

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) NETWORK/COMMUNICATIONS ADMINISTRATOR

JOB DESCRIPTION

Classification Responsibilities: An Intelligent Transportation Systems (ITS)

Network/Communications Administrator is responsible for performing technical leadership for the ITS computer and communications networks, which includes communications, network security, server administration, ITS devices and applications, desktops and laptops, and software. Incumbents in this class will perform technical duties that require the highest skill level in multiple support areas based on the changing needs of the ITS Group. This class will be responsible for ensuring the functionality and reliability of the ITS network and applications. Responsibilities include supervising and coordinating day-to-day activities of technical staff.

Duties will include: providing input or assistance in setting long-term technical directions for applications and infrastructure; performing highly specialized work such as configuration, integration, and resolution of problems for the ITS Network; assessing, and troubleshooting hardware, software, and networking problems; controlling changes in system environments to ensure stable and reliable delivery of computer resources; coordinating and mentoring staff; implementing, maintaining, and monitoring systems and related subsystems; installing and supporting hardware and/or software; preparing and/or updating system documentation; leading strategic and tactical planning activities; participating in the design, programming, installation, and/or implementation of the ITS network and devices.

Project/technical leadership duties may include: developing short- and long-range plans; estimating task duration and complexity, developing work plans, and scheduling target completion dates; facilitating and/or leading project or technical meetings; identifying, budgeting, planning, organizing, coordinating, scheduling, and assigning resources and tasks; informing management of project status; developing, reviewing, and adhering to policies and procedures. Duties may also include: assisting in preparing the section budget and project budgets; coordinating with other governmental and business organizations and serving on planning committees with these organizations; examining specifications to ensure system integrity. This class is also required to perform related duties as required.

Distinguishing Features: The ITS Network/Communications Administrator is responsible for the planning, development, implementation, and maintenance of the ITS network and related ITS devices, including the Transportation Management Center (TMC) and associated communications systems. The ITS Network/Communications Administrator class is distinguished from the ITS Engineer by the latter's responsibility for managing ITS group resources, including ITS Operations and the ITS Systems group. The ITS Network/Communications Manager is distinguished from the ITS Communications Specialists by its responsibility for the ITS network and managerial responsibilities. This class is supervised by the Intelligent Transportation Systems (ITS) Engineer who reviews work through meetings, conferences, and results achieved. This class is FLSA exempt-computer professional.

QUALIFICATIONS

Minimum Qualification(s) Required. Any combination of training, education, and experience equivalent to graduation from an accredited college or university with a Bachelor's Degree in Computer Science or a related field. Considerable (3 - 5 years) experience in computer networks and fiber optic or wireless communications systems including supervisory experience.

Special Requirement(s). Must possess a valid Arizona Driver's License by hire date.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualification(s). Experience with ITS planning, design, operations, maintenance and evaluation, and developing and analyzing wire line and wireless telecommunication systems is preferred. Working knowledge of National Electronics Manufacturing Association (NEMA) standards, and National Transportation Communications for ITS Protocol (NTCIP). Project management experience is preferred.

ESSENTIAL FUNCTIONS

Communication: Communicates with Transportation Department staff, the general public, other City employees, vendors, management, and contractors in order to plan and promote the ITS network and ITS concepts, to provide information on ITS network operation and performance, and to resolve problems. Ability to instruct and train staff in a classroom setting regarding ITS network, device, and communications systems operation and maintenance needs. Prepares written documents, such as: specifications, budgets, recommendations, project reports, performance evaluations, and procedural manual with clearly organized thoughts and using the proper sentence construction, punctuation, and grammar.

Manual/Physical: Enters data into a computer to create documentation, test and debug computer applications or system software, and/or write computer programs. Performs a variety of communications installation, maintenance, modification, troubleshooting, and repair work. Tests communication components using special testing equipment. Moves hardware weighing up to 50 pounds when necessary. Operates a variety of standard office equipment, such as photocopiers, mobile radios, and cellular phones to communicate, create documents, and interact with Signal/Intelligent Transportation Systems. Operates a City vehicle requiring a standard Arizona Driver's License to attend off-site meetings and to check work in progress out in the field. Works in a variety of weather conditions while performing traffic signal, other ITS and communication system equipment inspections or assessing damage of equipment. Meets scheduling and attendance requirements.

Mental: Plans, organizes and maintains the ITS network. Works closely with ITS field operations and TMC staff to support the installation or modification of traffic signals and ITS devices, and planning, designing, operating, and maintaining of wired and wireless communications. Prioritizes own work, work of others, and assigns work to personnel. Resolves procedural, operational, and other work-related problems by gathering information, evaluation, and making a decision. Coordinates work activities with other City departments, other cities, and other agencies. Develops operations policies and procedures to

meet short- and long-term objectives. Conducts research of policies and procedures of other organizations. Prepares short- and long-range plans, estimates, budgets, and staffing projections. Reads, understands and interprets complex specifications, schematic drawings, manuals, and engineering plans to maintain, modify or expand the ITS network.

Knowledge and Abilities:

Knowledge of:

operation and timing of signal control devices;

coordination of traffic signals;

planning and implementation of ITS projects;

directing maintenance of ITS systems and associated communications network;

evaluation of performance of ITS applications;

National ITS architecture, standards and trends;

the planning, implementation, and operation of communications systems for voice, video and data transmission over twisted pair, fiber optic, microwave, radio, Ethernet, multiplexing, etc.;

operation and maintenance procedures and policies for a traffic management center and communications systems;

National Electronics Manufacturers Association (NEMA) standards as they relate to traffic control devices;

National Transportation Communications for ITS Protocol (NTCIP);

real time video monitoring;

traffic engineering principles and practices;

system engineering approach;

the principles and practices of personnel management, supervision and training; and

relevant guidelines of the Manual on Uniform Traffic Control Devices (MUTCD), Institute of Transportation Engineers (ITE), International Municipal Signal Association (IMSA), Federal Highway Administration (FHWA), and other applicable standards for ITS.

Ability to:

plan, direct, oversee and implement expansion of the City's signal/ITS communications system;

operate the traffic signal computer system and integrate existing and new signals into that system;

establish operating procedures for system troubleshooting; conduct traffic and network analyses using statistical methods;

administer the ITS computer network, desktops, and laptops;

anticipate failure modes and implement preventive or corrective measures;

evaluate problems with the ITS systems, and direct staff in taking corrective action;

work with City personnel, other government agencies, contractors, and the general public to prevent, resolve, or minimize signal, ITS and communication system related problems;

compile and analyze data pertinent to conditions affecting traffic signal operation by considering such factors as modifications to design, changes in geometric configuration, changes in distribution, changes in volume, and increased pedestrian movement;

work with ITS field operations in modification, repair, and maintenance of traffic signals and other ITS

equipment;
schedule projects and order necessary materials and equipment;
give instructions in work procedures, safety practices, technical aspects, department policies, and related requirements; review projects in progress or upon completion to ensure conformance with plans and specifications; adjust work schedules to meet emergency conditions; ·
provide traffic signal timing and operation information for use in legal investigations or as evidence;
serve as an expert witness in court;
produce documents such as procedural and safety manuals with clearly organized thoughts, proper sentence construction, punctuation and grammar;
organize and conduct surveys; prepare contracts for continuous delivery of service;
compile statistical data;
prepare reports on traffic problems;
present ideas and report effectively both orally and in writing; and
plan assignments and working procedures and supervise technically trained personnel.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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CS5403.DOCX

EEO-Prof

NDOT SAFETY-Yes

NDOT RANDOM-No

DOT SAFETY-No

RESP-No

JOB FCTN-INT

INCREMENTS 42-200

PAY GRADE: 56

SECURITY-No

CDL-No

IND-9410

SWORN-No