Position Inventory Number: _____

Classification Specification: TECHNICAL SYSTEMS ANALYST_____

Salary Range: NR43 – Management Benefit Level C_____

Position Description: Operations Technical Systems Analyst_____

Incumbent: _____

Location: Public Works Operations – Administration Section_____

GENERAL PURPOSE:

Under the direction of the Public Works Operations Engineering Supervisor, or designee, oversee and coordinate a highly complex application environment; develop interfaces, reports, conversions, and software customizations; implement, document, and provide technical support for multiple business systems; analyze and assist users and Information Technology (IT) staff in meeting the technological needs of all business units within Public Works Operations Division.

Work is characterized by the incumbent's leading role in coordinating the technical aspects of overseeing and supporting systems that impact multiple section in the Public Works Department, have a large number of users or have a high volume usage of the systems by the City staff; these systems are critical to support the department's day-to-day activities. The incumbent will perform a variety of highly complex duties and responsibilities involved in the analysis, design, development, implementation, enhancement, maintenance, and support of computer applications in a highly complex, technical environment. The incumbent communicates and coordinates work in conjunction with the department staff, Information Technology staff, other departments, vendors, and consultants; provides training and technical assistance to the Public Works Operations Division staff; and provides guidance to IT Operations staff.

Work is performed under limited supervision. The supervisor sets the overall objectives and resources available. The incumbent and supervisor work together to develop deadlines, projects, and work to be completed. The incumbent is responsible for the work, plans and carries out the assignment, resolves most conflicts that arise, coordinates work with others, and interprets policies on own initiative in terms of established objectives. The incumbent keeps the supervisor informed of progress, potentially controversial matters, or far reaching implications. Work is reviewed only in terms of feasibility, compatibility with other work, or effectiveness of results.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Perform a variety of technical duties related to the implementation, operation, enhancement, integration, and maintenance of computer and information-related systems in the Public

Works Department.

Work with system, network, and database administrators as needed, coordinate, oversee, setup, document, prepare, and carry out all aspects of establishing application environments for development, testing, training, and production including deploying software and data appropriately within each environment. Coordinate with the operating system administrator(s) for establishing required system accounts, security, and logins and for software installation.

Plan, design, and develop programs, reports, and database changes to integrate business systems and address interface requirements of any required software customizations or write specifications for other staff and vendors. The incumbent is responsible for testing customizations and training appropriate staff in the use thereof.

Research, evaluate, and purchase new equipment and applications; assist with future growth plans; and provide recommendations and justification as requested. Maintain a leadership role in the alignment and integration of IT applications and systems with performance management/asset management goals and objectives; research and implement new tracking methods and procedures; collect, analyze, and report data for internal and external performance evaluation directives.

For new software upgrades, coordinate and carry out data conversions, table merges, and specification merges; apply software updates; coordinate with other department staff as needed; identify software customizations and database customizations that need to be reviewed and reconciled because of the upgrade; and coordinate with the project team to insure that all issues are addressed.

Proactively monitor the vendor's software patches and coordinate the review, assessment, and application of required updates.

Analyze, design, implement, and maintain applications systems without direct supervision.

Confer with users to determine needs and develop and/or purchase appropriate programs as required; develop appropriate reports based on department needs.

Research, analyze, document, recreate, and resolve application problems; and coordinate with Information Technology personnel, vendors, and users on problem correction and resolution, as needed.

Coordinate activities and timelines with other projects and/or provide training to department staff and Information Technology staff in the use of computer systems and equipment; provide technical assistance as required.

For new software installations and existing upgrades, design and develop programs and scripts to convert, create, and refresh data for setup, testing, training, and other purposes.

Develop and maintain appropriate documentation on all software and database customizations to facilitate software upgrade planning and analysis.

Act as a resource to the Public Works Operations Division for Geographic Information Systems (GIS) planning and use; and provide special-purpose maps as necessary.

Prepare accurate and timely reports and other written documents as directed.

Coordinate with the City's Information Technology Department on all system implementations and enhancements to ensure that all hardware, software, and system design practices comply with the City's Information Technology standards.

Coordinate and track software license usage to insure compliance with vendor license requirements; and oversee department growth planning in regards to licensing and service/support agreements.

Attend meetings, training, conferences, and seminars as appropriate; maintain current knowledge of technological advancements in the field; maintain current understanding of department functions and programs; and represent the department as required.

Operate a variety of minicomputers, servers, PCs, and related equipment including, but not limited to, printers, interfacing hardware, terminals, and software packages.

Become familiar with, follow, and actively support the vision, mission, values, and behavior statements of the department and the City.

PERIPHERAL DUTIES:

Perform related duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES:

KNOWLEDGE OF:
- Environmental Systems Research Institute (ESRI), Geographic Information Systems (GIS) applications, programming interfaces, GIS data organization, and specifications
- Global Positioning System (GPS) technology and its interaction with GIS systems
- Utility asset management practices and concepts
- Supervisory Control and Data Acquisition (SCADA) concepts and implementations
- Web Application design, including, but not limited to, scripting languages, interactive components (Active Server Pages), and design tools
- Report writing tools, such as Crystal Reports and Microsoft Access, and Structured Query Language (SQL)
- Major database management systems, such as Microsoft SQL Server and Oracle
- Municipal government policies, procedures, and structure; and applicable local, state, and federal laws, codes, regulations, and ordinances
- Principles and practices of governmental budgeting, accounting, and purchasing procedures and practices
- Principles and techniques of analysis, design, development, implementation, and maintenance of complex computer and information-related systems
- Fundamental techniques of programming and experience with programming languages and tools
- Structured programming practices and techniques
- Capacity management issues in an ongoing, growth-oriented organization
- Principles and concepts regarding development and maintenance of system documentation and computer programming
- Multiuser/multitasking computer systems capabilities

- Relational database models and issues related to database maintenance
- Computer operating systems
- Capabilities and operations of computers and peripheral equipment including, but not limited to, minicomputers, PCs, terminals, printers, handheld computers, software, and operating systems
- Modern office practices, procedures, and equipment
- Current literature, trends, developments, and technical aspects in Information Technology
- Recordkeeping techniques
- Correct usage of English grammar, spelling, punctuation, and vocabulary
- Effective interpersonal skills using tact, patience, and courtesy

SKILLED IN:
- Application of computer programming languages, tools, report writers, SQL, etc.
- Using research and analytical methods, practices, and procedures to define and resolve issues and meet organizational goals
- Application of GIS concepts
- Planning and organizing highly detailed work
- Effective organization and expression of ideas through use of oral and written communications
- Effective interpersonal skills using tact, patience, and courtesy
- Documentation of system design, procedures, and applications
- Demonstrating excellent customer service

ABILITY TO:
- Analyze, design, and implement computer systems
- Evaluate user needs, system requirements, and cost effectiveness to develop cost-saving alternatives across multiple business units
- Provide technical expertise and assistance to user departments
- Learn computer software and adapt for specific user application quickly and effectively
- Operate and troubleshoot a variety of computers and related equipment including, but not limited to, printers, interfacing hardware, terminals, and software
- Develop and maintain clear and concise documentation
- Plan for future growth and expenditures in City systems
- Establish and maintain cooperative and effective working relationships with others
- Analyze situations accurately and adopt an effective course of action
- Work effectively on several projects concurrently
- Work independently with limited direct supervision and make decisions within broad guidelines
- Plan and organize work to meet project schedules and timelines
- Work in a team environment to help solve complex problems
- Train and provide work direction to others
- Compose, proofread, and edit general correspondence, routine reports, software procurement and/or development contracts, technical systems documentation, user training manuals, etc.
- Read, analyze, interpret, apply, and explain technical journals, financial reports, legal documents, operating, procedural and technical manuals, general business periodicals, professional journals, government regulations, etc.
- Effectively communicate with, present information to, and answer questions from users, department staff, managers, officials, vendors, and consultants
- Add, subtract, multiply, and divide; compute fractions, ratios, percentages, and proportions; draw and interpret graphs and charts; and apply these concepts to practical situations

- Define problems, collect data, establish facts, and draw valid conclusions; apply common sense understanding to solve practical problems and deal with a variety of variables in situations where only limited standardization exists
- Effectively use interpersonal skills such as tact, patience, and courtesy
- Demonstrate excellent customer service

EDUCATION AND EXPERIENCE REQUIRED:

Education: Bachelor's degree in Business Computers, Computer Science, MIS, or related field; and

Experience: Two (2) years of increasingly responsible experience in analysis, design, development, implementation, integration, and support of complex computer systems.

Or: In place of the above requirement, the incumbent may possess any combination of relevant education and experience which would demonstrate the individual's knowledge, skill, and ability to perform the essential duties and responsibilities listed above.

LICENSES AND OTHER REQUIREMENTS:

- Experience customizing, integrating, and/or upgrading software packages is highly desirable
- Experience with a variety of report writing tools is highly desirable
- Knowledge of at least one major programming language for the PC environment is highly desirable
- Knowledge and/or application experience with more than one database management systems is highly desirable
- Technical experience with applications in a client/server and/or thin-client environment using a relational database is desirable
- Knowledge and/or experience with Microsoft development tools, applications, and operating systems is desirable
- Knowledge and/or experience with ESRI GIS software is desirable
- Possession of Washington State Driver's License, or the ability to obtain within thirty (30) days of employment
- Must successfully pass the City's pre-employment driver's records check; complete the City's Defensive Driving Course; and maintain an excellent driving record

MACHINES, TOOLS, AND EQUIPMENT USED:

Typical business office machinery and equipment including, but not limited to, personal computers, minicomputers, printers, scanners, telephones, cellular phones, pagers, fax machines, copy machines, calculators, and overhead projectors.

The incumbent may also be required to operate computer equipment to assist Public Works Operations personnel in maintaining complex systems.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an individual to successfully perform the essential functions of this job. Reasonable accommodations may be

made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to sit for extended periods of time; use hands to finger, handle, or feel; and talk and hear. The employee frequently is required to type on keyboard for extended periods of time. The employee is occasionally required to stand; walk; reach with hands and arms; climb or balance; and stoop, kneel, crouch, or crawl. The employee must occasionally lift and/or move up to 40 pounds.

Specific vision abilities required by this job include close, distance, color, and peripheral vision; depth perception; and the ability to adjust focus.

WORKING CONDITIONS:

Work is performed in a typical information services environment, which includes an office, a technical workstation, a computer room with a controlled environment, as well as working with users on site.

While performing the duties of this job, the employee is occasionally exposed to risk of electrical shock. The employee may be exposed to individuals who are irate or hostile and may occasionally work in high, precarious places while stepping on ladders or stepping stools. The employee is also required to occasionally work in a cold, controlled environment in the computer room. The noise level in the work environment is usually moderate in the office and loud in the field.

SIGNATURES:

_____   _____
Incumbent's Signature   Date   Supervisor's Signature   Date

Approval:

_____   _____
Department Director/Designee   Date   Employee Services Director/Designee   Date

** Note: This document will be reviewed and updated annually at the time of the employee's performance appraisal; when this position becomes vacant; or, if the duties of this position are changed significantly.

Revised: 2/6/07; 10/23/07