

## ASSISTANT INTELLIGENT TRANSPORTATION SYSTEMS (ITS) ANALYST

### JOB DESCRIPTION

**Classification Responsibilities:** Under general supervision, the Assistant Intelligent Transportation Systems (ITS) Analyst performs technical office and field traffic engineering work associated with signal timing and coordination, traffic engineering studies, and computerized traffic signal programming and control of the Intelligent Transportation Systems (ITS). Specific duties include assisting with the development, monitoring, and updating traffic signal timing plans; assisting with the implementation of citywide coordination plans using the *icons* and Sonex centralized traffic signal computer systems based on real time traffic patterns; assisting with the design and implementation of responsive traffic signal timing networks; observing and manipulating multiple live video images to constantly evaluate traffic operations and maximize capacity of existing transportation systems; assisting with the integration of new technologies with existing systems and resolving any compatibility problems; preparing analytical studies; assisting with creating specifications for ITS related equipment and systems; implementing changes to the traffic signal time-of-day plans; assisting with the management of a variety of components such as the video wall and subsystems, servers and workstations, fiber optic infrastructure, etc.; managing the design, operations, and maintenance of communications, closed circuit television cameras, dynamic message signs, and detectors; and performing database management which involves backing up the database systems to evaluate the system functionality. Assists ITS Supervisor with reports and maps, timing letters, and reviews production statistics and reports trends. This class performs related work as required.

**Distinguishing Features:** An employee of this class assists the Intelligent Transportation Systems (ITS) Analysts in their specialized and technical work of signal timing and coordination, traffic engineering studies, and computerized traffic signal programming and control. The Assistant ITS Analyst modifies existing computer programs of system timing and progression plans to facilitate the use of the program. This class is required to interrogate the system, on a fill-in basis, and make corrections to intersection signals if necessary. Work is performed under the general direction of the ITS Administrator who makes assignments and reviews work. This class is FLSA exempt-administrative.

### QUALIFICATIONS

**Minimum Qualifications Required.** Any combination of training, education, and experience equivalent to graduation from an accredited college or university with an Associate's Degree in Civil Engineering, Traffic Engineering, or a related field. Three plus years experience in civil or traffic engineering, at least one year of which involved working with the operations and timing of traffic signal equipment or traffic control systems analysis.

**Special Requirements.** Must possess a valid Arizona Driver's License by hire date.

**Substance Abuse Testing.** None.

**Preferred/Desirable Qualifications.** An International Municipal Signal Association (IMSA) Level I Traffic Signal Technician Certification is preferred.

## ESSENTIAL FUNCTIONS

**Communication:** Communicates with the general public, other City employees, vendors, management, and contractors in order to respond to questions regarding traffic signal timing and operation. Prepares written reports on traffic signal status, operation and inventory using proper sentence construction, punctuation and grammar, in order to respond to questions and disseminate information.

**Manual/Physical:** Operates a City vehicle requiring a standard Arizona Driver's License to monitor intersection operations and meet with citizens, contractors and/or other City personnel on-site. Responsible for setting up traffic cones to maintain proper safety when doing field checks and the operation of a measuring wheel in traffic to measure crosswalk distances. Inspects and verifies that delivered products meet specifications. Operates standard office equipment such as a computer, facsimile machine, and photocopier. Enters data on a personal computer in order to maintain records of maintenance, trouble calls, electrical usage, and monitoring of projects. Prepares and updates lists of traffic signals and left turn arrows. Performs physical inventories of traffic signal poles and heads in the field. Moves files and boxes of forms, weighing up to 25 pounds, a distance of 30 feet. Detects traffic sounds when working near moving traffic, backup warning devices when working around moving equipment, sirens and calls for help.

**Mental:** Prioritizes own work. Conducts research on traffic signal maintenance, trouble call logs, timing sheets, and system timing data to respond to questions from lawyers, insurance companies, and citizens regarding traffic signal timing, sequencing, and other operational information. Performs mathematical calculations and statistical computations to: provide statistics regarding maintenance and trouble call trends, provide monthly statistics for Responsibility Center report, and analyze and monitor the cost of various projects. Comprehends and makes inferences from written material including manufacturer's specifications and test data to prepare specifications and evaluate equipment. Understands blueprints and schematic drawings to determine load usage at new traffic signals, assist in as-building, and attain preliminary inventory data for new traffic signals. Learns job-related material in a classroom setting such as, vendor training on new equipment and seminars on traffic engineering topics. Offers input and reviews on technical specifications and contractual agreements.

### **Knowledge and Abilities:**

Knowledge of:

Microsoft Access, Arcview, ArcGIS9, Synchro, and AutoDesk;  
basic principles of computer programming;  
principles and practices of computerized traffic signal system design and maintenance including video-monitoring systems, automated traffic systems, responsive and adaptive traffic signal timing, and traveler information systems;  
current Intelligent Transportation Systems (ITS) theories and practices;  
traffic and civil engineering principles, practices, and theories;  
industry standards and specifications such as: ITE, NEMA, MUTCD, MAG Standard Details, OSHA, etc.; and  
the operation and timing sequences of traffic signal control devices.

Ability to:

record information on traffic signal trouble calls, preventive maintenance records, traffic signal equipment inventory, and miscellaneous reports on a personal computer;  
sort and analyze previously entered information in order to identify and monitor trends, equipment replacement needs, and response times;  
research and gather information to respond to traffic signal timing and operation requests (e.g., legal inquiries about the duration of a turn arrow of a pedestrian walk signal);  
work with ITS Analysts to ensure proper operation of the computerized traffic signal control system;  
work from the control room and with technician in the field in order to make corrections to field problems;  
determine load calculations for new traffic signals and update load calculations for modified traffic signals;  
review SRP and City of Mesa load calculations for accuracy;  
coordinate power service meter spots, customer contacts and field service agreements for all signal work in the City;  
use the computer and database to document problems with traffic signal equipment and to create reports on what might be causing those problems;  
use Computer Aided Drafting software to create background drawings of intersections so that signal characteristics and operations can be more easily understood by others;  
create or modify computer programs to make a software package comprehensible to a greater variety of users;  
gather pertinent facts, make thorough analyses and arrive at sound conclusions; and  
express complex technical matters related to traffic engineering problems in terms that are meaningful to nontechnical people.

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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PAY GRADE: 49

EEO-Tech

NDOT SAFETY-No

SECURITY-No

NDOT RANDOM-No

DOT SAFETY-No

CDL-No

RESP-No

IND-5506

JOB FCTN-TEC

SWORN-No

INCREMENTS 42-200