Code: **5613** 

Operation and Construction Service Engineering, Designing and Structural Group Civil Engineering Series

## CLASS TITLE: Civil Engineer III

CHARACTERISTICS OF THE CLASS: Under supervision, the class performs fully functional professional civil engineering work of moderate complexity related to the construction, maintenance and design of various infrastructure and building projects; and performs related duties as required. These positions require a minimum of one year of professional engineering experience.

ESSENTIAL DUTIES: Conducts field surveys to collect data for planned improvements to water, sewer, traffic, bridge, street, airport and related systems and facilities; establishes line and grade, property lines and elevations for construction projects; prepares and reviews engineering designs, drawings, calculations, specifications and cost estimates for infrastructure and building construction, maintenance, and repair projects; serves as resident engineer at the site of small maintenance and construction projects, monitoring construction methods and work in progress, inspecting materials and ensuring work is completed according to contract specifications and project time lines; prepares reports on the status and costs of engineering projects; reviews payment vouchers submitted by engineering and construction firms ensuring payment requests reflect completed work according to contract specifications; reviews proposed engineering changes, contract amendments and related costs and makes recommendations regarding appropriateness and cost efficiency.

RELATED DUTIES: May review permit applications submitted by developers for activities affecting foundations, waterways, traffic and City landmarks; may maintain records of inspections, permits, work orders, correspondence and related documentation; may consult with other departments and agencies to coordinate personnel engaged in project engineering activities; may assist in training and providing guidance to lower level staff.

## MINIMUM QUALIFICATIONS:

Training and Experience. Graduation from an accredited college or university with a Bachelor's degree in Civil Engineering or a directly related field of engineering supplemented by one year of Civil Engineering experience, or an equivalent combination of training and experience, provided the minimum degree requirement is met. Some positions may require a valid State of Illinois driver's license.

Knowledge, Abilities and Skill. Good knowledge of the principles and practices of civil engineering design and construction. Good knowledge of advanced mathematical principles. Good knowledge of the use of surveying and drafting instruments. Good knowledge of modern construction methods, materials and equipment. Good knowledge of computer assisted design software. Good knowledge of infrastructure systems. Some knowledge of project costing, monitoring and reporting techniques.

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## CLASS TITLE: Civil Engineer III (Cont'd)

Ability to apply civil engineering theories to municipal development projects. Ability to conduct land use and related surveys. Ability to use computer aided design software. Ability to perform complex engineering calculations. Ability to estimate costs and schedules for engineering projects. Ability to meet and consult with other engineers and contractors.

Working skill in the application of modern civil engineering principles to practical problems. Good advanced technical math skills. Good skill in the use of surveying and drafting equipment. Good skill operating computer assisted design software. Good skill in conducting standard engineering tests and surveys. Some skill in monitoring engineering projects. Some skill in preparing preliminary cost estimates for engineering projects.

<u>Physical Requirements</u>. Ability to access work sites during various stages of construction or repair.

<u>Working Conditions</u>. Inside: General office environment. Outside: Occasional exposure to inclement weather and extreme temperatures.

<u>Equipment</u>. Field surveying equipment. CAD system. Standard office equipment including personal computers.

NOTE: While the list of essential duties is intended to be as inclusive as possible, there may be other duties which are essential to particular positions within the class.

March, 2002 City of Chicago Department of Personnel

Driver's License added May, 2018