which should be considered in the traffic impact study.

Section 120 Scope of Traffic Study

- A. Traffic studies must describe the extent, nature, and location of traffic impacts for all property for which the application is being sought and further all contiguous property owned by the applicant. The study area shall include the entire site being developed, future phases of multi-phase development, and the surrounding roadways which are likely to be significantly impacted. At a minimum, the surrounding roadways to be included are:
 - 1. The expected routes of access to the site as far as the nearest major arterials serving the site from each direction nearest the site;
 - 2. The routes and site access to freeway interchanges or major intersections expected to carry fifteen (15) percent of the project's traffic; and
 - 3. Other roadways expected to carry 1,000 additional daily vehicles as a result of the development.
- B. It is recommended that a preliminary traffic assignment be performed to establish the scope of the study before beginning the inventory of existing conditions.
- C. Traffic studies must include the following elements:
 - 1. Site development proposal;
 - 2. Inventory of existing conditions;
 - 3. Trip generation;
 - 4. Trip distribution;
 - 5. Trip assignment;

- 6. Planned transportation improvements;
- 7. Identification of traffic impacts, problems, and deficiencies; and
- 8. Recommended transportation improvements and other impact mitigation measures.

Section 130 Site Development Proposal

- A. The traffic study must include a conceptual site plan for the overall project. The site plan should include the following information:
 - 1. District, land lot, and the parcels that are the subject of the application and all parcels in a multi-phase development;
 - 2. Location of the above parcels with respect to existing adjacent private and public roadways;
 - 3. Location of on-site parking, vehicular, and pedestrian circulation elements on the site;
 - 4. Dimensioned locations of land lot lines, property lines, existing and proposed rights-of-way, roadway centerlines, and driveways to public roadways which are part of the overall project;
 - 5. Locations of intersecting streets and public or private driveways which abut the site or are opposite the site on the adjacent public roadways.
- B. In addition, the site development proposal will include a narrative description of the phases of the project, the amount of land for each phase, along with the size and location of buildings and amount of parking for each phase, keyed to the site plan, and the expected date of occupancy for each phase.
- C. Impact studies for multi-phased projects may be accepted without a layout of proposed buildings, parking, and driveways. Similarly, the level of analysis may be less detailed if approved in advance by the Director. In these cases, the Director will recommend that, as a condition of rezoning, a complete site plan and a revised traffic study must be submitted and approved for each phase of the development before preliminary plat approval may be issued pursuant to the Comprehensive Land Development Ordinance.

Section 140 Inventory of Existing Conditions

The inventory of existing conditions will include a location map of the overall project and the surrounding roadways. For each of these roadways, the inventory will identify:

- A. Adjacent land uses;
- B. Existing travel lanes and rights-of-way;
- C. Existing pavement conditions;
- D. Existing peak hour volumes, turning movement data collected within six (6) months prior to application date, and levels of service for the peak hour period used in the assignment phase; and

E. Existing problems or deficiencies, such as excessive horizontal or vertical curvature. inadequate sight distances, drainage, paving markings or other deficiencies.

Trip Generation Section 150

- A. The traffic study will include trip generation data for each phase of the overall project. Trip generation data will include the total number of vehicles computed to be entering and exiting the site on an average weekday and during a.m. and p.m. peak hours. Trip generation rates will usually be based on the peak hour of adjacent roadways described in the latest edition of Trip Generation (ITE). If the planned development includes more than 250,000 square feet of retail space, include similar trip generation data for Saturdays. If the existing site is zoned for a use other than single-family residential, include trip generation data for the site developed as zoned.
- B. Trip generation rates must be taken from the latest edition of the ITE *Trip Generation* publication unless suitable documented local data are provided from at least three similar developments collected within the past five (5) years. Suitable documentation includes the type, location, and size of each development; the dates and hours of data collection; the availability of public transportation; and the vacancy rate for the development. Copies of actual trip data may be required.
- C. Vehicle trips will be computed by multiplying appropriate trip generation rates by the appropriate units for which the rates were intended. There are exceptions to this procedure:
 - 1. When mixed use developments are designed to encourage a significant number of internal trips, the total vehicle trips may be reduced by the estimated number of internal person trips, divided by the average auto-occupancy rate. The study must provide adequate published documentation or evidence of its assumptions concerning internal trips.
 - 2. When retail developments are located along an arterial where a significant number of passerby traffic is reasonable, an appropriate adjustment may be made if adequate published documentation or evidence is provided in the study.
 - 3. When the applicant commits to provide pedestrian improvements, ridesharing programs, flextime, or other means of reducing peak hour vehicle travel, appropriate reductions may be allowed in the published trip generation rates for use in the traffic impact study. The Department encourages these strategies and will provide limited technical assistance to applicants requesting this consideration. The Department encourages applicants to pursue travel demand management techniques which are implementable, verifiable, and can be maintained through the life of the project. Annual reports may be required.

Section 160 **Trip Distribution**

The trip distribution process will estimate the directional distribution of travel to and from the site for the approximate year of occupancy. Note that trip distribution for residential development (home-based work trip productions) and office development (home-based work trip attractions) are different. Retail development has a trip distribution similar to

office development. The trip distribution process may be accomplished by one of three means:

- A. Use appropriate trip distribution rates from trip tables prepared by state or regional planning agencies; or
- B. Prepare a custom trip distribution based on the "area of influence" method described in the American Planning Association publication *Traffic Impact Analysis* by Greenberg and Hecimovich (PAS Advisory Service Report No. 387, 1984); or
- C. Prepare another acceptable distribution and assignment using data approved in advance by the Department in the Pre-application Conference.

Section 170 Vehicle Trip Assignment

- A. The traffic impact study will prepare vehicle trip assignments for the peak hour period or periods which represent the worst case in terms of the sum of existing traffic and the traffic generated by the overall proposed development. Normally this would be the p.m. peak hour. If the trip generation for the a.m. peak hour exceeds 75 percent of the traffic generated by the p.m. peak hour, then both a.m. and p.m. peak hour trip assignments should be prepared. Two trip assignments will be prepared for each peak hour period stipulated above:
 - 1. Generated vehicle trips added to existing traffic assigned on the existing roadway system; and
 - 2. Generated vehicle trips added to existing traffic and to traffic from other planned developments near the site, assigned on the system of existing roadways including recommended improvements; include other nearby large developments which have been rezoned or issued a development permit during the past 24 months. When information about nearby developments is not available, growth factors may be used to inflate existing traffic in lieu of estimating traffic from other developments. Growth factors should be computed from the forecast population and employment of the Census tract which includes the site, and can be obtained from the Department during the Pre-application Conference.
- B. These trip assignments will be prepared and illustrated for the internal roadways and driveways within the overall development, along with the surrounding roadways, intersections, and interchanges in the study area. Trip assignments will describe the peak hour directional vehicle volumes and turning movements at intersections.

Section 180 Planned Transportation Improvements

- A. The traffic impact study will include a description of transportation improvements for the study area which are contained in the adopted transportation plans of Walton County or the Georgia Department of Transportation.
- B. The description of the planned improvements will indicate the current status of planning, engineering, design, and implementation of each project and the relationship of each to the proposed site development plan.

Appendix D 12/3/02

Section 190 Identification of Impacts, Problems and Deficiencies

- A. The traffic impact study will analyze the vehicle trip assignments with respect to:
 - 1. The adequacy of existing transportation facilities for existing plus generated traffic:
 - The adequacy of the existing facilities with planned transportation improvements for the total traffic (existing, plus generated, plus traffic generated by other specified developments); and
 - 3. Other on-site or off-site improvements or mitigation measures recommended by the applicant.
- B. This analysis will include a comparison of the appropriate peak hour levels of service for the intersections on the surrounding roadways:
 - 1. With existing traffic and geometrics;
 - 2. With existing plus generated traffic assigned on the existing roadways; and
 - 3. With total traffic assigned on the roadway system recommended by the applicant.
- C. This analysis will quantify the traffic impacts of the proposed development and address specific traffic problems and roadway deficiencies which the recommendations are designed to relieve. For purposes of this analysis, level of service at intersections will be evaluated using either critical movement summation or delay estimations described in the *Highway Capacity Manual*. Recommended improvements or mitigation measures will be designed such that intersections on all public roadways are expected to operate at level of service D or better at all times.

Section 200 Recommended Improvement Measures

- A. The traffic study will conclude with a summary of recommended transportation improvements and impact mitigation measures needed for the overall project and the surrounding roadways to function at the minimum level of service upon full occupancy. When a multi-phase project is proposed, the improvements will be identified for each phase of the project so that a minimum level of service will be maintained throughout all development phases. The traffic study will identify the rights-of-way dedications, paved road lanes and widths, geometrics of principal driveways and intersection improvements, and traffic control devices recommended to achieve this result.
- B. For multi-phase projects, assignments for later phases extending more than ten (10) years in the future may have less detailed recommendations. At a minimum, specify the number of through-lanes required on access routes and major interior roadways, the location of major intersections, and general criteria for spacing driveways and traffic signals.
- C. In addition to roadway and intersection improvements, the traffic impact study may identify other traffic mitigation measures to reduce peak hour traffic vehicle tripmaking. One example would be the incorporation of special site plan concepts, including sidewalks, pedestrian amenities and shuttle bus between homes, offices,

and stores both within the site and to off-site attractions which may reduce vehicle trip generation to a significant degree. Another example would be an aggressive carpool or vanpool program which includes a computer rideshare matching program and employer-sponsored incentives. "Flextime" programs can be used, especially for large single occupant buildings with a past history of staggered shift work hours. In each of these cases, the applicant will confer with the Department staff prior to submitting the traffic study to discuss the specifics of such a proposal and to agree upon the extent of traffic reduction to be assumed.

D. The County staff encourages creative approaches to traffic impact mitigation and will give such plans full consideration and support. However, there must be ample evidence of the effectiveness of the specific plan, the commitment of the applicant to implement the program, and a specific mechanism to maintain the program and sustain the full participation of successive owners, managers, and tenants for the life of the project.

Section 210 Report Format

The traffic impact study will be presented in an 8 $\frac{1}{2}$ " x 11" typed report. The report should include one chapter for each of the eight elements listed in Section 120. The traffic impact study report should include the following illustrations not larger than 11" x 17":

- A. Conceptual site plan showing the size, location, and arrangement of proposed buildings, parking, and driveways on the site;
- B. Existing roadways in the study area showing the relationship of the site to the surrounding area and roadway network;
- C. Trip distribution showing the directional distribution of traffic between the site and the market area;
- D. Existing trip assignments showing the peak hour turning movement volumes and levels of service at selected intersections in the study area, using a diagram which is as continuous as possible;
- E. Future trip assignments showing the peak hour turning movement volumes and levels of service at selected intersections in the study area, using a diagram which is as continuous as possible; prepare a separate diagram for each of the assignments required. Project-generated traffic volumes should be indicated distinctly from total traffic volumes in each of these diagrams.
- F. Recommended transportation improvements illustrating the location and extent of recommended new roadways, widenings, intersection improvements, traffic control devices, and other physical improvements, either on-site or off-site.

Section 220 Staff Review of Traffic Impact Studies

The Department will coordinate the review of traffic impact studies by affected Departments prior to the first review of the corresponding applications for rezoning, conditional use permit or preliminary plat approval by the Department. If necessary, the Department will convene a meeting and prepare a consolidated set of written comments

from the reviews made by affected Departments. Those comments will be summarized in the normal staff review process of applications prepared by the staff for agenda packages of the Department and Board of Commissioners.

Appendix E Shared Parking Analysis

Section 100 Shared Parking Analysis

- A. The standards for shared parking may be utilized for any of the combinations of uses shown below on any number of properties as authorized in Article 7, Part 1, Section 130 of the Walton County Comprehensive Land Development Ordinance when approval is reflected in the conditions of zoning for each such property. The conditions of zoning or conditional use permits, as applicable; establish the limits of parking requirements among uses and properties.
- B. The standards for determining parking requirements in a multiple use development are:
 - 1. Determine the minimum amount of parking required for each separate use.
 - 2. Multiply each parking requirement by the corresponding percentage for each of the time periods given below.
 - 3. Calculate the column total parking requirement for each time period.
 - 4. The largest column total is the shared parking requirement.

	Weekdays		Weekends		Night Time
	6 a.m. to	5 p.m.	6 a.m. to	5 p.m.	1 a.m. to
	5 p.m.	to 1 a.m.	5 p.m.	to 1 a.m.	6 a.m.
Office	100%	10%	10%	5%	5%
Retail	60%	90%	100%	70%	5%
Hotel	75%	100%	75%	100%	75%
Restaurant	50%	100%	100%	100%	10%
Entertainment/					
Recreational	40%	100%	80%	100%	10%
Church	50%	50%	100%	100%	10%

Example:

Properties proposed for individual uses would require the following number of parking spaces:

Office	300 spaces		
Retail	280 spaces		
Entertainment	100 spaces		
Total	680 spaces		

Properties proposed for multiple uses under the provisions for shared parking would require the following number of parking spaces:

	Weekdays		Weekends		Night Time
	6 a.m. to	5 p.m.	6 a.m. to	5 p.m.	1 a.m. to
	5 p.m.	to 1 a.m.	5 p.m.	to 1 a.m.	6 a.m.
Office	300	30	30	15	15
Retail	168	252	280	196	14
Restaurant/	40	100	80	100	10
Entertainment/					
Recreational					
Total	508	382	390	311	39

Thus, 508 spaces would be needed for this development, a reduction of 172 spaces or 25 percent.