

## **SECTION 1.0**

### **INTRODUCTION**

#### **1.1 PURPOSE OF MANUAL**

The purpose of this Manual is to provide a standard guideline to the contractor, developer and engineer for the design and construction of water and wastewater system extensions that will become a part of the Greenville Utilities Commission's water and wastewater systems. This publication is not intended to replace previously adopted codes, ordinances or statutes, but serves to consolidate the multitude of information on policy, design, materials, construction and standard detail drawings used by the Water Resources Department of the Greenville Utilities Commission.

The materials, design and construction standards contained within this Manual are established as the minimum for water and sewer extensions which will be accepted for ownership and maintenance by the Greenville Utilities Commission. These minimum standards have been adopted and compiled from information from several sources such as agencies of the State of NC, industry standards and the knowledge and experience of the technical staff of the Greenville Utilities Commission Water Resources Department.

Finally, it is the intent and purpose of this Manual to explain the requirements of the Greenville Utilities Commission relating to water and wastewater system extensions such that all can comprehend these requirements and to provide a consistent, orderly, and sound extension of the Greenville Utilities Commission's water and wastewater systems.

#### **1.2 ORGANIZATIONS, AUTHORITY, AND RESPONSIBILITIES**

##### **1.2.1 Greenville Utilities Commission**

The Greenville Utilities Commission was created by an act of the NC Legislature to provide utility services to citizens and industry within the City of Greenville and surrounding areas. The Greenville Utilities Commission is owned by the citizens of Greenville and operated by an independent, eight (8) member Board of Commissioners consisting of seven (7) Commissioners appointed from the public and the City Manager. The day to day management of Greenville Utilities Commission is by a general manager with a director for each operating department.

The three (3) operating engineering departments include the Electrical, Water Resources, and Gas Departments all of which are housed in the Engineering Center located on Mumford Road.

The main office for maintenance and construction operations is located in the Operations Center adjacent to the Engineering Center. Administration services are provided through the main office of the Commission at 401 S. Greene Street.

There are various utility systems operated by others throughout Pitt County including electrical, water and sewer, and gas. The areas served by the various utilities of the Greenville Utilities Commission are therefore not coterminous. A map indicating the areas served by Greenville Utilities can be viewed at the Commission's main office on S. Greene Street.

#### 1.2.2 City of Greenville

The Public Works Department has the responsibility to operate and maintain the streets, storm drainage, and solid waste collection systems. The Public Works Department also handles issuance of permits for work within the streets.

The Engineering Division of the Public Works Department is responsible for approval of all subdivision street and storm drainage design, commercial and industrial site development, sedimentation and erosion control plans within the Greenville City Limits and its Extraterritorial Jurisdiction (ETJ). The Inspections Division is responsible for the issuance of permits and inspection of actual building construction.

The City of Greenville Planning and Community Development Department has the responsibility for ensuring zoning compliance and for approval of landscaping plans for all development which occurs within the Greenville City Limits and its ETJ. The City of Greenville Planning and Zoning Commission has the responsibility for approval of all subdivisions including streets and drainage systems inside the Extraterritorial Jurisdiction and City Limits of the City of Greenville.

#### 1.2.3 County of Pitt

The County of Pitt Engineering and Planning Department has the responsibility for approval of all subdivisions including streets and drainage systems and erosion and sedimentation control plans

outside the Extraterritorial Jurisdiction of the municipalities within the county. However, this authority may extend to within the city limits of some of the smaller municipalities that have delegated their responsibility to the County. Any zoning ordinances applicable to the County are also administered by the County Engineering and Planning Department.

## 1.3 DEFINITIONS AND ABBREVIATIONS

### 1.3.1 Definitions

Wherever used in this Manual, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof. There are other terms used in this document which are defined in the sections to which they apply.

#### 1.3.1.1 General Definitions

**Approved Plans** - Water and/or sewer system extension plans which have been reviewed by and received the approval of the Water Resources Department of the Greenville Utilities Commission and the appropriate state and local agencies.

**Assistant Director** - The Assistant Director of the Water Resources Department of the Greenville Utilities Commission.

**Commission** - The term "Commission" refers to the Water Resources Department of the Greenville Utilities Commission and those persons employed by and authorized by the Greenville Utilities Commission to act on the behalf of the Water Resources Department in the particular instance cited. Words such as "as required by the Commission" shall also refer to this Manual and the Greenville Utilities Commission Utility Regulations.

**Commission's Representative** - An authorized employee or representative of the Water Resources Department of the Greenville Utilities Commission.

**Contract Documents** - The term "Contract Documents", shall refer to the project plans and specifications for water and/or sewer system extensions.

**Contractor** - The person, business, or corporation responsible for the performance of water or sewer system construction work.

**Department Engineer** - The term "Department Engineer" refers to a Professional Engineer on the staff of the Water Resources Department of the Greenville Utilities Commission.

**Director** - The Director of the Water Resources Department of the Greenville Utilities Commission.

**Developer** - The person(s) or corporations financially responsible for the design and construction of a development for which water or wastewater service by the Greenville Utilities Commission will be requested.

**Engineer** - The Professional Engineer responsible for the design or construction administration of a water or wastewater system extension.

**Professional Engineer** - A person who has been duly registered and licensed as a professional engineer by the North Carolina State Board of Registration for Professional Engineers and Land Surveyors.

**Manual** - The term "Manual" shall refer to all applicable standards, specifications, standard details and policies contained in or referenced by this document.

**Terms and Conditions** - The latest revision of the Terms and Conditions of Water and/or Sewer Service Part C, of the Greenville Utilities Commission's Utility Regulations, a copy of which is available upon request.

#### 1.3.1.2 Pipe Backfill Zones

The following terms are used in Sections 3.0 and 4.0 in reference to excavation and backfill for pipe. Refer to the standard detail entitled, "Trench Section Detail for the Installation of Sanitary Sewer Pipe".

**Foundation** - That portion of the pipe support structure bounded by the undisturbed trench bottom, the trench walls, and the pipe Bedding.

The construction of a pipe foundation is generally not required unless unstable materials are encountered in the trench bottom.

**Bedding** - That portion of the pipe support structure bounded by the Foundation or undisturbed trench bottom, the trench walls and the bottom of the pipe.

**Haunching** - That portion of the pipe support structure bounded by the Bedding, the trench walls, the outside of the pipe and a horizontal plane having an elevation equal to that of the springline or the pipe.

**Initial Backfill** - That portion of the backfill lying above the springline of the pipe and below a horizontal plane having an elevation which is one (1) foot above the top of the pipe.

**Final Backfill** - That portion of the backfill lying above the Initial Backfill.

### 1.3.2 Abbreviations

AASHTO - American Association of State Highway Transportation Officials

ANSI - American National Standards Institute

ASTM - American Society for Testing and Materials

AWWA - American Water Works Association

DENR-Department of Environment and Natural Resources

GUC - Greenville Utilities Commission

NCDEH - North Carolina Division of Environmental Health

NCDOT - North Carolina Department of Transportation

NCDWQ - North Carolina Division of Water Quality

### 1.3.3 Standards

Where reference is made by this Manual to published standards such as ASTM, ANSI, AWWA, etc., the latest revisions of such standard shall apply.