

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE Senior Bridge Engineer (Supervisor)	DISTRICT/DIVISION/OFFICE DES/SP&I/ODTS/Structure Hydraulics &	
WORKING TITLE Senior Bridge Engineer	POSITION NUMBER 559-220-3185-xxx	EFFECTIVE

As a valued member of the Caltrans team, you make it possible for the Department to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Caltrans is a performance driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

GENERAL STATEMENT: Under the direction of a Supervising Bridge Engineer, the incumbent is responsible for supervising and directing the work of the Structure Hydraulics and Hydrology Branch in the Office of Design & Technical Services. This Branch is responsible for the development of hydraulic modeling and hydraulic reports for structures over waterways on the State Highway System.

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	
30% E	Schedules, assigns, directs, and coordinates the work of a design team in the development of hydrology/hydraulics reports relating to bridge hydraulic design and scour mitigation from advance planning, through final design, and to construction.
20% E	Communicates verbally and in written form with the Division of Engineering Services, Division of Maintenance, the Districts, and Local Counties or other agencies on issues related to project delivery; such as design changes, to ensure timely completion.
15% E	Reviews and ensures that technical guidance material, standards and research are integrated appropriately into the design process in accordance with departmental policies and state of the practice. This includes, but is not limited to: Construction Standards (Standard Plans, Standard Specifications, NSSP and others), AASHTO Specifications as adopted/amended by Caltrans, Bridge Design Manuals (including Memos-to-Designers, Bridge Design Aids, Bridge Design Details, Bridge Standard Detail Sheets and others) and others.

¹ ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned
MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others

- 15% E Included in this overall assignment is the first-line supervision of the Structure Hydraulics and Hydrology branch staff.
- 10% E Provide technical guidance at all waterway / highway interfaces in the State for project delivery activities during design and construction, with a focus on special design solutions for the more complex non-standard design situations.
- 10% M May serve as Technical Committee chair or member in the review, development, and recommendation of changes to design policies, procedures, and criteria, including impacts due to Climate Change or Tsunami conditions. Writes reports; analyzes and prepares correspondence and performs other duties as required.

SUPERVISION EXERCISED OVER OTHERS

Incumbent supervises a staff of Transportation Engineers (Civil) to develop hydraulic models and reports for bridges

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Employee must hold a valid California registration as a Professional Engineer.

Knowledge of:

Purposes, organization, policies, and procedures of the Department of Transportation and the Division of Engineering Services.

- Methods of hydraulic and hydrologic analysis and sediment transport required for various complex stream/structure interfaces and be familiar with existing engineering computer programs used in this analysis.
- Characteristics of methods, materials, and equipment used in structure design and construction of bridges and transportation-related structures and associated economics.
- Principles of project management including scope, schedule and budget.
- Principles of personnel management, including related Department guidelines such as the "Supervisor's Guide to Employee Conduct and Discipline".
- Consultant contracting process, including consultant selection and contract management.
- External financing of transportation facilities.
- Budgetary and resource matters; economics of bridge design and financing and handling of construction work by contract.

Ability to:

- Plan, direct and coordinate the work of a group of engineering and technical staff.
- Analyze technical situations accurately and recommend or adopt an effective course of action.
- Address an audience effectively; work effectively with Caltrans' districts, consultants, local government agencies and other transportation or waterway agencies.
- Initiate correspondence and prepare complete and comprehensive technical reports.

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- Be flexible and adaptive to changes.
- Work successfully with others to gain their respect and confidence.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

Has the professional responsibility to assure the safety of the traveling public at a cost that is an effective use of public funds.

- Errors in judgment and decisions could affect public safety or result in liability for the Department
- Structural failure can be catastrophic due to loss of life, disruption in goods movement, and/or delays to the traveling public.

PUBLIC AND INTERNAL CONTACTS

Employee maintains communication with all personnel assigned to his/her branch. He/she handles routine communications and holds meetings and discussions with other groups within the Division of Engineering Services, Division of Maintenance, the Districts, and Local Counties or other agencies, to resolve questions and problems concerning the project. He/she is frequently called on to deal with permitting agencies and consultants' employees of cities and counties, etc., regarding waterway structures design and details.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

Must be able to perform tasks utilizing a personal computer, and sit for long periods of time. Must be able to grasp the essence of new information and master new technical and business knowledge. Must be able to organize and prioritize workload. Must be able to concentrate in order to review and create documents and meet deadlines at times. Must be able to maintain cooperative relationships with others. May be required to lift/move/carry various types of portable equipment around the work site or when out in the field. Travel may be required to evaluate bridge site conditions.

WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office under artificial lighting. Employees may also be required to occasionally travel and work outdoors and may be exposed to dirt, noise, uneven surfaces under extreme weather conditions adjacent to highway traffic.

I have read, and understand the duties listed above and can perform them either with or without reasonable accommodation. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

Employee's Name

Signature

Date

I have discussed the duties with and provided a copy of this duty statement to the employee named above.

Supervisor's Name

Signature

Date

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