

ENGINEERING AIDE SERIES

Definition:

Under varying levels of supervision assists in the preparation and maintenance of maps and plans for public works and related improvements, operates traffic counting devices and analyzes traffic pattern data, performs engineering computations of average difficulty, performs a variety of sub-professional engineering office and on-site tasks and performs related work as required.

Class Titles

**Engineering Aide I
Engineering Aide II
Engineering Aide III**

Essential Duties and Responsibilities:

The responsibilities and essential duties performed on a frequent and recurring basis by an incumbent in this series include the following:

Prepares preliminary engineering sketches, charts and plans.

Operates traffic counting devices, collects and analyzes traffic pattern data, designs traffic control plans and trouble shoots traffic signal problems.

Makes field inspections and meets with business owners related to traffic issues.

Prepares permanent improvement and plot plans from field survey notes.

Prepares quantity and cost estimates for engineering projects.

Responds to telephone and public inquiries and provides public information.

Records engineering data onto maps and indexes and maintains section files on current project maps and drawings.

Researches and drafts technical engineering plans for construction of streets, alleys, storm drains, water lines and other public improvements.

Assists in checking tentative and final maps and public works related plans.

Compiles and checks mass mailings related to engineering projects.

Maintains a variety of related records and prepares reports.

Operates a personal computer and uses applicable software.

Lifts and moves boxes of records, traffic counting devices and other equipment weighing 30 pounds or less.

Drives a vehicle on City business.

Other Duties and Responsibilities:

Performs other projects/tasks as assigned.

May perform surveying work, operate surveying equipment and clean and maintain surveying equipment.

Class Characteristics:

Engineering Aide is a multi-incumbent series in the Engineering Department. Engineering Aide I is the entry level class in the series. An incumbent performs a wide variety of general and engineering related tasks under direct supervision. Engineering Aide II is the mid-level class and is distinguished from the I by the II's performance of more difficult and involved duties requiring a greater degree of responsibility. The III is the journey level class. An incumbent performs the most difficult duties under limited supervision, requiring the use of independent judgment and initiative.

Contacts and Relationships:

An Engineering Aid establishes and maintains contact with staff in the Engineering Department. Contact with staff in other City departments, consultants, contractors, vendors and the public will occur during the course of some work assignments.

Qualification Guidelines:

The knowledge and abilities which are required to perform the duties and responsibilities of this series include the following:

Engineering Aide I - Knowledge of:

Basic knowledge of engineering drafting methods.

Basic engineering mathematics.

English usage and spelling.

Computer applications related to area assigned.

Engineering Aide II and III - Knowledge of those items listed under "Knowledge of" for Engineering Aide I plus the following:

Methods and equipment used in the collection and analysis of traffic flow data.

Basic engineering mathematics to include algebra and trigonometry.

Civil or traffic engineering map drafting.

Construction, design extension and maintenance of traffic systems.

AND

Engineering Aide I - Ability to:

Communicate effectively orally and in writing.

Establish and maintain effective relationships with those contacted in the course of work.

Read and write at the level required for successful job performance.

Meet the public with courtesy and tact.

Operate a personal computer and use applicable software.

Engineering Aide II - Ability to do/perform those items listed under "Ability to" for Engineering Aide I plus the following:

Perform manual drafting or operate a Computer Aided Design Drafting (CADD) system.

Operate and maintain mechanical map reproduction equipment and related engineering equipment.

Apply current and applicable rules, requirements, mandates and restrictions related to area assigned.

Engineering Aide III - Ability to do/perform those items listed under "Ability to" for Engineering Aide I and II plus the following:

Use independent judgment and initiative.

Work under limited supervision.

Perform Geographic Information Systems (GIS) data manipulation to include the development of public presentation exhibits from applicable computerized data.

A typical way to obtain the knowledge and abilities is as follows:

Education:

Engineering Aide I: Graduation from high school and some completed course work at an accredited college or university in drafting, algebra or trigonometry.

Engineering Aide II and III: Graduation from high school and two years of study at an accredited college or university in engineering or a related field.

AND

Experience:

Engineering Aide I: Six months of experience in an engineering office or related work.

Engineering Aide II: One year of sub-professional engineering experience to include some drafting experience.

Engineering Aide III: Three years of sub-professional engineering experience to include one year of drafting experience.

Special Requirements Include – All Classes in this Series:

Valid and appropriate California Drivers License and acceptable driving record at time of appointment and throughout employment in this position.

Must be able to work a flexible schedule to accommodate City needs.

Physical Tasks and Working Conditions Include the Following:

Work is performed indoors in an office environment and on-site in the field. When work is performed outdoors there is exposure to the elements. An incumbent drives a vehicle on City business, uses a computer, keyboard and related equipment, sits for extended periods of time, stands, walks, reaches, bends, kneels, twists, crouches and grasps, lifts and carries boxes of records, traffic counting devices and other equipment weighing 30 pounds or less. When in the field working with traffic counting devices or trouble shooting traffic signal problems, an incumbent will be exposed to vehicular traffic and fumes and may walk on slippery/uneven surfaces or slopes. An incumbent must be able to meet the physical requirements of the class and have mobility, balance, coordination, vision, hearing and dexterity levels appropriate to the duties to be performed.

Fair Labor Standards Act Designation: Non-exempt.

Revised May 2006 – Series revision and Engineering Aide III added.

Revised August 2004 – Series consolidation and revision - Engineering Aide and Senior Engineering Aide combined into Engineering Aide I/II.