

**K**  
**E** Engineering and  
Land Surveying, P.C.

# MUNICIPAL ENGINEERING

Strict Specifications.



# MUNICIPAL ENGINEERING

**At KC Engineering and Land Surveying, P.C. (KC), our interdisciplinary team ensures responsible solutions tailored to planning challenges and specific clients' needs.**

The municipal engineering group at KC serves municipal clients throughout the Hudson Valley, including clients in Orange, Sullivan, and Dutchess Counties.

We have exceeded expectations on hundreds of infrastructure and building projects in this area, including municipal buildings, community centers, wastewater treatment plants, water treatment and source development, and transportation projects. This work involves the preparation of design drawings, contract documents, and bid specifications. Our firm manages these projects through the bid process to the final construction phases, providing complete project oversight. We currently serve as municipal engineers for the Towns of Wallkill, Bethel, and Milan, the Village of Wappingers Falls, and the Tri-Municipal Sewer Commission. KC has in the past also served as municipal engineers for the Towns of Wappinger and Mount Hope, and the Village of Rhinebeck.

KC's municipal engineering group consists of skilled civil, resident, structural, office, wastewater, water, environmental, electrical, and traffic engineers; junior and senior inspectors; construction managers; land surveyors, party chiefs, draftsmen, CADD operators, engineering technicians, GIS coordinators, and instrument people; and grant coordinators, permit reviewers, compliance specialists, constructability reviewers, and community liaisons all with experience servicing the needs of local towns and villages.

## Services

- |                                       |  |
|---------------------------------------|--|
| As-Built Drawing Preparation          | Land Surveying                         |
| Civil Engineering                     | Office Engineering                     |
| Code Compliance                       | Permitting Support                     |
| Community Liaising                    | Plan Reviews                           |
| Constructability Reviews              | Resident Engineering                   |
| Construction Management & Inspection  | Site Development                       |
| Deeds & Records Research              | Stormwater Management                  |
| Document Support                      | Structural Engineering                 |
| Drainage & Sewer System Design        | Traffic Engineering                    |
| Electrical Engineering                | Utility & Lighting Design & Relocation |
| Environmental & Geotechnical Analyses | Value Engineering Support              |
| Environmental Engineering             | Wastewater Treatment                   |
| Geotechnical Engineering              | Water Supply                           |
| Grant Applications & Coordination     |  |
| Highway & Roadway Design              |  |





**Water System Capital Improvements Master Plan, Wallkill, NY** | KC was tasked with preparing a water system master plan for the Town of Wallkill with a specific focus on capital improvements and assessing the financial condition of the system as a whole. The Town of Wallkill water system consists of 3 water treatment plants, 8 water storage tanks, and more than 75 miles of water distribution piping that was in place before the water system was consolidated. The system produces and distributes an average of over 800M gallons of water every year. KC archived, cataloged, and analyzed over 1,000 plans and as-built drawings that were available for the water system to determine the condition of the facilities and the age, size, and material of the water distribution system. The end result provided information on over 99% of the water system assets.





**Two Sanitary Pump Station Upgrades And Two Sewer Force Main Replacements, Bethel, NY** |

As part of this project, KC provided consulting services for design, NYSDEC permitting, engineer's reports, preparation of contract documents, construction inspections, and support services during startup. Project components included the 1,150-foot Route 17B 8-inch sanitary sewer force main, the 525-foot Central Avenue 8-inch sanitary sewer force main, the Route 17B pump station, two wet wells, a flow meter, a new concrete block pump station, a new standby generator, and erosion/sediment control.



I am very satisfied with the engineering services supplied by KC Engineering.

Tom Morris  
Village of Wappingers Falls  
Planning Board

**Franny Reese Park, Wappingers Falls, NY** | The scope of construction work included sawcut pavement and pavement, curbing, and sidewalk removal; reconstruction of existing concrete curb and sidewalks; installation of mechanically-stabilized retaining walls, fencing, and site lighting; and additional site development work. KC provided area and initial site mapping, topographic survey and base mapping, asbestos report development, advancement of the conceptual plan and preparation of preliminary working drawings, State Environmental Quality Review (SEQR) support for buildout of the conceptual plan, preparation of an Environmental Assessment Form, and preparation of contractual bid documents and opinions of probable construction cost for bidding.



**Wappingers Dam, Wappingers Falls, NY** | The scope of work included an in-depth inspection of the dam structure; preparation of construction documents, plans, and specifications for the rehabilitation of the dam; assistance in the bidding process; and construction inspection and management services. In the design stage, KC prepared design reports including findings, recommendations, and a detailed repair plan. KC prepared an estimate and technical specifications, provided pre-bid services including conduction of a pre-bid conference, responded to requests for clarification as needed, performed a bid analysis complete with recommendations, and distributed final construction documents and bid documents.

In the construction stage, KC conducted and documented a pre-construction meeting, performed construction inspection visits, held progress meetings with the on-site contractor, responded to requests for clarification, reviewed and processed the contractor's submittals, performed a final inspection of the completed work, prepared a punch list, and performed a final walkthrough to verify its completion.







### **Administration Building Rehabilitation, Bethel, NY |**

The Town of Bethel Kauneonga Lake Wastewater Treatment Plant (WWTP) Administration Building was significantly damaged by a fire at the plant. The garage, chemical storage rooms, laboratory, and offices all suffered damage when the plant's electric vehicle caught fire. The mechanical, electrical, and plumbing systems all required repair.

KC inspected the building for fire damage, including structural repairs, MEP systems, and all finished areas. The building was found not suitable for occupation. KC provided consulting services for design of the replacement electrical system, repairs to the plumbing and HVAC systems, design of a new fire alarm system, and interior finishes.



### **Water Treatment Plant Solar Array, Wappingers Falls, NY |**

This project consisted of the design and construction of the solar array for the 1.0 MGD Water Treatment Plant in the Village of Wappingers Falls. This water treatment plant designed by KC was constructed to provide for the Village of Wappingers Falls' future water needs, replacing an aging plant. The solar panel system includes a grid design system of solar panels mounted on a post and rail support system. It provides power to the plant for daily operations. KC assisted the Village during the NYSERDA grant application process, which resulted in securing funding for this project. KC also provided the site layout for the solar panels.

### **Battenfeld Intersection Improvements, Milan, NY |**

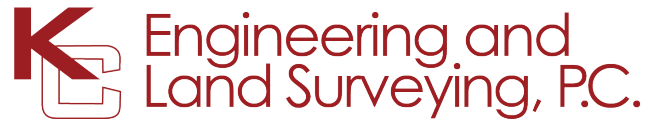
The skewed T-intersection of Battenfeld Road and Shookville Road was neither controlled nor striped. The intersection also had sight distance limitations on the Shookville approach and the southerly approach of Battenfeld. KC explored a few alternatives to improve the intersection for the safety of drivers and also help achieve better sight distances.

The sight distance to check for on-coming vehicles traveling north on Battenfeld was very limited. The large trees and brush (on the right) behind the guardrail were therefore removed and the approaches narrowed. A stop sign was added for the southbound vehicles on Battenfeld Road.



**Municipal Parking Lot, Wappingers Falls, NY |** The Mill Street parking lot has 2 retaining walls, totaling approximately 186 linear feet, of various heights and construction running along the south and east boundary of the property. The east retaining wall height varies from 10' to 14' in height with a 2' to 4' curb reveal. The south retaining wall is approximately 5' in height and ends at grade.

The scope of the retaining wall services completed for this site included the inspection and evaluation of the existing retaining walls and parking area above as well as preliminary design and estimating for the repair and replacement of various sections of the wall. Specifications of recommended materials and procedures for the repair to the wall and stairs were provided.



**Diversified. Multidisciplined.**

KC Engineering and Land Surveying, P.C. (KC) is a diversified, multidisciplinary consulting engineering firm. Since 1983, KC has provided our public and private sector clients with a comprehensive range of professional services using only the latest technical equipment. The corporate headquarters of the firm is located in New York City with a branch office in Newburgh, NY. KC has extensive experience with government agencies, municipalities, and private clients; a diverse, professional staff; and an impeccable record of services rendered.

### New York City

7 Penn Plaza, Suite 1204  
New York, NY 10001  
(212) 947-4945

### Hudson Valley

15 Governor Drive, Second Floor  
Newburgh, NY 12550  
(845) 931-2900

### Albany

100 Great Oaks Boulevard, Suite 122  
Albany, NY 12203  
(518) 209-7489

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