

DEPARTMENT: CITY OF NORTH TONAWANDA  
CLASSIFICATION: COMPETITIVE  
APPROVED: JANUARY 9, 2017

CIVIL ENGINEER

**DISTINGUISHING FEATURES OF THE CLASS:** The work involves responsibility for performing advanced engineering work in rendering opinions and decisions on technical aspects of a wide range of subjects. The incumbent engineer will make field surveys to investigate and evaluate various engineering projects; will design and prepare bid documents for roadway; storm sewer; and sanitary sewer projects, as well as all other public works projects related to the city's infrastructure. Work is performed under a higher level professional engineer. Supervision may be exercised over seasonal engineering aides. Does all related work as required.

**TYPICAL WORK ACTIVITIES:**

1. Designs, including computer designing, and drafts plans and specifications for roadways, storm drainage, erosion control, and sanitary sewers; determines storm runoff volume and flowrates; calculates pipe sizes; determines road profiles and cross sections; and associated details, etc.;
2. Reviews, makes comments, and conducts design review meetings with engineers, architects and design professionals on specific engineering projects within the city;
3. Directs and investigates planning for various engineering projects, prepares cost estimates and scheduling of construction projects for consideration by the City Engineer for the capital budget;
4. Prepares the Annual Stormwater Report and oversees collection of data, performs drainage inspections and coordinates with other city departments on good housekeeping and best management practices of the city related to pollution prevention, and regularly attends meetings as required;
5. Makes field surveys to collect data and make evaluations;
6. Performs shop drawing review, construction observation, prepares verbal and written inspection reports and materials testing of city designed municipal construction projects in progress, including making as-built record drawings;
7. Directs the inspection of major construction projects performed by consultants;
8. Supervises the preparation of right-of-way acquisition maps for municipal roadway projects;
9. Provides supervision and computer design training, including geographic information system (GIS) training to technical support staff;
10. Prepares and submits NYSDEC and USACOE permit applications;
11. Prepares SEQR documentation of environmental impact of construction projects and meets with professional staff of various agencies on permit requirements;
12. Serves as a liaison with outside engineers, architects and consultants for the city;
13. Performs hydrologic and hydraulic analysis, including computerized flood routing analysis for storm water detention, and storm drainage within the city;

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## **CIVIL ENGINEER CONTINUED**

14. Aids in the preparation of Initial Project Proposal (IPP) documents for federally funded transportation projects;
15. Performs underground locations of city utilities under UFPO Regulations when requested by various contractors, maintains daily logs, as well as providing computerized positive responses;
16. Acts as survey party chief, supervising field crew in providing line and grade for street paving and construction, sewer and waterline extensions and other standard municipal improvement projects.
17. Acts as survey party chief, supervising field crews in survey and mapping for the design of various municipal infrastructure projects and road reconstruction projects;
18. Investigates property owner's complaints and makes recommendations on corrective action to be taken.

### **FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:**

Thorough knowledge of principles and practices of civil engineering; thorough knowledge of modern methods and techniques as applied to the construction and maintenance of public works projects; thorough knowledge of computer aided design drafting techniques, terminology and equipment; thorough knowledge of physics and mathematics as applied to civil engineering; ability to perform complex technical engineering computations rapidly and accurately; ability to prepare detailed cost estimates, drawings and specifications; ability to use office engineering and GIS software, computer system and plotter, as well as field engineering instruments; ability to conduct engineering research work and to write technical reports; ability to analyze the condition of roads, structures, embankments and construction projects and determine construction needs; ability to establish cooperative working relationships with others; physical condition commensurate with the demands of the position.

### **MINIMUM QUALIFICATIONS:**

Graduation from a regionally accredited college or university or one accredited by the New York State Board of Regents to grant degrees with a Bachelor's Degree in Civil Engineering and two (2) years of full time paid civil engineering experience.