

# **SECTION 1 - GENERAL**

## **1-1 Purpose**

This Manual has been prepared to promote uniform design procedures for designers and technicians in the development of property and roads in the County of Henrico, Virginia. The Manual is intended to serve as a procedural design guide which is to be used in conjunction with specifications, standards and policy directives from other County agencies as well as design manuals published by the American Association of State Highway and Transportation Officials (AASHTO), and the Virginia Department of Transportation (VDOT).

Public roadways within the County are either maintained by the VDOT or Henrico County. Roadways which are designated as Interstate Routes (I-64, I-95, I-295, I-895, etc.), U.S. Highways (U.S. 250, W. Broad Street; U.S. 60, Williamsburg Road; etc.) and Virginia Primary Routes (Rt. 6, Patterson Avenue; Rt. 5, New Market Road; etc.) are maintained by the VDOT. A map identifying public roads which are maintained by the VDOT is included in Appendix A. The Sandston Residency Office of the VDOT should be contacted regarding issues relating to these roads. All other public roads within the County are maintained by Henrico County.

The design and construction of all public roads intended to be included in the Henrico County System of Maintained Roadways shall conform to the details included in this Manual and to the VDOT requirements where this Manual is silent.

Roads that are intended to be included in the VDOT system of maintained roadways must meet the standards and specifications prescribed by the VDOT.

## **1-2 Definitions and Acronyms**

The following terms, definitions and acronyms are utilized in this Manual. See Chapters 18 and 19 of the Henrico County Code for additional definitions of terms described herein.

**“AASHTO”** means American Association of State Highway and Transportation Officials.

**“ADT”** means average daily traffic.

**“Arterial Road”** is a road that connects major activity centers, carries high volumes of traffic longer distances and has access to abutting development/land as a small part of its function. The concept of service to abutting land is secondary to the provision of mobility for major traffic movements on arterial roads. Normally, arterial roads carry significantly higher traffic volumes and a variety of traffic types at higher speeds than collector roads or residential roads.

**“ASTM”** means American Society of Testing Materials.

**“BMP”** means Best Management Practice. A BMP is a practice or combination of practices that is determined to be the most practicable means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

**“Board of Supervisors”** means the Henrico County, Virginia, Board of Supervisors.

**“Building Official”** means the Henrico County Building Official.

**“CBLAD”** means Chesapeake Bay Local Assistance Department.

**“CBR”** means California Bearing Ratio. This is a testing procedure to determine the strength of soils.

**“Clerk”** means the Clerk of the Henrico County Circuit Court.

**“Collector Road”** is a road that provides both access and service for local traffic movements within a neighborhood, commercial or industrial area. Access and traffic service are of approximate equal importance on collector roads. Normally, collector roads carry higher volumes of traffic at higher speeds than residential roads.

**“County”** means Henrico County.

**“County Attorney”** means the Henrico County Attorney.

**“County Code”** means the Henrico County Code.

**“County Engineer”** means the Henrico County Director of Public Works.

**“Cul-de-Sac”** means a road with only one outlet that connects to the balance of the public road system at only one point. At the end opposite this outlet is an appropriate turnaround for the safe and convenient reversal of traffic movement.

**“DCR”** means Virginia Department of Conservation and Recreation.

**“Dam”** means an embankment or structure intended or used to impound, retain, or store water either as a permanent pond or as a temporary storage facility.

**“Dead End Road”** means a road that connects to the balance of the public road system at only one point and has no turnaround at the end.

**“Design Speed”** means a speed selected for purposes of design and correlation of those features of a road such as curvature, superelevation, and sight distance, upon which the safe operation of vehicles is dependent.

**“Developer”** means an individual, corporation or registered partnership engaged in the subdivision of land, development or redevelopment of a property.

**“Director of Planning”** means the Henrico County Director of Planning.

**“Director of Public Works”** means Henrico County Director of Public Works.

**“Easement”** means a grant of a right to use property of an owner for a defined specific limited use or purpose.

**“Expressway”** means a public way designed to handle heavy volumes of vehicular traffic with limited access. An expressway is a divided highway for through traffic, with full or partial control of access.

**“Extrinsic Structure”** means any structure whose primary mission is not essential for the operation of a public road (i.e. subdivision identification signing, landscaping, wall, etc.).

**“FEMA”** means Federal Emergency Management Agency.

**“FHWA”** means Federal Highway Administration.

**“Functional Classification”** means the process by which roads and streets are grouped into classes, or systems according to the character of service they provide or are intended to provide.

**“GCN”** means Geodetic Control Network.

**“GIS”** means Geographic Information System.

**“ITE”** means Institute of Transportation Engineers.

**“ITE Trip Generation”** means the current edition of Trip Generation, an informational report of the Institute of Transportation Engineers.

**“Intersection”** means the juncture of two or more roads or streets at which point there are three or more legs.

**“Level of Service”** means a qualitative measure describing operational conditions within a traffic stream. The latest edition of the Highway Capacity Manual shall serve as the basis for determining “level of service”.

**“Major Street”** A major street is a road (four or more lanes), which typically falls within the functional classification range of arterial to collector road. The road may be a multi-lane facility or proposed to be such and will normally carry a large percentage of through trips while at the same time providing for a certain amount of access to abutting property.

**“Major Thoroughfare Plan”** is the transportation element of the County’s Comprehensive Plan. The Major Thoroughfare Plan identifies the existing roadways and future roadway corridors (controlled access roads, arterial roads, collector roads and major access roads) that are planned to serve the County.

**“Manual”** means the Department of Public Works Design Manual.

**“May”** means that the condition is permissive. The design or condition is optional when “may” is referenced.

**“Minor Street”** means a street providing access to abutting property without large volumes of through traffic. A minor road is a road which typically falls within the functional classification range of collector to local street. The road is not normally a multi-lane facility nor is it proposed to be. The road normally carries a large percentage of local, short distance trips and provides for access to adjacent land.

**“Must”** means that the specified criteria are mandatory.

**“MUTCD”** means the Manual of Uniform Traffic Control Devices (Federal Highway Administration).

**“NEC”** means National Electrical Code.

**“Non-Through Street”** means a street or road that connects to the balance of the public road system at only one point.

**“NPDES”** means National Pollution Discharge Elimination System.

**“Planning Office”** means the Henrico County Planning Office

**“Private Road”** means a road or street that has not been or is not intended to be accepted into the Henrico County or the VDOT system of maintained roadways.

**“Projected Traffic”** means the number of vehicles forecast to travel over the segment of road involved.

**“POD”** means Plan of Development as defined by Section 24-2 of the Henrico County Code.

**“Professional Engineer”** means an engineer registered and licensed to practice in the Commonwealth of Virginia.

**“Public Road”** means a road or street that has been constructed in a public right-of-way to accepted standards of the responsible jurisdiction (VDOT or Henrico County) and/or has been formally accepted into the jurisdiction’s system of maintained roads.

**“Residential Road”** is a road whose primary purpose is to serve abutting development/land and carry low traffic volumes over short distances.

**“R/W”** means right-of-way. “Right-of-Way” is land, property or interest therein, usually in a strip, acquired for or devoted to a public road designated to become part of the County system of maintained roadways or the VDOT system of maintained roadways.

**“Shall”** means that the specified criteria is mandatory.

**“Should”** means that the condition is advisory or recommended. Where “should” is used it is considered to be advisable usage, recommended but not mandatory.

**“Through Street”** means a street or road which connects to and provides access between at least two other public streets or roads.

**“Traffic Engineer”** means the Henrico County Traffic Engineer.

**“Traffic Impact”** is the effect that traffic generated by a development has on nearby roads, intersections and/or interchanges. Impact is normally determined by an analysis of existing and future traffic flows, with site generated/distributed traffic included, which in turn is used to establish needed improvements to correct deficiencies brought about by the development.

**“Unmaintained Right-of-Way”** is land, or property, usually in a strip, acquired for or devoted to a public street designated to become part of the County system of maintained roadways or the VDOT system of maintained roadways but is not currently maintained in any way by the County.

**“VDOT”** means the Virginia Department of Transportation.

**“VPD”** means vehicles per day

### **1-3 Effect of Legislation**

If subsequent legislation is enacted that conflicts with any provision of this Manual, the legislation provisions shall govern. As of its effective date, such legislation shall take precedence over any conflicting interpretations or decisions rendered by the Department of Public Works personnel prior to the enactment of the legislation. However, such action shall not affect the validity of these requirements as a whole, or any part thereof, other than the specific provision involved.

### **1-4 Discretionary Authority and Appeal Procedure**

The Director of Public Works may utilize discretionary authority, as it relates to the provisions of this Manual, in the application of geometric standards relative to the alignment and grade of roads and streets. Such judgements will take into consideration the individual situation, but in no instance will safety features or structural integrity prescribed by the standards be sacrificed.

The Director of Public Works will consider and render a ruling on unresolved differences of opinion between a developer and a Public Works staff member that pertain to the interpretation and application of the requirements specified herein.

To obtain this review, the developer shall submit a written request to the Director identifying the conflict and describing the unresolved issue. After reviewing all pertinent information, the Director will advise the developer of his decision relative to the appeal.

The request for an exception or more liberal interpretation, may be considered provided that the request is not based exclusively on financial considerations. The exception must also not be detrimental to public safety or injurious to surrounding property.