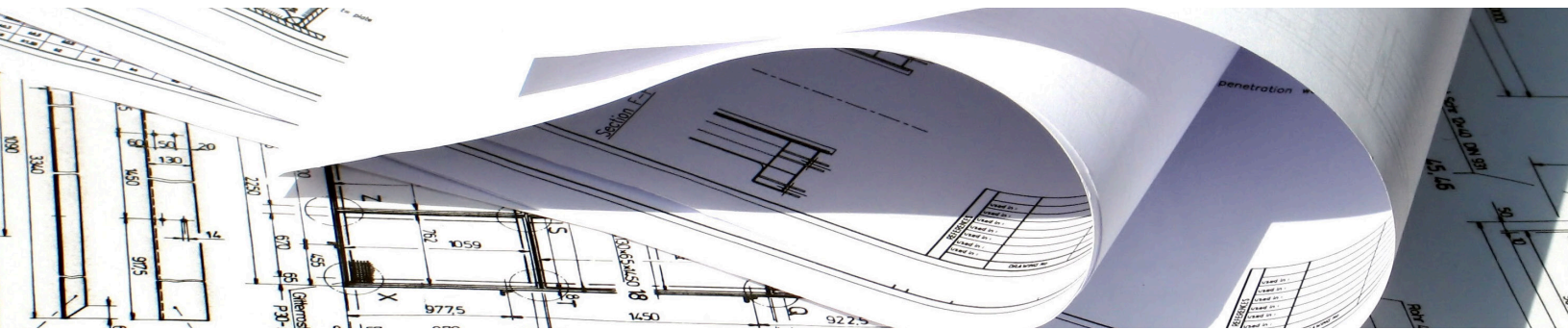




COMPANY PROFILE

WINCHESTER, VA | ASHBURN, VA | MARTINSBURG, WV

SERVICES | LAND PLANNING



Land Planning

Greenway Engineering's Land Planning Division has extensive experience working with clients and government officials to obtain project approvals. The Land Planning Division specializes in land use design, land use policy, and public process services in a cost effective manner with a very successful project approval record for our clientele.



Public Process Services

The Greenway Team has vast professional experience in public sector work and extensive knowledge of public processes necessary to obtain project approvals.



Land Use Services

Providing all aspects of land use services required for property development entitlements, including comprehensive planning, zoning entitlements, land use design, development programming, and land use code legislation.

Development Programming Services

Including site feasibility studies, land use implementation plans, and community impact analysis assessment studies.

Land Planning Services

- Comprehensive Planning
- Code and Ordinance Development
- Public Process Services
- Residential, Commercial, Industrial, and Mixed Land Use Planning
- Rezoning Entitlement
- Development Programming and Proffer Statements
- Master Development Planning
- Conceptual Design Layout
- Feasibility Studies
- Site Analysis and Schematic Designs
- Subdivision Planning and Design
- Conditional/Special Use Permitting
- Variances/Exceptions and Appeals

SERVICES | CIVIL ENGINEERING



Civil Engineering

Client communication is the key to project execution and success. At Greenway, we strive to keep our clients informed and involved in all aspects of a project's timeline. Telephone, video conferences, and onsite meetings are essential elements of a successful project. Greenway Engineering takes pride in staying at the forefront of Civil Engineering services thus providing state of the art design, consulting, and project management.



Locally Knowledgeable and Experienced

Formed in 1971, Greenway has developed projects within the Eastern Panhandle of West Virginia as well as the Northern Shenandoah Valley and Northern Virginia. Our extensive experience of the topography, utilities, and governmental process provides us with valuable knowledge to provide an efficient and thorough design for our clients. We provide local information in preliminary and final design which may be difficult to obtain from other firms.



Environmentally Responsible Engineering

Greenway takes pride in investigating ways to maximize land use while minimizing impacts to environmentally sensitive areas. We also provide methods and solutions in the area of water quality measures for stormwater runoff. Greenway employs LEED accredited professional staff to ensure site development methods meet national environmental design standards.

Engineering Services

- Site Selection, Preparation, and Development
- Feasibility Studies and Layouts
- Residential Design; Subdivisions and Urban
- Commercial and Industrial Site Design
- Governmental/Institutional Plans
- Erosion and Sediment Control Plans
- Stormwater Management Design: Quantity and Quality
- Road, Highway, and Utility Design
- Water and Sewer System Modeling
- Floodplain Studies and Permitting
- Grading and Earthwork
- Low Impact Development/ LEED Certified



Land Surveying

With more than 45 years of experience, our surveyors, using the latest technology and equipment, work quickly and efficiently to produce comprehensive and accurate results while keeping the client informed of project status every step of the way.



Global Positioning Systems

GPS provides surveying and mapping data of the highest accuracy. GPS-based data collection is much faster than conventional surveying and mapping techniques, reducing the amount of equipment and labor required.



LIDAR 3D Scanning

Utilizing our state-of-the-art LIDAR mapping device, we are able to produce a robust, accurate 3D representation of the surveyed site that can be used for a variety of applications.



UAV Topography & Imaging

UAV aerial mapping can achieve cost savings over traditional survey methods and manned flyovers. We have the ability to fly our UAVs under cloud cover and in moderately inclement weather, avoiding time delays associated with other topographic methods.



Underground Utility Location

We locate underground electric, telephone, water, and gas lines using the newest induction/conduction sensing equipment available prior to design, thereby avoiding costly and time consuming issues that might otherwise arise concerning them.

Surveying Services

- Boundary Surveys
- ALTA/ACSM Surveys
- House Location Surveys/Title Surveys
- As-Built Surveys
- Utility Easement Surveys
- Route Location Surveys
- Record Plat Preparation
- Drainfield Location Plats
- Easement Plats
- Rezoning
- Construction Stake-Out
- Field-Run Topographic Surveys
- Aerial Topography
- GPS/RTK Surveys
- House Grading Plans
- Mortgage Surveys
- Deed Research
- Topographic Surveys
- Route Location Surveys
- Right-of-Way Dedication Plats
- Natural Gas Well Location Plats
- Digital Terrain Modeling
- Floodplain Elevation Certificates

SERVICES | STORMWATER INSPECTION



Stormwater BMP Site Inspection and Inventory

Often in complement to a completed as-built topographic survey, Greenway's Certified Stormwater Management Inspector will GPS locate, inventory, and inspect stormwater facilities to determine if they are functioning as intended, or may require repair or redesign. The inspection and GPS location of the stormwater facilities are then used in the creation of a BMP Inventory. The deliverables associated with this task may include inspection reports, inventory and GPS locations of stormwater facilities, and a long-term Stormwater Maintenance Plan.



Stormwater Analysis

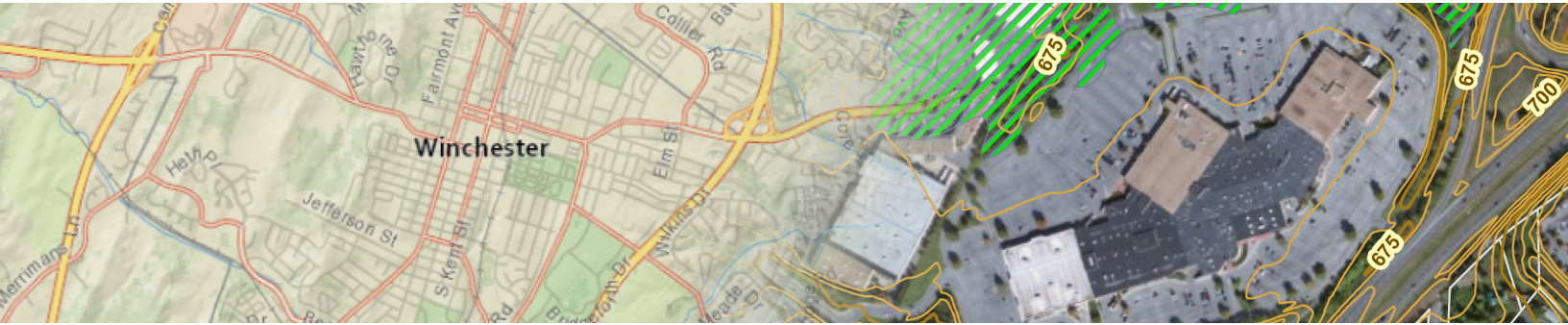
The stormwater analysis will include the review of the data gathered as part of the stormwater BMP site inspection and inventory, as well as a review of the existing approved stormwater management plan to determine if adequate capacity is available.

Stormwater Analysis

As part of the analysis, we will also evaluate the drainage patterns for adequacy. The deliverable associated with the analysis typically includes a Final Stormwater Drainage and Management Evaluation Report which will include an analysis of the drainage conditions, an analysis of the existing stormwater management ponds, analysis of the overland relief drainage patterns, a proposed stormwater maintenance plan, and a prioritized list of most severe stormwater issues needing immediate remediation. This analysis also identifies and analyzes the alternatives to repair and mitigation for the stormwater drainage issues evaluated and recommend a phasing plan to bring the system into proper operating standards.

Stormwater Mapping Update

Using the GPS location shapefile created as part of the stormwater inspection and inventory and the as-built data gathered, Greenway can create a comprehensive SWM BMP inventory map which includes an updated network with rim, invert, size, material, length, and slope fields populated.



GIS

Greenway Engineering provides a range of GIS services, including Custom Mapping, Data Attribute Analysis, and Location Analysis. The power of GIS is in the information associated with a given location. Some say that “location, location, location” is what is important, while others say that “information is knowledge, and knowledge is power.” GIS combines these two trains of thought to show where desired features are located, while symbolically or descriptively conveying information about the feature.

Custom Map Examples



Top: County Zoning Map, Bottom: Environmental Features Map

GIS Services

- **Application Development**
 - Interactive Map
 - Public Access
 - External Links
 - Address Search
 - Parcel Search
 - Data Filtering
- **Customized Mapping**
 - Parcel Based
 - Zoning Layers
 - Transportation
 - Public Utilities
 - Environmental
 - Historical Districts
 - Aerial Overview
- **Spatial Data Analysis**
 - Zoning Analysis
 - Property Value Analysis
 - Structural Analysis
 - Redevelopment Analysis
 - Demographic Analysis

SERVICES | ENVIRONMENTAL & LABORATORY



Wetlands

Greenway Engineering provides Preliminary Wetland Evaluations, Wetlands and Waters Delineation, and Permitting. The Environmental Department of Greenway Engineering is educated and trained in biology, ecology, and soil science. Our staff is trained in Wetlands and Waters delineation, stream assessments, regulatory permitting, and mitigation.



Alternative Onsite System Design

Greenway's alternative onsite system design team provides all the necessary details and specifications for installation of a complete alternative wastewater disposal system.



Soils Evaluations

Greenway's experienced soil scientists can perform a soils study to determine if a drainfield (conventional or alternative) site can be approved.



AOSS Inspections, Maintenance, and Monitoring

Greenway Engineering has the experience, training and resources to offer comprehensive AOSS inspections, maintenance and monitoring to homeowners with onsite conventional and alternative wastewater disposal system.

Environmental Services

- Preliminary Wetland Evaluations
- Wetland Delineation and Permitting
- Wetland Construction Monitoring
- Jurisdictional Determinations
- Stream Assessments and Classifications
- Stream Water Quality Monitoring
- Wetland and Stream Impact Assessments
- Wetland and Stream Mitigation Banking
- Environmental Constraints Analyses
- Threatened and Endangered Species Studies
- Habitat Evaluations
- Existing Vegetation Surveys
- Section 401/404 Permitting
- Complete Soil and Site Evaluation for Single Lot, Subdivision Lots, Community, Commercial, and Industrial Uses (AOSE Licensed)
- Water Percolation and KSAT Tests
- Conventional and Alternative Wastewater Disposal Systems Design
- Onsite Wastewater Treatment and Disposal System Design (Single Family and Mass Drainfield Systems)
- Regulatory Permitting
- Compliance Monitoring
- Preventative Maintenance and Monitoring
- AOSS Operator Certified
- Existing Drainfield Inspections
- Drainfield Location and Camera Services

SERVICES | QC INSPECTIONS



QC Inspections

Greenway Engineering provides QC Inspection services for third-party inspections as well as construction monitoring and testing services in multiple State and County jurisdictions. Our inspectors are qualified to perform inspections and testing services on new and remodeling construction projects to meet the applicable standards.



Code Compliance Inspections

- Foundations – subgrade, dimensions, reinforcing steel
- Floor Slabs – subgrade, base, and reinforcing steel
- Retaining Walls – dimensions, reinforcing steel, and backfill with drainage system inspection
- Structural Steel – visual weld and bolt torque

Laboratory Testing

- Moisture Content
- Modified and Standard Proctor
- Natural Density and Moisture
- Concrete, Grout, and Mortar Compressive Strength Testing



Inspections Services

- Sub-grade Inspection
- Compaction Testing for Controlled Fill Placement
- Footing Inspection with Bearing Capacity Determination
- Floor Slab and Retaining Wall Inspection
- Reinforcing Steel Inspection
- Field Concrete Sampling and Testing including Coring and Windsor Probe Testing
- Structural Steel Inspection to include Visual Weld Inspection, Dye Penetrant, Mag Particle, Column Plumbness, Bolt Torque, Ultrasonic Weld Inspection, and Radiographic Weld Inspection
- VDOT and WVDOH Concrete and Asphalt Pavement Certified
- Fireproofing with Fire Stop Inspection
- NRMCA Plant and Ready Mix Truck Inspection Certified



Construction Administration

Greenway Engineering can provide construction administration (CA) services for our clients during the development/construction phases of a project. Greenway can coordinate with architects, contractors, and local government representatives to help clients transition projects from full design to construction efficiently.

Greenway's involvement in the construction administration phase is a win-win for our clients. Having prepared the approved construction documents, our engineers, surveyors, and planners have a thorough understanding of what needs to happen on the ground to bring the planned construction to completion. Construction is monitored to ensure that the project is built according to the design documents. Owners, contractors, and other design partners can come directly to Greenway team members as questions arise, in real-time, to get prompt answers so they can complete on schedule. The contractor may submit questions directly to Greenway to assess if the materials or plan aligns with the design specification shown in the plans.

Documentation for inclusion in the project records is critical during the CA phase. Greenway can perform periodic site visits to track and document progress of the project, and address questions that may arise during construction. Greenway can also provide local government agencies with the documentation needed to confirm that the site was properly constructed, so that permits can be issued with greater expediency and clients can complete their projects sooner.

Construction Administration Services

- Site visits and progress review
- Answer client, contractor, or architect questions
- Pay Request Reviews
- Review Shop Drawings
- Material Storage Review
- Utility Changes
- RFI Review/Response
- Revisions/Addenda to Site Plan After Plan Approval
- Punch List Development/Stormwater Management Certification
- Asbuilt Survey
- Bond Reduction/Release
- Construction Survey Stakeout
- Construction Testing and Inspection
- Bid Period Services

ADDITIONAL INFORMATION | LIST OF SERVICES

Land Planning Services

- Rezoning Services
- Residential, Commercial, Industrial, and Mixed Land Use Planning
- Development Programming
- Local and Regional Comprehensive Policy Planning
- Community Impact Analysis Assessment
- Conceptual Design Layout
- Feasibility Studies
- Master Development Planning
- Ordinance Development
- Rural Subdivision Planning and Design
- Conditional/Special Use Permitting
- Variances/Exceptions and Appeals
- Site Analysis and Schematic Designs
- Legislation Development for Zoning and Subdivision Ordinances
- Land Use Policy Development
- Arboriculture
- Landscape Planning and Design
- Landscape Management, Plant Inventories, Evaluations, and Contract Documents

Engineering Services

- Site Selection, Preparation, and Development
- Feasibility Studies and Layouts
- Ordinance and Subdivision Regulations Studies
- Preliminary Engineering Reports
- Conceptual Design Development and Cost Estimation
- Residential Subdivision Design: Rural and Urban

- Commercial and Industrial Site Designs
- Governmental/Institutional Site Plans
- Campus Plans/Multi-use Site Designs
- Public Improvement Plans/DOH Road Designs
- Entrance Design and Permitting
- Traffic Counts
- Speed Studies
- Intersection Analysis
- Maintenance of Traffic (MOT) Plans
- Grading (Commercial, Residential, Municipal, Recreational)
- Earthwork Studies
- Digital Terrain Modeling
- Erosion and Sediment Control Plans
- Stormwater Pollution Prevention Plans
- Stormwater Management Design/ Studies: Quantity and Quality
- Regional Stormwater Modeling
- BMP Design (Stormwater Best Management Practices)
- Floodplain Studies, CLOMR, LOMR, Elevation Certificates
- Water and Sewer System Modeling and Design, Private and Municipal
- Water Booster Station Design
- Sewer Pump Station Design
- Utility Design (Water & Sanitary)
- Construction Cost Estimating
- Construction Documents and Specifications
- Value Engineering/Constructability Review
- Permit Processing

- Parking Studies
- Pavement Design/As-built Pavement Review
- Land Disturbance Permit/Processing
- Construction Administration and Management
- House Grading Plans
- House Composite Development/ Subdivision Matrix
- Leadership in Energy and Environmental Design (LEED)

Surveying Services

- Boundary Surveys
- ALTA/ACSM Surveys
- House Location Surveys/Title Surveys
- As-Built Surveys
- Utility Easement Surveys
- Utility Location Plats
- Route Location Surveys
- Record Plat Preparation
- Drainfield Location Plats
- Easement Surveys
- Easement Plats
- Rezoning Plats
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- Road and Bridge Stake-Out
- Field-Run Topographic Surveys
- GPS/RTK Surveys
- Deed Research
- Topographic Surveys
- Right-of-Way Dedication Plats
- Digital Terrain Modeling
- LIDAR 3D Scanning
- UAV Topography and Imaging
- Underground Utility Location

ADDITIONAL INFORMATION | LIST OF SERVICES

Inspection Services

- Sub-grade Inspection
- Compaction Testing for Controlled Fill Placement
- Footing Inspection with Bearing Capacity Determination
- Floor Slab and Retaining Wall Inspection
- Reinforcing Steel Inspection
- Field Concrete Sampling and Testing including Coring and Windsor Probe Testing
- HUD Permanent Foundations Inspection
- VDOT and WVDOH Concrete and Asphalt Pavement Testing
- Fireproofing with Fire Stop Inspection
- EFIS Application Inspection
- NRMCA Plant and Ready Mix Truck Inspection Certified
- Code Compliance Inspections

NDT Services

- Liquid Penetrant Testing (PT)
- Magnetic Particle Testing (MT)
- Ultrasonic Testing (UT)
- Visual Testing (VT)

GIS Services

- Aerial Photos Maps
- Real Estate Maps
- Regional Wall Maps
- Historic Maps (Replica)
- Road and Highway Maps (Existing and Proposed/Future Road Networks)
- Tourism Site Maps
- Parcel Location Maps
- Editing and Maintenance of Existing Data Files
- Marketing Maps
- Custom Mapping

Environmental Services

- Preliminary Wetland Evaluations
- Wetland Delineation and Permitting
- Wetland Construction Monitoring
- Jurisdictional Determinations
- Stream Assessments and Classifications
- Stream Water Quality Monitoring
- Wetland and Stream Impact Assessments
- Wetland and Stream Mitigation Banking
- Environmental Constraints Analyses
- Threatened and Endangered Species Studies
- Habitat Evaluations
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