

ENGINEERING TECHNICIAN III

JOB DESCRIPTION

Classification Responsibilities: The Engineering Technician III performs journey-level engineering work, including technical and skilled drafting assignments (manual and computer-aided). Assignments involve the application of engineering knowledge and City of Mesa policies. This class performs related duties as required.

Distinguishing Features: The Engineering Technician III is a journey-level class in the Engineering Technician series that exercises independent judgment in selecting work methods. Work is reviewed for its conformity to sound engineering principles and compliance to instructions given. This class can be distinguished from the lower-level Engineering Technician classes by the more complex work assignments performed. This class can be distinguished from the Engineering Technician IV by the greater know-how applied and intermittent lead work responsibility required of the latter. This class is FLSA nonexempt.

This is a full-performance position within Engineering Design. The assignments range from drafting more complex street, utility, or park improvement projects both manually and on AutoCAD, to laying out an entire quarter section with the section lines, right-of-way lines, lot lines, etc. Specific responsibilities include: researching, extracting, and integrating information from various sources to produce plans and maps for construction and record documents. This position may also be involved in checking work and helping to train new or temporary employees. Incumbents function independently and must be thoroughly familiar with civil engineering principles and practices.

QUALIFICATIONS

Minimum Qualification(s) Required. Any combination of training, education, and experience equivalent to graduation from high school or GED. Three years of full-time work experience in the civil engineering field, and a minimum of six credit hours of college-level coursework in drafting technology, engineering graphics, computer-aided drafting, or equivalent.

Special Requirement(s). A minimum of one year of AutoCAD experience. Must possess a valid Arizona Driver's License by hire or promotion date.

Substance Abuse Testing. None.

Preferred/Desirable Qualification(s). None.

ESSENTIAL FUNCTIONS

Communication: Communicates with the general public, vendors, and others such as: Salt River Project (SRP), Arizona Department of Transportation (ADOT), Maricopa County Highway Department (MCHD), etc., in order to gather information or respond to questions. Prepares written documents, procedures, and problem reports in order to provide clear information as to the problem or the changes.

Manual/Physical: Operates City of Mesa vehicles requiring a standard Arizona Driver's License to travel to and from off-site meetings and job sites. Operates a variety of standard office equipment, engineering printer, etc., to make copies of documents, maps, etc. Enters data or information into a personal computer (PC) terminal or workstation in order to work with AutoCAD, Access, Excel, batch plots, and perform area retrievals. Operates a computer in the drafting of municipal design plans and road maps. Meets scheduling and attendance requirements.

Mental: Prepares base sheets, plans and profile sheets, and other plans and map products on a computer workstation. Creates a plot including determining "x" and "y" coordinates, area size, and scale. Performs engineering calculations, such as computing manhole inverts, determining slopes, and using appropriate measurements to determine section bearings and distances. Field checks sites to accurately reflect conditions on topographic plans. Applies skilled, technical civil engineering drafting concepts on various types of utility, street, or park improvement projects. Interprets field notes, specifications, and standards. Reads and interprets engineering drawings, maps, and plans. Applies analytical and mathematical processes to engineering assignments. Applies the practices and techniques of drafting manually and on AutoCAD to produce neat, precise, and well-balanced drawings.

Knowledge and Abilities:

Knowledge of:

engineering drafting principles required to formulate and prepare engineering drawings, maps, and plans;
the symbols and terminology used in engineering drawings;
engineering maps, plans, and records;
civil engineering principles and practices;
basic mathematics, including algebra, geometry, and trigonometry;
digital engineering mapping systems and functions;
sources of engineering information needed for computer mapping;
database systems and their applications in creating computerized plans and maps from engineering records;
computer operations, including plotting;
the symbols and terminology used in engineering drawings; and
engineering maps and records.

Ability to:

prepare engineering drawings from sketches, verbal descriptions, and specifications;
exercise independent judgment in determining work methods;
perform detailed engineering records research;
apply research to ensure accuracy and completion of manual engineering drawings and maps;
relay drafting standards to coworkers who may need assistance on an assignment;
apply fundamental design practices and procedures;

maintain concentration on detailed graphics and graphics data over extended periods of time on a daily basis;
deal with AutoCAD working conditions and environment (i.e., limited lighting and cooler temperatures);
and
establish and maintain effective working relationships with all those encountered during the course of work.

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: 45

EEO-Tech

NDOT SAFETY-No

SECURITY-No

NDOT RANDOM-No

DOT SAFETY-No

CDL-No

RESP-No

IND-8810

JOB FCTN-ENG

SWORN-No

INCREMENTS 55-200