

## CIVIL ENGINEER (GENEVA)

DISTINGUISHING FEATURES OF THE CLASS: This beginning level professional engineering position exists in the City Engineering Department and involves work requiring limited experience or practice, but demanding ability to apply principles of physics, mathematics, mechanics and materials to engineering problems. The work requires familiarity with engineering methods, materials, equipment and techniques used in the field. The work is performed under general supervision of the City Engineer. Assignments are received in general terms as far as details are concerned, but the scope of each assignment is limited and superiors outline methods of procedure. As proficiency increases, the complexity of assignments increases and the degree of supervision decreases. The incumbent does related work as required.

### TYPICAL WORK ACTIVITIES:

Designs roads, bridges and parts of buildings;  
 Computes estimates of quantities of materials and work progress for contractors' payments;  
 Writes job specifications for projects of limited difficulty with guidelines from standard specifications, codes and regulations;  
 Prepares estimates of quantities of materials and work progress for contractor payments;  
 Makes field tests of materials;  
 Operates transits, levels and other surveying instruments;  
 Inspects construction work for conformance with plans and specifications, including physical and operational condition of existing roads, bridges and buildings;  
 Prepares and maintains records, project data, and may utilize computer systems;  
 Conducts surveys to establish or re-establish property lines, to map developed areas and to run location lines for roads, bridges and other facilities;  
 Records data, prepares records and maintains files necessary for the functioning of the Engineering Department;  
 Coordinates projects, including liaison with contractors and vendors, schedule projects, determine space needs, equipment layout, traffic flow patterns and material options;  
 Computes rough estimates on studies of proposed facilities;  
 Develops plans and cost estimates and contract documents for projects of limited difficulty;  
 Develops plans and profiles of roads and bridges;  
 Performs general engineering office work.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Working knowledge of basic principles and practices of engineering; working knowledge of construction, survey and inspection practices; ability to use drafting, surveying and other instruments or precision in professional engineering work; working knowledge of the procedures and practices of engineering, including design and specification writing; computerized drafting, inspections and surveys; working knowledge of the terminology, tools and materials used in the construction of roads, bridges and sewers; working knowledge of applicable codes, laws, rules and regulations and procedures governing engineering design and construction; ability to use micro-computer software in engineering design and calculations; ability to design public works projects; ability to express engineering concepts and decisions in drawings; ability to follow specific and detailed instructions; ability to prepare plans, designs, specifications, right of way maps and narrative reports.

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MINIMUM QUALIFICATIONS:

1. Graduation from a regionally accredited or registered New York State college or university with a Bachelor's degree in engineering; OR
2. Graduation for a regionally accredited or registered New York State college or university with an Associate's degree in engineering technology, engineering design, engineering design technology, engineering science or related field; and
  - a) Two years of experience involving structural design; OR
  - b) Two years of experience involving the design of, the surveying for, or the engineering inspection of highways, bridges or buildings; OR
3. An equivalent combination of training and experience as defined by the limits of (1) and (2) above.

ADOPTED: APRIL 21, 1997

POSITION CLASSIFICATION: COMPETITIVE