

SENIOR ENGINEERING AIDE

DISTINGUISHING FEATURES OF THE CLASS: This position involves the performance of moderately difficult sub-professional civil engineering work in the office or in the field including making the more difficult routine technical computations and drawings and gathering preliminary data for use by supervisors. The position is distinguished from Engineering Aide by the complexity of assignments and by the presence of drafting duties. The work is performed under general supervision of the Civil Engineer allowing leeway for the exercise of independent judgment in carrying out the details of assignments in accordance with department policy and sound civil engineering practices. Supervision is not a responsibility of the position. Does related work as required.

TYPICAL WORK ACTIVITIES: (Illustrative Only) Develop engineering plans using CAD from sketches, computations, grade lines and base maps; Plots cross sections, profiles, base lines and topography; Checks maps for location of structures, conduits, cables, sewer and water lines; Makes routine engineering computations; Plots location of storm and sanitary sewers and water lines from field notes and related data; Answers inquiries from general public, county departments and other municipalities regarding work in progress; Prepares working drawings for the construction of highways, highway bridges, water main installations and storm installations; Recordkeeping and inspection for various construction related projects; Operates a scanner, plotter and general office machines; Performs materials tests on construction materials; Performs traffic counts for the county and other municipalities; Performs sight distance verifications and inspections for access permits; Performs three dimensional topography surveys with fully electronic total station surveying equipment; Downloads surveying notes from data collector to a computer and utilizes survey software to produce base mapping for civil engineering projects; Performs a variety of sub-professional engineering duties and general office duties as assigned.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Good knowledge of the principles, practices and procedures for developing engineering drawings; Good knowledge of mathematics including algebra, geometry, and trigonometry; Working knowledge of acceptable engineering practices used in road, bridges, drainage, paving, sign, guiderail and water line projects; Skill in the use of CAD; Ability to set up and use surveying instruments; Ability to interpret engineering maps, sketches, drawings and specifications; Ability to understand and carry out technical and written civil engineering instructions; Initiative and resourcefulness; Accuracy; Good judgement; Physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Either:

A. Graduation from a regionally accredited or New York State registered college or technical institute with an Associate's Degree in engineering technology or related field; OR

B. Graduation from a New York State registered or regionally accredited college or university with an associate's degree or completion of 60 credit hours in civil engineering, engineering technology or related field; OR

C. (1) Graduation from a high school or GED program and (2) four years of full-time paid experience assisting civil engineering work which shall have included the operation of survey equipment, making engineering computations or developing drawings; OR

D. An equivalent combination of experience as defined by the limits of (A), (B) and (C) above.

NOTE: College credits in related field may be substituted for experience on a year-for-year basis.

Revised 2/27/87;1/14/94; 6/23/98; 5/23/05; 12/21/11; 8/26/22

Reviewed 4/24/01, 7/3/07; 2/5/09; 12/4/09; 3/13/14; 5/16/18