



## CAD DRAFTER

JC: TA298	BU: 04 (SEIU)
PG: 08	Created: August 2001
FLSA: Non-Exempt	Revised January 2019

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

### **DEFINITION**

Under general supervision, performs complex layouts and designs for various engineering projects; prepares electrical, mechanical, civil and other working plans, detail drawings, schematics, dimensional representations, and as-built records utilizing 2D applications; may provide lead direction to CAD Drafters; checks and reviews the work prepared by other CAD Drafters; makes computations and assists in drawing reproduction, scanning and control of engineering documents and electronic files; and performs related work as assigned.

### **CLASS CHARACTERISTICS**

Incumbents in this classification perform various drafting assignments. Incumbents may specialize in one or more disciplines, but are expected to be capable of performing the full scope of drafting duties using computer-aided techniques and measuring devices/tools. This classification is distinguished from the Senior CAD which is responsible for producing complex 2D drawings as well as 3D models and designs.

**EXAMPLES OF DUTIES** – *Duties may include, but are not limited to, the following:*

1. Prepares electrical, mechanical, civil and structural working plans, detailed drawings, schematics and as-built records using the current CAD software (2D) and other software applications used by the District.
2. Performs various engineering design work under the direction of a professional engineer.
3. Reads, interprets and applies engineering terminology and symbols.
4. Transfers engineering designs and concepts to final hard copy drawings and records that comply with specialized standards and specifications.
5. Uses a variety of electronic document management hardware and software applications to scan, index, and manage a variety of electronic file formats.
6. Performs calculations and uses standard tables to determine dimensions, scale, and linear and

angular measurements.

7. Prepares electrical, mechanical, and civil working plans, detail CAD 2D CAD drawings, schematics, dimensional representations, and as-built records using computer-aided techniques utilizing measuring and scanning devices/tools.
8. Develops, designs, and arranges layouts for a variety of work such as posters, banners, signs, brochures, and reports.
9. Discusses job requirements and specifications with originators prior to work and at various stages of completion.
10. Monitors developments in the use of CAD hardware, software and techniques, and recommends and utilizes changing technologies as appropriate.
11. Maintains records and prepares brief reports regarding application and revision of drafting standards, procedures and work assignments.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles and practices of basic engineering design in one or more disciplines of electrical, mechanical or civil design and illustration.
- Principles and practices of engineering drafting.
- Computer Aided Drafting (CAD) and document file control, including hardware, software, devices and tools (2D) and Electronic Document Management Systems (EDMS).
- Layouts and positional relationships for representing electrical, mechanical, and civil projects, systems and equipment.
- Electrical, mechanical, and civil engineering terminology and schematic symbols. Applicable codes, standards and procedures.
- Basic mathematical calculations including fundamental geometry.
- Media and materials used in the preparation of technical drawings document control, retrieval and filing systems.

### **Skill in:**

- Preparing specialized and difficult Electrical, Mechanical, Civil and Structural working plans, detail drawings, schematics and as-built records using the District's standard CAD software, tools and applications.
- Preparing basic engineering designs under the direction of a professional engineer.
- Reading, interpreting and applying engineering terminology and symbols to working plans. Providing instruction, work review and project or day-to-day direction to others.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Transferring engineering designs and scans to final hard copy drawings and records, which comply with specialized standards and specifications.
- Using a variety of electronic document management hardware and software applications to scan, index and manage a variety of electronic file formats.

## **CAD Drafter**

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- Performing calculations and uses tables, scans and other tools to determine dimensions, scale and measurements.

### **MINIMUM QUALIFICATIONS**

#### **Education:**

Associate in Arts Degree in Drafting Technology from an accredited college or university.

#### **Experience:**

Three (3) years of (full-time equivalent) verifiable experience in engineering CAD drafting. Experience must have included the use of the latest version of AutoCAD.

#### **Other Requirements:**

Must possess visual acuity to distinguish detailed drawing features, and manual dexterity to operate CAD drafting tools and equipment and a computer keyboard.

#### **Substitution:**

Additional experience as described above using AutoCAD may be substituted for the education on a year-for-year basis.

### **WORKING CONDITIONS**

#### **Environmental Conditions:**

Office environment; exposure to computer screens.

#### **Physical Conditions:**

Requires maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

**BART EEO-1 Job Group:** 3500 - Professionals  
**Census Code:** 1540 - Drafters  
**Safety Sensitive:** No