

ENGINEERING DRAFTSMAN SERIES

| <u>Code No.</u> | <u>Class Title</u> | <u>Occ. Area</u> | <u>Work Area</u> | <u>Prob. Period</u> | <u>Effective Date</u> |
|-----------------|-----------------------------|------------------|------------------|---------------------|-----------------------|
| 1212 | Engineering Draftsman I | 01 | 032 | 6 mo. | 07/29/88 |
| 1213 | Engineering Draftsman II | 01 | 032 | 6 mo. | 07/29/88 |
| 1216 | Chief Engineering Draftsman | 01 | 032 | 6 mo. | 07/29/88 |

Promotional Line: 64¹

Series Narrative

Employees in this series perform, supervise, or direct drafting duties that support the design or modification of equipment, apparatus, devices, or facilities involving mechanical, electrical, electronic, civil, structural, or other fields of engineering.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Engineering Draftsman I

1212

Employees at this level perform technical duties involving skill and experience in drafting and structural, mechanical, electrical, electronic, civil, or other engineering fields. They work under general supervision from a designated supervisor.

An Engineering Draftsman I typically –

1. prepares drawings and diagrams of mechanical, electrical, or electronic devices, apparatus, and equipment from notes, sketches, and instructions
2. makes detailed shop drawings from sketches and layouts of machinery and equipment
3. prepares designs of machinery, equipment, and apparatus from layouts and specified dimensions
4. prepares layout for wiring and piping diagrams and schematics
5. prepares working drawings and diagrams for water distribution systems, sewers, electrical distribution systems, plumbing, heating and air conditioning, and electrical and mechanical machinery and equipment
6. makes detailed drawings from general design drawings, indicating materials, tolerances, and other information necessary to make the detailed drawing clear and complete
7. specializes in one or more phases of engineering drafting (such as electronic, electrical, or mechanical) as deemed desirable

¹See promotional line list for complete listing of all classes in this promotional line.

8. assists in instruction and supervision of lower level draftsmen as assigned
9. performs other related duties as assigned

Level II: Engineering Draftsman II**1213**

Employees at this level perform engineering drafting involving a high degree of technical skill and ability. They work under general supervision from a designated supervisor.

An Engineering Draftsman II typically –

1. supervises and coordinates the work of lower level draftsmen and instructs them in standards, methods, and techniques of work
2. assigns, checks, and corrects work prepared by others in order to conform to standards, specifications, and design requirements
3. prepares drawings and diagrams of mechanical, electrical, or electronic devices, apparatus, and equipment requiring a knowledge of design principles
4. makes detailed shop drawings involving design and selection of materials and components
5. prepares highly complex wiring and piping diagrams and schematics
6. performs complex mechanical, electrical, or electronic drafting that involves limited design function in working out finished drawings and details
7. performs other related duties as assigned

Level III: Chief Engineering Draftsman**1216**

Employees at this level direct the preparation of engineering drawings for utility, construction, mechanical, electronic, cartographic, and other related activities. They work under administrative supervision from a designated supervisor.

A Chief Engineering Draftsman typically –

1. supervises the preparation of engineering drawings for utility, construction, mechanical, electronic, cartographic, and other related areas
2. prepares preliminary designs and sketches for requirements in each of the above listed areas
3. reviews and/or recommends additions, changes, and/or deletions to designs and drawings of systems and facilities submitted by consulting engineers
4. confers with administrative personnel and engineering consultants concerning the feasibility of proposed facilities, as well as the revision and improvement of existing facilities

5. coordinates drawings with related specifications, preliminary cost estimates, bid documents, and work of other units and divisions
6. supervises the checking of shop drawings and the preparation of full-sized details
7. supervises the maintenance and cataloging of existing departmental maps, drawings, prints, and related materials
8. performs other related duties as assigned

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO:

Level I: Engineering Draftsman I

1212

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. high school graduation or equivalent
2. three years of general experience in engineering drafting work. If specified by the department to be served, two of the three years must have been in the area of specialty required by the department, such areas to be recognized as heating and ventilating, plumbing and drainage, electrical, cartographic, mechanical and machine design, electronics schematic and logic circuitry, or others as indicated by the department.

College course work in an engineering curriculum may be substituted, year for year, up to a maximum of two years, for general work experience in engineering drafting; but if an area of specialty is required, then the applicant must offer two years of specialized experience if he has one year of educational credits or one year of specialized experience if he has two years of educational credits.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. ability to perform technical drafting work requiring a high degree of drafting skill

Level II: Engineering Draftsman II

1213

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. high school graduation or equivalent
2. six years of general experience in engineering drafting work. If specified by the department to be served, three of the six years must have been in the area of specialty required by the department, such areas to be recognized as heating and ventilating, plumbing and drainage, electrical, cartographic, mechanical and machine design, electronics schematic and logic circuitry, or others as indicated by the department.

College course work in an engineering curriculum may be substituted, year for year, up to a maximum of three years, but only for the lack of experience in other than the required area of specialization.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

- 1. ability to perform engineering drafting involving a high degree of technical skill in preparation of complete drawings
- 2. ability to supervise a group of draftsmen and to coordinate work

Level III: Chief Engineering Draftsman

1216

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

- 1. high school graduation or equivalent
- 2. eight years of progressively responsible experience in engineering drafting work, four years of which were in the area of specialty required by the department to be served, such areas to be recognized as utility distribution (heat, ventilating, plumbing, drainage, and/or electrical), cartographic, mechanical and machine design, electronic schematic and logic circuitry, or others as indicated by the department.

College course work in an engineering curriculum may be substituted, year for year, up to a maximum of four years, but only for the lack of experience other than the required area of specialization.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

- 1. ability to perform engineering drafting involving a high degree of technical skill in preparation of complete drawings
- 2. ability to supervise a group of draftsmen
- 3. ability to plan and coordinate the work of a drafting service area
- 4. ability to consult with and advise departments on drafting techniques and requirements

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| Engineering Draftsman I | Edited |
| Engineering Draftsman II | Edited |
| Chief Engineering Draftsman | Edited |