

## The Maryland-National Capital Park and Planning Commission

TITLE: Senior Land Survey Technician                      GRADE: 18                      DATE: 1/12/2017  
SERIES: Design & Construction      CODE: 3111      EEO: Technicians      FLSA: Nonexempt

### Class Definition:

Under general supervision, performs technical land survey work at the full performance level. Works fully proficiently in land survey operations and uses the full range of surveying instruments; work includes adapting surveying techniques to varying field situations and working in crowded or confined work locations or rugged terrain. The work results in final land survey products that affect Commission operations and programs. Applies knowledge of, and skill in using, the principles, methods, practices and equipment of land survey operations. Performs various types of data analyses and makes the full range of land survey calculations. Interacts with people inside and outside the organization to exchange routine and non-routine information. Performs other duties, as assigned.

Assignments are made in terms of requirements and anticipated problems. The incumbent plans and carries out the work in conformance with established policies and procedures and accepted land survey methods and practices, resolves commonly encountered work problems and deviations by selecting and applying the appropriate guideline(s), and brings uncommon problems to the supervisor's attention for guidance or resolution. The work is expected to be accurate and is subject to check for conformance with guidelines, quality, quantity, timeliness, teamwork, customer service and other factors.

### Examples of Important Duties:

1. Operates electronic total station, automatic level, utility location instruments, Global Positioning System (GPS) equipment, metal detector, electronic data collector or microcomputer, calculator, theodolite, transit, compass, radios, utility location instruments, and other survey tools and equipment.
2. Performs complex survey calculations using formulas and understanding survey principles. Checks plats for accuracy. Uses utility location instruments to locate underground utilities. Establishes or re-establishes land boundaries, conducts topographic or field surveys; and perform field adjustments to calibrate survey field equipment.
3. Uploads and downloads critical field data between computer and data collector. Operates civil design, surveying, and landscape design software and computer-aided design and drafting (CADD) programs.
4. Operates computer to track Miss Utility work orders; supplies electronic files of utility location drawings to Geographic Information Systems (GIS) administrator for entry into database to provide real-time utility location information at all park facilities. Recognizes potential field survey or utility location problems and develops solutions.
5. Works with automated work requests through Enterprise Asset Management (EAM) system and contacts appropriate personnel with results upon completion. Researches GIS data from various sources. Reviews files and data before each assignment.

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6. Produces, stores, and copies hard copies and digital records of project files, drawings, calculations, and related documents. Maintains and safeguards files and records.
7. Performs trigonometric leveling, differential leveling, photogrammetric control surveys, automated as-built surveys, boundary surveys, and analyzes and adjusts data according to accepted survey practices. Reads stadia to obtain distance between two points. Performs routine surveys which include locating paths, trails, roads, and other physical characteristics
8. Leads survey crews in field work, as assigned. Organizes daily work assignments, and coordinates requirements and equipment needs with supervisor or other parties. Provides instructions and assists with training on proper procedures, methods, and safety.
9. Renders first aid and cardiopulmonary resuscitation (CPR) in the field, as needed.
10. Stays abreast of the field of work and associated materials, methods and practices.
11. Communicates and interacts effectively with business contacts. Establishes and maintains or enhances working relationships, including teamwork, with internal contacts, which include employees of other departments to exchange information about field survey party work led or performed. Incidental external contacts include landowners and homeowners; they may question the employee's right for the survey team to be on the owner's property.
12. Uses a computer, modern office suite software (such as MS Office), enterprise software and specialized software to plan or schedule, communicate (email), word process (light word processing only), manipulate data, prepare land survey products, conduct research (Internet), report time and attendance, and perform other functions.

### Important Worker Characteristics:

- A. (1) Knowledge of, and skill in using, the principles, methods, practices and equipment of land survey operations including, but not limited to, electronic total station, automatic level, utility location instruments, GPS equipment, metal detector, electronic data collector or microcomputer, calculator, theodolite, transit, compass, radios, and utility location instruments.
- (2) Knowledge of, and skill in using, CADD hardware and software.
- (3) Knowledge of, and skill in using, algebra, trigonometry and geometry in land survey problems.
- (4) Knowledge of, and skill in using, field safety procedures.
- (5) Knowledge of Commission organization, policies, and procedures.\*

*\*Typically acquired or fully developed primarily after employment in this job class.*

- B. Skill in problem solving to select, organize and logically process relevant information (verbal, numerical or abstract) to solve a problem. Examples include operating a variety of

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field and office technical equipment, working in accordance with recognized land survey methods and practices, and applying a variety of mathematical formulae to the full range of land survey problems.

- C. Skill in communication to understand verbal and information (including facts, descriptions and ideas) and to express such information so that others will understand.
- D. Interpersonal skills to interact effectively with business contacts in a businesslike, customer service-oriented manner; this includes skill in establishing and maintaining effective working relationships and working as a member or a leader of a team.
- E. Skill in using a computer, modern office suite software (such as MS Office), enterprise software and specialized software.
- F. Proficiency in rendering, and willingness to provide, first aid and CPR.

### Minimum Qualifications (MQs):

1. An Associate's Degree in Surveying or any other related field.
2. Two years of progressively responsible experience in land or marine surveying that includes substantive work in the range of duties and responsibilities in this class specification.
3. An equivalent combination of education and experience may be substituted, which together total 4 years.
4. Must pass Commission medical examination.
5. Valid driver's license in accordance with both State and Commission rules and regulations. Driver's license must be unencumbered by restrictions, revocations, suspensions, or points that could limit the employee's ability to drive Commission vehicles or perform driving duties required by the position of assignment.

### Working Conditions:

Works in indoor and outdoor settings. On a regularly recurring basis, moves, bends and stoops or otherwise positions self, and transports and operates equipment. Lifts, carries or otherwise moves and uses objects weighing up to (or requiring force of) 49 pounds on own and heavier objects with assistance or mechanical advantage. Is regularly exposed to continuing periods of extremely inclement weather such as heavy rain and very high winds, extremely hot, cold or humid outdoor conditions and a variety of potential hazards from driving and working in the field or nearby moving traffic. Maintains situational awareness, adheres to established safety procedures, takes care and wears personal protective equipment to minimize potential hazards to self. May be subject to various job demands such as high volume of work and tight deadlines.