

ENGINEERING TECHNICAL ASSISTANT

JOB DESCRIPTION

Classification Responsibilities: An Engineering Technical Assistant is responsible for managing all aspects of the engineering plans to include numbering, distributing, uploading, archiving, researching plans, and ensuring legal compliance. The position is also responsible for performing digital manipulation to accurately transfer inspectors' redlines to digital plan sets; prepare graphical images considering colors, resolution, and size manipulation of images and videography in appropriate computer software; converting images and videography into usable formats; extracting Geographic Information System (GIS) databases and shapefiles for design efforts; creating and updating GIS databases for complaints (irrigation, drainage, etc.) and approved drainage reports; and creating digital engineering seals and signature stamps in Photoshop, Adobe Pro, and Visio. This position is also responsible for maintaining and operating the Engineering Department's unmanned aircraft program. This requires a Remote Pilot Certificate, and the position will be responsible for performing all pre- and post-flight checks, operating the unmanned aircraft as pilot in command within FAA guidelines and restrictions, determining waypoints and angles to capture necessary photos or videography, downloading and manipulating data from flight, and writing and maintaining policies related to the unmanned aircraft.

This class will assist the AutoCAD Group with performing basic AutoCAD drafting edits and GIS tasks, and will also perform basic computer troubleshooting, move phones and computer equipment as needed within the Engineering Department, and maintain and operate a large format scanner and printer.

Distinguishing Features: The Engineering Technical Assistant class operates in a more limited capacity than the GIS Technician which performs mapping functions full time. The Engineering Technical Assistant is primarily responsible for researching and reproducing engineering drawings, and acts as a drone pilot. This distinguishes it from the Engineering Assistant class. This class is supervised by a Senior Civil Engineer or a Senior Engineering Technician. This class is FLSA nonexempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, and experience equivalent to graduation from high school or GED. Good (1 – 3 years) experience in a clerical or paraprofessional capacity including basic operating computer systems and records management; and good (1 – 3 years) experience with digital manipulation, graphic design, or GIS software.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire, transfer, or promotion date. Must obtain a Remote Pilot Certificate as identified under 14 Code of Federal Regulations (CFR) Part 107 of Federal Aviation Administration regulations within three (3) months of hire, transfer, or promotion date.

Substance Abuse Testing. None

Preferred/Desirable Qualifications. Graduation from an accredited college or university with an Associate's Degree in GIS, Civil Engineering, Computer Science, or a closely related field is preferred.

ESSENTIAL FUNCTIONS

One position may not include all of the essential functions, knowledge and abilities listed, nor do the listed examples include all the knowledge and abilities which may be found in positions of this classification.

Communication: Communicates with the general public, other City employees, contractors, and other departments to communicate and respond professionally to demanding and diverse questions, takes request for plans, resolves public inquiries or complaints, and informs of status of ongoing construction projects. Communicates with team members to support assigned tasks. Prepares written documents with clearly organized thoughts and uses proper sentence structure, punctuation, and grammar, in order to document work completed, problems inputting data, and status reports.

Manual/Physical: Reviews the work products of others to ensure compliance with standard operating procedures or other engineering guidelines for quality and accuracy. Distinguishes colors to input GIS data. Operates a motor vehicle requiring a valid Class D Arizona Driver's License to visit sites and deploy unmanned aircraft. Works in the field and operates an unmanned aircraft within FAA guidelines and departmental policy. Captures and manipulates needed images and videos. Operates a variety of standard office equipment and large format office equipment (copier, scanner, plotter, and rotatrim) to run copies, scan drawings, and trim drawings. Enters data or information into a personal computer (PC) in order to update reference database, logbooks, forms, and other related material. Installs toner, fuser oil, and paper in order to keep copier, scanner, and plotters functioning properly. Prepares bundles of electronic and paper plans and maps for distribution to various departments. Sorts, files, and distributes incoming mail and print room supplies, plans, and maps. Performs physical inventories of print room supplies and forms. Moves rolls of paper and plans weighing up to 50 pounds for distances of up to 200 feet to restock paper supplies and deliver bid plans. Assists Surveyor in the field. Performs all unmanned aircraft maintenance. Uses a cart to transport drawings. Wears appropriate PPE while working in the right of way. Meets scheduling and attendance requirements.

Mental: Prioritizes work assignments. Comprehends, makes inferences from, and interprets written materials, including department policies, specifications, procedures, standards, correspondence, and computer software manuals. Reads and interprets site plans, subdivision plats, and other engineering drawings and makes decisions that conform to regulations and policies. Develops policies and procedures related to the unmanned aircraft program area for Engineering. Completes special projects as assigned. Resolves customer or equipment problems. Researches and resolves public inquiries or complaints or routes to the appropriate staff member. Conducts research and analyzes data to find utility, paving, right-of-way, and other information. Understands and interprets plan sets, layouts, and quarter section maps to locate utilities, paving, and building improvements. Understands and applies state requirements for records and image management. Learns job-related material in a classroom setting regarding software, hardware, and operation of equipment.

Knowledge and Abilities:

Knowledge of:

the principles and practices of records database management and related equipment;
unmanned aircraft operation maintenance, software, and operation;
basic survey principals;
knowledge of photographic and videographic formats and manipulation;
basic GIS (ESRI) and/or CAD software;
State requirements for records and image management;
FAA requirements for unmanned aircraft;
research techniques and methods of report presentation;
basic symbols and terminology used in engineering drawings;
basic civil engineering principles and practices;
word processing and spreadsheet applications; and
basic procedures regarding office equipment maintenance.

Ability to:

operate large format office equipment;
operate an unmanned aircraft to capture images and videos;
research and resolve public inquiries or complaints;
coordinate print room workflow to ensure accuracy and timeliness;
read site plans, subdivision plats, and other engineering drawings;
manipulate digital images and videos;
maintain a database to cross-reference plan information for drawing reference program;
maintain databases and systems to track all record drawings received;
transfer electronic files;
maintain complex records and/or databases;
interpret and make decisions conforming to regulations and policies;
perform assignments independently and without specific instructions;
anticipate changes in the priorities of tasks or volume of work to be accomplished and make necessary adjustments;
act as a contributing member of a project team;
maintain a high level of attention to detail for quality control purposes;
maintain effective documentation and system backups of maps and data; and
establish and maintain effective working relationships with management, coworkers, and the general public.

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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