JOB DESCRIPTION
Engineering Systems Analyst
Code Number: 22024

GENERAL PURPOSE
Under direction, provides information technology support for Engineering Department end user system requirements using integrated technologies; designs, codes, tests and documents engineering software applications; trains and assists end users in implementing new applications; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS
The Engineering Systems Analyst performs applications planning, design, programming, testing and implementation of computer application software packages and program modifications and enhancements to meet Engineering Branch requirements for effective and efficiently designed information systems.

The Engineering Systems Analyst is distinguished from a Business Systems Analyst II in that the latter class is used only in the Information Systems Department and typically works on larger, more complex systems with District-wide or multi-department impact.

ESSENTIAL DUTIES AND RESPONSIBILITIES
The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

Performs applications development, conversion, installation and/or maintenance; meets with users; plans, organizes and defines project requirements, methods and end objectives; coordinates project activities with Engineering Branch staff, Operations and Maintenance staff, and outside consultants

Interviews, analyzes and documents end user business processes and systems requirements; develops or refines system specifications; evaluates and tests vendor software packages for conformance with user requirements and priorities.

Translates system specifications into logical processes to prepare detailed system designs or enhancements; analyzes and evaluates program code to identify appropriate modification and enhancement requirements; using applicable programming languages,
writes and edits program code for applications or enhancements; with guidance from the Database Administrator, develops database designs and locations when required for the application.

Develops and executes system test plans to ensure application performance conforms to specifications; modifies programs to correct errors and optimize system performance and cost-effectiveness.

Follows the change management process, and performs necessary technical and project management duties needed to bring applications on-line within acceptable time period and budgeted amounts.

Implements and maintains database files; generates reports and data runs; designs screens, utility programs and menus.

Develops software documentation and user training materials; trains and works with users in implementing new applications or systems enhancements.

Trains and assists end users in utilization of various applications.

Performs and implements systems maintenance and software upgrades and conversions, making program modifications as necessary to meet user requirements.

Utilizes various applications and technologies to support Capital Improvement Program projects and to assist in designing, developing, and maintaining Engineering Branch and enterprise-wide applications including database conversion, software installation, user training, and hardware maintenance.

Troubleshoots system problems and develops reports to identify the source of problems and performs or requests fixes or repairs.

Assists in the establishment of departmental network standards and training programs.

Evaluates, researches, and recommends software and technologies that satisfy user and project requirements.

Performs related duties as assigned.

**DESIRED MINIMUM QUALIFICATIONS**

**Knowledge of:**
Computer programming principles, techniques and procedures for technical system applications, including design principles and systems development methodologies to ensure efficient systems operation, implementation, and maintenance; various computer-based technologies including Microsoft software, networks and operating systems, web-based technology development and integration, project management software, CAD, GIS and .Net architecture; standard programming languages and utilities similar to those used by the District; standard software development tools and utilities; principles, methods and techniques in the design, integration and operation of information systems for standard computer platforms and peripherals, functions, capabilities, characteristics, and limitations of standard computer, PCs and related equipment; accounting, statistical, business and office procedures commonly supported by system applications; thorough knowledge of the Systems Development Life Cycle, Change Management practices, systems testing practices, and project management skills.

Ability to:

Understand and apply user systems specifications in performing systems evaluation, design and diagnosis; complete project responsibilities and programming assignments efficiently and in accordance with District quality standards; organize and plan applications development projects; prepare clear and concise program documentation, user procedures, reports of work performed, and other written materials; make sound independent decisions within established guidelines; understand and follow written and oral work instructions; communicate clearly and concisely, orally and in writing with technical personnel as well as with Engineering Branch, Information Systems staff, and support staff; work collaboratively and effectively as a project team member; establish and maintain effective working relationships with end users, consultants, and others encountered in the course of work.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from an accredited college or university with a bachelor’s degree in information systems, computer science, information science, or a closely related field, supplemented by coursework in engineering, computer-aided drafting, GIS, Networking, Project Management, and other closely related topics; and at least one year of progressively responsible experience in applications analysis and programming in an engineering environment; or an equivalent combination of training and experience.
PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands

While performing the duties of this class, employees are regularly required to sit; talk and hear, in person and by telephone; use hands repetitively to finger, handle, feel or operate standard office equipment; and reach with hands or arms. Employees are frequently required to walk, stand, bend, stoop and kneel. Occasionally incumbents are required to lift objects weighing up to 40 pounds.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

Mental Demands

While performing the duties of this class, employees are regularly required to use oral and written communication skills; read and interpret data, information and documents; analyze and solve problems; use mathematical reasoning; learn and apply new skills and information; perform highly detailed work on multiple concurrent tasks; work under changing deadlines with frequent interruptions; work effectively as a team member; and interact with Department end users, employees, vendors and other encountered in the course of work.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employees work under typical office conditions, and the noise level is usually quiet.

FLSA DETERMINATION: Meets administrative and computer exemption from overtime.