

## Chapter Nine **Building Regulations and Construction Standards**

### **(1) Authority**

This Chapter is adopted under the authority of the Constitution of the State of Georgia and laws enacted pursuant thereto.

### **(2) Purpose**

These regulations are intended to serve the following purposes.

- a. To protect and promote the health, safety and general welfare.
- b. To encourage economically sound and orderly land development in accordance with the Comprehensive Plan and other policies and objectives of the City.
- c. To assure the provision of required streets, utilities, and other facilities and services to new developments and to redevelopments in conformance with public improvement policies of the City.
- d. To assure adequate provision of safe and convenient traffic access and circulation, both vehicular and pedestrian, in new land developments and in redevelopments.

### **(3) Intent and Application**

It is the intent of this Chapter that it will apply to and provide guidance for the development of lands within the incorporated limits of the City of Douglas, Georgia, whether the developments involve the subdivision of land or the construction of buildings and/or other improvements on a single parcel. Any land development activity must first comply with this Code.

### **(4) General Provisions**

#### **a. Zoning Ordinance**

Whenever there is a discrepancy between minimum standards or dimensions required under this Section and those contained in the building codes or other ordinances or regulations of the City of Douglas, the most restrictive shall apply.

#### **b. Required Public Improvements**

Every developer of lands within the jurisdiction of this Code shall provide the public improvements included in this Code, in accordance with this Code and other pertinent ordinances, codes, and regulations of the City of Douglas. These public improvements together with associated rights-of-way, easements, and other lands shall be provided at no cost to the City and shall be dedicated or otherwise transferred, as required, to the public in perpetuity and without covenant or reservation.

**c. Plan Review and Approval**

Any developer of land within the City of Douglas shall first submit to the Community Development Department such plans, plats, or construction drawings as may be required by these Regulations and receive approval of those documents by the City prior to the initiation of development activities. Approval of plans, plats, or construction drawings by the City shall not imply nor transfer acceptance of responsibility for the application of the principles of engineering, surveying, architecture, landscape architecture, or any other profession, from the professional corporation or individual under whose hand or supervision the plans, plats, or construction drawings were prepared and sealed.

**d. Other Permits**

Nothing in this Code shall impose any obligation on the City to obtain or assist in obtaining permits, approvals, and/or clearances from other local, state or Federal agencies having jurisdiction over elements of a project. It is solely the developer's responsibility to obtain all such required permits, approvals, and/or clearances. The developer shall furnish the Community Development Department with copies of all such permits, approvals and/or clearances before authorization to proceed with development is requested.

**e. Standard Specifications**

In addition to the construction standards found in the text of this Code, the City will maintain on file for consultation and distribution a series of standard specifications for construction of improvements required for the development of land in accordance with this Code.

In conjunction with this Code, the standard specifications describe minimum acceptable standards for the construction of required improvements, but shall not supersede more restrictive prudent design requirements or good engineering practice as applied to specific situations on a case- by-case basis.

The standard specifications are included in this Code as Appendix A.

**f. Standard Drawings**

The City will maintain on file for consultation and distribution a series of standard drawings illustrating details of construction of public improvements, and other elements related to the development of land in accordance with this Code.

The standard drawings illustrate minimum acceptable construction standards for public improvements required under this Code, but shall not supersede more restrictive prudent design requirements or good engineering practice as applied to specific situations on a case-by-case basis.

The standard drawings are included in this Code as Appendix B.

**(5) Street Improvement Standards**

Streets, whether abutting or internal, existing or new, public or private, shall be constructed or improved under those circumstances and to the standards as established in this Section. Roadway improvements shall be in accordance with the street classification system defined in Section 6. Specific street classification designations shall be as shown in adopted transportation plans of the City.

**a. Right-of-Way Requirements**

1. Minimum Right-of-Way and Pavement Widths:

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- i. The minimum widths for public rights-of-way or private street ingress/egress easements and pavements shall be as shown in “Table of Minimum Right-of-Way and Lane Widths.” See Appendix B, Standard Drawings for detailed dimensions. Total width of streets includes land width plus curb and gutter (back of curb to back of curb) or from edge of pavement if no curbs exist. Local streets will use a 24-inch curb and gutter. Other road/street classifications will use a 30-inch curb and gutter. If an existing street is used for access, the developer shall conform to the existing street width.
- ii. Minimum widths of right-of-way and lanes shall be as shown in the “Table of Right-of-Way and Lane Widths.”

**Table 9-1: Minimum Right-of-Way and Lane Widths**

<b>Street Category</b>	<b>Minimum R-O-W</b>	<b>Lane Widths*</b>
Principal Arterial Ditch section/20 ft. median C&G/20 ft. median C&G, undivided	120 ft. 120 ft. 120 ft.	12 ft. 12 ft. 12 ft.
Minor Arterial Ditch section C&G section	100 ft. 100 ft.	12 ft. 12 ft.
Collector Street Ditch section C&G section	80 ft. 80 ft.	12 ft. standard; 11 ft. minimum 12 ft. standard; 11 ft. minimum
Local Street Residential/Subdivision (C&G) Commercial/Industrial/Other	50 ft. 60 ft.	11 ft.* 12 ft. standard; 11 ft. minimum
Cul-de-sac Commercial /Industrial /Other Residential	75 ft. radius 50 ft. radius	65 ft. radius 40 ft. radius
Notes: *Lane widths include only pavement width. Example: 2 lanes @ 11 ft. with 2 ft. C&G would be 26 ft. back of curb to back of curb. Lane widths on collector streets and other local (non-subdivision) streets will be based on design speed and traffic volumes Number of lanes will be determined based on traffic volumes, except for subdivision streets which will be typically two (2) lanes only. Typical section details are show in Appendix B, Standard Drawings.		

**2. Right-of-Way Dedication:**

- i. The minimum width of right-of-way shall be dedicated based upon the street classification, as provided in this section and approved by the City Engineer.
- ii. On any existing street abutting a proposed development, one-half of the required width of right-of-way shall be dedicated, at no cost to the City of Douglas, as measured from the centerline of the roadway along the entire property frontage. Right-of-way widths for existing streets shall be based on the current classification as determined by the City Engineer.

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iii. Additional right-of-way may be required at intersections or other locations fronting the property where turning lanes, storage lanes, medians, re-alignments or other traffic safety improvements are required.

iv. If a new street or thoroughfare is proposed by the City of Douglas or the State of Georgia to adjoin or traverse the property, the proposed road shall be accommodated into the development plans of the property in accordance with these Regulations. These right-of-way requirements shall govern except where there exist clearly defined plans of the Georgia Department of Transportation (GDOT) or the City of Douglas that require additional right-of-way. In that case, the greater right-of-way requirements shall govern.

### **3. Clear Zone Requirements:**

All new roads/streets should utilize the concepts, designs, and philosophies in the Federal Highway Administration (FHWA) Roadside Design Guide, where practical and feasible to use the latest state-of-the-practice in roadside safety. New roads/streets should also use context-sensitive design concepts in the applications of clear zone. Context-sensitive design concepts are also on the GDOT web site ([www.dot.state.ga.us](http://www.dot.state.ga.us)). The application of clear zone concepts on existing roads/streets needs to be used where the greatest safety benefit can be realized. Crash reports, site investigations, and maintenance records offer starting points for identifying these locations.

## **b. Access Management**

1. Applicability: Except for development projects consisting of single-family dwelling units or industrial development, land development that takes its primary access from a state or federal highway or a thoroughfare classified as a collector, principal arterial or minor arterial shall comply with these standards. These standards shall apply unless a more restrictive standard is required by the GDOT.

### **2. Joint and Cross Access:**

i. Adjacent commercial or office properties on collector, principal arterial or minor arterials shall provide a cross access drive and pedestrian access to allow circulation between sites.

ii. Joint driveways and cross access easements shall be established for multi-parcel commercial, office or industrial development, wherever feasible, along collector, principal arterial or minor arterial corridors. The building site shall incorporate the following:

a. Continuous service drives or cross access corridor connecting adjacent parcels along the thoroughfare.

b. A design speed of 15 mph and a two-way travel aisle width of 24 ft. to accommodate automobiles, service vehicles and loading vehicles.

c. Driveway aprons, stub-outs and other design features to allow abutting properties to be connected and provide cross access via a service drive.

### **3. Minimum Driveway Setbacks from Street Intersections:**

i. Driveway connections shall not be permitted within the functional area of the intersection, of two public streets. The functional area includes the longitudinal limits of auxiliary or turning lanes.

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ii. Minimum Standards. No driveway access shall be allowed within 150 ft. of the centerline of an intersecting major collector or arterial street, or within 100 ft. of any minor collector street. The City Engineer may reduce these required distances where they prove impractical due to lot frontages of less than 100 ft.

4. Minimum Access Requirements:

- i. All developments shall have one or more driveways or entrances to a public right-of-way.
- ii. The number of such access points shall be as shown in “Table of Minimum Number of Access Points.”

**Table 9-2: Minimum Number of Access Points**

<b>Type of Development</b>	<b>Minimum Number of Driveway Access Points</b>	<b>Type of Primary Access</b>
Residential, less than 100 units	1	Local Street or Collector Street
Residential, 101 -200 units	2	Local Street or Collector Street
Residential, more than 200 units	3	Collector
Non-Residential, less than 50 required parking spaces	1	Collector
Non-Residential, 50-300 required parking spaces	2	Collector
Non-Residential, 301 – 1,000 required parking spaces	3	Minor Arterial
Non-Residential, more than 1,000 required parking spaces	4 or more	Principal Arterial

5. Separation of Access Points:

- i. Subdivisions located along existing City roads shall be required to provide reverse frontage lots or parallel frontage roads where feasible. All other lots must comply with the following:
- ii. Along state or federal highways, no more than one point of vehicular access from a property shall be permitted for each 300 ft. of lot frontage, or fraction thereof, although requirements of the GDOT shall apply whenever more restrictive.
- iii. Along arterial or collector roads other than state or federal highways, no more than two points of vehicular access from a property to each abutting public street shall be permitted for each 300 ft. of lot frontage, or fraction thereof; provided, however, that lots with less than 200 ft. of frontage shall have no more than one point of access to any one public street. The City Engineer shall determine whether the points of access may be unrestricted or will have to be designed for right-in, right-out traffic flow. To make this determination the City Engineer may require a traffic study to be performed by the owner.
- iv. No point of access shall be allowed within 35 ft. of the right-of-way line of any street intersections for single-family and two-family residential lots and within 50 ft. for multi-family and non-residential properties.
- v. Corner lot access shall be located as far from the intersection as reasonably possible to reduce turning movement conflicts and to promote proper traffic circulation.
- vi. The separation of access points on any street or road shall be determined by the established speed limit of the street or road, with the following minimum spacing requirements as provided in “Table of Minimum Driveway Spacing.”

**Table 9-3: Minimum Driveway Spacing**

<b>Speed Limit</b>	<b>Minimum Driveway Spacing</b>
25	125 ft.
30	125 ft.
35	150 ft.
40	185 ft.
45	230 ft.
50	275 ft.
55	350 ft.
60	450 ft.
65	550 ft.

vii. The distance between access points shall be measured from the centerline of the proposed driveway to the centerline of the nearest adjacent driveway or roadway.

viii. Driveways shall be located so that the radius return is a minimum of 4 ft. from a property line that intersects the right-of-way line.

ix. The City Engineer may reduce the required separation distance of access points where the minimum required distance proves impractical, provided all of the following requirements are met:

- a. Joint-access driveways and/or cross-access easements are provided in accordance with this Section.
- b. The site plan incorporates a unified access and circulation system for vehicles and pedestrians.

x. The requirements of this Section are not intended to eliminate all access to a parcel of land that was legally subdivided prior to the enactment of this Section.

**6. Emergency Access:**

All public streets, private and residential drives shall be designed and maintained so as to provide safe and convenient access for emergency vehicles, as required by the City of Douglas Fire Chief. New developments with restricted access, such as gated subdivisions, must receive a variance from this requirement based on review and approval of the City of Douglas Police Department.

**c. Driveway Design Standards**

**1. Permits Required**

No driveway shall be constructed abutting a City-maintained road or street until all applicable driveway permits have been approved and issued by the City. For driveways that abut a state or federal highway, all applicable permits shall be obtained from the GDOT prior to construction.

**2. General Requirements.**

- i. Joint access driveways are permitted in order to achieve minimum driveway spacing requirements.
- ii. No property may have a curb cut in excess of 50 ft. in width without approval of the City Engineer.
- iii. If a non-residential driveway design is one-way in or one-way out, then the driveway shall be a minimum width of 16 ft. and shall have appropriate signage designating the driveway as a one-way connection.

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- iv. For two-way, non-residential access, each travel lane shall have a minimum width of 11 ft. When more than two lanes are proposed, a specific driveway design must be approved by the City Engineer.
- v. Driveways that enter an arterial or collector street at traffic signals must have at least two outbound lanes of at least 11 ft. in width and one inbound lane with a maximum width of 12 ft.
- vi. Except for single-family and two-family residences, driveway grades shall conform to the requirements of the Georgia Department of Transportation Design Standards.
- vii. Driveways shall intersect roads or streets with no more than a 10 degree skew from a 90 degree angle.
- viii. Driveway aprons shall slope from the right-of-way to the edge of pavement or gutter flow line. For all non-single-family driveways and entrances, a storm sewer inlet or grade break shall be provided at the right-of-way line to prevent discharge of stormwater onto the public right-of-way.
- ix. Driveways shall comply with the minimum requirements of the City of Douglas Standard Drawings Appendix B, based on projected use and classification.
- x. Driveways serving single-family detached or duplex residences may be no less than 10 ft. wide at the right-of-way line and shall provide a radius to the back of the curb or edge of the pavement of the roadway of no less than 5 ft. All other driveway curb cuts on public streets shall conform to the standards shown on the driveway details contained in the Standard Drawings, Appendix B.
- xi. All driveways and driveway curb cuts on state highways shall conform to GDOT Standards.

### **3. Driveway Construction Standards:**

- i. Sidewalks and curbs adjacent to driveways shall meet requirements of the Americans with Disabilities Act.
- ii. Portions of driveways within the public rights-of-way shall be 6 inches thick, 4000 psi fiber-reinforced concrete or asphalt. Pavement requirements of asphalt driveways located in the City ROW shall meet the design requirements of the adjoining street.
- iii. Driveways shall be no closer than 3 ft., at the closest point, to an at-grade utility structure, including, but not limited to, curb inlets, drainage structures, streetlights, telephone and electrical poles, boxes and transformers, manholes, handholes and fire hydrants.
- iv. Driveways shall be no closer than 10 ft. from a street tree or fire hydrant.
- v. Water and sewer lines shall be located outside of driveways, except for generally perpendicular crossings.
- vi. Commercial driveways shall provide a 35-ft. minimum radius at intersection with a public street. If designed for tractor-trailer trucks, the minimum radius shall be 75 ft.

### **4. Auxiliary Lanes:**

- i. Along any arterial or major collector street, a deceleration lane, acceleration lane, left turn lane, larger turning radius, traffic islands or other devices or designs may be required to avoid specific traffic hazards that, otherwise, would be created by the proposed driveway location, except in instances where the driveway is for a one or two family residence.
- ii. Deceleration lanes shall be required by the City of Douglas at each access point on roads classified as arterials or collectors when the posted speed limit is 30 mph or higher and otherwise where considered necessary by the City Engineer based on traffic volumes. Deceleration lanes are required on City roads classified as arterial and major collector streets when the posted speed

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limit is 30 mph or higher. Minimum deceleration lengths are specified in the “Table of Deceleration Lane Requirements.” The City Engineer may vary length requirements based upon a consideration of available sight distance and traffic volumes. For state routes and federal highways, GDOT requirements shall apply whenever more restrictive

**Table 9-4: Deceleration Lane Requirements**

Operating Speed	Min. Length of Lane
30 mph	75' + 50' taper
35 mph	100' + 50' taper
40 mph	150' + 50' taper
45 mph	175' + 100' taper
55 mph	250' + 100' taper
60 mph	300' + 100' taper
65 mph	350' + 100' taper

Deceleration lane length and taper lengths in Table 9-4 are considered minimum design values Actual lengths may be greater when all design constraints are considered. Refer to the American Association of State Highway and Transportation Officials Manual.

iii. When a new deceleration lane required by this Section is proposed to begin or end within 50 ft. of an existing deceleration lane, driveway or street intersection, then the new deceleration lane shall be extended as needed to provide a safe, continuous connection with adjacent or nearby deceleration lanes, driveways and intersections.

5. Sight Distance: All roads, streets, and driveways shall provide adequate sight distance as shown in the Table of Intersection Sight Distance Requirements.

**Table 9-5: Intersection Sight Distance Requirements**

Design Speed (mph)	Sight Distance, Feet							
	2 lanes		3 lanes		4 lanes		5 lanes	
	SDL=SDR	SDL	SDR	SDL	SDR	SDL	SDR	
30	335	310	355	335	375	335	400	
35	390	365	415	390	440	415	465	
40	445	415	475	445	500	475	530	
45	500	465	530	500	565	530	600	
50	555	515	590	555	625	590	665	
55	610	570	650	610	690	650	730	
60	665	620	710	665	750	710	795	
65	720	670	765	720	815	765	860	
SDR means Sight Distance Required for vehicles approaching from right side of driveway.								
SDL means Sight Distance Required for vehicles approaching from left side of driveway.								

The sight distances given in Table 9-5 are for undivided highways. If the highway is divided, the effect of the median should be considered in determining the required sight distance. See American Association of State Highway and Transportation Officials manual for adjustments due to grades greater than 3% and design vehicles other than passenger cars.

**d. Requirements for New Streets and Roadways**

1. All new streets proposed to be constructed in a subdivision or other development shall be designed and constructed to the minimum standards contained in these Regulations, in accordance with the classification of streets.

2. If a new street or thoroughfare is proposed by the City of Douglas or the State of Georgia to traverse the property, the proposed road shall be designed and constructed in accordance with the street classification as shown in these Regulations or as shown on plans proposed by the City or State of Georgia. The specific vertical and horizontal alignment of the proposed roadway shall be as established or approved by the City of Douglas and/or the State of Georgia, as applicable.

3. Street Widening: When property fronting on an existing City street is to be developed and when the property is to be accessed from the existing City street, roadway improvements (pavement, curb and gutter and drainage) are required along the existing road across the entire property frontage. Required improvements shall not be less than provided in these Regulations for the designated street classification.

4. Widening, curb and gutter and drainage shall be provided from the centerline of the existing roadway along the side of the road upon which the property abuts. In lieu of installation of curbs and gutters and/or related improvements, the Developer must have presented to and received approval by the City for a Street Improvements and Storm Water Drainage Plan for the development and its affected environs. Said plan must provide for adequate storm water drainage, and will further address as a minimum, street grading, paving, and curbs and gutters, and or other innovative provisions for said drainage. This plan must conform to the applicable standards and specification established by the City and be prepared, signed, and sealed by a Georgia registered professional engineer.

5. The Developer shall be responsible for the relocation and/or modifications of public and/or private utilities as necessitated by the required street improvements.

**6. Substandard Streets**

i. If a substandard street (dirt or gravel road or inadequate width of pavement or right-of-way) provides a means of access to a development, the street shall be upgraded to the street classification standard required by this Article. These improvements shall extend from the entrance of the development to the nearest standard paved road of an equivalent or higher classification, along the route of primary access.

ii. In the event that a development has access to a substandard street and if that substandard street is other than the primary means of access to the development, the substandard street, except as indicated below, shall be fully upgraded only along the entire property frontage and shall be paved on the opposite side of the road from the development, 12 feet from the street centerline.

iii. The upgrading of substandard streets used for access will not be required if any of the following conditions are met:

a. The development consists of a single one or two family residence on an existing recorded lot within the City;

b. Total traffic on the substandard street is less than 2000 vehicles per day including projected traffic volume from the development.

**7. Improvements along State Highways:**

For any development which abuts a State or Federal highway, 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 and these Regulations. A permit for the proposed access or improvements shall be required to have been

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approved by the GDOT and incorporated into the construction drawings for the project prior to issuance of a development permit by the City.

### **8. Permanent Dead-end Streets:**

New streets shall connect at both ends to existing streets unless the City Engineer determines that unique parcel configuration or terrain make a fully connected street pattern infeasible or unsafe.

- i. When necessary, streets designed to have one end permanently closed shall provide a cul-de-sac turnaround and may be no more than 600 ft. in length, unless otherwise approved by the City Engineer.
- ii. The length of a cul-de-sac street shall be measured from the center of the cul-de-sac to the center of the intersection with another street.
- iii. Cul-de-sacs shall conform to the standard drawings found in Appendix B.

### **9. Temporary Dead-end Streets:**

- i. A temporary dead-end street shall be provided to the boundary of a subdivision to provide access to abutting property for planned continuity of future circulation, improved access for public safety vehicles or for the extension of public water or other utilities to neighboring properties. Such dead-end streets shall be designed to meet the requirements of these Regulations and to allow their reasonable extension and shall be located so as to be reasonably incorporated into a street design for the neighboring property. A temporary vehicular turnaround shall be provided as required by the Subdivision Regulations Section IV B 17.
- ii. Existing dead-end streets on abutting property shall be extended into a proposed subdivision and incorporated into the street design of the development.
- iii. Paragraphs (A) and (B) of this subsection may be modified by the City Engineer in cases of serious topographical hardship or 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 a 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.
- iv. Where a dead-end street (other than a cul-de-sac) serves four or more lots in a multi-phase subdivision and such street is to be extended later, the Developer shall be required to provide a temporary vehicular turnaround complying with paragraph (1) above. 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.

**10. Access Roads:** Where a development borders on or contains a railroad right-of-way, major utility easement, limited access highway right-of-way or a 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. Locations of such service roads shall be aligned with similar service roads on adjacent properties.

**11. Construction Access Drives:** Construction access drives are required for vehicles with gross weight of 10,000 lbs. or more.

- i. On multi-phase developments, the Developer shall be required to dedicate, install, maintain and remove temporary construction access drives for the ingress and egress of construction vehicles, personnel and equipment.
- ii. Temporary construction access drives shall be shown on the concept plan and preliminary plat and shall access an existing City road where possible. Construction access drives shall be permitted through the City, and shall comply with sight distance requirements in Section 403(E) Sight Distance.

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iii. Temporary construction access drives shall be utilized as the sole means of ingress and egress during the construction of subsequent phases of the development, to prevent the flow of construction and heavy vehicular traffic on newly constructed streets completed under earlier phases.

iv. If the City Engineer determines that a temporary construction access drive cannot be provided, due to site-specific restrictions, then the Developer shall provide a maintenance bond for those portions of the newly constructed roadway utilized for construction access.

12. Half Streets: Both the construction of new half streets and the extension of access to existing half streets shall be prohibited. Whenever a street is planned adjacent to the proposed development tract boundary, the entire street right-of-way shall be platted within the proposed development.

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

14. Alleys: Alleys are to be constructed to the following standards:

i. Minimum width of right-of-way or easement: 20 feet.

ii. Minimum 14-foot wide paved travel lane.

iii. 24-inch rolled curb and gutter.

iv. Minimum 4-foot building setback from the edge of the pavement. No obstructions are permitted in this clear zone.

v. Utility easements as required by the City Engineer.

vi. Maximum length, 1,200 feet with a minimum of two points of access/egress to a local street or higher classification. No dead end alleys may be longer than 200 feet.

a. Maximum grade of 8 percent.

b. Paving and base must be constructed to standards of public streets.

c. Alleys shall be signed, “Fire Lanes – No Parking.”

15. Street Jogs:

i. Local streets shall either directly align or have offsets of a minimum of 125 ft. for residential subdivision streets and a minimum of 200 ft. for non-residential subdivision streets, as measured between the centerlines.

ii. Where it is not feasible to align new streets or entrances with an existing street intersecting nearby on the opposite side of a collector or arterial street, then the new street intersection shall be no less than 600 ft. from the intersection of the existing street, as measured between centerlines of the two opposing streets.

15. Traffic-Calming Measures: Street layout and configuration should include a series of relatively short interconnected roadways in lieu of longer straight roads, to discourage excessive speeds. Additional traffic-calming measures may be required by the City Engineer. Any specific measures employed shall be approved by the City Engineer. .

**e. Street Intersection**

1. Angle of Intersections: Intersections of two public streets shall form an angle that is between 80 and 100 degrees, unless otherwise approved by the City Engineer. If the intersection is signalized, the angle of the intersection may be reduced subject to the review and approval of the City Engineer.

2. Intersection Approaches.

i. The approaching street at any intersection shall be designed and constructed to provide both the minimum horizontal and vertical approach distances, as defined in this section and indicated in the “Table of Intersection Approach Distances” contained in this section.

ii. Minimum horizontal approach distance is defined as the minimum distance required along the centerline of an approaching street, perpendicular or no less than 85 degrees to the intersected street, as measured from the edge of pavement of the intersected street to the point of horizontal curvature on the approaching street.

iii. Minimum vertical approach distance is defined as the minimum distance required along the centerline of the approaching street, at a grade less than or equal to the recommended grade indicated in the “Table of Intersection Approach Distances,” as measured from the edge of pavement of the intersected street to a point on the profile of the approaching street where grades exceed recommended values.

iv. The use of vertical curves, drainage boxes or other approved methods shall be used in the design of the approaching street at any intersection to prevent drainage of surface water from draining into the travel lanes of the intersected street.

**Table 9-6: Intersection Approach Distances**

<b>Approaching Street Classification</b>	<b>Minimum Horizontal Approach Distance<sup>1</sup></b>	<b>Minimum Vertical Approach Distance<sup>1</sup></b>	<b>Recommended Approach Grade<sup>2</sup></b>
Principal Arterial	300 Ft.	200 Ft.	2.0%
Minor Arterial	200 Ft.	150 Ft.	2.0%
Collector Street	150 Ft.	100 Ft.	2.5%
Local Street	75 Ft.	50 Ft.	4.0%
1. Distance of the approach is measured from edge of pavement of the intersected street to the point of curvature in the approaching street. 2. Recommended approach grades shall be considered as the maximum allowable grades, unless otherwise approved by the City Engineer. No grade shall be less than 1.5 %.			

3. Crown Taper: The typical crowned street cross section shall be tapered over a distance of not less than 50 ft. on the approaching street at all intersections, in order to connect flush with the line and grade of the edge of pavement on the intersected street. The cross section taper shall be designed and constructed so as to provide for the adequate drainage of surface water from all portions of the travel surface and gutter.

4. Intersection Radii: Intersection radii for roadways measured at back of curb and for the right-of-way lines shall be as shown in the “Table 9-7 of Intersection Radii.” For intersecting streets of different classification, the larger radii shall be provided. Larger radii may be required for streets intersecting at angles less than 90 degrees. In all cases, adequate right-of-way shall be provided to maintain a minimum of 12 ft. from back of curb to right of way line. Miters are acceptable. The Engineer should utilize design radii in accordance with the Geometric Design of Highways and Streets Manual, but they should not be less than shown in Table 9-7.

**Table 9-7: Intersection Radii**

<b>Street Category</b>	<b>Radius at Intersection</b>
Principal Arterial	30 ft.
Minor Arterial	30 ft.
Collector Street	25 ft.
Local Street–Rural or Urban	25 ft.
Commercial/Industrial	35 ft.

5. Islands: In no case shall anything in an island extend more than 3 ft. above the street grade within the right-of-way; except traffic regulatory devices, street trees and other infrastructure erected or approved by the City of Douglas. No island shall be approved that contains less than 100 sq. ft. Irrigation or other private systems shall not be installed within public right-of-way.

6. Intersection Corner Sight Distance.

i. Intersections shall be designed with adequate corner sight distance for each approaching street. Where necessary, back slopes shall be flattened and horizontal or vertical curves lengthened to provide the minimum required sight distance.

ii. The minimum corner sight distance from the approaching street shall be calculated using latest edition of AASHTO “Policy on Geometric Design of Highways and Streets.”

7. Obstructing Visibility at Intersections: On all corner lots located at a street intersection, a clear sight zone shall be maintained at all times. The design and location of new intersections shall meet the standards of Section 403(E).

8. Turning Lanes at Intersections: Both center left-turn and right-turn lanes shall be provided on all new internal project streets, and on all existing City roads, where traffic volumes and turning movements warrant the installation. At the request of the City Engineer, the Developer or applicant shall prepare and submit a detailed traffic study (as defined herein), outlining projected traffic volumes, turning movements and auxiliary lanes required. The methodology and conclusions presented in the traffic study are subject to the review and approval of the City Engineer.

i. Center Turn Lane Storage. A minimum storage length of 150 ft. shall be provided for center left turn lanes on any arterial streets. A minimum storage length of 100 ft. shall be provided on all collector streets. Additional storage capacity shall be provided as required, based on projected peak traffic volumes and turning movements.

ii. Taper Length: The taper length shall be in accordance with AASHTO design standards, based on the lane widths and design speed of the subject street.

iii. The design, right-of-way acquisition, drainage system improvements, roadway widening, asphalt construction, traffic control, traffic striping, signage and all other improvements required or incidental to the installation of auxiliary turn lanes required to support any proposed development shall be completed by the Developer or Applicant, at no cost to the City of Douglas.

iv. Under the following conditions, left storage lanes shall be added to two-lane collectors or arterials with speed limits of 30 MPH or more, at unsignalized locations where left turning vehicles will leave the arterial or collector street and enter major driveways or development entrances. See the “Table of Left Storage Lane Requirements.”

**Table 9-8: Left Storage Lane Requirements**

<b>If average peak hour left turn volume is :</b>	<b>And collector/arterial traffic is: (vehicles per lane in peak hour):</b>	<b>Left turn storage lane</b>
Over 25	All volumes	Required
16-25	51-100	Required
13-15	101-200	Required
1-12	Over 200	May be required
Any volume	Any volume	May be required by City Engineer if sight distance (in feet) in either direction is less than 10 times the posted speed limit.

Source: Institute for Traffic Engineers, Traffic Engineering Handbook.  
 Note: Traffic volume shall include all additional vehicles from proposed development.

v. The length of left turn storage lanes and tapers shall be as prescribed in the Table 4-9, “Minimum Design Elements of Left Turn Lanes”, GDOT “Regulations for Driveway and Encroachment Control”, and the latest edition.

**f. Geometric Design Standards**

1. All streets and roadways shall be designed in accordance with the AASHTO Standards, as provided in “A Policy on Geometric Design of Highways and Streets,” latest edition and any amendments thereto. All applicable signage, markings or other traffic control measures shall be designed in accordance with the Manual of Uniform Traffic Devices (MUTCD), latest edition and any amendments thereto.

2. Horizontal Curvature and Super-elevation: All new streets shall adhere to the standards governing horizontal curvature and super-elevation in “Table of Horizontal Curvature and Super-elevations,” unless otherwise specified by AASHTO Standards:

**Table 9-9: Horizontal Curvature and Super-Elevations**

<b>Street Category</b>	<b>Design Speed</b>	<b>Minimum Radius</b>	<b>Maximum Super-elevation</b>
Principal Arterial	55 mph	1190 ft.	0.04
Minor Arterial	45 mph	711 ft.	0.04
Collector Street	30 mph	348 ft.	0.04

3. Tangents: Between reverse horizontal curves there shall not be less than the minimum centerline radii and tangents shown in the “Table of Horizontal Alignment and Reverse Curves,” unless otherwise specified by AASHTO Standards. Compound radii are prohibited.

**Table 9-10: Horizontal Alignment and Reverse Curves**

<b>Street Category</b>	<b>Desirable Tangent Length (ft.)</b>	<b>Minimum Tangents Between Reverse Curves</b>
Principal Arterial	400	250 ft.
Minor Arterial	280	200 ft.
Collector Street	150	100 ft.
Local Street	120	50 ft.

4. Vertical Alignment.

- i. All changes in street profile grades having an algebraic difference greater than that shown the latest edition of the GDOT Design Manual shall be connected to a parabolic curve having a minimum length in feet (L), which is equal to the algebraic difference between the grades in percent (A) multiplied by the design constant (K) assigned to the street according to its classification and design speed (i.e.  $L = KA$ ).
- ii. (K) values shown in the Table of Constant (K) Values for Vertical Alignments shall be utilized in all cases, and in no case shall the constant K value be less than the minimum permitted.

**Table 9-11: Constant (K) Values for Vertical Alignments**

<b>Street Category</b>	<b>Design Speed</b>	<b>Crest Vertical Curves (K Value)</b>	<b>Sag Vertical Curves (K Value)</b>
Principal Arterial	55 mph	114	115
Minor Arterial	45 mph	61	79
Collector Street	30 mph	19	37
Local Street	25 mph	12	26

5. Street Centerline Grades.

- i. Street or road grades exceeding 10 percent for a minor collector and 12% for local streets are prohibited, unless otherwise approved by the City Engineer. The City Engineer may grant limited exceptions on maximum grades, based on conclusive evidence that shows a lesser grade is impractical due to topographic or site specific limitations.
- ii. The minimum centerline grade for any street or roadway shall not be less than 1.5 percent, without exception, due to drainage concerns. A desirable minimum centerline grade of 2 percent shall be provided where possible.
- iii. The maximum centerline grade across any cul-de-sac turnaround shall be 5 percent.

6. Crown Slope: Unless super-elevated, all streets and roadways, except alleys, shall be designed and constructed with a crown slope of 1/4 inch per ft., to provide for the adequate drainage of surface water from the street centerline to the gutter or edge of pavement.

7. Super-elevation: The design of arterial and major collector roadways may require the super-elevation of the travel surface on horizontal curves in accordance with AASHTO Standards. The design and horizontal alignment of minor collectors and local streets serving residential areas should avoid the use of super-elevation where possible. In all instances, the maximum super-elevation rates shall be in accordance with paragraph (B) above. Under no circumstance is a curved street of any classification to be reverse super-elevated.

8. Pavement Design.

- i. Pavement sections shall be constructed in accordance with the standards in the “Table of Standard Pavement Sections.”

**Table 9-12: Standard Pavement Sections**

Street Type <sup>1,2</sup>	9.5 mm Superpave		Superpave			GAB <sup>3</sup>
	Type I	Type II	12.5 mm	19 mm	25 mm	
<b>Residential Streets</b>						
< 250 VPD	1¼”			2”		6”
250-1,000 VPD	1¼”			2¼”		6”
1,001-5,000 VPD		1½”		2½”		8”
<b>Commercial/Industrial Streets</b>						
< 250 VPD		1½”	2½”	3”		10”
251- 1,000 VPD		1½”		2½”	3”	10”
1,001-5,000 VPD			2½”	3”	4”	12”
Notes:						
1. Only roads that serve strictly residential uses (<1% trucks) shall use the sections listed above as residential. All other developments shall use the commercial/industrial sections.						
2. All streets designated as “arterial” shall have a pavement design submitted that meet the requirements below.						
3. Graded Aggregate Base (GAB).						

Add a column to above table Street Type-Soil Cement-6”, 6”, 8”, 8”, 8”, N/A

- ii. The Developer may submit for review and approval an alternative pavement design, prepared at the Developer’s cost. This submittal shall meet the following requirements:
  - a. Design prepared by a Professional Engineer licensed in Georgia.
  - b. Soils testing results prepared by a Professional Engineer licensed in Georgia.
  - c. Design shall be completed using the GDOT’s “Asphalt Pavement Design Procedures,” latest edition.
  - d. Design shall be based on 15-year pavement life.
  - e. Traffic shall be calculated using the Trip Generation Manual, by the Institute of Transportation Engineers, latest edition.
  - f. Traffic projections shall be made for any streets that serve areas outside of the proposed development.
  - g. Traffic counts, including truck traffic, shall be made as required on existing roads.
  - h. The City of Douglas will require written certification that material used in sub-base conforms to the soils test results used in the design.
  - i. Cores of pavement and base will be made as necessary to verify actual thickness of each pavement layer (surface, base, and sub-base). Test results shall be certified by a 3<sup>rd</sup> party contractor at the expense of the developer. Copies of the test reports will be made available to the City Engineer. The minimum number of cores of surface, binder, base, and sub-base is one core per 100 ft. of each street (or one core with streets less than 100 ft. in length).

**g. Street Construction Standards and Specifications**

Unless otherwise specifically set forth herein, all of the materials, methods of construction, and workmanship for street construction shall conform to the latest edition of the Georgia Department of Transportation Standard Specifications - Construction of Transportation Systems including all amendments.

1. Clearing and Grubbing: Before grading is started, the entire right-of-way area shall be first cleared and grubbed of all trees, stumps, roots, brush, debris and other objectionable materials per GDOT specifications A - Clearing and Grubbing Specifications). All erosion control measures shall be installed as required by the approved plans and in accordance with Chapter 38, Article III – Erosion & Sedimentation Control of the Code of Ordinances of the City of Douglas. For specific technical requirements reference is made to Georgia DOT Specifications Section 201-Clearing and Grubbing Right-of-Way. Combustible material generated from clearing and grubbing operations may be burned only when authorized and permitted by the City of Douglas Fire Chief.
2. Rough Grading: Conduct street earthwork construction in accordance with Georgia DOT Specification Sections 205 - Roadway Excavation and 208 - Embankments.
  - i. For purposes of these Regulations, the maximum density of soil material shall be determined by ASTM D 698 (Standard Proctor) test procedures.
  - ii. Complete rough street sub grade construction before starting utility and drainage installation.
3. Final Grading and Subgrade Preparation.
  - i. Perform sub grade construction in accordance with Georgia DOT Specification Section 209 - Subgrade Construction.
  - ii. The developer shall provide quality control testing during earthwork and subgrade construction as necessary to assure the entire earthwork, including all fill layers and subgrades, meet the minimum requirements of these Regulations. The minimum quality control testing to be provided consists of the following:
    - a. Moisture - density relationship curve for each type soil encountered.
    - b. One in-place density test (ASTM D 1556 or other recognized method) per 1,200 square yards or fraction thereof of subgrade or base to be paved.
    - c. One in-place density test (ASTM D1556 or other recognized method) per 1000 cubic yards or fraction thereof of fill placed.
  - iii. Earthwork which falls below specified minimum quality control limits shall be removed, reconstructed and retested until compliance with specified requirements is achieved.
  - iv. After completing street earthwork operations and before beginning street base construction, the Developer shall file a copy of the quality control test results demonstrating compliance with these requirements with the City. At any time during the construction process, representatives of the City may request to review and the Developer shall provide quality control test results.
4. Street and Alley Base Construction.
  - i. Street and alley bases shall be constructed in accordance with Georgia DOT Specification Section 300 - Specifications Applying to All Base and Subbase Courses.
  - ii. The following Georgia DOT Specification Sections shall apply to base materials indicated on the Standard Detail Typical Street Sections: Graded Aggregate Base - Section 310 - Graded Aggregate Construction.

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5. Surface and Binder Asphaltic Paving Course Construction: Surface and binder asphaltic paving courses, including prime, shall be constructed in accordance with Georgia DOT Specification Section 400 - Hot Mix Asphaltic Concrete Construction.

6. Post-Construction Stabilization of Disturbed Areas: When earthwork and paving are complete, the Developer shall grass and stabilize all disturbed areas including roadway shoulders which are not covered by paving or other improvements per GDOT Specifications for Grassing. It shall be the Developer's responsibility to maintain grassed areas by watering, fertilizing, weeding, mowing, trimming, regrading and replanting as required to establish a smooth, acceptable stand of grass free of eroded or bare areas. Grassed areas will be considered acceptable when a viable stand of grass covers at least 90 percent of the total area with no bare spots exceeding one square foot and the ground surface is fully stabilized against erosion. Grassing operations shall meet the technical requirements of Georgia DOT Specification Section 700 - Grassing for Planting Zone 4.

7. Quality Control Testing Required:

i. The Developer shall provide quality control testing during base and pavement construction as necessary to assure the entire pavement structure meets the minimum requirements of these Regulations. The minimum quality control testing to be provided consists of the following:

- a. Moisture-density relationship curve for each base material used on project.
- b. For soil cement base, conduct mix design to determine Portland cement content (percent of dry weight of the soil) to achieve a minimum compressive strength of 300 psi at seven days when testing in accordance with ASTM D 1632 and D 1633.
- c. One in-place density test (ASTM D 1556 or other method acceptable to the City) per 1200 square yards or fraction thereof of base.
- d. One thickness measurement normal to base surface per 1200 square yards or fraction thereof of base.
- e. One surface tolerance measurement using a 15 foot straight edge per 250 square yards or fraction thereof of base.
- f. One asphalt extraction (ASTM D 2172) and aggregate gradation analysis (ASTM C 136) per 2400 square yards or fraction thereof of surface course and per 2400 square yards or fraction thereof of binder course (if any). Obtain samples for extraction and gradation tests in accordance with ASTM D 979. 7) One density and compacted thickness measurement per 1200 square yards or fraction thereof of each course placed. Density determined to be made in accordance with ASTM D 1188. Remove not less than 3 inch diameter nor larger than 12 inch square test specimens. Repair test specimen holes with full depth application of fresh hot asphaltic plant mix.
- g. One surface tolerance measurement using 15 foot straight edge per 250 square yards or fraction thereof of surface course.

ii. Base and/or paving construction which falls below specified minimum quality control limits shall be removed, reconstructed and retested until compliance with specified requirements is achieved.

iii. After completing base and paving construction, the Developer shall file a copy of the quality control test results demonstrating compliance with these Regulations with the City. At any time during the construction process, representatives of the City may request to review and the Developer shall provide quality control test results.

8. Use of Non-specified Base or Paving Materials or Systems: In the event the Developer desires to utilize base or paving materials or systems not included in these Regulations, the Developer shall provide an engineering study prepared by a Georgia registered professional engineer comparing the proposed material or system to the appropriate system which is included in these Regulations. The

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engineering study will include a pavement structural design based on the AASHTO "Guide for Design of Pavement Structures" and suggested specifications for the materials and construction of the proposed system. The City will treat the Developer's request through the appeals process described elsewhere in this Code.

### **h. Curb and Gutter**

1. All new streets or street widening sections shall be provided with curb and gutter, except as provided herein under. All gutters shall drain smoothly with no areas of ponding.
2. In lieu of installation of curbs and gutters and/or related improvements, the Developer must have presented to and received approval by the City for a Street Improvements and Storm Water Drainage Plan for the development and its affected environs. Said plan must provide for adequate storm water drainage, and will further address as a minimum, street grading, paving, and curbs and gutters, and or other innovative provisions for said drainage This plan must conform to the applicable standards and specification established by the City and be prepared, signed, and sealed by a Georgia registered professional engineer.
3. All concrete curb and gutter shall be GDOT Standard 9032B, Type 2 (except in subdivisions, where the curb and gutter shall be 24 inches wide, while all other dimensions remain).
4. Curbing shall conform to the following standards:
  - i. Concrete shall be Class "A" as defined by the GDOT, and have a minimum strength of 3,000 PSI at 28 days; a 2 inch to 4 inch slump (ASTM C 143) and, 3 to 6 percent air content (ASTM C 231 or C 173) and shall comply with ASTM C 94.
  - ii. One-half inch expansion joints or pre-molded bituminous expansion joint material shall be provided at all structures and radius points and at an interval not to exceed 250 ft. in the remainder of the curb and gutter. Contraction joints also shall be provided at 10 ft. intervals along the curb line.
  - iii. When the development ties into existing curbing, the curb and gutter shall transition to match the existing width and profile at the connection point.
  - iv. Termination or curb tapers shall be provided at the end of any gutter. The curb height shall be tapered from 6 inches to 0 inches over a distance of 6 ft.
5. The Developer shall use a standard curb and gutter section. The section is shown in Appendix B, Standard Drawings.
6. Curb and gutter shall be set true to the line and grade of the street on a properly prepared subgrade with application of Georgia DOT Type 2 membrane curing compound, horizontally and vertically field staked and finished to the section shown on the plans. Line and grade shall be established by the Developer's engineer or surveyor. Offset staking shall be provided at 50-ft. intervals.
7. Curbing not installed in accordance with the requirements of this section or Appendix B, Standard Details shall be removed and replaced at the Developer's expenses. The City may require and the Developer shall provide core samples to verify concrete thickness.
8. Disturbed areas along curbing shall be back-filled, compacted, stabilized and grassed.

### **i. Street Lighting**

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The developer shall provide a street lighting standard at each street intersection and at an interval not exceeding 400 feet. The developer shall provide lighting standards at no cost to the City.

1. The developer or other person developing a residential subdivision shall be required to provide street lights that conform to all of the standards provided for in this Section and, in addition thereto, shall be required to obtain approval of the street light layout from the City Engineer prior to the construction of any street light facilities. Approval or final acceptance of the subdivision requires compliance with this Section.

2. The developer or other person developing a shopping center, industrial park, office park, apartment complex or like development within a designated street light district shall provide street lights along public rights-of-way adjoining that property that conform to all standards provided for in this Section; and the Developer shall obtain approval of the street light layout from the City Engineer prior to commencing any construction of any street light facilities.

3. The City Engineer shall not recommend the acceptance of any public streets or roads proposed to be dedicated to the City for perpetual ownership and maintenance until such time as the street lights conform to the approved street light layout.

4. Street Lights: Street lights shall be required to be provided by the Developers of all new subdivisions or other developments utilizing new streets or roads to be dedicated to the City or existing City streets or roads or any combination, unless waived by City Commission. Unless so waived, the Developer, at the time of submitting the final plat to the City shall:

i. Submit a final street light layout prepared by the utility company, which will provide the lighting service showing exact location of street lights within the development or subdivision. For residential and non-residential subdivisions, this drawing must be approved by the City Engineer prior to obtaining any building permit within the subdivision. Fixtures and standards/poles installed or used shall be approved by the utility company, which will be responsible for the maintenance of the facilities, and by the City Engineer. The fixtures shall be mounted a minimum of 25 ft. above the ground, and each fixture shall have appropriate arm length to illuminate the street. Lights must be located at any or all street intersections within the subdivision or other development and 400 feet apart along any streets with the subdivision or other development.

ii. Pay all costs for standards/poles, fixtures and any other related items or materials necessary for the installation.

iii. Submit proof of payment for complete installation to the City.

iv. Submit a copy of an executed agreement with the utility company for complete maintenance of all installations.

5. Standards of Installation and Operation.

In order to ensure adequate illumination of public rights-of-way and promote safety and security, the American National Standard Practice for Roadway Lighting of the Illuminating Engineering Society, as approved by the American National Standards Institute (1983), as from time to time amended, is hereby adopted as the standard for the installation and operation of lighting in the City of Douglas, with the following exceptions:

i. Except for Principal Arterials, lighting fixtures installed within the public rights-of-way to be operated for the purpose of street illumination shall comply with these standards. The minimum average horizontal foot-candle illumination level by roadway classification shall be as shown in “Table of Minimum Average Street Illumination Levels”

**Table 9-13: Minimum Average Street Illumination Levels (foot-candles)**

<b>Roadway Classification</b>	<b>Commercial Area</b>	<b>Intermediate Area</b>	<b>Residential Area</b>
Minor Arterial	1.2	0.9	0.6
Collector Street	0.8	0.6	0.4
Local Street	0.6	0.5	0.3
*Note: Illumination of Principal Arterials shall be determined by GDOT.			

ii. The uniformity of illumination shall be such that the point of lowest illumination shall have at least one-third of the average horizontal foot-candle required illumination level, except that on local or residential streets it may be no less than one-sixth of this average.

iii. Any party requesting permission to install or operate lighting fixtures within public rights-of-way shall furnish plans and specifications to the City Engineer for approval showing how the proposed lighting meets the standards, and no lighting shall be installed or operated without this approval.

iv. Should the City Engineer disapprove the request to install or operate lighting fixtures within any public right-of-way, he shall communicate the disapproval in writing to the party requesting approval. The written communication shall include the specific reasons for disapproval.

v. Any disapproval of a light or lighting system by the City Engineer may be appealed to the Board of Zoning Appeals. If any party desires to appeal an adverse decision by the City Engineer, a notice of appeal shall be filed within 30 days from the date following the written notice of disapproval. It shall be the responsibility of the City Engineer to transmit forthwith to the Building Inspector Board of Zoning Appeals all papers and allied documents constituting the record upon which the action appealed from was taken. The Board of Zoning Appeals may reverse or affirm, wholly or partly, or may modify the order, requirement, decision or determination being appealed.

vi. 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 be mounted on the side of the pole opposite from the street, and shall be oriented in such a manner 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, so as to protect the users of the street from objectionable glare. The approval of the City Engineer shall be obtained before installation of these lights.

vii. Other lighting fixtures to be installed within or outside of public rights-of-way, for whatever purpose, 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.

**j. Sidewalks and Bikeways**

Sidewalks shall be provided along public streets for all developments and in such other locations as deemed necessary by the City for safe pedestrian movement.

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1. Sidewalks shall be located on both sides of the street or road and on existing or new street frontage that is part of any new development and shall meet all current ADA requirements.
2. Sidewalks in subdivisions shall be continued to the nearest arterial street.
3. All new sidewalks shall match and provide a smooth transition to any existing sidewalk.
4. Sidewalks shall be installed on an individual lot basis at the time of building construction. The City shall inspect the location and construction of the sidewalk and shall not issue a Certificate of Occupancy until the required sidewalk is properly installed.
5. A strip of grass or other approved landscape material at least 4 ft. in width shall separate all sidewalks from adjacent curbs on public streets. Sidewalks shall be concrete and a minimum of 5 ft. wide and 4 inches thick. Concrete shall be Class “A,” as defined by the GDOT, and have strength of 3,000 PSI at 28 days. Disturbed areas along sidewalks shall be backfilled, compacted, stabilized and grassed. The City may require and the Developer shall provide core samples to verify core thickness.
6. Additional sidewalks and/or pedestrian easements may be required in subdivisions or developments where deemed essential to provide circulation or access to schools, playgrounds, shopping centers, transportation and other community facilities.
7. Bicycle lanes, where provided, shall be a minimum of 4 ft. in width and placed between the outside lane of a roadway and the curb or shoulder. When on-street parking is permitted, the bicycle lane shall be between the parking lane and the outer lane of moving vehicles. Lanes shall be delineated with appropriate markings, as required by MUTCD Standards. Bikeways and bicycle lanes must be pre-approved by the City Engineer and meet the requirements of AASHTO “Guide for the Development of Bicycle Facilities,” latest edition.

### **k. Traffic Calming Devices**

1. Traffic calming devices and associated signage may be required by the City Engineer.
2. The City Engineer may establish specific standards for the design, construction, placement, and if applicable, planting plan for traffic calming devices. These standards shall be known as "Traffic Calming Device Design and Placement Standards for the City of Douglas," further referred to and known as the design and placement standards and are hereby made a part of this section by reference. The City will maintain on file for consultation and distribution a series of design and placement standards for traffic calming devices. The City Engineer may, from time to time, modify these technical standards.
3. Traffic calming devices for all local streets shall be placed, designed and installed in accordance with the design and placement standards.
4. Other designs or types of traffic calming devices not included in the design and placement standards may be approved at the discretion of the City Engineer, provided that such devices meet the following minimum criteria:
  - i. The proposed traffic calming device must be recognized as such by the transportation industry, i.e., it must be recognized by the Institute of Transportation Engineers, American Association State Highway Transportation Officials, the Federal Highway Administration, the American Traffic Safety Services Association or other nationally recognized transportation industry organization or guiding authority.

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ii. The proposed traffic-calming device must be designed, located and constructed in accordance with the minimum standards of the approving organization or guiding authority. The City Engineer may impose additional design, location or construction criteria prior to approving such a device.

iii. The proposed traffic-calming device must include plantings, water quality or other environmental enhancements or beautification elements.

iv. Traffic calming may be accomplished via proper geometric design of the streets. Such designs may be accepted by the City Engineer in lieu of other structural traffic calming devices.

v. The City Engineer may disallow the use of devices that meet the criteria set forth in subsections (A) through (D) of this section if, in his judgment, the installation of such a device would create unusual or costly maintenance, create a safety hazard, restrict movement of emergency vehicles, or would otherwise not be in the best interest of the city.

5. Islands that are not specifically for traffic calming, such as entrance islands, cul-de-sac islands, tree save islands or other decorative islands may be approved for construction by the City Engineer, if they conform to the design principles contained in the design and placement standards.

6. All plant materials included in islands shall be installed at the expense of the Developer and shall be maintained by the subdivision's homeowner's association. A notification to this effect shall be included on the final plat recorded for the subdivision.

7. The City Engineer may, at his or her discretion, approve unusually shaped islands or innovative designs.

### **l. Traffic Control Devices**

1. Traffic control devices consisting of street name signs, traffic control signs, traffic markings and traffic signals shall be provided by the Developer as appropriate to serve each development. All traffic control devices and installation thereof shall conform to the Federal Highway Administration “Manual on Uniform Traffic Control Devices”.

i. For residential developments, minimum traffic control devices shall consist of street name signs at each street intersection, stop or yield signs at each intersection, one speed limit sign per block, school or pedestrian crossing signs where appropriate, and limited pavement marking such as crosswalk lines for school or pedestrian crossings.

ii. Minimum traffic control devices for non-residential developments shall include those devices for residential developments and lane and centerline markings, stop lines, and parking space markings. Additionally, appropriate other signs and signals shall be provided by the Developer.

### **m. Street Improvement Plans**

1. Plans Required: Street improvement plans for all new streets, street widening and existing street upgrades shall be prepared by a Georgia registered professional engineer. At least three copies of the plans shall be submitted to the City for review and comment. An electronic copy (in PDF format) may be submitted in addition to other plans. Within thirty days of submittal of the plans, the City will either approve the plans or make comment on items requiring changes and/or additional information. When not approved, the cycle of plan submittal and review will be repeated until the plans can be approved by the City.

2. Required Information: All plans shall consist of not less than the following:

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- i. Profiles of existing ground levels along street centerlines and each right-of-way. Field determined elevations shall be indicated at intervals not exceeding 25 feet. Where cross sections are provided at least every 25 feet, only centerline elevations need be shown on the profile.
- ii. Existing facilities and features within and adjacent to rights-of-way which affect or could be affected by street improvement construction. Items include, but are not limited to, streets, rights-of-way, sidewalks, buildings, parking lots, driveways, fences, tree lines, and railroads.
- iii. All drainageways, lakes, streams, creeks, channels, wetlands, and drainage facilities.
- iv. All existing utilities and appurtenances within and adjacent to rights-of-way which affect or could be affected by street improvement construction. Items include, but are not limited to, sanitary and storm sewers, water mains, gas lines, fire hydrants, electric and telephone poles and street lights. The utility type, size, depth, material and location in relation to street improvements should be indicated.
- v. Existing and proposed property and easement lines and land lot and land district lines intersecting street rights-of-way.
- vi. Limits of new construction.
- vii. New road improvements, including but not limited to, curbs and gutters, sidewalks, pavements, driveways, wheel chair ramps, traffic control devices, and street lights (if any).
- viii. Profiles of each pavement edge or line of curb and gutter with new finished grade elevations at intervals not exceeding 50 feet.
- ix. Horizontal and vertical street geometry including street centerline angles of deflection, radii, degree of curvature, design speed, tangent lengths, arc lengths, bearings street grades, and lengths of vertical curves. Stations for all points of curve, points of tangency, points of intersection, both horizontal and vertical, should be shown.
- x. Benchmarks for vertical control.
- xi. Name of the development, names, addresses and telephone numbers of Developer and Developer's engineer, engineer's seal, north arrow, scale, and date.

### 3. Plans shall conform to the following standards:

- i. Where specific design guidance is not given in these regulations or other City of Douglas regulations, rules, or ordinances the AASHTO publication "A Policy on Geometric Design of Highways and Streets", latest edition shall be followed.
- ii. All elevations shall be based on and tied to U.S. Coast and Geodetic Survey mean sea level datum.
- iii. Plan drawings shall be at a scale of at least 1 inch equals 50 feet. In developed or congested areas, the City may require a scale of 1 inch equals 20 feet or less to be utilized.
- iv. For profile drawings, the horizontal scale shall be the same as that used for associated plan drawings. The vertical scale shall be at least 1 inch equals 10 feet. A 1 inch equals 5 feet vertical scale is often necessary to properly depict grade changes in flat areas.
- v. The desired drawing size is 18 inches by 24 inches. In no case shall drawings be larger than 30 inches by 42 inches nor smaller than 11 inches by 17 inches.
- vi. One set of Mylar drawings are to be provided.

### **(6) Utilities**

All authorized public utilities must be installed by a Georgia Licensed Underground Utility Contractor who must meet minimum bonding and insurance requirements as determined by the City.

**a. Placement of Utilities**

All authorized public and private underground or overhead utilities shall be located within the right-of-way of a public street or within an easement designated for such use. Within public street rights-of-way, placement of the various authorized utilities (water, sanitary sewer, natural gas, power, telephone, and cable TV) shall conform to the specific locations for such use designated by the City. Private underground utilities such as lawn sprinkler systems, septic tanks and drain fields, exterior lighting systems, and heating and cooling piping are not permitted within public street rights-of-way.

**b. Easements**

1. Easements Required:

Permanent easements for public water, drainage and sanitary sewer facilities shall be dedicated to the City.

2. Easement Widths:

The minimum width permanent easements for a single utility shall be 15 feet. Where more than one utility has a common easement, the minimum easement width shall be increased by 5 feet for each additional utility. However, additional easement widths may be required by the City where the depth of the utility is excessive or other conditions will cause difficulty in accessing the utility.

3. Dedication Requirements:

Before dedication, the developer shall grass and stabilize all disturbed areas within and adjacent to easements which are not covered by paving or other improvements. An acceptable stand of grass free of eroded or bare areas must be achieved before the City will consider dedication.

**c. Utility Line Extension Requirements**

If existing water mains and or sanitary sewers must be extended to serve a development, the developer shall install or have installed the necessary extensions at no cost to the City under the existing City policy and procedures at plan approval time.

**d. Water Distribution System Design Criteria**

1. Pressure: All water mains, including those not designed to provide fire protection, shall be sized after hydraulic analysis performed by a Georgia registered Professional Engineer to maintain a minimum pressure of 40 psi at ground level under all conditions of design flow. Regardless of Water System Design Pressure and Flows, all water mains shall be a minimum of eight (8) inches.

2. Design Flow: The design flow is to consist of projected peak demand plus fire flow (where applicable). To determine projected peak flow for residential developments, utilize values in “Table of Peak Water Demands for Residential Developments.” For developments other than residential, utilize AWWA "Manual of Water Supply Practices M22, Sizing Water Service Lines and Meters" to estimate peak demand. For fire flow, select proper value from the “Table of Minimum Design Fire Flows”.

3. Sprinkler Connections: For each fire protection sprinkler connection to the City's water system, the developer must provide a double detector check valve installation consisting of not less than two detector check valves with by-pass meter on the second unit and two gate valves all enclosed in an accessible, non-floodable concrete pit. The pit is to have a double leaf aluminum access hatch which should be sized for easy access for maintenance.

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4. State Approval: It is the developer's responsibility to obtain the approval of the Environmental Protection Division of the Georgia Department of Natural Resources of all water distribution system additions and extensions. In addition to the other requirements, the City must receive a copy of the approval before the developer will be allowed to proceed with construction.

**e. Location of Water Mains, Fire Hydrants and other Fixtures**

1. Water Mains: Water mains shall be located along City streets on the south and west side of the street, five feet from the back of the curb. The minimum cover is to be 42 inches. Locate water service laterals with a minimum cover of 24 inches within street rights-of-way. Within 5 feet of the water meter, service lateral cover may be reduced to not less than 18 inches

**Table 9-14: Peak Water Demands for Residential Developments**

<b>Number of Dwelling Units</b>	<b>Required Flow (GPM)</b>
5	8
10	5
20	4.3
30	3.8
40	3.4
50	3.0
60	2.7
70	2.5
80	2.2
90	2.1
100	2.0
150	1.6
200	1.3
200	1.2
400	0.9
500	0.8
250	0.7
1000	0.6

**Table 9-15: Minimum Design Fireflows** <sup>(1)</sup>

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<b>Zoning District</b>	<b>Gallons Per Minute</b>
R-15 Single Family Residential	1000
R-12 Single Family Residential	1000
R-M Mixed Residential	1000
R-I Residential Infill	1000
R-P Residential Professional	1500
TC-C Town Center Commercial	1250
G-C General Commercial	1250
N-C Neighborhood Commercial	1250
PD Planned Development	1000 - 3500
M-1 Light Industrial	3500 <sup>(2)</sup>
M-2 Heavy Industrial	3500 <sup>(2)</sup>
AU Agricultural	1000
<sup>(1)</sup> Values given in this table represent minimum requirements. Should Fire Chief or Insurances Services Office, Inc. recommend higher fire flows, use the largest values.	
<sup>(2)</sup> To meet ISO recommendations, calculated using multiple hydrants.	

2. Fire Hydrant Spacing: Provide fire hydrant spacing as requested by the Fire Chief and as follows:

- i. One and Two Family Residential Uses: Space fire hydrants not more than 500 feet apart with additional fire hydrants located as necessary so that the maximum hose lay from a hydrant to the furthestmost part of any building does not exceed 500 feet.
- ii. Multiple-Unit Residential Uses: Space fire hydrant not more than 500 feet apart with additional fire hydrants located as necessary so that the maximum hose lay from a hydrant to the farthermost part of any building does not exceed 400 feet.
- iii. Office, Institutional, Commercial and Industrial Uses: Space fire hydrants not more than 400 feet apart so all portions of buildings can be reached by hose lays of not more than 400 feet.
- iv. Except when waived by the Fire Chief, a fire hydrant shall be located at all street intersections in all Zoning Districts.
- v. Locate fire hydrants between the water mains and right- of-way and within 5 feet of the right-of-way.

3. Valves: Locate valves at not more than 1,000 foot intervals in residential areas and 500 foot intervals in non-residential areas. At water main junctions, the minimum number of valves to be provided shall equal the number of pipes extending from the junction minus one.

4. Meters: Locate water meters in public rights-of-way within six inches of the right-of-way except where alternate location is approved by the Water Department. Water meters will be furnished and installed by the City upon payment of appropriate fees.

**f. Sanitary Sewer Design Criteria**

1. Design Capacity: Design sewer systems for the estimated ultimate development tributary population and/or area. In establishing design capacity, the following factors must be considered.

- i. Maximum hourly residential sewage flow.
- ii. Maximum hourly commercial/institutional sewage flow.

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- iii. Maximum hourly industrial sewage flow.
- iv. Ground water infiltration.
- v. Topography of the area.
- vi. Pumping requirements.
- vii. Design new sewers in residential areas on the basis of an average daily flow of sewage of not less than 400 gallons per household per day. A peaking factor of not less than 2.5 must be applied to the average daily flow to establish peak design flow. Sewers shall be designed to carry peak design flow when flowing one-half full.
- viii. In non-residential developments, base sewer design on the estimated peak flow from the development but in no case less than 0.4 gallon per square foot of gross building areas. Sewers shall be designed to carry peak flow when flowing one-half full.

2. Size and Shape: The minimum size sanitary sewer shall be 8 inches. Design sewers to give mean velocities, when flowing half full, of not less than 2.0 feet per second based on the Manning formula using an "n" value of 0.013. The "Table of Minimum Sewer Slopes" contained in this section gives the minimum as built slopes which must be provided to allow dedication of sewers to the City, however, where possible greater slopes are desirable. Sewers shall be placed with a uniform slope between manholes.

3. Manholes.

- i. Install manholes at the following locations
  - a. End of each sewer.
  - b. At all changes in grade, size, or alignment.
  - c. At all sewer intersections
  - d. At distances not greater than 400 feet for sewer 15 inches and smaller.
- ii. When pipe sized change at a manhole, the 0.8 depth point of both sewers shall be aligned at the same elevation.
- iii. When the same size pipe enters and leaves a manhole, at least a 0.1 foot drop in elevation shall be provided between the entering and the exiting inverts.
- iv. U-shaped flow channels shall be constructed through manholes.

4. Relation to Water Mains.

- i. Whenever possible, lay sewers at least 10 feet horizontally from any existing or proposed water main. Should conditions prevent a separation of 10 feet, lay the lines in separate trenches. In either case, construct the elevation of the crown of the sewer at least 18 inches below the bottom of the water main.
- ii. When sewers cross under water mains, lay the sewer so that the top of the sewer is at least 18 inches below the bottom of the water main. Install the two pipes such that a full length of pipe will be centered over the crossing so that all joints will be separated as much as possible. Install ductile iron pipe for both lines when the crossing is less than two feet of separation.

**Table 9-16: Minimum Sewer Slopes**

Nominal Minimum	Sewer Size (inches)
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<b>Slope</b>	<b>Feet Per 1000 Feet</b>
0.4	8
0.28	10
0.22	12
0.15	15
0.12	18
0.10	21
0.08	24
0.067	27
0.058	30
0.046	36

iii. 5. Sewer Locations: When sewers are laid in public streets, construct the sewer along the approved right-of-way or easement at a depth of not less than 5 feet from the road surface to the top of the pipe. In curved streets, install the sewer between gutter lines to avoid conflicts with other utilities.

iv. State Approval: It is the Developer's responsibility to obtain the approval of the Environmental Protection Division of the Georgia Department of Natural Resources for sanitary sewer collection system additions and extensions. In addition to other requirements, the City must receive a copy of the approval before the Developer will be allowed to proceed with construction.

**g. Natural Gas System**

All gas mains and services will be installed in accordance with the City of Douglas Natural Gas Department Operations and Maintenance Manual.

**h. Electrical System**

All electrical systems will be installed according to the latest edition of the National Electrical Code and the City of Douglas Electric Service Manual.

**i. Preparation of Utility Plans**

1. Plans required: Utility plans for all extensions, additions, improvements and/or modifications for the water distribution and sanitary sewer collection systems shall be prepared by a Georgia registered professional engineer. At least three copies of the plans shall be submitted to the City for review and comment. Within thirty days of submittal of the plans, the City will either approve the plans or make comment on items requiring changes and/or additional information. When not approved, the cycle of plan submittal and review will be repeated until the plans can be approved by the City.

2. Information to be shown on the plans shall consist of not less than the following:

i. Existing facilities and features in the vicinity of utility construction which affects or could be affected by such construction. Items include but are not limited to streets, rights-of-way, buildings, driveways, parking lots, fences, tree lines and railroads.

ii. All drainageways, lakes, streams, creeks, channels, wetlands, and drainage facilities.

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- iii. All existing utilities and appurtenances in the vicinity of utilities construction which affect or could be affected by such construction. The utility type, size, depth, material and location in relation to utilities improvements should be indicated.
- iv. Existing and proposed property and easement lines and land lot and land district lines intersecting utility line construction.
- v. New utilities construction including as applicable, but not limited to, pipelines, manholes, lift stations, force mains, valves, fittings, fire hydrants, meters, casings, services facilities, special construction and details for connections to existing utilities. Pipe sizes and materials shall be indicated on the plans. Include horizontal geometry as necessary to define location of new utilities.
- vi. Profiles of sanitary sewers showing existing ground surface, sewers, manholes with top and invert elevations, line lengths and grades, crossing utilities, and limits for special construction.
- vii. Benchmarks for vertical control.
- viii. Name of the development, names, addresses and telephone numbers of Developer and developer's engineer, engineer's seal, north arrow, scale and date.

### 3. Plans shall be prepared in conformance with the following:

- i. All elevations shall be based on and tied to U.S. Coast and Geodetic Survey mean sea level datum.
- ii. Plan drawing shall be at a scale of at least 1 inch equals 50 feet. In developed or congested areas, a scale of 1 inch equals 20 feet or less shall be utilized.
- iii. For profile drawings, the horizontal scale shall be the same as that used for associated plan drawings. The vertical scale shall be at least 1 inch equals 10 feet. A 1 inch equals 5 feet vertical scale is often necessary to properly depict pipeline conditions.
- iv. The desired drawing size is 24 inches by 36 inches. In no case shall drawings be larger than 30 inches by 42 inches nor smaller than 11 inches by 17 inches.
- v. Utilities construction may be shown on street improvement plans provided the resulting drawings are clear, legible and plainly show all necessary information.

### **j. Construction Record Drawings**

At the completion of utilities construction and before dedication to the City, the developer shall furnish two copies of construction record drawings for the development to the City. The record drawings shall be made from the original drawings of the approved development drawings revised to reflect actual construction. Drawings shall be signed/sealed by Georgia licensed surveyor.

## **(7) Grading And Drainage**

### **a. Site Grading**

1. Site grading shall be done in accordance with the finished grades shown on the approved development plans. Site grades shall direct surface drainage away from buildings without causing adverse impact on adjacent properties.
2. The maximum slopes for soil cut or fill shall be two feet of horizontal run for each foot of vertical rise or fall except for stable rock slopes. If actual soils encountered require a flatter slope for stability, the lesser slope shall be used.

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3. Soil erosion and sediment control measures shall be provided as required in Chapter 38, Article III – Erosion, Sedimentation and Pollution Control of the Code of Ordinances of the City of Douglas.

**b. Drainage**

Provisions for storm water drainage and detention designs are to be in accordance with the City of Douglas Stormwater Management Ordinance.

**c. Specifications for Drainage Construction**

Refer to Georgia Department of Transportation, Standard Specifications for Construction of Roads and Bridges, latest Edition for specifications for drainage construction.

**d. Preparation of Grading and Drainage Plans**

1. Plans Required: Grading and drainage plans for all developments except individual one and/or two family dwelling units, shall be prepared by a Georgia registered professional engineer or landscape architect.
2. Plan Submittal Requirements: At least three copies of the plans and detention study shall be submitted to the City for review and comment.
3. Plan Review Process. Within thirty days of submittal of the plans, the City will either approve the plans or make comment on items requiring changes and/or additional information. When not approved, the cycle of plan submittal and review will be repeated until the plans can be approved by the City.
4. Required Plan Information: Information to be shown on the plans shall consist of not less than the following:
  - i. Topographic map of the existing conditions for the development showing existing facilities and features which affect or could be affected by grading and drainage improvements. Utilize a contour interval of not greater than two feet with spot elevations as necessary to define existing ground surfaces.
  - ii. All drainageways, lakes, streams, creeks, swales, ditches, channels, wetlands, and drainage facilities.
  - iii. All existing utilities and appurtenances which affect or could be affected by grading and drainage improvements. The utility type, size and location in relation to grading and drainage improvements should be indicated.
  - iv. Existing and proposed property and easement lines and land lot and land district lines intersecting or bounding grading and drainage improvements.
  - v. Finished grades depicted by finished contours and/or spot elevations as necessary to define finished grade surfaces.
  - vi. New drainage improvements including, but not limited to, pipes, culverts, catch basins, area drains, drop inlets, junction boxes, headwalls, berms, dikes and detention basins with outlet works. The drainage areas tributary to each drainage structure, design flow, and time of concentration shall be indicated.

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- vii. Profiles of storm drains showing existing and finished ground surfaces, pipes, drainage structures with top and flow line elevations, distances from centerline to centerline of drainage structures, pipe and ditch grades, crossing utilities, and limits of special construction.
- viii. Pipe design chart including:
  - a. Drainage area
  - b. Runoff coefficient
  - c. Rainfall intensity
  - d. Design flow
  - e. Pipe size
  - f. Pipe material
  - g. Pipe slope
  - h. Full flow capacity
  - i. Flow velocity
- ix. Benchmarks for vertical control.
- x. Name of the development, names, addresses and telephone numbers of Developer and Developer's design professional, design professional's seal, north arrow, scale and date.

### **5. Plans shall be prepared in conformance with the following:**

- i. All elevations shall be based on and tied to U.S. Coast and Geodetic Survey mean sea level datum.
- ii. Plan drawings shall be at a scale of at least 1 inch equals 50 feet. In developed or congested areas, a scale of 1 inch equals 20 feet or less shall be utilized.
- iii. For profile drawings, the horizontal scale shall be the same as that used for the associated plan drawings. The vertical scale shall be at least 1 inch equals 10 feet. A 1 inch equals 5 feet vertical scale is often necessary to properly depict drainage conditions.
- iv. The desired drawing size is 24 inches by 36 inches. In no case shall drawings be larger than 30 inches by 42 inches nor smaller than 11 inches by 17 inches.
- v. Drainage construction may be shown on street or utilities improvements plans provided the resulting drawings are clear, legible and plainly show all necessary information.

### **(8) Schedule Of Fees**

If applicable, the schedule of fees for development plan review, appeals, waivers, reinspections, and other items is on file with the City Clerk and may be altered or amended from time-to-time by the City Commission to help defray the costs of the administration of these Regulations.

Development plan review fees, if any, shall be paid at the time development plans are submitted for review. A development plan review fee shall be paid each and every time development plans or parts thereof are submitted or resubmitted.

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### **(9) Administration And Enforcement**

This Code shall be administered, interpreted, and enforced by the City Manager.

It shall be the duty and responsibility of the City Manager to maintain an accurate and up-to-date compilation of this Code, including Appendices, and all amendments, and to publish said compilation and make it available to the public for a fee set by the City Commission.

In any case in which activities are undertaken in violation of this Code, not in compliance with the provisions of a permit issued by the City, or without authorization of a permit which would otherwise be required, the City Manager is hereby authorized to order that all unauthorized or improper work be stopped, direct correction of deficiencies, or take any other legal or administrative action appropriate to the severity of the violation and degree of threat to the public health, safety and welfare. The stop work order shall be posted on the property and delivered or mailed to the Developer.

### **(10) Variances**

Requests of for variances to requirements of this Chapter shall be submitted in a form as prescribed by the City Manager along with such fee as shall be established by the City Commission.

The City Manager shall coordinate the review of each variance request by all other affected City departments and shall summarize such comments and/or recommendations as may be received in a report to the Board of Zoning Appeals for final action in their normal course of business.

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

### **(11) Appeals**

#### **a. Appeals, Hearings, and Notice**

It is the intention of this Chapter that all questions arising in connection with the interpretation and enforcement of this Code shall first be presented to the City Manager, and that such questions shall be presented to the Board of Zoning Appeals only on appeal from the decision of the City Manager, and that from the decision of the Board of Zoning Appeals, recourse shall be to the courts as provided by the law.

Appeals to these Regulations may be taken to the Board of Zoning Appeals by any person aggrieved or by any officer, department, board or bureau of the City. Such appeal shall be taken within a reasonable time, as provided by the rules of the Board by filing with the officer from whom the appeal is taken and with the Board of Zoning Appeals' notice of said appeal specifying the grounds thereof. The City Manager shall forthwith transmit to the Board all papers constituting the record upon which the action appealed from was taken.

An appeal stays all legal proceeding in furtherance of the action appealed from, unless the officer from whom the appeal is taken certifies to the Board, after the notice of appeal shall have been filed with the officer, that by reason of facts stated in the certificate a stay would, in the officer's opinion, cause imminent peril to life and property. In such case, proceedings shall not be stayed otherwise than by a restraining order which may be granted by the Board or by a court of record on application, on notices to the officer from whom the appeal is taken, and on due cause shown.

The Board shall fix a reasonable time for the hearing of the appeal or other matter referred to it, and give public notice thereof, as well as due notice to the parties in interest, and decide the same within a reasonable time. At the hearing any party may appear in person or by agent or by attorney.

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**(12) Penalties for Violations**

Any person, firm or corporation violating any provision of this Code shall be upon conviction and shall be punished for each offence according to Section 1-12 of the Code of the City of Douglas, Georgia.

Each day such violations continue shall constitute a separate offense.

Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation.