

STATEMENT OF QUALIFICATIONS



WHITE ENGINEERING, INC.

A VETERAN-OWNED SMALL BUSINESS

**55 SOUTH MERRIAM STREET
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WHITE ENGINEERING, INC., CORPORATE OFFICE

**55 SOUTH MERRIAM STREET
PITTSFIELD, MA 01201-6609**

ABOUT THE FIRM

In order to provide comprehensive Civil Engineering and Environmental Permitting services to a diverse client population located in Western New England, Marshall P. White, P.E., founded White Engineering, Inc. on November 1, 1993. His expertise and technical qualifications provide a substantive base for the firm.

Mr. White holds a Master's degree in Civil Engineering, registration as a Professional Engineer in the Civil Engineering field, and has over 39 years of engineering and management experience. For the last 30 years, Mr. White conducted his professional practice in Berkshire County, Massachusetts, where he gained extensive experience in the design and construction management components of the engineering field.

As a veteran-owned business, White Engineering, Inc. provides a broad range of engineering and consulting services to its clients. These services range from the earliest planning stages of a project, through the preliminary design phases, and continue to the cost estimating and final design preparation phases. In addition, the services that the firm offers include those related to securing necessary permits through any of the various local, state and federal regulatory agencies. Once a project has been designed and all necessary permits have been acquired, White Engineering, Inc. continues to stand ready to provide critical on-going support services. These services range from soliciting bids from contractors and help selecting a highly qualified and reputable contractor to supervising the construction of the project in order to ensure that all work conforms strictly to the approved plans and specifications. Over the years, the firm has gained an extensive working knowledge of pertinent environmental and other regulations that may affect projects in Berkshires and surrounding counties. Through our work with various regulatory bodies, we have gained the insight to be able to advise clients appropriately regarding which options may and may not be permitted in any given situation. Our firm has established a strong working relationship with local boards as well as the Massachusetts Department of Environmental Protection, Department of Transportation, and the Army Corps of Engineers. White Engineering is pleased to state that we have been officially prequalified by the Massachusetts Department of Transportation, allowing us to serve local communities and the Commonwealth in a greater capacity.

White Engineering, Inc. is a fully computerized operation from CAD drafting and design components through other necessary and state-of-the-art computer programs utilized in data analysis and design. Our topographic surveying capabilities include the use of modern electronic measuring and data collection instrumentation. The instrumentation that we employ in the field dovetails nicely with our CAD software for efficient and effective processing of all field data that is collected. In addition, the office administrative and business management components of the operation are fully computerized. Our technological capabilities enable us to respond fully to the needs of our clients in a timely manner. White Engineering, Inc. currently employs:

- Two Professional Engineers
- One Environmental Analyst
- One Project Manager
- One Administrative Assistant

A full listing of services that we offer our clients is provided on the following pages.

STATEMENT OF PURPOSE

The goal of our firm has always been to develop the most cost-effective solutions to meet the client's needs. The scope of services provided on any project is solely a function of the client's wishes. At White Engineering, Inc., we believe whole-heartedly in the position articulated by our company president:

“We are professionals dedicated to personal service with a clear focus on environmentally-friendly, cost-effective solutions to the contemporary civil engineering and environmental permitting needs of our valued clients.”

CIVIL ENGINEERING

White Engineering, Inc. offers the following ***CIVIL ENGINEERING SERVICES*** to its valued clients:

- **Site Development Planning**
- **Site Design**
- **Percolation Testing**
- **Subsurface Disposal System Design**
- **Drainage Study and Design**
- **Sanitary Sewer Design**
- **Storm Sewer Design**
- **Road Design**
- **Title 5 Inspections**
- **Dam Inspections and Reports to Regulatory Agencies**
- **Topographic Surveying and Mapping**
- **Construction Cost Estimates**
- **Construction Management and Inspections**
- **Ability To Subcontract Any Service Not Offered In-House For Your Project**

ENVIRONMENTAL PERMITTING

White Engineering, Inc. offers the following ***ENVIRONMENTAL PERMITTING AND SUPPORT SERVICES*** to its valued clients:

- **Wetlands Permit Applications**
- **Wetland Delineations**
- **Massachusetts Environmental Policy Act Submissions**
- **401 Water Quality Certification Applications**
- **Chapter 91 Dock License Applications**
- **US Army Corps of Engineers Permit Applications**
- **Water Quality Certification Applications**
- **Solid Waste Facility Permit Applications**
- **Public Water Supply Permit Applications**
- **Spill Prevention, Control, and Countermeasure Plans**
- **Stormwater Pollution Prevention Plans**
- **Massachusetts Endangered Species Act Submissions**
- **Erosion Control Monitoring and Inspections**
- **Enforcement Action Mitigation**
- **Wetland Replication Plans and Construction Oversight**
- **Ground Source Heat Pump System Permitting**
- **Ability to Subcontract Any Service Not Offered In-House For Your Project**

WHITE ENGINEERING, INC. STAFF

Marshall P. White, PE
President

Professional Profile:

Mr. White is the founder and President of White Engineering, Inc. and personally directed the firm's activities from both a managerial and technical standpoint until 2016, when a transition of these responsibilities to his son Brent occurred. Mr. White founded White Engineering, Inc. to provide both Civil Engineering and Environmental Permitting services to clients in the Western Massachusetts, Vermont and Connecticut areas. He has an extensive background in managing engineering organizations and broad experience in both the design and construction oversight fields. His credentials include a Master's Degree in Civil Engineering and licensure as a Professional Civil Engineer in Massachusetts, Vermont and Connecticut. The experience and credentials of Mr. White provide the foundation for the firm's activities in the Civil Engineering and Environmental Permitting fields.

Mr. White's background includes 39 years of valuable experience that he incorporates into all of his work. He spent over nine years as an Engineer Officer in the Army. During this time, he held many positions ranging from Company and Detachment Commander to managing multimillion-dollar construction projects for the Army Corps of Engineers. His experience with the Army was primarily in the horizontal construction, facilities management and construction management fields.

Subsequent to his time in the Army, Mr. White spent nearly five years with Hill Engineers, Architects & Planners, Inc. of Dalton, MA, where he was responsible for Civil Engineering Design and Environmental Permitting. At the time Mr. White left Hill, he was the manager-in-charge of the Civil Engineering and Survey Division, and was on the Board of Directors of the firm. His experience ranged from residential to commercial and industrial site/utility design and permitting. During this period, he became very well versed in various local, state and federal environmental regulations.

Education:

Combined Arms Services Staff School, US Army Command & General Staff College, 1987
University of New Hampshire, Durham, NH, Master of Science, Civil Engineering, 1985
Norwich University, Northfield, VT, Bachelor of Science, Civil Engineering, 1979

Professional Registrations:

Registered Professional Civil Engineer: Massachusetts and Vermont
Licensed Soil Evaluator
Licensed Septic System Inspector

Certifications:

OSHA 40 Hour Hazardous Waste Operations and Emergency Response

Professional Affiliations:

National Society of Professional Engineers
Massachusetts Society of Professional Engineers
American Society of Civil Engineers
Association of Massachusetts Wetland Scientists

Awards:

Who's Who Environmental Registry	Outstanding Young Engineer Award (SAME)
George C. Marshall Award	America's Outstanding Names and Faces
Outstanding Young Men of America	Meritorious Service Medal (2)
Army Commendation Medal	Best of the Berkshires - "Best Employer" 2000

***Brent M. White, PE, MCE, LEED AP
Principal***

Professional Profile:

Mr. White is responsible for directing the firm's activities from both a managerial and technical standpoint. He began working at White Engineering, Inc., during the summers since 1997 as a member of the topographic survey team and the drafting department. In May 2005, Mr. White joined the company as a full-time engineer. Mr. White has a Master's Degree in Civil Engineering and is currently a registered Professional Engineer in Massachusetts, Vermont, Connecticut and New York. He is also a registered Soil Evaluator in the Commonwealth of Massachusetts. While a member of the Norwich University Corps of Cadets, Mr. White attained valuable leadership experience. He served as Deputy Commander during his senior year.

Mr. White has a broad base of professional experience, including drafting using AutoCAD, performing topographic surveys, laying out construction sites, performing soil evaluations, designing conventional and innovative technology septic systems, engineering water supply systems and designing dam repairs. He also has gained much experience in obtaining various permits and working closely with local boards and commissions, as well as the Massachusetts Department of Environmental Protection, Massachusetts Department of Transportation and the Environmental Protection Agency. Mr. White has been able to use these skills to not only aide in the design, permitting and oversight of these projects but has also been able to successfully assist clients while serving as an expert witness.

Aside from Mr. White's duties at White Engineering, Inc., he had served as an Adjunct Faculty Member and Course Developer for the Norwich University School of Graduate and Continuing Studies from 2008 - 2015. This experience has allowed Mr. White to work with many accomplished engineers among the faculty as well as help to work with students on the practical uses of the coursework in professional practice.

Education:

Norwich University, Northfield, VT, Master of Civil Engineering, June 2007
Norwich University, Bachelor of Science, Civil Engineering, May 2005

Professional Registrations:

Registered Professional Engineer: Massachusetts, Vermont, Connecticut and New York
Licensed Soil Evaluator (Massachusetts)
Licensed Title 5 System Inspector (Massachusetts)
LEED Accredited Professional (Neighborhood Development)

Certifications:

OSHA 40 Hour Hazard Waste Operations and Emergency Response
OSHA 10 Hour Construction Safety

Professional Affiliations:

American Society of Civil Engineers
Order of the Engineer

Awards:

Confessore Leadership Award, Norwich University Corps of Cadets (2005)
Williams Higgins Outstanding Engineer Award, Norwich University (2005)
Most Promising Practicing Engineer, David Crawford School of Engineering, Norwich University (2005)
Finalist for Student Leader of the Year, Norwich University (2005)

Shannon Darrin Boomsma
Environmental Analyst

Professional Profile:

Ms. Boomsma has been with White Engineering, Inc. since November of 1998. Her responsibilities include delineating wetland resource areas according to the Massachusetts Wetlands Protection Act standards, filing Notices of Intent, Requests for Determinations of Applicability, and various Special Permits as well as other types of permits with local boards and state agencies. As a Project Manager, she is responsible for the coordination and management of all wetland-related jobs and permit filings.

Ms. Boomsma's professional experience includes four years of work at Foresight Land Services, Pittsfield, MA, as an Environmental Analyst. She became familiar with many aspects of civil engineering design, blueprint reading and environmental protection practices before joining White Engineering, Inc. She is also educated in the areas of wildlife habitat, rare and endangered species, soil evaluation and the interpretation of environmental mapping. She has over 24 years of experience working cooperatively with the Massachusetts Department of Environmental Protection through her work experience and involvement with local Conservation Commissions. Ms. Boomsma's work experience also includes permit processing with the U.S. Army Corps of Engineers in the Commonwealth of Massachusetts and New York State.

Prior to entering the engineering field, Ms. Boomsma had five years of experience in environmental education, teaching various age groups from pre-school children to senior citizens. She taught in a variety of settings, from classrooms to the outdoors, in Connecticut, South Carolina and Arizona.

Ms. Boomsma's internship programs, in conjunction with her studies at New England College included working with the State of New Hampshire on mapping of groundwater supply contamination. She also completed a wildlife evaluation of threatened birds during migration at a New London, NH, nature preserve. Locally, Ms. Boomsma has been involved in the management of Lake Mah-Kee-Nac and associated water quality monitoring projects.

Ms. Boomsma has served on the Stockbridge Conservation Commission and the Becket Conservation Commission. While on the Stockbridge Commission, she assisted in the development of the Scenic Mountain Act and Scenic Streets by-laws. In Becket, her responsibilities as chairperson included scheduling and organizing meetings, site visits and project monitoring activities as well as communicating with local residents and applicants.

Education:

New England College, Henniker, NH, Bachelor of Arts, Environmental Science, 1994
University of Massachusetts Extension, Amherst, MA, Forestry & Wildlife, 1999

Certifications:

OSHA 40 Hour Hazardous Waste Operations and Emergency Response
Wetland Delineation Workshops
Vernal Pool Certification Seminar
Rivers Protection Act Field Workshops
Stormwater Management Seminars
Lake and Watershed Management Seminar

Christopher J. Markham
Project Manager

Professional Profile:

As a Project Manager, Mr. Markham plays an important role in the successful completion of a wide variety of Civil and Environmental Engineering projects at White Engineering, Inc. He works closely with the staff to conduct topographic surveys of project sites for clients throughout Berkshire County and beyond. He uses the firm's innovative AutoCAD and Eagle Point software with the collected field data to draft topographic site plans. These plans ultimately are turned into various kinds of designs including: conventional or innovative technology subsurface disposal systems, dams, spill control systems, or dredging operations, among a variety of other things. Mr. Markham also works with White Engineering's environmental and wetlands permitting staff. He provides necessary supporting plans for all submissions to governmental agencies such as the Massachusetts Department of Environmental Protection (DEP) and the Environmental Protection Agency (EPA), local Boards of Health and Conservation Commissions. His work enables White Engineering, Inc. clients to secure appropriate local and state permits as they move their projects forward in the construction process.

Education:

Mr. Markham graduated from Taconic High School and attended Berkshire Community College. He is an avid outdoorsman, who has spent a number of years studying the wildlife and natural resources of Berkshire County.

Michele L. Conroy
Administrative Assistant

Professional Profile:

Ms. Conroy handles the day-to-day administrative tasks at the firm. In addition to entering time and expense data, client invoicing, and accounts receivable, she assists project managers with proposal and permit preparation and follow-up, and tracking project budgets. In addition, she schedules percolation and other tests and monitors the schedule of members of the staff. She is the key point of contact for all matters affecting our office, and the primary point of contact for inquiries pertinent to client billing.

Education:

Ms. Conroy has over 30 years of experience in the secretarial field. She received an Associate's Degree in the Executive Secretarial program at Berkshire Community College.

WHITE ENGINEERING, INC. STAFF AT WORK



Brent White, MCE, PE, Assessing the Sediment Accumulation and Flooding Caused by Extensive Beaver Activity



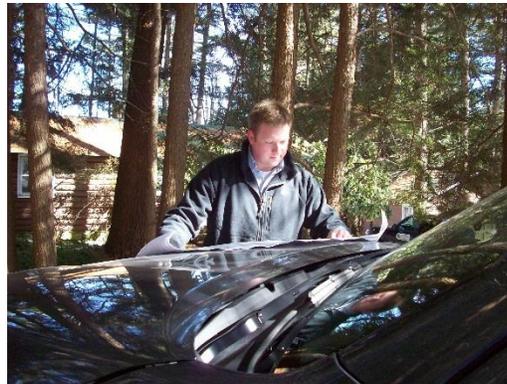
Environmental Staff Digging Holes for Wetland Evaluation



Christopher Markham Conducting a Topographic Survey of a Client's Property



Shannon Boomsma, Environmental Analyst, Working with the Topographic Survey Team



Brent White, MCE, PE, Studies Plan Details On-Site

**WHITE ENGINEERING, INC.
PROJECT EXPERIENCE**

RESIDENTIAL PROJECTS

RESIDENTIAL PROJECTS

Main Road, Monterey, MA

Job Type: Site Planning, Driveway Design, and Septic Design

Scope of Work:

White Engineering, Inc. was contracted to develop a site plan for the construction of a home near the highest elevations of the property including identifying the location of the house, the design of a driveway through dense woods, and the design of the subsurface disposal system. This project involved the submittal of permits for the subsurface disposal system and the filing of a Notice of Intent under the Town of Monterey's Scenic Mountain Act.



Re-Grading of Lower Portion of Driveway to Improve Drainage



Driveway to House Site on Mountaintop Nearing Completion



Leach Field under Construction



Distribution Box for Soil Absorption System

Mount Hunger Road, Monterey, MA

Job Type: Site Modifications

Scope of Work:

White Engineering was contracted to develop a plan for a single-family residential home that was proposed to be built on a steep mountainside site. The proposed project involved construction within an area regulated under the Scenic Mountain Act. Surface and subsurface drainage systems were constructed, and the site was stabilized to become a level site for the construction of a new home. White Engineering, Inc. staff worked closely with a design team of architects, landscape engineers, project coordinators, and contractors to make this project a success.



Tarping of Materials On-Site



Railings at Top of Retaining Wall



Block Wall to Create Building Site



House Construction Site in Progress

Jug End Road, Egremont, MA

Job Type: Site Design, Septic Design, and Wetland Crossing

Scope of Work:

White Engineering, Inc. was contracted to develop a plan for a single-family residential home including driveway design, house placement, well location and septic system design. Due to the proximity of protectable wetland resource areas to the proposed work site, the project involved delineation of the wetlands in the area of the proposed driveway. The plan, therefore, had to be suitable for both wetlands permitting and for construction purposes. The work included preparing the necessary paperwork for submission of a Notice of Intent. In addition, the property is located within an Area of Critical Environmental Concern. The driveway was designed to cross a Bordering Vegetated Wetland and an intermittent stream. The crossing had to comply with Massachusetts stream crossing standards. A temporary crossing of steel plates was used to transport the house to an upland site, and then a box culvert was installed. Despite the strong objections of one neighbor who appealed to the Massachusetts Department of Environmental Protection, we were able to obtain all necessary permits for our client.



Preliminary Excavation for Driveway through Dense Woods



Trap Rock and Filter Fabric Placement through Wetland to Create an Unrestricted Flow



Driveway to House Site on Opposite Side of Wetland



Clearing for House Site

Blythewood Drive, Pittsfield, MA

Job Type: Site Improvement and Dock Permitting

Scope of Work:

White Engineering, Inc. was contracted to prepare a plan for a house demolition and rebuild. This project involved the installation of extensive drainage, landscaping, Buffer Zone replanting and the relocation of an existing dock on the property. In order to accomplish this, it was necessary to prepare a Notice of Intent. Since the property fell within a priority habitat of a state-listed Endangered Species, the plan also had to be submitted to the Natural Heritage and Endangered Species Program for review. In addition, a Chapter 91 General Waterways License application was submitted to the State of Massachusetts to obtain a permit for the proposed relocated dock.



House Before Demolition and Rebuild



Dock Before Relocation



Site after Rebuild
Site Stabilization Underway

Norton Road, Otis, MA

Job Type: Restoration Layout and Inspection Monitoring

Scope of Work:

White Engineering, Inc. was contracted to design a driveway with drainage that would cross a wetland resource area. In so doing, it was necessary to prepare a Notice of Intent. The project was being undertaken because of an Administrative Consent Order issued by the Massachusetts Department of Environmental Protection. White Engineering, Inc. worked closely with the Massachusetts Department of Environmental Protection to meet the demands of the Administrative Consent Order. A restoration plan and inspection monitoring plans were submitted on the client's behalf.



Bordering Vegetated Wetland
at Crossing Location



Illegal Culvert Replaced by
Open-Bottom Arch Pipe

Gibbs Road, Otis, MA

Job Type: Design for a 16-Lot Subdivision

Scope of Work:

White Engineering, Inc. was contracted to assist in the design of the 16-Lot Subdivision with riverfront area, Bordering Vegetated wetland and a Vernal Pool. Because of the proximity of protectable wetland resource areas to the proposed work, the wetland resource areas had to be delineated and a Notice of Intent filed. The common driveway design included drainage, wetland replication, stormwater management, 401 Water Quality Certifications and turnouts for passing and snow removal. The drainage issues on this project required close coordination with the Otis Department of Public Works.

Lenox Road, Richmond, MA

Job Type: Wetlands Delineation, Driveway Design, Septic Design and Special Permits

Scope of Work:

White Engineering, Inc. was contracted to delineate the wetlands on the property, to prepare a design for the driveway and to conduct the necessary permitting. Permits included filing under the Massachusetts Wetland Protection Act and the Richmond Scenic Mountains Act as well as filing and obtaining Special Permits and Variances from the Town of Richmond. The project also involved designing and permitting of both a septic system and a well in order to serve the proposed single-family residence.



Proposed Driveway Alignment



Existing Common Driveway



Delineated Bordering Vegetated Wetland

Bidwell Road, Monterey, MA

Job Type: Septic Design and Wetland Delineation

Scope of Work:

White Engineering, Inc. was contracted to design a septic system to accommodate an addition to an existing single family home. Since it was lakefront property, the project included wetlands delineation and the filing of a Notice of Intent under the Wetlands Protection Act as well as a Notice of Intent under the Scenic Mountains Act because of the steep grades on the property. The site constraints of this property, slopes, small size and extensive wetlands, represent the kinds of significant challenges in which White Engineering, Inc. specializes. We were able to secure all necessary permits for our clients.



House Prior to Renovation



Access Road to Renovate House and Construct Septic System



Post-Construction Retaining Wall



Post-Construction Leaching Field

Walden Lane and Route 7, Pittsfield, MA

Job Type: Site Development

Scope of Work:

White Engineering, Inc. was contracted to prepare schematic designs and preliminary drawings for a special permit application, to produce final design and engineering of the subdivision including roadway, open space areas, infrastructure, utilities, stormwater management, site-grading and environmental systems. We also assisted the project team in obtaining the following permits:

- Order of Conditions
- Curb Cut
- Sewer Connection
- Environmental Notification Form
- Special Permit

Iron Mine Road, West Stockbridge, MA

Job Type: Percolation Tests

Scope of Work:

White Engineering, Inc. was contracted to conduct two percolation tests and two observation holes in accordance with the current State Sanitary Code (Title 5) at five locations in West Stockbridge and one location in Richmond in order to determine if the properties were buildable.

Interlaken Road, Stockbridge, MA

Job Type: Notice of Intent

Scope of Work:

White Engineering, Inc. was contracted to submit a Notice of Intent to the Conservation Commission for house reconstruction, septic design, landscaping, and renovations to the boathouse including a septic pump, siding, roof, and window replacement. The site plan included all necessary components of the proposed work, as well as showing all required erosion and sedimentation controls to protect the lake. This project involved enabling the client to meet the stringent requirements of a Lake and Pond Overlay district.

Deerwood Park Road, New Marlborough

Job Type: Site Design and Wetlands Permitting

Scope of Work:

White Engineering was contracted to prepare site plans for the demolition of three existing structures and building of one new single-family home with an attached garage. The proposed work required approval from the New Marlborough Conservation Commission because wetland resource areas were located within 100 feet of the proposed work. It also required securing permits from the Special Permit issuing authority for non-conformity with existing zoning by-laws. These included the bank of Lake Buel and a nearby wetland area. The wetland areas required the submittal of a Notice of Intent. A site plan was prepared and included the house construction location, septic and well location, grading details, driveway improvements, bank stabilization details, dock details and landscaping details.

Elephant Rock Road, Monterey, MA

Job Type: Design and Permitting of a Retaining Wall

Scope of Work:

White Engineering, Inc. was contracted to design and obtain permits for a retaining wall that was constructed in conjunction with the reconstruction of a stone terrace and dock on the shoreline of Lake Garfield. The site plan included all necessary components of the waterfront improvements to the retaining wall, terrace, dock and walkways. Since the project involved a resource area, it required the submission of the Notice of Intent, and a Chapter 91 license from the Massachusetts Department of Environmental Protection.

Interlaken Road, Stockbridge, MA

Job Type: Driveway Design and Septic Upgrade

Scope of Work:

White Engineering, Inc. was contracted to prepare a site plan that provided topographic detail of the proposed house and driveway. This required that modifications to the septic system be made. Due to the proximity of protectable wetland resource areas, it was necessary to perform a delineation of the wetlands in the area of the proposed driveway, house and septic system. The edge of the bordering vegetated wetland was flagged in the field and shown on the site plan. A Request for Determination of Applicability was submitted to the local Conservation Commission. The components of the current septic system on the property were modified and upgraded to better suit the owner's plans.

Various Properties along Housatonic River in Pittsfield, MA

Job Type: Residential Property Remediation: Design, Permitting and Construction Inspection

Scope of Work:

White Engineering, Inc. was responsible for wetlands permitting for approximately 100 residential properties along the Housatonic River throughout the City of Pittsfield that underwent PCB soil remediation during the 1998 and 1999 calendar years. Work involved the delineation of wetlands and other resource areas, wetlands permitting for construction activities and construction supervision relative to wetland issues. The design efforts also incorporated bioengineering design for river or stream bank restoration on a number of the properties.

Sodem Road, Tyringham, MA

Job Type: Pond Dredging, Design, Permitting and Inspection

Scope of Work:

White Engineering, Inc. was contracted to respond to Enforcement Orders issued by the Department of Environmental Protection and the Tyringham Conservation Commission for illegal draining of a one-acre pond for the purposes of dredging. It was necessary to evaluate the situation and respond to both agencies with a plan of action, to prepare the necessary drawings and to secure the necessary permit from the DEP Division of Wetlands and Waterways, the Army Corps of Engineers and the local Conservation Commission.

Goose Pond Road, Tyringham, MA

Job Type: Design of Multiple Septic Systems for Four Properties

Scope of Work:

White Engineering, Inc. was contracted to design, permit and inspect individual septic systems on a shared property. Innovative design involved five separate septic systems clustered on one lot enabling the property owner to make use of the remaining property.

Walker Street, Lenox, MA

Job Type: Sewer Hookup

Scope of Work:

White Engineering, Inc. was contracted to design, permit and provide construction inspection of residential sewer hookups. This project enabled four homeowners to connect their homes to the Town of Lenox sewage system through a common easement. Systems were designed so that each homeowner was able at their convenience to connect without taking the sewer out of service. This resulted in reasonable costs while improving the marketability of these properties.

Maple Hill Road, West Stockbridge, MA

Job Type: Pond Dredging, Design and Permitting

Scope of Work:

White Engineering, Inc. was contracted to provide engineering and wetlands permitting services to restore an existing Beaver Pond to a scenic pond with open water area greater than the existing area. The design involved dredging the pond area, constructing a berm and a spillway type dam and covering the pond bottom with a clay-max type liner. A dry hydrant was extended to the proposed driveway area above the pond. Due to the proximity of protectable wetland resource areas to the proposed work, a delineation of the wetlands in the area of the pond was performed. A topographic survey of the area was performed including the pond area and wetland boundaries. The topographic survey also identified the locations of all surface features, property monumentation, and flagged wetland areas. All necessary paperwork for submission of the Notice of Intent, the 401 Water Quality Certificate and the Army Corp of Engineers Category 2 Permit for Dredging were filed and the permits were secured.



Loading De-Watered Sediments
Into Dump Truck



Excavation of New Pond

MUNICIPAL PROJECTS

MUNICIPAL PROJECTS

Route 7, Lanesborough, MA

Job Type: Site Design, Research and Permitting

Scope of Work:

White Engineering, Inc. was contracted to:

- Delineate all wetland and riverfront areas on the property.
- Conduct a topographic survey of the property to identify surface features within a 2-foot contour interval accuracy, to identify where delineated wetlands or riverfront resource areas are located, to identify locations of existing utilities, percolation tests sites, and other significant surface features that could ultimately influence the site design.
- Provide preliminary concept designs. Eventually, detailed designs of the concept were produced. The designs incorporated elements for possible future development on the property.
- Identify the necessary documents for permitting, bidding and procuring, including a Request for Determination of Applicability or a Notice of Intent, a Curb Cut permit, Disposal Works Construction Permit and the Construction General Permit under the National Pollutant Discharge Elimination System.



Existing Field for Proposed
Development



Bordering Vegetated Wetland
Boundary

Route 7, Lanesborough, MA (continued)



Intermittent Stream On-Site



Existing Access to Fields



View of Route 7 from Property



Existing Intermittent Stream

Olsen Road and Greylock Estates Road, Lanesborough, MA

Job Type: Road Evaluation/Design

Scope of Work:

White Engineering, Inc. was contracted to evaluate Olsen Road and Greylock Estates for drainage improvements such as sub-drains, additional catch basins, additional drainage, additional culverts, removal of substandard gravel, installation of road fabric and ditch cleaning. In doing this project, we conducted a topographic survey of the roads, drainage systems, manholes and all surface features and property monumentation. A base plan was prepared that indicated all surface features as well as the locations of resource areas and Buffer Zones. The site plan that was developed from the base plan created a design with drainage improvements that was suitable for the construction cost estimates, technical specifications and bid packages. Construction estimates for the proposed work were prepared. These estimates were used as a benchmark for evaluation of contractors' bids and

for establishing a budget. In addition, a required Notice of Intent was prepared for the proposed upgrade work on Olsen Road. A topographic survey of Olsen Road and a delineation of the wetlands in the area were also required for this project.



Overgrown and Poorly Functioning Drainage Structures



Views of Road Problems Created by Inadequate Stormwater Management Systems



Views of Culvert Channeling Stream Flow Under Road

Sargeant, Vine & Willow Streets, Stockbridge, MA

Job Description: Waterline Design and Wetlands Permitting

Scope of Work:

White Engineering, Inc. was contracted to perform wetlands delineation, a topographic survey, design drawings and to prepare a Notice of Intent and represent the client at public hearing. The work was done as a part of the water system upgrade for the Town of Stockbridge in 1999.

Route 183, Stockbridge, MA

Job Description: Bridge Design and Permitting

Scope of Work:

White Engineering, Inc. was contracted to perform wetland delineation, a topographic survey, bridge abutment and sidewalk design and to prepare a Notice of Intent and represent the client at public hearings so that an Order of Conditions could be issued. This was an upgrade project to repair deteriorating headwalls and to create a safe pedestrian traffic way.

Route 7/South Street, Stockbridge, MA

Job Description: Curb, Shoulder, and Sidewalk Improvements

Scope of Work:

White Engineering, Inc. was contracted to perform a topographic survey, provide design drawings and specifications to be submitted to the Mass. Highway Department for bidding. This project dovetails into streetscape improvements recently made in the Town. This work, however, is located along a State highway and, therefore, the construction work was administered by the Massachusetts Highway Dept.

Barnum Street, Sheffield, MA

Job Description: Landfill Closure

Scope of Work:

White Engineering, Inc. assisted in the bidding and construction supervision of the capping of an existing landfill. We were contracted to ensure that the plans were properly implemented during the capping procedure. We are also required to conduct ongoing site inspections and report to the governing agencies.

Business Park, Sheffield, MA

Job Description: Site Design and Engineering for a Five Lot Industrial Subdivision

Scope of Work:

White Engineering, Inc. was contracted to perform site design including layout, grading and utilities for a 5-lot business park subdivision. We requested and obtained necessary permitting and completed and filed an Environmental Notification form with the State. In addition, we conducted construction inspection and supervision activities and worked with the contractor to reduce overall project costs.

Pearl Street, Great Barrington, MA

Job Description: Designs, Specifications, and Bidding Documents for a Sewer Modification

Scope of Work:

White Engineering, Inc. was contracted to design a remedial solution for a leaking interceptor line under the Housatonic River. The final products that we produced allowed the Town to bid the project under the State Revolving Fund Program so that construction could be completed expeditiously. The proposed work included relocating a portion of the Town sewer and constructing a small lift station.

Spring Road, Adams, MA

Job Description: Design and Permitting for a Sewer Extension

Scope of Work:

White Engineering, Inc. was contracted to perform a topographic field survey of the new sewer line and create updated plans. We also prepared and submitted applications to the Department of Environmental Protection Water Pollution Control Division in order to obtain the Sewer Extension Permit.

Baldwin Hill Road E-W, Egremont, MA

Job Description: Landfill Closure Activities

Scope of Work:

White Engineering, Inc. was contracted to prepare technical specifications for the landfill capping materials and bidding documents for material suppliers. After reviewing documents prepared by others and communicating with the DEP Division of Solid Waste, we successfully reduced the amount of materials necessary for capping the landfill. In addition, we assisted in the bidding process and supervised the layout at the landfill during construction. We worked closely with the Department of Public Works Superintendent to ensure that a quality product was delivered in the most efficient manner. This project requires continued monitoring.

Housatonic Village Infrastructure Improvements, Great Barrington, MA

Job Description: Roadway, Drainage and Retaining Wall Design, Complete Specification Preparation, Construction Monitoring

Scope of Work:

White Engineering, Inc. was contracted to design, assist in contractor procurement, and provide construction supervision for infrastructure improvements in the Village of Housatonic within the Town of Great Barrington. The project was funded through the Community Development Block Grant funds. While the roadways were in poor condition, there were serious deficiencies with the drainage infrastructure as well as a retaining wall that supported the road and was in very close proximity to an existing residential structure. Our firm worked closely with town's Department of Public Works Superintendent as well as its Highway Department Head to develop a design that would suit all of the town's needs in a cost-effective manner. Once the design was completed, environmental permits secured and a contractor awarded, we also worked closely with the contractor to develop the necessary

Stormwater Pollution Prevention Plan and obtain the Construction General Permit from the Environmental Protection Agency.

Throughout the construction phase we met with the contractor's project manager, town officials, and representatives from the Berkshire Regional Planning Commission. This program had very specific construction inspection requirements that exceeded what the town would have normally required. The project was completed during the fall of 2009 and spring through the summer of 2010 at a total project cost of approximately \$450,000.



View of Retaining Wall & Roadway prior to construction



View of the Replacement Retaining Wall



View of new sidewalks



View of new sidewalks and pavement

COMMERCIAL PROJECTS

COMMERCIAL PROJECTS

South Street, Pittsfield, MA

Job Type: Streetscape Design

Scope of Work:

White Engineering, Inc. was contracted to design the streetscape and investigate a storm drain issue. Because of the involvement of many entities in this project and a short timeline, completing the project as quickly as possible was a critical factor. The new city parking lot adjacent to the project area was to be completed by July 21, 2006, and it was essential that this project be completed by the same time as well. White Engineering, Inc. has always prided itself on being able to complete even the most complex of projects in a timely manner for our clients.

Memorial Drive, West Springfield, MA

Job Description: Pedestrian Mall and Midway Design, Permitting, and Construction Supervision

Scope of Work:

Marshall P. White was responsible for the design and permitting of a complete upgrade to the storm and sanitary sewers and water system associated with the construction of a new \$3M Pedestrian Mall and Midway while employed at Hill Engineers, Architects and Planners. While at White Engineering, he was responsible for construction inspections of these upgrades.

Memorial Drive, West Springfield, MA

Job Description: Site Engineering in Conjunction with an Addition to the Livestock Complex

Scope of Work:

White Engineering, Inc. was contracted to provide a plan identifying site grading and utilities including storm drain, sewer, natural gas and water. In addition, we prepared site drawings and obtained an Order of Conditions from the West Springfield Conservation Commission. During construction, we conducted inspections on an as-needed basis.

Dalton, MA

Job Type: Design and Permitting of a Solid Waste Transfer Station

Scope of Work:

White Engineering, Inc. was contracted to obtain permits for a new Solid Waste Transfer Station for the Town of Dalton. Berkshire Cleanways, Inc. was awarded a contract to design, build and operate the transfer station for the Town. White Engineering, Inc. conducted the topographic survey, created the design drawings and filed the necessary permitting documents with the Massachusetts Department of Environmental Protection.

Kittle Road, Hancock, MA

Job Type: Sewer Design for a 150-Lot Campground

Scope of Work:

White Engineering, Inc. was contracted to design the sewer treatment facility and connections for all lots on the property, utilizing as much of the existing minor infrastructure as was present. The sewer fed to an existing lift station that, in turn, fed to an existing suitable leaching area.

Kittle Road, Hancock, MA

Job Type: Public Water Supply Permitting

Scope of Work:

White Engineering, Inc. performed permitting and testing of pumps for two new water supply wells.

Pecks Road, Pittsfield, MA

Job Type: Design, Permitting and Construction Inspection of Site Renovations

Scope of Work:

White Engineering, Inc. was contracted to perform necessary topographic surveying, wetlands delineation and permitting and to prepare a design for a 50,000 square-foot addition connecting two existing production facilities.

Westfield, MA

Job Type: Design, Permitting and Construction Inspection for a Sewer Upgrade

Scope of Work:

White Engineering, Inc. was contracted for the design, permitting and construction inspections of a one-mile run of sewer line to connect the Western Mass Hospital to the City of Westfield's municipal sewerage system. The previously existing sand filter bed system had routinely been in non-compliance with Massachusetts requirements. The result was the design of the new sewer connection to the City's system. The new sewer system included over a half-mile of gravity sewer connections, a thirty-thousand gallon lift station and an approximately one mile run of 6-inch force main. The sewer run is primarily located along Route 20, but it also crosses under the Conrail Railroad and is attached to a concrete bridge over the Powder Mill Brook and a steel bridge over the Westfield River. The permit requirements for this project included permits from the Department of Environmental Protection for decommissioning of the sand filter bed. It also included a new sewer connection permit, state highway access permits, a permit from Conrail to run the lines under the railroad, and permits from Massachusetts Highway Department to attach components to the bridges. Lastly, a permit from the Conservation Commission and the Department of Environmental Protection about wetland disturbances was obtained.

South Main Street, Great Barrington, MA

Job Type: Site Design and Permitting

Scope of Work:

White Engineering, Inc. was contracted to provide a site design including utilities in order to develop a very limited site for constructing a new Dunkin Donuts facility in Great Barrington. This work included meeting with all boards in Great Barrington to gain approvals.

Stockbridge Road, Great Barrington, MA

Job Type: Design and Permitting of a 60-Unit Motel

Scope of Work:

White Engineering, Inc. was contracted to work with the owner, architects and legal counsel to design and permit a proposed 60-unit motel. The facility was proposed in an area subject to protection under the Wetlands Protection Act. This required permitting through the Conservation Commission as well as obtaining a special permit from other Town Boards.

INSTITUTIONAL PROJECTS

INSTITUTIONAL PROJECTS

Drab Avenue, Bard College at Simon's Rock Campus, Great Barrington, MA

Job Type: Road Reconstruction

Scope of Work:

White Engineering, Inc. was contracted to prepare the design to upgrade an existing road (portions of which were unpaved), provide permitting and supervise the construction. Because of the proximity of jurisdictional wetlands, formal wetland delineation was required. The design included the plan, the profile and construction details for the road improvements. Because of the upgrade to the road, we were required to meet stormwater management standards under the Wetlands Protection Act as part of the submission of a Notice of Intent. In order to meet these standards, it was determined that porous pavement materials would have to be used. During the construction phase, we were required to be sure all erosion control measures and guidelines outlined on our plans and in the Order of Conditions were being met.



Unimproved Road That Received Drainage Improvements and Porous Pavement



Road with Drainage and Porous Pavement

**Drab Avenue, Bard College at Simon's Rock Campus, Great Barrington, MA
(continued)**



Three Views of Improved Road

Arts Center, Bard College at Simon's Rock Campus, Great Barrington, MA

Job Type: Site Design and Wetlands Permitting

Scope of Work:

White Engineering, Inc. was contracted to work with the architects for the Daniel Arts Center. This was a 50,000 square-foot building housing the performing and visual arts. The facility included two theatres, as well as rehearsal space, dance studio, offices, classrooms, visual arts studios and various other supporting spaces. The architecture responds to the site's agrarian setting and to the school's ambitions for teaching and the performing arts. For its work in designing the site for the facility, White Engineering, Inc. was the recipient of two prestigious awards from the Boston Society of Architects: an Honors Award for Design Excellence and a Citation for Design. This project involved creating a raised walkway over a wetlands area and stormwater monitoring inspections.



Three Views of Completed Daniel Arts Center

Dormitories, Bard College at Simon's Rock Campus, Great Barrington, MA

Job Type: Site Plans and Permitting

Scope of Work:

White Engineering, Inc. was contracted to provide engineering services related to site planning for a new modular dormitory area on the North Campus. The three main units had to be placed so that there is a common area that the students can use. In addition, ample parking and provisions for handicap residents had to be provided. The plan also had to address utilities that would be connected to the modular units. Water came from a 6-inch main that runs by the area to the water tanks. A 6-inch line was required for the sprinkler system in the trailers. A smaller water line was run for domestic water purposes. The sewer was connected to the existing gravity line that runs from Pibley House to Lake Mansfield Road. The communication lines were connected at Pibley House, and the electrical power was fed from a transformer located on Fox Run Road.

Supports for the modular units had to be installed. Prior to placing the supports, the area for the trailers and common area was leveled, and gravel put in place and compacted. The leveling of the area included the removal of the topsoil and the subsoil so that the gravel was placed on the existing parent soil, providing a firmer foundation. The topsoil and subsoil that were removed provided materials that were re-used for the common area and for proper site drainage. Lastly, an access road for emergency vehicles was required, as well as a walking path in keeping with the rest of the campus.



**Old Dormitory Awaiting Demolition and Site-Clearing
for Modular Dormitory Construction**

Athletic Center, Bard College at Simon's Rock Campus, Great Barrington, MA

Job Type: Site Design, Permitting, Construction Document Preparation, and Construction Inspection of Site Work Associated with the New Athletic Center

Scope of Work:

White Engineering, Inc. was contracted to work with Centerbrook Architects in Essex, CT, in the preparation of the site design plan for a new athletic facility. This included all of the utility design as well as grading and layout. There was a large wetlands permitting effort under the Rivers Protection Act. A complex stormwater detention and treatment system was designed to meet the requirements of the Stormwater Management Regulations under the Massachusetts Wetlands Protection Act.



Two Views of Completed Athletic Center

Hillcrest Educational Center, Old Stockbridge Road, Lenox, MA

Job Type: Utility Upgrade/Wetlands

Scope of Work:

White Engineering, Inc. was contracted to prepare the plans and provide necessary permits for a new eight-inch water line from Frothingham Crossing to service the Old Stockbridge Road campus and the neighborhood residential water distribution system. Because the proposed water line will run along the edge of a jurisdictional wetland area, a Notice of Intent with the Lenox Conservation Commission and the Massachusetts Department of Environmental Protection was filed. To do so it was necessary to delineate the bordering vegetated wetland, conduct a topographic survey, create a base plan, design the new water system, obtain a water connection permit, submit a Notice of Intent and provide inspection of all phases of construction.

Berkshire School, Sheffield, MA

Job Type: Waste Water Treatment Plant for Residential School

Scope of Work:

White Engineering, Inc. was contracted to evaluate an existing 40,000 gallons per day septic system, apply for a groundwater discharge permit, and design necessary upgrades to the existing septic system for a private school in the county. All work was permitted through the Massachusetts Department of Environmental Protection, the regulatory authority.



Construction of Septic System Upgrade



Finished Waste Water
Treatment Building



Interior Views of Waste Water Treatment Equipment

Otis Elementary School, Otis, MA

Job Type: Site Engineering and Permitting for Elementary School Construction

Scope of Work:

White Engineering, Inc. was contracted to provide site engineering and design of utilities including storm drainage, septic system and water supply. Challenging wetland-permitting issues included replication areas and detention ponds. We also reviewed technical specifications for related activities and prepared bidding specifications for preliminary site work and water supply well installation. In addition, we performed water supply well sampling and testing in accordance with Massachusetts DEP drinking water supply requirements and prepared site runoff calculations and designed stormwater detention system in accordance with DEP and Mass. Highway Department requirements. All work closely coordinated with the School District in order to meet budgetary requirements.

Five Elementary Schools, Pittsfield, MA

Job Description: Site Engineering and Permitting for Additions and Renovations to Five Elementary Schools.

Scope of Work:

White Engineering, Inc. was contracted to design site grading and utilities including storm drain, sewer, natural gas and water, prepare site plans and obtain the necessary permits from the Conservation Commission, prepare plans for site utility work and specifications, and worked closely with the architects and landscape architects to prepare design within budgetary constraint limits of the City of Pittsfield.

ENFORCEMENT ASSISTANCE

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Clayton Road, Ashley Falls, MA

Job Type: Wetland Restoration

Scope of Work:

White Engineering, Inc. was contracted to prepare a response to an enforcement action that the client received because of an Administrative Consent Order from the Massachusetts Department of Environmental Protection, requiring wetland restoration work at his property. The client had previously filled two sections of wetlands. The project required that a delineation of the existing wetland boundary be performed and that the presumed boundary prior to alteration be established. Based on the information, a restoration plan was developed. The plan included final grades, soil preparation, plantings and procedures for the wetland area. Once the plans were drafted, we prepared a written response to the Administrative Consent Order issued by the Massachusetts Department of Environmental Protection describing the proposed restoration and monitoring plan. Upon approval, the replication areas were constructed and must be monitored for three years.



Pink Flags Delineate Presumed Wetland Boundary



Excavation of Restoration Area



Two Views of Restoration Area after One Growing Season

Route 57, New Marlborough, MA

Job Type: Wetland Restoration

Scope of Work:

White Engineering, inc. was contracted to address an Administrative Consent Order and violations to the Massachusetts Wetlands Protection Act, including significant alterations to Bordering Vegetated Wetland and Bank. These areas along with the 100-foot buffer zone measured horizontally from the boundaries are protected under the Massachusetts Wetlands Protection Act and are under the jurisdiction of the New Marlborough Conservation Commission. The client was advised to stop working on the driveway in order to minimize any penalties, and obtain permits from the conservation commission before proceeding. This project was taken over for review under an Administrative Consent Order and 401 Water Quality Certification by the Massachusetts Department of Environmental Protection. In this project, we delineated the boundaries of the jurisdictional wetland areas on the property and prepared a written report. We determined the extent of the alterations and conducted a topographic survey of the area including the driveway, drainage, and wetlands areas. The topographic survey identified all surface features, property monumentation, and flagged wetlands. We developed a driveway plan that included drainage and wetland restoration, and prepared the necessary paperwork including wetland restoration areas, driveways, culverts and drainage to comply with the Administrative Consent Order. This project includes continued monitoring.



Drainage Way Constructed in BVW



New Culvert in Driveway to Maintain Connectivity between Wetlands

Route 57, New Marlborough, MA (continued)



Washout along Common Drive due to Inadequate Swale Construction



Replication Area



Replication Area



Replication Area after One Growing Season

CONSTRUCTION MONITORING

CONSTRUCTION MONITORING

Big Bass Lane, Becket, MA

Job Type: Responding to Conservation Commission Requirements for Design Modifications, Amending a Request for Determination of Applicability, and Monitoring Construction

Scope of Work:

White Engineering, Inc. was contracted to provide a plan modification per Becket Conservation Commission in order to obtain negative determination for the driveway on the property. The project involved delineating and verifying the wetland boundaries, and preparing a report that included necessary measurements and modifications requested by the Becket Conservation commission, including construction monitoring. It involved designing a series of small culverts under the driveway, a riprap swale on right side of property, specifying procedures for removing sediment deposits from the wetland area, and producing a planting and stabilization plan for the side slopes of driveway that passes through the wetland and buffer zone.



Driveway Prior to Improvements and Full Site Stabilization before Winter



Driveway Prior to Improvements



Sediment Overtopping the Silt Fence and Entering into Wetland

Big Bass Lane, Becket, MA (continued)



Stabilization of Steep Slopes with Erosion Control Blanket and Seed



Stabilization of Slope with Geoweb, Topsoil, Seed and Mulch

West Road, Richmond, MA

Job Type: Site Development, Driveway Design, Bridge Design, Wetland Permitting, and Construction Monitoring

Scope of Work:

White Engineering, Inc. was contracted to obtain necessary wetlands permits for the driveway and approvals for a septic system and well for a single-family residence. The project involved conducting two percolation tests; performing a delineation of the boundaries of the wetland resource areas within 100 feet of the driveway and house site and fields; and performing a topographic survey of the driveway alignment, percolation test locations, and Buffer Zones relevant to the development of the property. The plan also involved the design of a bridge. We prepared the Disposal Works Construction Permit application, the Well Permit application and the necessary paperwork for submission of the Notice of Intent. We were also responsible for monitoring the wetland replication area.

Route 41, Richmond, MA

Job Type: Driveway and Septic System Design, Stream Crossing, Wetland Permitting and Construction Monitoring

Scope of Work:

White Engineering, Inc. was contracted to prepare designs for a septic system and a driveway. Due to the proximity of protectable wetland resource areas to the proposed work, we delineated the wetlands in the area of the proposed septic system, driveway and house. The project involved designing a driveway with a minimum width of 18 feet to provide access for the house. The design included an intermittent stream crossing. It was routed through the woods to protect as many healthy trees as possible. The site plan showed the house location, grading, drainage and the limits of clearing. It was necessary to prepare the required paperwork associated with for submission of a Notice of Intent. In addition, we prepared the Disposal Works Construction Permit application for the client and monitored the project during the construction phase.



Replication Area Seeded and Mulched



Area of Stream Before
Box Culvert is Installed



Open-Bottom Box Culvert
for Stream Crossing



Driveway with Stream Crossing
Nearing Completion

Stebbins Road, Otis, MA

Job Type: Driveway and Septic Design, Wetland Crossing, Wetland Permitting, and Construction Monitoring

Scope of Work:

White Engineering, Inc. was contracted to design a driveway to cross the wetland and 100 feet beyond the wetland and wetland replication area. The design included drainage and construction details suitable for approval by the Otis Conservation Commission, and the design for a septic system, and the placement for a well. Permit applications to the Board of Health for the septic and well were prepared as was the necessary paperwork for submission of the Notice of Intent. We were also responsible for monitoring the replication area.