

**CITY OF LOS ANGELES
CIVIL SERVICE COMMISSION**



CLASS SPECIFICATION
POSTED JUNE 1999

10/2/98

**FIRE PROTECTION ENGINEERING ASSOCIATE, 7978
FIRE PROTECTION ENGINEER, 7979**

Summary of Duties: Performs professional engineering work in the application of engineering principles to problems of safeguarding life and property against loss from fire, explosions and related hazards; conducts fire and life safety reviews of building plans and field inspection for new construction projects; may supervise Fire Protection Engineering Associates and Fire Inspectors; and does related work.

Distinguishing Features: Fire Protection 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 Fire Protection Engineering Associate I and an Engineer-in-Training (EIT) Certificate will automatically promote to Fire Protection Engineering Associate II.

Fire Protection 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.

Fire Protection 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 Fire Protection 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.

Fire Protection 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.

Fire Protection Engineer supervises Fire Protection Engineering Associates and Fire Inspectors.

Examples of Duties:

Fire Protection Engineering Associate

- checks and approves construction plans for occupancies processing hazardous materials, public assemblages, hospitals, institutions, blasting and drilling activities, helicopter sites, sprinkler and other extinguishment systems, material handling systems, complex and technologically advanced occupancies, industrial processes, and other locations, activities, and equipment regulated by ordinance or State law within the limits of existing standards;
- works with private engineers and architects to develop building design criteria;
- investigates and recommends on requests for waivers of or variations in applicable regulations;
- interprets and explains City Fire Code provisions and applicable standards of the National Fire Protection Association, American Petroleum Institute, Department of Transportation, State Division of Industrial Safety, and other specifications and performance standards incorporated in regulations enforced by the Fire Department;
- conducts objective tests of equipment, machinery, and clothing requiring approval by the Department and prepares test finding reports;
- issues permits for regulated activities;
- investigates complaints from citizens and City Council offices concerning reported fire hazards;
- prepares complaints against hazards for submission to the City or District Attorney;
- gathers evidence of violations and testifies in court on compliance with applicable regulations as an expert witness;
- investigates legislative proposals for applicability to Department regulatory activities;
- participates in research projects to devise performance standards;
- occasionally assists fire suppression personnel with unusual inspection

problems;

- meets with representatives, builders, school administrators, architects, and engineers to review plans, explain design problems, and suggest means for compliance with Department regulations involving some latitude for judgment;
- recommends waivers from State and City code requirements where warranted;
- assists in training engineering employees and clerical personnel;
- provides technical information for Department spokespersons before committees, hearings, and court proceedings;
- participates in public informational programs on fire safety; and
- may occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Fire Protection Engineer

- supervises professional engineering and clerical employees engaged in the above activities and may personally perform the more difficult, complex, or responsible work;
- oversees issuance of Certificates of Fitness for persons engaged in fire extinguisher maintenance and blasting operations in the City;
- conducts inspection of construction plans for occupancies involving processing of hazardous material, public assemblages, sprinkler and other extinguishment systems, and oil well and blasting operations;
- coordinates and maintains contact with the Department of Building and Safety, public and private school administrators, and other agencies on building plan and fire hazard matters;
- participates in engineering conferences;
- interprets City and State regulations to engineers and architects to resolve design questions relating to complex structures and fire prevention systems and suggests alternate but equivalent design and construction methods;
- coordinates with the City Attorney's Office on hearings and trials involving Fire Code violations;
- testifies before committees and legislative bodies on fire protection matters;
- may act for the Senior Fire Protection Engineer in the latter's absence; and
- may occasionally be assigned other duties for training purposes or to meet technological changes or emergencies.

Qualifications: Incumbents must have the following knowledges and abilities:

Knowledges of:

	Fire Protection Engin- eering <u>Associate</u>	Fire Protection <u>Engineer</u>
Principles of mathematics, physics, chemistry, electricity, and hydraulics as applied to fire protection engineering.	General	Good

Fire protection engineering principles and practices.	General	Good
Sources of fire protection information.	Working	Good
Building construction and standards to prevent loss of life by fire including means of escape.	General	Good
Design, installation and use of manual and automatic fire extinguishing devices and systems.	General	Good
Design, installation and maintenance of fire detection devices.	General	Good
Methods to reduce and control fire hazards and to restrict the spread of fires.	General	Good
City Fire Code provisions, and applicable standards of the National Fire Protection Association, American Petroleum Institute, Department of Transportation, State Division of Industrial Safety, and other specifications and performance standards incorporated in regulations enforced by the Fire Department.	General	Good
Investigation and handling of legal prosecution of Fire Code violations.		Working
Organization of the Fire Department and its interrelationship with other City departments.		Working
Safety principles and practices.	General	Good
Laws and regulations related to equal employment opportunity and affirmative action.		Working
City personnel rules, policies, and procedures.		Working
Ability to:	Fire Protection Engineering Associate	Fire Protection Engineer

Make fire engineering research studies and make analysis under laboratory and field conditions	X	X
Deal tactfully and effectively with government officials, employees, and the public.	X	X
Write clear, accurate and concise reports.	X	X
Receive assignments in general terms and plan, lay out and direct the work of subordinates.	X	X
Represent the Fire Department and City in conferences, hearings and meetings relating to fire engineering.	X	X

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 accommodate the limitation.

Minimum Requirements:

Fire Protection Engineering Associate: Graduation from a school of engineering in a recognized four year college or university with a degree in engineering; or possession of a valid Engineer in Training certificate recognized by the California State Board of Professional Engineers.

Fire Protection Engineer: Two years of professional engineering experience at the level of Fire Protection Engineering Associate.

Registration as a Professional Engineer with the California State Board of Registration for Professional Engineers is required for Fire Protection Engineer.

License:

Both classes: A valid California driver's license and a good driving record may be required.

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 and responsibilities of any position shall be.