

**CITY OF LOS ANGELES
CIVIL SERVICE COMMISSION**



CLASS SPECIFICATION
POSTED JUNE 1999

5-15-98

MATERIALS TESTING ENGINEERING ASSOCIATE, 7967

Summary of Duties: Performs professional engineering work in making physical tests of soils and construction materials; inspects pipe fabrication, concrete and asphalt batchings, earthwork and fill for certification; may supervise professional and technical personnel involved in this work; and does related work.

Distinguishing Features:

Materials Testing Engineering Associate I is the normal entry level to the class. Employees at this level usually have little, if any, experience or special training. They initially perform the less complex professional engineering work under close supervision while learning and assisting in a variety of routine duties. As employees become more experienced, they may work independently and may be responsible for one or more large projects. Positions at this level are three year temporary training positions under Civil Service Rule 5.30. Employees with two years of full-time paid City experience as a Materials Testing Engineering Associate I and an Engineer-in-Training (EIT) Certificate will automatically promote to Materials Testing Engineering Associate II.

Materials Testing Engineering Associate II performs journey level engineering work requiring a working knowledge of engineering skills. Individuals at this level usually work independently, receiving instructions in general terms, and may be responsible for one or more major City projects having wide impact and significant cost. Employees may serve as a lead over a small group of lower level employees.

Materials Testing Engineering Associate III may supervise, or may serve as a lead over a small group of employees, or as a project manager, or as a project engineer involved in work that is technically complex and requires considerable experience, skill and engineering knowledge. Two years of full time paid, professional experience at the level of Materials Testing Engineering Associate II and registration as a professional engineer with the California State Board of Registration for Professional Engineers is required for advancement to this level.

Materials Testing Engineering Associate IV is a non-supervisory technical expert, who shall maintain the skills and expertise necessary to remain at this higher pay grade level. They may conduct extensive research into new technical developments and evaluate their suitability for City use, may prepare standards for technical design, may develop and conduct training for other employees on new technology or very difficult issues. These positions are designated by department management according to their department's needs. Some positions require registration as a professional engineer with the California State Board of Registration for Professional Engineers, as determined by department management.

Examples of Duties: A Materials Testing Engineering Associate:

- makes standard physical tests and chemical analyses of cement, concrete, pipe, rock, sand, soil, protective coatings and a wide variety of other materials and equipment to assure conformance to specifications and to determine their properties for design and construction;
- interprets and reports test results;
- performs metallurgical and chemical analyses of construction and maintenance materials, including ferrous and nonferrous metals, textiles, and petroleum products; takes samples of noxious or hazardous gases to determine the source and recommends corrective measures; assists in testing the effectiveness of large incineration operations; keeps records and makes oral and written reports regarding tests made; calibrates apparatus and gauges; assists in investigating new materials and conducting research in construction materials; supervises test hole drilling operations; prepares instructions which clarify, expand, supplement, or replace tests prescribed by City specifications or testing organizations such as the American Society for Testing and Materials; may maintain schedules and work flow; and may supervise employees engaged in the above work.

May occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications: Incumbents must have the following knowledges and abilities:

A good knowledge of:

- physics as it pertains to the strength of materials and the laws of mechanics;
- mathematics necessary for evaluating the results of tests of materials;
- safety principals and practices;
- standards and standard testing methods of the American Society for Testing and Materials;

A working knowledge of:

- chemistry relating to quantitative and qualitative analysis;
- types and characteristics of commonly used construction and maintenance materials;
- standard sources of information pertaining to materials testing;
- laboratory testing methods and apparatus;

The ability to:

- deal tactfully with subordinates, supervisors, contractors, the public, public officials, and others;
- prepare written reports and correspondence that are clear, concise, logical, persuasive, and complete;
- keep accurate records;
- efficiently obtain, interpret, and manipulate information contained in personal computers and computer networks;
- efficiently review files, plans, maps, blueprints, and other sources of information related to materials testing engineering work; and

- make effective oral presentations to groups.

Minimum Requirements: Graduation from a recognized four year college or university with a specialization in engineering, physics, or geology; **or** possession of a valid Engineer-in-Training Certificate recognized by the California State Board of Registration of Professional Engineers.

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depend, in part, on the specific requirements for the job, the limitations related to the disability, and the ability of the hiring department to reasonably accommodate the limitation.

Licenses: A valid California driver's license may be required prior to appointment.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties, responsibilities, and required qualifications of any position shall be.