

## SENIOR SURVEY PARTY CHIEF

### JOB DESCRIPTION

**Classification Responsibilities:** Under general supervision, performs a variety of technical, skilled survey engineering work in the field; supervises a survey crew; and performs related duties as required.

**Distinguishing Features:** An employee of this class performs skilled, technical survey work in the field, including the supervision of a survey crew. Working conditions include: making decisions, occasionally under stressful conditions; performing mathematical calculations and interpreting construction plans quickly so that contractors can keep crews and equipment productive; laboring (pounding stakes and taking measurements) in hot (100°+ F) and dusty conditions; working alongside heavy equipment in traffic, and on steep slopes, and near open trenches. This class can be called upon to perform all the duties of Chief Surveyor in the Chief's absence. Work is performed under the general supervision of the Chief Surveyor who reviews work through reports, results achieved, conferences, and on-site observation, checking for production, accuracy, timeliness, and completeness. Employees may progress to this class by noncompetitive promotion upon meeting the specific criteria-based promotion requirements. 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.** Graduation from high school or GED. Any combination of education, training, and experience equivalent to a minimum of five years of surveying experience, including some experience at the level of Survey Party Chief.

**Special Requirements.** Must possess certification as a Registered Land Surveyor in the State of Arizona by hire or promotion date. Must possess a valid Class D 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 Qualifications.** Supplemental coursework in Civil Engineering and surveying is preferred. Knowledge of Microsoft Excel, AutoCAD, and Geographic Information Systems (GIS) is also preferred.

### ESSENTIAL FUNCTIONS

**Communication:** Communicates with the general public, other City employees, vendors, and contractors in order to prepare for and carry out assignments. Instructs and trains subordinates in a classroom setting regarding proper surveying procedures. Prepares legal descriptions of property, right-of-ways, utility easements, etc., in order to describe legal boundaries. Collect topography and levels for design purposes.

**Manual/Physical:** Reviews the work products of others to ensure compliance with standard operating procedures, federal regulations, state regulations, MAG (Maricopa Association of Governments), and City standard details. Inspects and evaluates work-related conditions around traffic and construction equipment to determine compliance with prescribed safety standards. Distinguishes colors to determine markings for underground utilities. Detects traffic sounds when working near moving traffic, backup warning devices when working around moving equipment, and sirens, or other warning signs while working in traffic or around construction equipment. Operates a crew cab pickup truck requiring a standard Class D Arizona Driver's License to transport crew and equipment to job site. Uses common hand tools, such as a hammer, saw, screwdriver, ax, brush hook, shovel, or pick to complete work assignments. Operates a variety of standard office equipment, (examples: calculator, copy machine, etc.). Enters data or information into a data collector in order to store surveying information which is downloaded into a computer. Prepares and updates maps, schedules, graphs, benchmarks, and monument ties to update survey data. Performs physical inventories of surveying equipment and supplies. Moves survey instruments and supporting equipment from one place to another. Uses GNSS (Global Navigation Satellite System), Total Stations, levels, rods, cones, etc. Digs up ground using a pick, shovel, or spade to locate property corners, manholes, valves, and central points. Cleans work area, survey truck, and equipment. Works with spray paint, using normal protective equipment. Sets up barricades, traffic cones, or flag trees to close or re-route traffic lanes to help protect crews. Works in a variety of weather conditions while performing daily work assignments. Meets scheduling and attendance requirements.

**Mental:** Plans, organizes, and directs the activities of survey crews. Supervises and evaluates the work of subordinate personnel responsible for measuring, recording survey data, identifying corners, etc. Prioritizes and assigns work to personnel and prioritizes own survey assignments. Resolves procedural, operational, and work-related problems such as conflicts in plans, errors in work, missing corners, etc. Coordinates work activities and program functions with other City departments, other cities, or other agencies to expedite and clarify any conflicts. Conducts research and analyzes property descriptions, maps, plans, records, etc., to complete projects in a professional manner. Performs mathematical calculations, statistical computations, and daily surveying operations. Comprehends and makes inferences from legal documents, survey requests, construction plans, and plats to complete assignments. Understands and interprets blueprints, schematic drawings, layouts, graphs, and profiles to complete job assignments. Learns job-related material through on-the-job training and in a classroom setting regarding modern equipment and procedures.

**Knowledge/Skill/Abilities:**

Knowledge of:

field survey methods and techniques;  
the survey instruments used in the measurement and location of lines, elevations, areas, angles, points, and contours of the earth's surface;  
civil engineering and survey terminology;  
the principles, practices, and procedures of employee supervision and training; and  
the concepts of algebra, geometry, and trigonometry.

Skill in the use and care of optical and electrical surveying instruments and equipment (examples: GPS, Total Station, and electronic level).

Ability to:

supervise, review, and evaluate all phases of the work of a field survey crew consisting of Instrument Technicians and Survey Aides engaged in determining exact locations, measurements, and contours; lay out work projects and make assignments to subordinate personnel; give instructions in surveying procedures and in the use of instruments; make decisions quickly, so that contractors can keep crews and equipment productive; operate survey instruments in performing the range of tasks common in survey work; stake, and direct the staking of, retention basins, streets, curbs, gutters, sidewalks, underground utilities (examples: water, gas, sewer, storm, etc.), culverts, catch basins, rights-of-way, property lines, and other construction features; stake, and direct the staking of, the route of bridges over main irrigation canals at the intersection of arterial streets by applying algebra and trigonometry to calculate the alignment and elevation; apply algebra and trigonometry knowledge in order to run closures on a traverse, calculate the hypotenuse to set right-of-way points, set radius points for curb return and right-of-way, calculate arcs, lay out horizontal and vertical curves; compute areas, distance, and volume; keep and reduce field notes; check measurements and computations made by office personnel for accuracy; perform boundary and topographical surveys to locate, by relative position and elevation, physical objects and property lines; survey new construction projects and record measurements and change onto a set of "as-built" plans; set right-of-way markings and property corners; make field sketches and computations necessary to record field observations and data; make estimates of time required to perform survey jobs; perform the duties of Chief Surveyor as required; read construction plans and specifications; read and interpret standard details and specifications; maintain and be accountable for expensive survey equipment, radios, and a survey truck; communicate with supervisors, inspectors, and other departments, using a two-way radio, to relay status, situations, and instructions; handle the physical requirements of the job; and establish and maintain effective working relationships with management and subordinate personnel, often under such unpleasant working conditions as when the survey crew is performing hard physical labor in the heat and dust created by construction equipment, and having to redo physically demanding 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 do 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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CS4433.DOCX

EEO-Tech

JOB FCTN-TEC

PAY GRADE: 47

IND-9410

SWORN-No

INCREMENTS 53-200