CLASS TITLE:  Electrical Engineer III

CHARACTERISTICS OF THE CLASS:  Under supervision, the class performs fully functional professional electrical engineering work in connection with a variety of maintenance, construction and design projects including street lights, traffic signals, transit lines, fire alarms, bridges and electrical equipment; and performs related duties as required. These positions require at least one year of professional electrical engineering experience.

ESSENTIAL DUTIES:  Meets with project managers to determine project scope and objectives; surveys project location to identify existing utilities, systems and equipment, take field notes and draft preliminary sketches; prepares moderately complex design plans detailing electrical power, equipment, material and labor needs and prepares estimates of related costs; reviews project design plans and drawings prepared by consultant engineering firms for accuracy and conformance to project requirements and standards and makes or requests changes as needed; performs complex calculations to determine electrical power distribution, luminance and voltage levels; writes specifications for the procurement of electrical equipment and systems; conducts field inspections of work in progress to monitor compliance with contract specifications, check materials and equipment and evaluate changes in construction plans; inspects new electrical systems and equipment for conformance to plans and specifications and recommends modifications to ensure compliance; reviews engineering changes, contract amendments and related costs and makes recommendations to superiors regarding appropriateness; reviews payment vouchers submitted by engineering and construction firms ensuring payment requests reflect completed work according to contract specifications; meets with construction contractors and utility companies to coordinate electrical construction work and resolve electrical engineering problems; prepares reports on the status of electrical engineering projects.

RELATED DUTIES:  Maintains records of plans, inspections, permits, work orders, correspondence and related documentation and provides information requested by contractors; consults with other departments and agencies to coordinate electrical engineering work on various infrastructure projects.

MINIMUM QUALIFICATIONS:

Training and Experience.  Graduation from an accredited college or university with a Bachelor’s degree in Electrical Engineering or a directly related field of engineering supplemented by one year of electrical engineering experience, or an equivalent combination of training and experience, provided the minimum degree requirement is
met.
Knowledge, Abilities and Skill. Good knowledge of modern principles and practices of electrical engineering. Good knowledge of various electrical conduit designs. Good knowledge of advanced mathematical principles. Good knowledge of voltage and applicable safety codes and ordinances. Good knowledge of infrastructure systems. Some knowledge of contract modification procedures.

Ability to prepare electrical conduit designs. Ability to perform complex engineering calculations. Ability to estimate costs and schedules for electrical engineering projects. Ability to originate, prepare and check designs, estimates and specifications for electrical engineering projects.

Working skill in the application of modern principles and practices of electrical engineering. Good skill in the use of surveying and drafting equipment. Good advanced technical math skills. Good skill in preparing electrical conduit designs. Some skill in preparing specifications and cost estimates for electrical engineering projects. Good oral and written communication skills.

Physical Requirements. Ability to access work sites during various stages of construction or repair.


Equipment. Field surveying equipment. 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.

May, 2002
City of Chicago
Department of Personnel