



CLASS SPECIFICATION

5/12/11

SENIOR AIRPORT ENGINEER, CODE 7257

Summary of Duties: A Senior Airport Engineer performs the more difficult and complex professional engineering work in the planning, design, construction, maintenance and operation of airport landside facilities, structures and support systems that may include but not be limited to airside runways, taxiways, navigations aides, associated airfield infrastructures, airport communication systems, and airport security networks; plans airport projects, systems and construction to address airfield design, passenger processing, airport ground access, environmental compliance, airport safety and airport security; prepares specifications, designs, plans, estimates, studies assessments and reports on emerging airport needs, variability of air traffic, problems of congestions and delays, airport terminals, automatic baggage systems, people mover systems, and reconfiguration of services and facilities during construction.

Supervises and directs the work of a section in the Los Angeles World Airports (LAWA) Planning, Facilities Engineering, Information Technology, or Airport Development Groups; serves as the head of a major section or element working on airport engineering design and construction projects; coordinates the application, implementation, and compliance with Federal Aviation Administration (FAA) and Transportation Security Administration (TSA) standards, policies, and requirements related to airport design, construction, operation, and security; attends meetings with LAWA management, capital improvement project consultants, and airport tenants.

Distinguishing Features: Employees in this class may act as a technical and administrative advisor to engineering division managers. A Senior Airport Engineer may direct a variety of airport engineering infrastructure capital improvement programs and related projects by preparing, reviewing and evaluating airport planning studies, life-cycle cost analyses, preliminary design concepts, landside traffic modeling, airside gate analyses, and cost estimates. A Senior Airport Engineer may perform a wide array of higher level technical duties in support of planning, designing, constructing and defining specifications for the development of airport infrastructures, airport improvement programs, large and primary hub airport projects, airport security systems, hangars, terminals, and tenant improvements all with the purpose of handling both aircraft and passenger demands. An employee in this class must keep abreast of LAWA planning, environmental, engineering, information technology operations, security, regulatory and administration activities in conjunction with the planning and development of passenger terminals, landside improvements, airside facilities, cargo facilities, airfield hangars, jet fuel distribution networks, utility plants and other airport infrastructures.

A Senior Airport Engineer I is generally appointed to a position which personally performs duties that require higher level technical expertise in the fields of airport planning, airport engineering, program management, airport design and construction management, airport facilities and asset management, airport environmental management, facilities engineering, information technology management, transportation engineering, airport safety, and airport security as outlined by FAA and TSA standards. As an engineering project manager or element manager, a Senior Airport Engineer I may direct the work of Airport Engineers and other technical staff who investigate, evaluate, and analyze engineering problems and solutions, perform coordination activities for airport engineering programs and projects, and research emerging airport design and construction issues.

A Senior Airport Engineer II as a program or element manager oversees the completion and delivery of large, complex airport Capital Improvement and Master Plan programs, and the management of airport assets, utilities, communication networks and infrastructures. An incumbent in this position supervises an integrated project management team which may consist of LAWA engineering staff, architects, planners, engineering consultants, as well as representatives from other agencies and other City departments. Persons at the second pay grade would possess all the skills, knowledge and abilities of a Senior Airport Engineer I, and provide supervisory management, oversight of professional services contracts, and direction to professional engineers, consultants, and other support staff; may work closely with a Chief of Airports Engineer, Chief Airport Planner, or Senior Systems Analyst; and may represent engineering division managers in meetings with the Mayor, City Council, Board of Airport Commissioners, airport agencies and contractors, as needed.

A Senior Airport Engineer supervises and provides technical and administrative oversight of more complex professional services for airport planning, information technology, engineering, and technical support for the Airport Capital Improvement Program (CIP) or Airport Facilities Management Program. Incumbents in the class of Senior Airport Engineer as bona fide supervisors are responsible for the supervision, management, training, and development of direct and indirect subordinate staff. A Senior Airport Engineer assists in the development and implementation of LAWA policies and procedures, and contributes to the management of staffing, capital project costs, and annual operating budgets.

Examples of Duties:

- Directs the work of a section engaged in communications, planning, civil, structural, mechanical, electrical, and communication engineering;
- Prepares and reviews designs, plans, drawings, specifications, estimates, and reports necessary for the communications, construction, maintenance, and operation of a variety of concrete, steel and timber structures and other facilities including passenger terminals, runways, taxiways, service roads, cargo buildings, retaining walls, underground piping and utilities, streets and bridges, drainage and sewer facilities, acoustic modifications of buildings, and specialty aviation-

related systems including airfield lighting and signage, navigational aides, fueling systems, passenger boarding bridges, baggage handling systems, explosive detection systems, fire life safety systems, and security access devices;

- Certifies the airport is in compliance with Federal Aviation Regulations (FAR) which promote and regulate civil aviation in a manner that will provide for safety of flight and also provide for the safe and efficient use of airspace; ensures that work on the airport is designed and constructed in compliance with the latest editions of Federal Aviation Administration Standards Advisory Circulars which contains the changes to the FAR;
- Directs staff and consultants efforts to ensure that the airport is in compliance with FAR Part 77 Imaginary Surfaces Analysis which establishes standards and notification requirements for objects affecting protected airspace;
- Prepares strategic reports, designs, plans, specifications, and estimates for complex airfield infrastructure facilities, including runways, taxiways, airfield lighting and signage, navigational aides, fueling systems, airfield access and security infrastructure;
- Ensures that LAWA telecommunications network infrastructure resources are in order to meet industry specification requirements; directs strategic network solutions for the infrastructure by evaluating new computer and network hardware and software technologies;
- Reviews all on-airport and off-airport projects for potential encroachment into FAA approach slope and transitional slope gradients;
- Coordinates with various federal agencies and departments when developing construction specifications including working restrictions and phasing requirements for construction affecting airfield and terminals operations;
- Ensures that the TSA is engaged during the development of various airport security improvements including passenger screening, baggage screening and cargo/perimeter security improvements; ensures new in-line baggage screening system designs and construction projects comply with the latest TSA planning guidelines and design standards which were established to provide reference for those who will implement improved checked baggage screening systems;
- Ensures that runways, taxiways, aircraft ramps, passenger terminals, hangars, and cargo buildings are designed to handle the latest generation of aircraft taking into consideration factors such weight, size, and speed of the aircraft;
- Ensures and certifies that all developments on any of LAWA's airport locations are in accordance with Airport Layout Plans that are approved by the FAA; ensures coordination by and approval of all construction activity with FAA;
- Represents the Department of Airports at meetings with City officials, air carriers, FAA, TSA, other governmental agencies, citizen groups, and other organizations on various activities related to more complex LAWA facility projects;
- Performs the full range of supervisory activities including the application of discipline, processing and resolving grievances, and evaluating performance; and
- Accepts occasionally assignments for other airport engineering related duties for training purposes or to meet technological changes or emergencies.

Qualifications:**Knowledge of:**

- The principles and practices of construction contract management, including scheduling, change management, claims mitigation/resolution, safety, and airport security;
- Airport facilities and infrastructure specifications to be able to oversee in-house maintenance services of those facilities and structures;
- Extensive knowledge of airport electrical and power installations including approach lighting systems, with frangible light poles that break away if struck, to allow pilots to visually identify the runway environment and align the aircraft with the runway upon arriving;
- Civil, electrical, mechanical, structural, architectural, and communications engineering as applied to the design construction, maintenance, and operation of airports facilities and infrastructure;
- Engineering economics and facility life-cycle costs assessment, particularly as related to airports facilities and programs;
- LAWA's organization, policies, and scope of activities, as well as airport security principles, practices, and requirements as mandated by FAA and TSA;
- Coordination, supervision, organization, and budgeting methods needed to successfully manage complex, large-scale aviation programs that involve engineering, planning, design, construction, and maintenance work;
- Federal, State, and City laws and regulations concerning the design, construction, planning, troubleshooting, maintenance, and operating functions of LAWA;
- The legal requirements of contracts, leases, and permits as related to the Department of Airports activities;
- Standard, government approved airport construction materials and practices;
- City personnel rules, policies and procedures;
- Memoranda of understanding as they apply to subordinate personnel;
- Laws and regulations related to equal employment opportunity and affirmative action; and
- Principles of supervision.

The ability to:

- Independently handle and/or direct teams working on more complex engineering and administrative matters and to evaluate alternate technical proposals in relation to soundness of engineering features, economic feasibility, and conformance to Department policies and accepted practices;
- Make comprehensive studies and investigations and prepare reports and recommendations about airport infrastructure, facilities and passenger systems;
- Represent the Department at conferences, meetings, and hearings;
- Deal tactfully and effectively with government officials, employees, and the public; and

- Apply sound supervision principles and techniques.

Minimum Requirements: Two years of professional experience at the level of an Engineer in the areas of civil, structural, mechanical, electrical, or communication in the planning, design, communication, construction, commissioning, activation, and facilities/asset management of engineering of airport/aviation projects or programs is required for appointment to the Senior Airport Engineer position.

Registration: Registration as a Professional Engineer with the California State Board of Registration for Professional Engineers is required for appointment to a Senior Airport Engineer.

License: A valid California driver's license is required.

Physical Requirement: Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds; good speaking and hearing ability.

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 limitations.

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.