**STREET AND ROAD DESIGN**
**TECHNICAL MANUAL**

Development Document #7
Augusta-Richmond County Planning Commission
March 1998
Street and Roadway Design
Technical Manual

Table of Contents

Click on any of the topics to go directly to that section.


| | | | |
|---|---|---|---|
| **Part I** | **Street and Roadway Design Criteria** | **Part III** | **Materials of Construction** |
| Section 1 | Street and Roadway Classification | Section 1 | Storm Drains |
| Section 2 | Right-of-way Requirements | Section 2 | Culverts |
| Section 3 | Layout Requirements | Section 3 | Miscellaneous Concrete |
| Section 4 | Embankment Construction | Section 4 | Base and Paving |
| Section 5 | Pavement Design | Section 5 | Bridges |
| Section 6 | Storm Drainage Control | Section 6 | Incidental Items |
| Section 7 | Sidewalks | Section 7 | Minor Drainage Structures |
| Section 8 | Deceleration Lanes | Section 8 | Earthwork |
| Section 9 | Driveways | **Part IV** | **Maintenance** |
| Section 10 | Miscellaneous Elements | Section 1 | Commercial Development |
| **Part II** | **Environmental Requirements** | Section 2 | Subdivision Development with Public R-O-W |
| Section 1 | Permitting Requirements | Section 3 | Private Subdivision Developments |
| Section 2 | Disposal of Material | | |


## Part I Street and Roadway Design Criteria

### Section 1 Street and Roadway Classification

#### General

Augusta-Richmond County Planning Commission shall determine street/road classifications for all new developments or substantial changes or improvements to existing developments. These classifications shall be based on the following definitions utilizing Average Daily Traffic (ADT) information. The ADT will be determined using the Institute of Traffic Engineers (ITE) Trip Generation manual, current edition.

Minor or Residential Streets – Streets that provide access to frontage properties and are designed to carry traffic having origins or destinations within the immediate area traversed. Such streets are not designed to interconnect adjoining neighborhoods, subdivisions, or non-residential areas. They should be designed so that no segment has an ADT greater than 500. A loop street may be considered two separate streets but the design ADT at any point shall not

exceed 500.

Residential Collector Streets – The highest order of residential street. Conducts and distributes traffic between lower-order residential streets and higher-order streets (arterial or expressways). Such streets function to promote free traffic flow; therefore, curb parking should be prohibited and special setbacks and/or lot widths should be required. Residential collectors should be designed to prevent use by non-neighborhood traffic. Total traffic volume should not exceed 3,000 ADT.

Collector Streets - Streets that connect minor or residential streets to higher order streets, either collectors or arterials. Such streets function to promote free traffic flow, therefore curb parking should be prohibited and special building setbacks and/or lot widths should be required. Collectors should be designed so as not to be attractive as shortcuts for traffic that has neither an origin nor destination within a neighborhood or an immediate area traversed. Residential collectors should have sidewalks on at least one side. Collector streets should be designed to accommodate a maximum ADT of 3,000.

Arterial Streets – Higher order, interregional streets that convey traffic between centers. There should be no curb parking and ideally there would be limitations on access to frontage properties. Most traffic would not have origins or destinations within the immediate area traversed.

**Section 2 Right-of-way Requirements**

**General**

Right-of-way requirements shall be established based on roadway classification and the proposed geometry of the pavement section. Because design requirements and proposed concepts vary for each proposed project, cross-sectional roadway geometry will vary to provide for the installation of curb and gutter or conversely, shoulders and ditch sections. The following right-of-way requirements and pavement widths have been established for each roadway classification:

| PROPOSED ROADWAY REQUIREMENTS | | | | | | |
|---|---|---|---|---|---|---|
| CLASSIFICATION | MINIMUM DESIGN SPEED | CURB & GUTTER | | SHOULDER & DITCH SECTION | | |
| | | Right-of-Way | Pavement Width B/C to B/C | Right-of-Way | Pavement Width | Shoulder Width |
| Minor | 25 | 60 | 31 | 80 | 24 | 6 |
| Residential | 30 | 60 | 31 | 80 | 24 | 6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Residential Collector* | 35 | 80/60 | 31 | 80 | 24 | 6 |
| Collector | 35 | 80 | 31 | 80 | 24 | 6 |
| Industrial Access | 35 | 80 | 31 | 80 | 28 | 6 |
| Arterial** | 45 | 100 | 53 | 120 | 48 | 8 |

*Residential Collector streets shall require an 80 foot right-of-way on the first 200 feet of the proposed residential collector street from major intersections. The right-of-way may be reduced to 60 feet for those portions of a residential collector street between major intersections beyond the 200 feet requirement.

**Georgia DOT Standard Specifications Type 7 curb and gutter shall be required where speeds are 45 mph or greater.

2.02. Intersections

Right-of-ways at intersections shall include a "mitered" configuration. The mitered right-of-way would be established by reducing the property line a total length of twenty-five (25) feet along each right-of-way line from the intersecting point of two (2) right-of-way lines. Connecting the two (2) right-of-way lines at the twenty-five (25) feet distance will create the "mitered" configuration. "Clear View" easements shall not be accepted.

No construction, fence, hedge, bushes, or other obstruction to a clear view, which extends over three (3) feet in height, shall be permitted at any corner of intersecting streets. Exceptions shall be made for utility pole lines, lighting standards, post office boxes, traffic signs, and trees, the branches of which are kept trimmed to a height of eight (8) feet above the ground.

**Section 3 Layout Requirements**

**3.01 Vertical Alignment:**

The minimum centerline grade for roadways shall be maintained at 0.5% for cross-sections utilizing concrete curb and gutter; all others shall be at least 1%.

The maximum centerline grade for roadways shall be maintained at 15 percent. In the event that specific site conditions necessitate the design of roadways in excess of 15 percent, the Augusta-Richmond County Planning Commission along with the City Engineer shall review and consider an exception. It shall be handled on a case-by-case basis.

Street and intersecting street approaches shall not have grades in excess of 5% for a distance of fifty (50) feet from the intersection of centerlines in all directions for all streets.

At roadway intersections with normal crown, a vertical curve is required to tie into the grade of the intersecting street. The vertical curve shall be designed with the extension of the cross slope of the through road as the first tangent and the approach grade of the intersecting street as the second tangent.

The vertical curve tying into an intersecting street with a through street shall not tie into the edge of the pavement of the through street, but shall maintain at least a 15.0 foot tangent distance from the edge of pavement to the PVT.

All intersections shall be designed to avoid cumulation of water.

Vertical curves at intersections shall be designed to accommodate a minimum two car stacking distance.

The minimum length of a vertical curve through the run of the road shall be 130 feet; the minimum length of a vertical curve used to accommodate an intersection design shall be 50 feet.

The minimum stopping sight distance shall be established based on design speed limits in accordance with AASHTO design criteria. The minimum stopping sight distance shall govern the length of vertical curve, but in no case shall the minimum length of vertical curve be less than 130 feet.

Excepting minor classified streets, a minimum 30-mph design speed limit should be utilized unless otherwise noted and agreed upon by the Augusta-Richmond County Planning Commission or Traffic Engineering. A minimum design speed of 25 mph should be utilized for minor streets. Design exceptions may be granted on a case-by-case basis as approved by City Engineer, Augusta-Richmond County Planning Commission and Traffic Engineer.

**3.02 Horizontal Alignment**

The maximum length of any dead-end/cul-de-sac street shall be 1,000 feet. The Augusta-Richmond County Planning and Zoning Commission will review special conditions necessitating the installation of a roadway in excess of 1,000 feet. Exceptions to this policy shall be granted on a case-by-case basis.

All permanent dead-end streets shall be provided at the closed end with a turn-around having a street-property line diameter of not less than eighty (80) feet. Turn-arounds of this nature shall have a paved diameter of not less than sixty (60) feet. Dead-end streets intended to be continued at a later time shall be provided with the same turn-around as required for a permanent dead-end street, but only that portion to be required as right-of-way when the street is continued shall be dedicated and made a public street.

Minor and residential roadways should be laid out to avoid long tangent sections and to discourage speeding and cut-through traffic. New techniques in the layout of residential developments that discourages speeding may be approved on a case-by-case basis with specific design requirements governed and approved by the Augusta-Richmond Planning Commission, Public Works and Traffic Engineer.

Minimum tangent requirements for horizontal curves will be based on roadway classification in accordance with the following table:

| Road Classification | Length of Tangent (feet) |
|---|---|
| Minor | 60 |
| Residential | 75 |
| Residential Collector | 100 |
| Collector | 125 |

| | |
|---|---|
| Arterial | AASHTO |

Typically, residential streets will not require superelevation design if posted speed limits and calculations are based on a speed limit of 30 mph or less. For speeds in excess of 30 mph on collector and arterial roadways, superelevation cross-sections shall be required for horizontal curves.

For minor and residential streets with posted speed limits less than or equal to 30 mph, the tangent distance required between reverse curves shall be based on the minimum stopping sight distance requirements.

Reverse curves are discouraged in the design of roadways. However, topographic and design characteristics may dictate the need for reverse curves. Reverse curves will only be allowed on minor and residential road classifications. Should speed limits dictate the use of superelevation horizontal curve design, the transition zone required to achieve superelevation will establish the tangent length between reverse curves.

When submitted for review by the City Engineer and Traffic Engineer, plans and construction drawings shall include the road classifications in accordance with Planning and Zoning requirements. Classifications shall be clearly labeled on each road/street.

The minimum allowable distance between the centerlines of streets intersecting a common roadway shall be established by the minimum stopping sight distance. In the event that development of property along existing right-of-ways necessitates a roadway intersection without the appropriate stopping sight distance between intersecting street centerlines, the City Engineer and Traffic Engineer will review the available data and consider permit exceptions.

Connecting an existing street to a proposed street with non-parallel centerlines will be allowed for streets with posted speed limits less than 30 mph. The connection of the two streets shall result in a centerline deflection of less than 10 degrees. Centerlines that connect at deflections greater than 10 degrees will require the design and installation of a horizontal curve in accordance with road classification requirements.

Minor and residential street intersections shall be designed with a minimum 25 foot radius on each intersecting corner. All roadways that intersect collector, arterial or state highways will require a minimum 30 foot radius on each intersection corner.

Intersection of streets shall maintain a 90-degree angle. Design exceptions may be granted on a case-by-case basis as approved by the City Engineer and Traffic Engineer.

## Section 4 Embankment Construction

### General:

Fill placed and compacted for public roadway embankments shall be constructed in accordance with Georgia Department of Transportation Standard Specifications, Construction of Roads and Bridges, current edition, Section 208 – Embankments, and related sections.

## Section 5 Pavement Design

## 5.01 General:

Each public street and road shall be paved or surfaced with a paving or surfacing of a type and strength deemed suitable for the volume and character of traffic to be expected. No street or road shall be provided with less than a paved (asphalt or concrete) all weather surface. The type of roadway surfacing shall be determined by the Department of Public Works and Engineering except where the proposed roadway is on a part of the existing system of state highways, Public Works and Engineering shall first consult with the Georgia Department of Transportation over such portion of the state system for its recommendation.

Due to the geologic location of Augusta-Richmond County along the Fall Line, separating the Coastal Plains Geologic Province from the Piedmont Province, the Georgia Department of Transportation Standard Specifications for Construction allow the use of sand-clay in the construction of roadway base course (Section 303). Although sand-clay and graded aggregate are acceptable materials to be utilized in the development of base and sub-base construction, Augusta-Richmond County encourages graded aggregate base construction.

## 5.02 Sub-Grade Construction:

Sub-grade construction shall be accomplished in accordance with Georgia Department of Transportation Standard Specifications, Section 209. Sub-grade stabilization, use of select material in sub-grade construction, and shoulder stabilization shall be included in this work. The City Engineer or on-site inspector during construction may require subgrade stabilization prior to base construction.

## 5.03 Base:

All base course design and construction shall be accomplished in accordance with Georgia Department of Transportation Standard Specifications, current edition.

For minor and residential roadway classifications, sand-clay base or graded aggregate base may utilized. A minimum depth of eight (8) inches of compacted sand-clay base is required; all work should be accomplished in accordance with Georgia Department of Transportation Specifications, Section 300 and related sections. A minimum of six (6) inches of compacted graded aggregate base will be required in accordance with Georgia Department of Transportation Standard Specifications.

Complete pavement analysis and design data may be required by the City Engineer to establish minimum rigid and flexible pavement system components. Base thickness shall not be less than the minimum established for minor and residential roads.

On roadway cross-sections without curb and gutter, the base material shall be extended at least six (6) inches beyond the limits of the asphaltic or concrete pavement on each side of the road.

## 5.04 Pavement Criteria:

As a minimum, asphaltic concrete pavement with a minimum compacted thickness of 2.0 inches shall be required as a wearing surface over both sand-clay and graded aggregate base courses for minor and residential streets. All asphaltic concrete pavement shall be placed in accordance with

Georgia Department of Transportation Standard Specifications, Section 400 and related sections. The City Engineer reserves the right to request a pavement design analysis to verify required thickness of flexible system pavement components based on experience and knowledge of the area.

## Section 6 Storm Drainage Control

### 6.01 General:

The geometric cross-section design of paved roadway surfaces with shoulders and longitudinal ditches or curbing to route stormwater to appropriate collection and conveyance systems shall be based on the following criteria:

Roadside longitudinal ditches may be allowed in accordance with the roadway classification, pavement width and shoulder as prescribed. The use of roadside longitudinal ditches will be evaluated based on topography, soil conditions, including but not limited to soil indices analysis or equivalent design data, and experience in the area and is subject to the approval of the City Engineer. Roadside ditches shall maintain minimum front slope dimensions of three (3) horizontal to one (1) vertical and a minimum two (2) horizontal to one (1) vertical dimensions on the back slope. Non-conforming exceptions may be submitted to the City Engineer for consideration.

Concrete curb and gutter is desirable in all subdivision developments.

Excepting extenuating circumstances requiring evaluation of specific alternatives or pre-existing raised edge asphalt, the type of curbing utilized in residential areas shall be continuous.

Minimum 24 inch concrete curb and gutter section is required for minor and residential street classifications; 30 inch concrete curb and gutter is required on residential collectors, collectors and arterial streets.

Hydraulic calculations characterizing stormwater encroachment into the travel lane and catch base placement shall be provided.

A minimum template size of 18 inches is required for raised edge asphalt sections. Raised edge asphalt sections shall be constructed as an integral unit with full depth asphalt (8") compacted at the back edge of pavement cross-section. A raised edge asphalt curb shall not be installed on top of existing asphalt pavement.

The tie-in of storm drainage structures installed on raised edge asphalt cross-sections shall include concrete transitions as specified in the Augusta-Richmond County Construction Standards.

In curb and gutter road sections, roadside slopes should be constructed to include a shoulder of 8 feet from the face of curb.

A minimum of one (1) foot extension of sidewalk grades shall be required behind the sidewalk prior to establishing slopes. Site conditions should dictate actual slope cross-sections for fill or cut slopes; a minimum fill section slope of two (2) horizontal to one (1) vertical is desirable. A minimum cut cross-section slope of two (2) horizontal to one (1) vertical is desirable.

Concrete "rolled curb" may be allowed in certain residential developments. The application for utilizing concrete rolled curb will require prior approval by the City Engineer. The approval process will include hydraulic and road spread calculations to establish the safety of rolled curb for the specific application. All rolled curb shall be constructed in accordance with Augusta-Richmond County Standard Detail.

## Section 7 Sidewalks

### 7.01 General:

Sidewalks shall be required at various locations in Augusta-Richmond County depending on location in urban areas and proximity to other public facilities in sub-urban and rural areas. Sidewalk requirements shall be determined by the City Engineer. Additionally, sidewalks are allowed in subdivision developments as desired by the owner. Design and construction of sidewalks, ramps, etc. shall be accomplished in accordance with the ASSHTO Green Book and Americans with Disabilities Act (handicap ramps, etc.)

## Section 8 Deceleration Lanes

### 8.01 General:

Deceleration lanes will be required at all tie-ins to arterial and collector road classifications. The minimum length of deceleration lanes is 150 feet.

Deceleration lanes shall be constructed to provide a minimum 12 foot travel lane and total pavement width of 14.5 feet to the back of curb. In the event that curb and gutter is not used, the asphalt width shall be 12.5 feet with an appropriate shoulder in accordance with the road classification requirements.

Exceptions for the requirement of a deceleration lane shall be considered by the City Engineer and Traffic Engineer on a case-by-case basis. Exceptions shall be based on projected traffic generation, through street traffic counts, and accident analysis in the area.

Acceleration lanes shall not be required. In lieu of an acceleration lane, a 50-foot taper shall be installed from the end of the radius of the intersecting street to the arterial or collector road. The Traffic Engineer shall determine specific radius and lane taper.

### 8.02 Commercial Developments:

Large developments, greater than 200,000 square feet of building area, shall provide a traffic impact study to determine required roadway improvements. Required improvements shall be established by the Traffic Engineer and may include but is not limited to left turn lanes, signalization, deceleration lanes, concrete curb and gutter, etc.

## Section 9 Driveways

### 9.01 General:

Individual driveways may be required on all residential properties and commercial properties.

Depending on the design and construction of the public roadway system, various pavement cross-sectional structures may be used including roadside shoulders and ditches, concrete curb and gutter, and raised asphalt sections. Additionally, materials of construction utilized to establish the access driveways may vary.

**9.02 Residential Drives:**

For concrete curb and gutter roadway cross-sections, driveways may be extended to the edge-of-pavement utilizing a typical Georgia Department of Transportation valley gutter section. The concrete curb and gutter may be removed on both sides of the intersecting driveway to the nearest full joint or construction joint of concrete curb and gutter. This curbing shall be replaced in the construction of the new driveway in accordance with Georgia Department of Transportation Specifications.

An alternate drive construction technique is allowable for concrete curb and gutter roadway sections in accordance with the following criteria. The curb shall be saw cut at the end of the radius of the proposed driveway. The existing gutter shall remain intact. A new concrete lip shall be constructed 1.5 inches above the gutter line extending from the gutter to the back of curb. The driveway concrete apron shall be installed to back of the newly constructed 1.5 inch concrete lip at back of curb with appropriate expansion joint.

For raised edge asphalt pavement cross-sections, driveways shall be constructed to the back of the raised edge asphalt without disturbing the structural integrity of the pavement system, including the raised edge asphalt. Grading activities to install the drive shall be accomplished to avoid damage to the base or subgrade supporting the pavement system and the raised edge asphalt.

For roadway cross-sections with shoulders and longitudinal ditch sections, driveways shall be installed with a culvert capable of handling the projected stormwater runoff through the longitudinal ditch. Appropriate design calculations sizing the culvert will be required. Flared end sections and/or concrete headwalls, in accordance with Georgia Department of Transportation Specifications, shall be required. All headwalls shall be located to meet clear zone requirements as established by the AASHTO Roadside Design guide. Changes in alignment of longitudinal ditch sections to meet clear zone requirements are subject to approval by the City Engineer based on appropriate hydrology/hydraulic calculations. In addition to end treatments, culverts shall require appropriate soil and erosion control measures to control velocity entering and leaving the culvert section and protect the longitudinal ditch section from erosion, siltation or degradation. All disturbed areas within the right-of-way, including the longitudinal ditch section and shoulders shall be revegetated appropriately.

Driveways constructed over longitudinal ditch sections shall require a minimum 8 foot travel surface with 2 foot shoulders on each side of the travel way. Minimum slope dimensions for the embankment construction shall be 3 horizontal to 1 vertical. Longitudinal culverts under the drive shall be sized to allow appropriate end treatment (and tied into the driveway embankment). Material types in accordance with Georgia Department of Transportation Standard Specifications shall be utilized.

**9.03 Commercial Driveways:**

All commercial driveways shall be installed in accordance with Georgia Department of Transportation Standard Specifications. All commercial drives tying into varied roadway cross-

sections as described for residential driveways shall be treated similarly. The location and width of all commercial drives shall be subject to the approval of the City Engineer and Traffic Engineer.

A curb cut shall be located as far as practical from the intersection of the right-of-way lines of two streets, and no curb cut shall be permitted within fifty (50) feet of an intersection. Each parcel that is in ownership separate from the ownership of contiguous parcels shall be entitled to at least one curb cut per street front. Except in single family residential zones, curb cuts shall be at least 100 feet apart where practical. Except in single family residential zones, shared driveways are encouraged, and where practical a driveway that is not a shared driveway shall be at least fifty (50) feet from a property line.

Owners/developers of commercial developments accessing county roadways utilizing existing driveway cuts shall be required to submit development plans indicating on-site traffic movement and site ingress and egress to the City Engineer and Traffic Engineer for review and approval. The owner may be required to improve the driveway cut to accommodate the proposed development or eliminate the existing drive.

**Section 10 Miscellaneous Elements**

**10.01 On-street Parking:**

On-street parking along commercial corridors is allowed in certain areas of the urban district. On-street parking will be evaluated on a case-by-case basis by the City Engineer and Traffic Engineer.

On-street parking will not be allowed on collector streets and/or arterial roadways. On-street parking along residential collector streets shall be evaluated by the City Engineer and Traffic Engineer. On-street parking is generally allowed on residential and minor streets in accordance with Augusta-Richmond County codes.

**10.02 Street Lighting:**

Street lighting is encouraged in all subdivisions. Street lighting is essential for pedestrian safety and security.

**PART II Environmental Requirements**

**Section 1 Permitting Requirements**

All public and private developments within Richmond County are required to comply with local, state, and federal regulations including environmentally sensitive land areas, "wetlands", and stormwater runoff quality programs. Depending on location and impact of properties under consideration for development, other state and federal regulations may require compliance.

Permitting requirements involving wetlands, water quality requirements, including NPDES programs and Georgia Department of Natural Resources programs involving state waters are outlined in the Stormwater Management Plan. Appropriate documentation, permit applications, and agency approval are required by Augusta-Richmond County for all projects that may impact these resources.

General environmental permitting activities shall be accomplished in accordance with Georgia Department of Transportation Standard Specifications Sections 107.23 and 107.22.

**Section 2 Disposal of Material**

Disposal of materials and/or soils excavated from grading activities and construction at a site is of substantial importance to Augusta-Richmond County. In order to more effectively control removal of "waste" material generated from construction activities, the following statement shall be placed on all plans:

> Prior to any materials from this project being wasted or otherwise disposed of outside the project limits, the contractor shall furnish the City Engineer a copy of written permission, signed by the property owner (or his authorized agent) describing the estimated amount, and type of material to be placed on said property. If any Portland Cement Concrete, asphaltic concrete, wood, or other such materials are to be wasted on said property a copy of the owner's inert landfill permit, issued by the Environmental Protection Division, shall be furnished to the engineer prior to any such waste being removed from the project.
>
> In all cases, regardless of the material being wasted, a grading permit issued by Augusta-Richmond County must be furnished to the City Engineer.

**PART III Materials of Construction**

**General:**

For all public systems, and those roadway designs that impact public right-of-ways, the Georgia Department of Transportation Standard Specifications shall be required in regards to all materials and appurtenances.

**Section 1 Storm Drains**

All storm drain pipe, manholes, junction boxes, catch basins, inlets, etc. and appurtenances shall comply with Georgia Department of Transportation Construction Standard Specifications. All stormwater manholes shall be precast structures.

**Section 2 Culverts**

Culverts required under public roadway sections shall be constructed of Class III reinforced concrete pipe, Class IV reinforced concrete pipe, as appropriate or concrete box culvert. Design of said facility shall be in accordance with Georgia Department of Transportation Standard Specifications.

Culverts required in longitudinal ditches under residential drives shall be Corrugated Metal Pipe (CMP), Corrugated Polyethylene Pipe (CPP) smooth lined, or Reinforced Concrete Pipe (RCP) – Class III or IV. All materials and construction details shall be in accordance with Georgia Department of Transportation Standard Specifications.

**Section 3 Miscellaneous Concrete**

All miscellaneous concrete construction shall be in accordance with Georgia Department of Transportation Standard Specifications Section 441.

**Section 4 Base and Paving**

Base and paving design and construction shall be accomplished in accordance with Georgia Department of Transportation Standard Specifications Sections 222 through 328 (base) and Sections 400 through 461 (paving) as appropriate.

**Section 5 Bridges**

Georgia Department of Transportation Standard Specifications Sections 500 through 543 shall be applied to all bridge design and construction activities.

**Section 6 Incidental Items**

Construction of incidental facilities and structures, including grassing, as part of roadway design shall be accomplished in accordance with appropriate Georgia Department of Transportation Standard Specifications. These standards and specifications shall be referenced on development plans; appropriate construction details as published by the Georgia Department of Transportation shall also be referenced.

**Section 7 Minor Drainage Structures**

The design and construction of minor drainage structures shall be accomplished in accordance with Section 544 through 577 of the Georgia Department of Transportation Standard Specifications.

**Section 8 Earthwork**

Earthwork shall include all activities from clearing and grubbing through grading activities, storm drainage installation, sanitary sewer and water installation within public right-of-ways. Earthwork shall include subgrade preparation and pipe bedding material as appropriate for the development. Within public rights-of-ways, all earthwork shall be accomplished in accordance with Georgia Department of Transportation Standard Specifications.

**Part IV Maintenance**

**General:**

The construction of roadway systems and streets within our county are of particular concern to the Augusta-Richmond County Commission-Council. Proper design, construction and maintenance of these facilities require a responsibility on the part of the developer/contractor to construct cost effective yet structurally sound transportation corridors that may be accepted into the County roadway system. Once accepted, these facilities become the responsibility of the tax payer to maintain.

In general, maintenance requirements vary for various types of construction and treatment. Therefore, temporary maintenance agreements are required for those properties dedicated to Augusta-Richmond County Commission for maintenance and ownership while private and commercial development are responsible, independently for the maintenance and efficient operation of facilities developed for these projects.

**Section 1 Commercial Development**

Owners of commercial developments are responsible for all aspects of traffic ingress/egress to commercial facilities. Augusta-Richmond County assumes no responsibility or liability for the operation, maintenance, and

care of these systems. In the event that deterioration of systems encroaching public right-of-ways at access locations to County maintained roads, minimum levels of maintenance to insure the safety of motorist, pedestrians, and other forms of vehicular transportation are required. Therefore, Augusta-Richmond County Commission reserves the right to require improvements to these facilities within the right-of-way in the event structures are not adequately maintained.

**Section 2 Subdivision Development with Public Right-of-ways**

During the developer maintenance period, the developer and/or contractor shall be responsible for all routine, remedial and/or capital improvements required to insure that the roadway system and associated storm drainage facilities effectively operate within the parameters established during design.

Following the developer maintenance period, and after public rights-of-way and easements are dedicated to and accepted by the Augusta-Richmond County Commission, routine maintenance and capital improvement activities shall be the responsibility of the County.

**Section 3 Private Subdivision Developments**

Private subdivisions may be designed and developed in accordance with sound engineering practices and specifications that have not been adopted by Augusta-Richmond County Commission for acceptance into the county infrastructure system. All private subdivisions not designed, constructed, inspected, and approved in accordance with the minimum standards established by Augusta-Richmond County can not be accepted into the county infrastructure system for ownership and maintenance. Therefore, it is the responsibility of the property owner(s) to maintain all facilities in accordance with design requirements. This responsibility shall include the necessary periodic and regular maintenance as required to insure the efficient operation of the system. Capital improvements may be required in the event of system deterioration or ineffective operation of the facility based on approved plans.

Final plats of privately developed subdivisions shall include the following statement identifying the property owner(s) responsibility for maintenance of the roadway system in perpetuity:

> "The streets, roads and stormwater management facilities are the private property of the owner, who has full and perpetual responsibility for their maintenance and repair. The owner releases Augusta-Richmond County Commission from any and all claims, damages, or demands arising on account of design, construction, ownership and maintenance of the streets and roads as shown hereon. The Augusta-Richmond County Commission assume no liability or duty related thereto, and in no manner approves or assumes liability for the design of the streets and road as shown hereon."

Private subdivisions not constructed in accordance with the standards and specifications setforth by Augusta-Richmond County Commission may not be inspected during construction activities. Consequently, these developments and associated infrastructure can not be accepted into Augusta infrastructure system for ownership and maintenance.

REFERENCES:

Augusta-Richmond County Subdivision Regulations,
Columbia County Subdivision Regulation Manual, April 1993
Georgia Department of Transportation Standards & Specifications
AASHTO Roadside Design Guide

Manual of Uniform Traffic Control Devices (MUTCD)
AASHTO Drainage Guidelines
AAHSTO, Policy on Geometric Design of Highways & Streets, 1994

**LAST UPDATED: NOVEMBER 5, 1999**