

Senior Bridge Engineer

California State Personnel Board Specification

- **Schematic Code:** GL50
- **Class Code:** 3185
- **Established:** 06/11/1936
- **Revised:** 04/21/1992
- **Title Changed:** --

Definition

Under direction, as a first line supervisor to plan, direct and coordinate the design, maintenance, and construction of bridges, major structures or transportation related buildings; or, in a staff specialist capacity, to perform other difficult and complex work on specialized structure engineering projects or research studies; or, to serve as resident engineer on major structure projects; and to do other related work.

Typical Tasks

Plans, assigns, and checks work, gives instructions and assistance, maintains discipline and makes decisions in connection with the supervision of the work of a staff of designers and drafting technicians engaged in making complete designs and construction drawings of bridges, major structures, or transportation related buildings; serves as resident engineer on State-owned toll bridges other than the San Francisco-Oakland Bay Bridge; inspects State-owned toll bridges from a structural standpoint to determine safety for continued use; assists in planning of structural maintenance, repairs or alterations; reviews and supervises the checking of plans, designs, quantities and specifications and the writing of reports; makes preliminary design studies of various types of bridges, structures, or other transportation related buildings; makes original investigations in connection with the preparation of unusual or complicated designs; oversees structure projects being developed by local agencies and/or consultants; assigns resident engineers and inspectors to structure construction contracts; advises resident and assistant resident engineers concerning construction problems; assigns and directs the work of field parties on construction, investigation and structure surveys; supervises the securing of preliminary site data and budget information; makes and supervises the making of studies to determine the safe loading on existing structures; makes the final inspection and acceptance of contracts; as required, acts in a staff capacity and represents the department on complex special assignments and research studies.

Minimum Qualifications

Possession of a valid certificate of registration as a civil engineer issued by the California State Board of Registration for Professional Engineers. and Either I Experience: One year of engineering experience in bridges, major structures, or transportation related buildings performing the duties of an Associate Bridge Engineer or Transportation Engineer (Civil), Range D, in the California state service.

OR II

Broad and extensive (more than five years) transportation engineering experience, two years of which are in bridges, major structures, or transportation related buildings equivalent in responsibility to that of an associate level engineer in the California state service.

Knowledge and Abilities

Knowledge of: Methods, tools and equipment used in structure design and construction; methods of stress analysis for both statically determinate and indeterminate structures, of the determination and influence of deflection on the stresses in structures and of design practices and bridge or structure engineering as applied to transportation related structures; purposes, organization, and activities of the toll bridge operation and the Division of Structures in Caltrans; principles and techniques of personnel management and supervision;

department's Affirmative Action Program objectives; a supervisor's role in affirmative action, health and safety and labor relations programs and the processes available to meet their objectives.

Ability to: Do estimating and inspection work on all types of bridges, major structures or transportation related buildings, including foundations; plan, direct, and coordinate the work of a group of engineering and clerical assistants; analyze situations and adopt an effective course of action; prepare correspondence and reports; effectively contribute to the department's affirmative action objectives.

Special Personal Characteristics

Demonstrated supervisory ability and neat personal appearance.

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