

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)/TRANSPORTATION MANAGEMENT CENTER (TMC) SUPERVISOR

JOB DESCRIPTION

Classification Responsibilities: Under general direction, coordinates resources and schedules activities of teams to meet objectives within budget constraints. This classification will supervise and direct operations of the traffic signal management system, a key part of the Intelligent Transportation System (ITS) within the Transportation Management Center (TMC) as part of the Intelligent Transportation System (ITS) within the Transportation Department's Traffic Engineering Division. Services managed include: signal timing development and audit, selection, operation and support of ITS devices, database development and maintenance, systems and engineering analysis, system and device testing and evaluation; and development, documentation, and evaluation of procedures and processes. This class performs related work as required.

Distinguishing Features: The ITS/TMC Supervisor, under the general direction of the ITS Engineer, is responsible for the planning, development, implementation, operation, and maintenance of the traffic management system and related ITS functions, including the TMC and associated communications systems. Work also involves assistance in preparation and management of the section's budget and the preparation of written recommendations, surveys, council proposals, manuals, reports, and forms. This class is FLSA exempt-executive.

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 Traffic Engineering or related field. Extensive (5+ years) experience in traffic engineering and operation and management of centrally coordinated traffic signal control systems.

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 wireline and wireless telecommunication systems is preferred. Supervisory and project management experience is preferred. Registration as a Professional Engineer in the State of Arizona or ability to obtain such registration within 12 months is desired.

ESSENTIAL FUNCTIONS

Communication: Communicates with Transportation Department staff, the general public, other City employees, vendors, management, and contractors in order to plan and promote traffic engineering and ITS concepts, to provide information on traffic signal and ITS operation and performance, and to resolve problems. Instructs and trains staff in a classroom setting regarding safety, new equipment, signal, ITS, and communications systems operation and maintenance needs, and future growth. 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: Reviews the work products of others to ensure compliance with standard operating procedures, federal and state regulations, such as Manual on Uniform Traffic Control Devices (MUTCD), Occupation Safety and Health Administration (OSHA), policy and procedure manuals, and the Barricade manual. Operates a City vehicle requiring a standard Arizona Driver's License to travel to meetings and to job sites for field inspections. Operates a variety of standard office equipment, such as photocopiers, mobile radios, and cellular phones to communicate, create documents, and interacts with Signal/Intelligent Transportation Systems. Enters data or information into a personal computer in order to operate the Advanced Traffic Management System, review inventory reports, and create documents. Prepares and updates maps, schedules, and graphs to provide information on the system and staff activities. Moves objects, such as large sets of plans, weighing 10 pounds, a distance of 500 feet to review in the office or use in the field for site inspections. Works in a variety of weather conditions while performing traffic signal, other ITS and communication system equipment inspections or assessing damage of equipment.

Mental: Plans, organizes and directs the activities in the TMC. Manages, supervises and evaluates the work of staff in areas such as managing traffic, developing and reviewing of signal timing plan, responding to public complaints, responding to requests for information, maintaining TMC systems and ITS communications network, working collaboratively with ITS field operations on 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 TMC operations policies and procedures to meet short- and long-term objectives. Conducts research of policies and procedures of other organizations. Performs mathematical calculations, statistical computations, and financial and cost analysis. Prepares short- and long-range plans, estimates, budgets, and staffing projections. Comprehends and makes inferences from technical user's manual or specifications to understand controller operations and equipment tolerances. Reads, understands and interprets complex specifications, schematic drawings, manuals, and engineering plans to construct and inspect ITS equipment. Estimates labor and material costs from blueprints and verbal descriptions of work required. Learns job-related material through higher educational opportunities, attending career specific conferences, and seeking additional training opportunities.

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;
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;
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;
plan assignments and working procedures and supervise technically trained personnel;
explain technical traffic signal, computer, traffic engineering and ITS concepts to the public and others;
make quick and accurate decisions under stress; and
remain flexible while experimenting with different solutions to traffic management needs.

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.

Revised 8/15

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EEO-O/A

NDOT SAFETY-Yes

NDOT RANDOM-No

DOT SAFETY-No

RESP-No

JOB FCTN-ADM

INCREMENTS 42-200

PAY GRADE: 55

SECURITY-No

CDL-No

IND-9410

SWORN-No