## FIRE ENGINEER

## **DEFINITION:**

Under general supervision, to have primary responsibility for the operation, use and routine maintenance of fire vehicles and pumping equipment utilized during fire fighting activities; to perform a full range of fire fighting duties; to perform fire prevention inspections; and to perform related work as required.

## **CLASS CHARACTERISTICS:**

Positions in the class of Fire Engineer have primary responsibility for the operation, use and routine maintenance of fire vehicles and pumping equipment utilized during fire fighting activities. Incumbents, additionally, perform the full range of duties associated with the class of Firefighter. Successful performance in this class requires skill in the operation of fire equipment and in using hydraulic theory and mathematics to figure correct pump pressure to ensure required water pressure. Vacancies in the class of Fire Engineer are generally filled by promotion from the class of Firefighter.

## LICENSE REQUIRED:

 Possession of or ability to obtain a valid and appropriate California driver's license with Firefighter endorsement or possession of a Commercial Class A or B license.

## **CERTIFICATION REQUIRED:**

- Possession of current and valid Basic Emergency Medical Technician Certification (EMT1, EMT-(O/S), or EMT-(P) with the ability to become certified by the Santa Barbara County Emergency Medical Services Agency
- Current CPR card for Healthcare Providers
- Successfully completed Departmental Acting Engineer Certification program

## **ESSENTIAL FUNCTIONS:**

The following duties are typical of this classification. Incumbents may not perform all of the duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

Responds to alarms; drives fire equipment to fires; operates a pumping engine engaged in regulating water pressure from street mains, or draft, through hose lines to nozzle; uses hydraulic theory and mathematics to figure correct pump pressure to ensure required water pressure at the nozzle; assumes responsibility for operation of pumps; cleans, washes and services equipment; inspects equipment and motor of pump; cleans and maintains hose carried on equipment; places apparatus in appropriate position at the scene of a fire or in other emergencies; performs a full range of fire fighting duties; performs rescue and lifesaving work through the use of ladders and other equipment; estimates heights and adjusts equipment to ensure proper and safe operation; conducts inspections of public assemblies and commercial, industrial or governmental buildings and other public establishments to secure compliance with codes and regulations pertaining to fire safety; issues orders to comply with codes; inspects and tests fire protection systems; examines the storage, handling and use of flammable liquids and other hazardous materials; makes recommendations regarding correction of hazards;

# CITY OF LOMPOC (Fire Engineer)

assists in the investigation of fires; responds to complaints and requests for information from the public; conducts daily inspections of condition and readiness of equipment; studies the geography of the City and knows all streets,100 blocks, location of fire hydrants; maintains EMT skills and renders medical aid within scope of practice on assignment, makes company inspections; assumes responsibility of an engine company in the absence of the captain.

### PERIPHERAL FUNCTIONS:

Assists in maintenance of fire station and grounds, apparatus pump testing, tests hose annually, and performs related work as required.

## PHYSICAL AND MENTAL/PSYCHOLOGICAL DEMANDS:

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

# Physical:

Strength category: Very Heavy- exert force over 100 pounds occasionally, over 50 pounds frequently, or over 20 pounds constantly to lift, carry, push, pull or move objects. Frequent standing, walking. Occasional sitting, bending, stooping, crouching, climbing stairs and ladders, crawling, kneeling, pushing, pulling, twisting at the waist, handling, gripping, grasping, fingering, typing, reaching at, above and below shoulder level, extending neck upward, downward and side to side. **Vision:** visual acuity sufficient to perform the essential functions of the position; average depth perception required. **Hearing:** effectively hear/comprehend oral instructions and communication and equipment noise. Must have excellent general health and physical fitness.

# Mental/Psychological:

Work cooperatively and interact appropriately with those contacted in the course of work, including the general public, without exhibiting extreme responses; respond appropriately to criticism from supervisor; read/comprehend complex materials; utilize complex skills; utilize complex writing skills; understand, remember and carry out complex job instructions; respond quickly to changing situations under emergency pressures; maintain mental and emotional control in the face of extremely stressful situations; communicate effectively orally; work under pressure; work within deadlines; train other workers.

#### **ENVIRONMENTAL CONDITIONS:**

Work in extremely hazardous conditions. Works both indoors and outdoors. Frequently drives motorized equipment/vehicles. Occasionally works at unprotected heights, around machinery, and in confined spaces. Occasional exposure to extreme temperatures, dust, fumes, gases, odors, chemicals, excessive noises, electrical energy, solvents, grease, or oil, slippery or uneven walking surfaces, flames, smoke. Regular use of a computer. Works both alone and with others. On rare occasions may work with

# CITY OF LOMPOC (Fire Engineer)

near or post volatile substances. May be exposed to biohazards including blood borne pathogens and infectious diseases.

#### SPECIAL REQUIREMENTS:

Employees in this classification may be required to utilize respirators in the course of their job duties or under emergency circumstances, and thus must follow General Industry Safety Order 5144. Employees shall not wear beards, mustaches, sideburns, facial hair or other conditions in such a manner that may prevent or interfere with establishing and maintaining a proper seal of the respirator facemask. This requirement is implemented to ensure the safety and health of the employee.

## **MINIMUM QUALIFICATIONS:**

# Knowledge of:

- 1. Hydraulic principles related to fire fighting.
- 2. City geography and water systems.
- 3. Technical firefighting principles and techniques.
- 4. Emergency medical techniques.
- 5. Basic mathematics and mechanical relationships.

# Ability to:

- 1. Calculate hydraulic engineering problems under emergency conditions.
- 2. Drive fire apparatus safely.
- 3. Perform skilled firefighting duties.
- 4. Understand and carry out oral and written instructions.
- 5. Establish and maintain effective relationships with those contacted during work.
- 6. Respond quickly to changing situations under emergency pressures.
- 7. Use tools and equipment used in fighting fires.
- 8. Perform mechanical work involved in maintaining firefighting and rescue vehicles, equipment, and tools.

## **EDUCATION AND EXPERIENCE:**

Any combination of training, education, and experience which demonstrates an ability to perform the duties of the position. The qualifying entrance is two years' experience as a full-time Firefighter, successfully completed Departmental Fire Engineer Succession Plan Certification program, successfully completed the Departmental Driving Training Program, AA/AS or BA/BS degree, or Fire Hydraulics, and Supervision courses though any accredited college or the California Fire Service Educational System, (CFSTES), AND completion of Company Officer 2A-2E, OR completion of 45 educational units from

# CITY OF LOMPOC (Fire Engineer)

an accredited college or university + 4 years' experience as a Firefighter + certification as a Firefighter II, OR completion of 30 educational units from an accredited college or university + 6 years' experience as Firefighter + certification as a Firefighter II. (Completion of 3 of the 6 Company Officer certification courses may be substituted for the Firefighter II requirement).

Rev. 12/2023