

LAND SURVEYING

Cutting-Edge Technology.



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

KC's land surveying group is a leading provider of boundary and topographic surveying, base mapping, right-of-way mapping with GPS control, and geographic information system (GIS) services.

We continue to invest in the latest developments in GPS technology and personnel training as part of our commitment to provide quality service at competitive rates. We have in-house capabilities for performing Computer-Aided Design (CAD) and analysis, word processing, and cost estimating. Real Time Kinematic (RTK) surveying and differential rapid static GPS are our preferred methods for performing a variety of surveying services such as construction layouts, topographic and as-built surveys, wetland locations, aerial photo control, and hydrographic surveys.

KC's newest pieces of survey equipment, our terrestrial, aerial drone, and mobile Light Detection and Ranging (LiDAR) scanners, allow us to pick up the full detail of project areas with minimal impacts to the traveling public. The scanners' capabilities cut field time in half and produce high-quality and detailed survey plans.

KC's land surveying group consists of dedicated professional land surveyors, party chiefs, instrument people, GIS technicians, draftsmen, engineering technicians, and CAD operators with experience researching and recording all types of survey data and with extensive experience out in the field in varying terrains and weather.

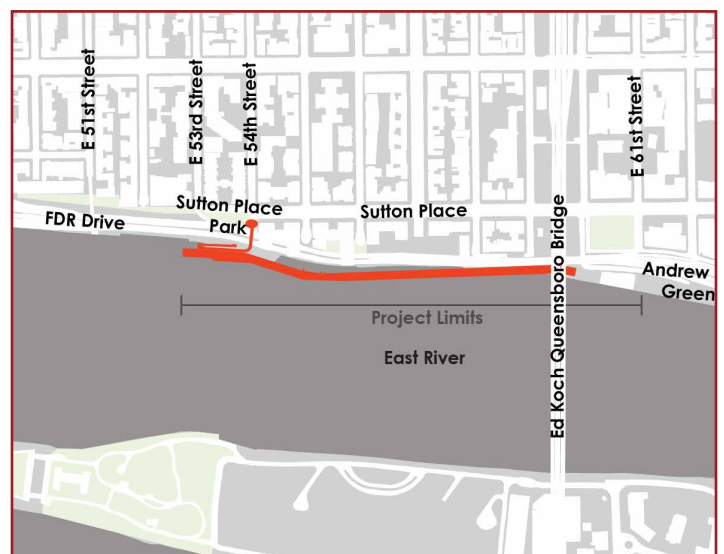
Services

- Aerial Photogrammetry Control
- American Land Title Association (ALTA) & American Congress on Surveying and Mapping (ACSM) Standards
- As-Built Surveys
- Conversion of Hard-Copy Source Information
- Deeds & Records Research
- Digital Depth Sounders & GPS Receivers
- Digital Land Base Mapping
- DTM to Compile Topographic Mapping
- Dynamic Three-Dimensional Terrain Modeling
- Environmental Surveys
- FAA 1A / 2C Certifications
- Ground Control Surveys & Field Verifications
- Geodetic Networks for GIS Databases
- GPS Coordination
- High Definition (HD) Laser Scanning
- Monumentation
- Planimetric & Topographic Data for GIS
- Right-of-Way (ROW) Mapping
- Sun & Star Shots
- Survey Plans, Reports, & Legal Descriptions
- Topographic / Utility / Deformation Surveys
- Traditional Conversion Option / Board Digitizing / Tracing Paper Source Documents
- USGS Level 1 & Level 2 DTMs
- Vertical Controls / Benchmarks



NYCEDC Contract 33610002: East Midtown Greenway (EMG), New York, NY

| The intent of this project was to construct a continuous public waterfront esplanade over the East River in Manhattan, NY. The EMG's southern and northern termini are East 53rd Street and East 61st Street. The project also included a new pedestrian bridge that provides access to the esplanade at 54th Street and Sutton Place South. KC performed the topographic survey, utility survey, and easement survey for the project. Work associated with the production of these deliverables included a comprehensive investigation of all available record utility and government agency maps. KC also researched available design drawings, as-built drawings, and aerial maps spanning approximately 80 years to understand site conditions, both above and below ground. KC's survey crew also coordinated with an arborist to accurately measure, classify, and record all trees within the project limits.



NYS DOT Contract D038105: Rehabilitation of Brooklyn-Queens Expressway (BQE) Viaduct, Queens, NY |

The project involved rehabilitation of a viaduct on the BQE over 47th Street, running over Laurel Hill Boulevard from 47th Street to 58th Street, and work on a 45-span bridge. KC performed design survey and mapping, including base and supplemental mapping; topographic field survey of roadway, approach, and bridge superstructure and substructure elevations; geotechnical survey of soil borings and underground utility surveys; and ROW surveying, mapping, and analysis. KC produced draft and final design survey reports, CADD files, base mapping reports, and ROW mapping reports.



The basic principles of surveying have changed little over the ages, but the tools used by surveyors have evolved.

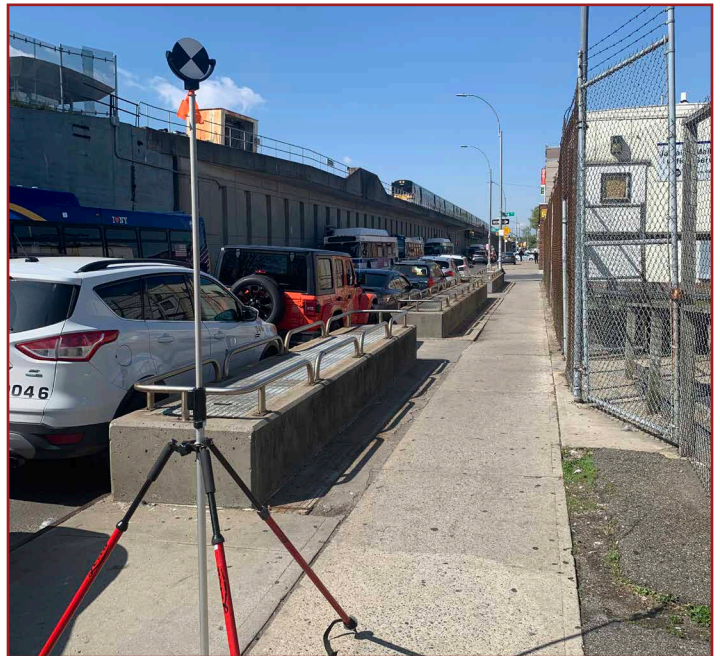


NYSDOT Contract D031304-06: Priority Surface Treatments, Suffolk County, NY

NYSDOT Contract D031304-06: Priority Surface Treatments, Suffolk County, NY | The project scope included highway pavement surface restorations at multiple locations. The scope of work included two-inch milling of the existing asphalt riding surface, isolated full-depth pavement repair, two inches of new top course asphalt resurfacing, installation and/or upgrade of sidewalk curb ramps, new pavement markings, and traffic signal loop and traffic count loop replacement. KC provided design survey of the project sites, including supplemental field survey, pedestrian ramp evaluation, and utility and drainage casting inventory. KC assisted with preparing the construction cost estimate, advanced detailed plans (ADPs) and all related preliminary progress plans for highway design, and the final plans, specifications, and estimates (PS&E).

NYCEDC Contract 54350001: Station Plaza Intermodal Roadway Improvements, New York, NY

NYCEDC Contract 54350001: Station Plaza Intermodal Roadway Improvements, New York, NY | The project scope included the engineering and landscape architectural design services required to improve pedestrian safety, reduce traffic congestion, improve conditions for more than 18,000 daily transit users, and create open space at Station Plaza. The Station Plaza transit hub is served by 13 bus lines, 2 subway lines, the Long Island Railroad (LIRR), and the AirTrain service from John F. Kennedy (JFK) International Airport to the LIRR. The scope of work included proposed roadway realignment and restoration, site regrading, retaining walls, sidewalks, pavements and pavement markings, lighting, and signage. KC provided land surveying services in support of design development, which included topographic, metes and bounds, easement, and utility surveys along Archer Avenue between 144th Place and 147th Place at 90-70 Sutphin Boulevard and 91-24 and 91-20 146th Streets.





NYSDOT Contract D038181: Design Services for Drainage Enhancement, Nassau County, NY |

The project scope included preparation of PS&E documents and ADPs for alleviation of flooding conditions caused by storm surge and rainfall in Nassau County. KC provided survey and mapping, including design and ROW survey, mapping, and analysis; detailed highway design, including preparation of cost estimates, ADPs, and final PS&E documents; finalization of drainage models and solutions to mitigate surcharge issues; and solicitation and coordination with a subsurface utility exploration (SUE) subcontractor.



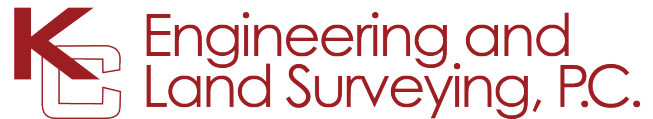
NYSTA Contract D214787-02: I-287 / Route 17S Pavement Resurfacing, Rockland and Orange Counties, NY |

The project scope included the final design (Phases V and VI) for pavement resurfacing along the New York State Thruway mainline, interchange ramps, service area deceleration / acceleration lanes, and the Sloatsburg truck parking area. KC was responsible for performing design survey and mapping, including preparation of a digital terrain model (DTM) in InRoads format; environmental permitting and consulting services, which included wetland studies and field delineation, floodplain evaluations, and applying for and obtaining permitting; and detailed design, including preparation of ADPs and PS&E for drainage structures, stormwater treatment, and work zone traffic control (WZTC).

NYS DOT Contract D038174: Flood Mitigation, Queens, NY | The scope of work for this project includes addressing flooding occurring in various locations in Queens, including the Van Wyck Expressway (VWE), Long Island Expressway (LIE), and the Grand Central Parkway (GCP). KC's scope of work includes design survey and mapping in support of preliminary and final design services. The data being collected includes rim / invert elevations, overall depth at each drainage structure, verification of the configuration of the existing drainage system, and survey at all accessible drainage structures along approximately 1,700 linear feet (LF) of trunk sewer within the project limits.



Amtrak Contract BPO1003963: Hudson Line Control, Various Locations, NY | KC was tasked with providing geo-referenced control for a mobile LiDAR project on the National Railroad Passenger Corporation (Amtrak) Hudson Line. The corridor consisted of 94 miles of track, from MP 75.8 to MP 169.9. Specifications called for setting targets within the track at intervals of less than 800 feet apart, alternating between the northbound and southbound tracks. Targets consisted of a MAG Nail set in the corner of a painted target on ties. In addition, readily available National Geodetic Survey (NGS) control monuments and approximately 50 random check points immediately adjacent to the railway were to be observed for validation.



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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