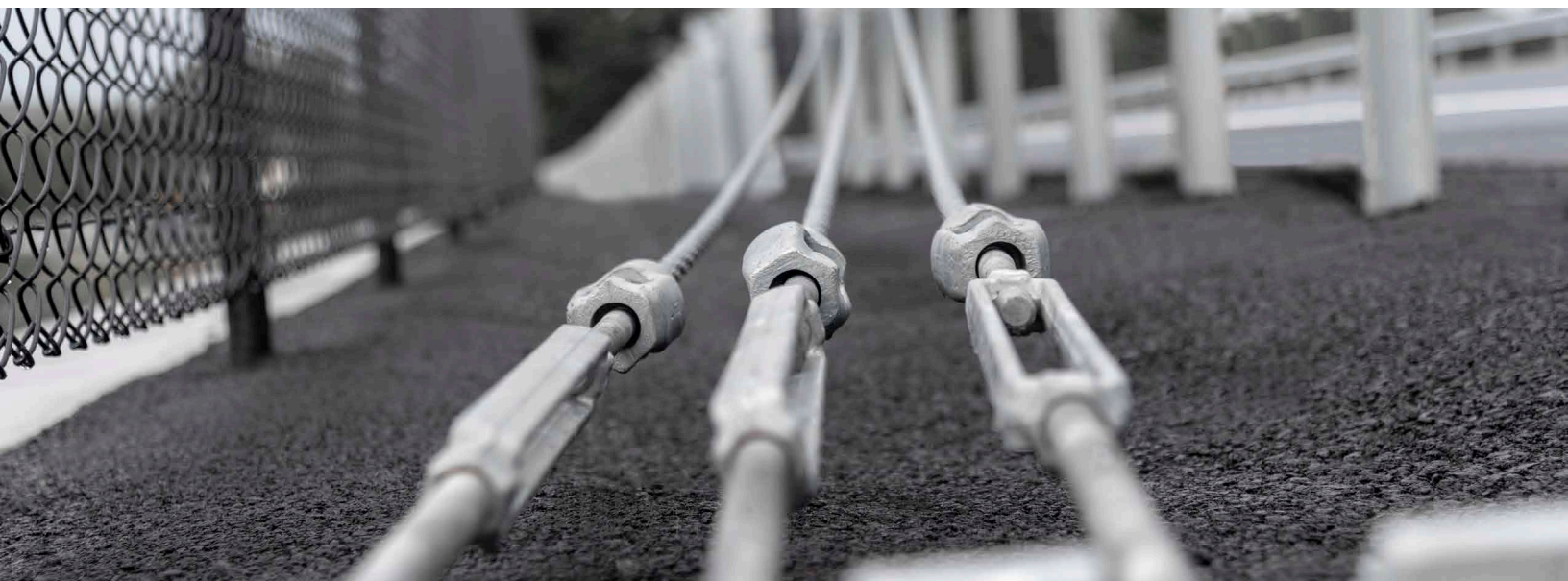


CIVIL ENGINEERING

Responsibility to Community.



CIVIL ENGINEERING

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

Our civil engineering services include site grading, drainage, and earthwork; pavement evaluation and design; traffic engineering; soil erosion and sediment control (E&SC); signage and striping plans; drainage structure design; utilities engineering, including water and sewer systems; stormwater management; roadway and site lighting; civil site plans, subdivisions, and site layouts; parking lot design; and permitting, cost estimation, and specifications.

KC closely adheres to local, state, and federal standards, as well as all applicable international and state building codes. Our civil engineering group provides these services for roads and highway projects, as well as residential, commercial, industrial, institutional, and mixed-use projects.

KC's civil engineering group brings together many talented engineers ready to develop drainage plans and design sewer and stormwater systems. KC fully understands the New York State Department of Environmental Conservation's (NYSDEC's) stormwater treatment and compliance requirements and has prepared Stormwater Pollution Prevention Plans (SWPPPs) for projects of all sizes. Our solutions pursue the lowest impact and operating cost while meeting permit requirements. We also provide construction phase stormwater management compliance inspections and recommendations to maintain permit compliance in dynamic construction environments.

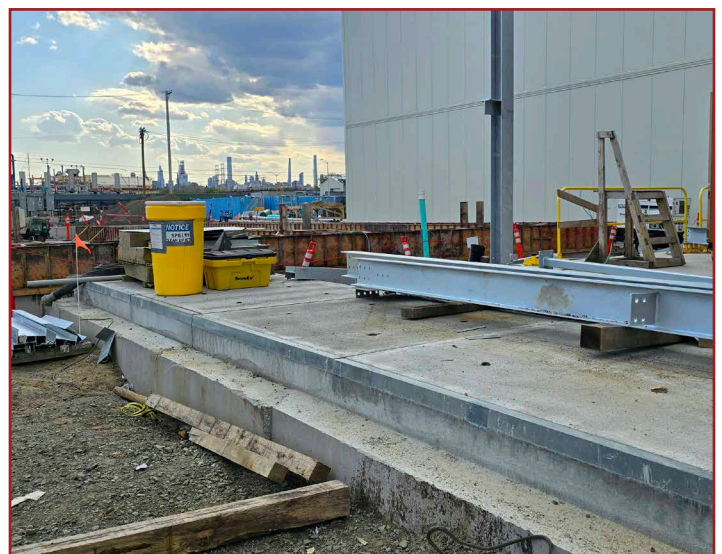
KC's traffic engineering experience includes the formulation and presentation of traffic impact statements, operational analysis, level-of-service (LOS) calculations, signal design and operational assessment, safety studies, implementation, and maintenance. Our engineers effectively and efficiently plan, design, and oversee intersection improvements, parking facilities, maintenance and protection of traffic plans, highways, driveways, roadways, utility relocations, site lighting, curbs, and sidewalks so that the outcomes not only provide for smooth transitions, but also for economically-functional results.

Services

- Code Compliance
- Community Liaising
- Drainage & Sewer System Design
- Environmental Engineering
- Geotechnical Engineering
- Highway Design
- Intersection Improvements
- Lighting Design (Security / Site / Street / Tunnel)
- Permitting Support
- Parking Facilities Design
- Roadway Design
- Traffic Engineering
- Site Development
- Stormwater Management
- Utility Design & Relocation
- Value Engineering Support
- Wastewater Treatment
- Water Supply



Champlain Hudson Power Express (CHPE), Various Locations, NY | The CHPE is an innovative renewable power transmission project for the delivery of low-cost renewable energy to New York State, which includes the installation of approximately 339 miles of underground and underwater transmission line from the United States-Canada border to Astoria, Queens, NY. For the upland cable installation, KC is preparing the utility plan and profile, site access road plans, the maintenance and protection of traffic (MPT) plans, E&SC plans, a SWPPP, and drainage plans. For the Astoria converter station, KC is performing all civil and drainage design, including development of the site plan, site grading, and 3D modeling; vehicle turning analysis; and preparation of plans and specifications to meet all local and national code requirements. The project involves close coordination with many stakeholders, including municipalities, park lands, utility companies, and railroads.



NYSDOT Contract D031304-07: NY-27 at Barnes Road Reconstruction, Brookhaven, NY

NYSDOT Contract D031304-07: NY-27 at Barnes Road Reconstruction, Brookhaven, NY | This project constructed a new diamond interchange, including ramps and ancillary facilities, to improve safety and mobility. Work included development of traffic counts, forecast data, and project scoping, design alternatives, and capacity and accident analyses. KC assisted with the Project Scoping Report / Final Design Report (PSR / FDR) by designing speed memos and performing flood plain, crash, and pavement analyses. KC also provided surveying services, including right-of-way (ROW) mapping research and development of a ROW base map.

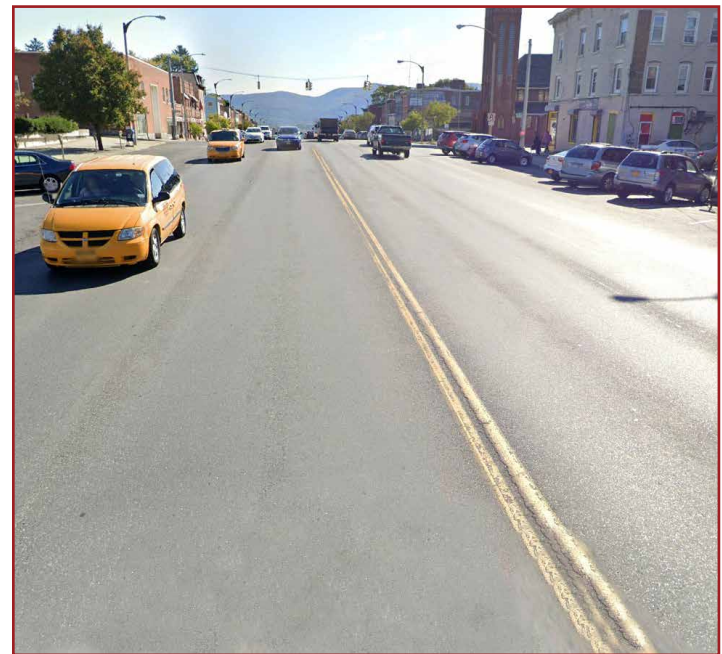


The KC civil engineering group consists of a team of skilled professionals dedicated to providing responsive and quality service to our clients.

New York, NY | The project scope included widening of the VWE to add a fourth lane from the KGI to JFK International Airport, which involved evaluation of the proposed project on 21 bridges and evaluation of on- / off-ramp operations. KC provided traffic, utility, and structural engineering and design. KC modified proposed profiles to meet minimum vertical clearance requirements and design standards. Additionally, KC coordinated and oversaw the development of the WZTC schemes for the VWE over North Conduit Avenue, Belt Parkway, and South Conduit Avenue to Federal Circle.



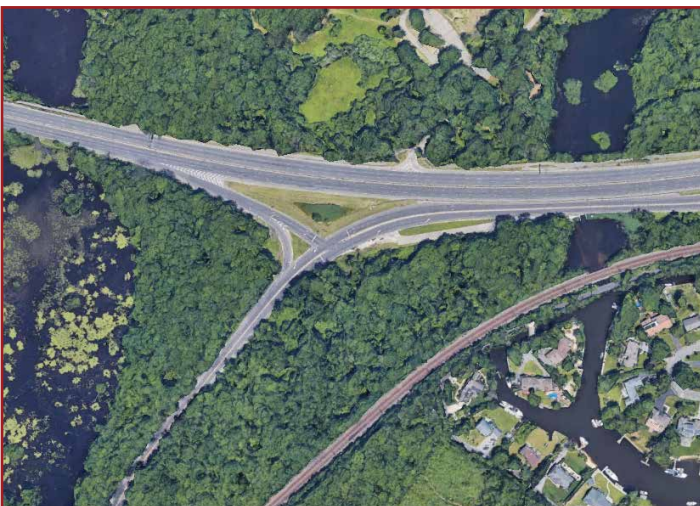
Signal Improvements, Newburgh, NY | The project scope included the identification and reconstruction of non-standard features within and adjacent to the side street intersections along Broadway between Chambers Street and Robinson Avenue in Newburgh, NY. The scope of work encompassed pedestrian curb ramps and traffic signals along Broadway, including several mid-block crossings, which were determined to be non-compliant with Americans with Disabilities Act (ADA) standards. KC was responsible for providing data collection and analysis services, including design survey and mapping, determination of existing conditions, capacity analysis, and traffic counts; preliminary and detailed design, including development of design alternatives, Draft and Final Design Approval Documents (DAD), Advance Detail Plans (ADP), cost estimates, and contract documents; permitting, including State Environmental Quality Review Act (SEQRA) determination; and utility coordination.





Contract 8761.74: Route 9D Pedestrian Improvements, Wappingers Falls, NY | KC prepared a preliminary Engineer's Report to assist the Village of Wappingers Falls with receiving this NYSDOT Transportation Alternatives Program (TAP)-funded project, which featured safety enhancements for pedestrian and multimodal traffic users on Route 9D. The project included traffic calming features, ROW surveying and mapping, utility coordination, ADA-compliant

sidewalk improvements and crosswalks, and new pedestrian / street lighting. New LED lighting fixtures were selected to provide pedestrian scale lighting that also allowed the Village to phase out existing and costly cobra head lighting above. The project included installation of several Rectangular Rapid Flashing Beacons (RRFBs) to enhance pedestrian safety at crosswalks.

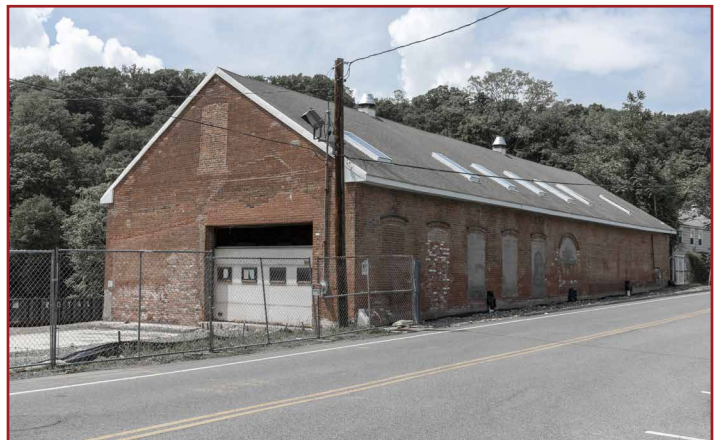


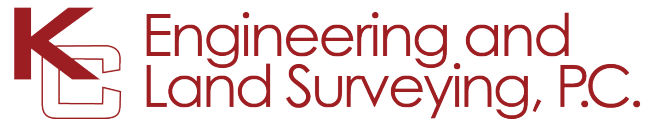
NYSDOT Contract D031472-04: Oakdale Merge Planning and Feasibility Study, Islip, NY | The project scope included the identification, evaluation, and documentation of existing conditions and deficiencies along 3 miles of the Sunrise Highway (NY-27) Oakdale Merge area from Connetquot Avenue to Locust Avenue in Islip, NY. The scope of work also included review of environmental impacts due to proximity to wetlands. KC was responsible for performing highway capacity software (HCS) analysis and accident analysis, analyzing traffic data, identifying existing highway features and deficiencies, preparing detailed cost estimates for design concepts, design survey and mapping, and preparing utility and culvert inventories.

NYS DOT Contract D037604: Highway Safety Investigation, Region 8, NY | The project scope included highway safety investigations at 25 locations along various highways in Ulster, Orange, Dutchess, Putnam, Rockland, and Westchester Counties. KC's scope of work included generating accident history of the project area, plotting collision diagrams, and determining accident patterns, contributing factors, and countermeasures for each study location, as well as performing the cost-benefit analysis for recommended improvements. Field observations included sight obstructions, roadside clearances, parking restrictions, curvature, driveways, stop lines, crosswalks, locations of reference markers, sight distances from critical stopping points, and cultural characteristics of the area.



Highway Garage, Phases I and II, Wappingers Falls, NY | After providing civil engineering and surveying services for the construction of the highway garage for the Village of Wappingers Falls, KC provided environmental engineering services for the 0.9-acre Highway Garage site. KC's services consisted of a Phase I Environmental Site Assessment (ESA) and a Phase II Subsurface Investigation (SI), including a geophysical survey; advancement of soil borings; installation of temporary groundwater monitoring wells and soil vapor probes; and collection of soil, groundwater, soil vapor, and air samples. KC's findings were documented in a Phase II Subsurface Investigation Report.





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 branch offices in Newburgh and Albany, NY. KC has extensive experience with government agencies, municipalities, and private clients; a diverse, professional staff; and an impeccable record of services rendered.

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