

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Sr Bridge Eng	OFFICE/BRANCH/SECTION DES/Structure Design	
WORKING TITLE Branch Chief	POSITION NUMBER 559-240-3185-001	REVISION DATE 06/01/2021

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

Under direction of a Supervising Bridge Engineer, a Senior Bridge Engineer (Supervisory), Branch Chief, will perform difficult and complex work on specialized transportation-related structures, engineering projects or research studies. This is a supervisory position with responsibility for managing project delivery relative to bridge design work. The incumbent must possess a valid certification of registration as a Civil Engineer issued by the California State Board of Registration for Professional Engineers.

CORE COMPETENCIES:

As a Sr Bridge Eng, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Managing Change:** Demonstrating support for organizational changes needed to improve the department's effectiveness; supporting, initiating, sponsoring and implementing change. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Pride)
- **Conflict Management:** Recognizes differences in opinions and encourages open discussion. Uses appropriate interpersonal styles. Finds agreement on issues as appropriate. Deals effectively with others in conflict situation. (Safety First, Cultivate Excellence - Engagement)
- **Fostering Diversity:** Capable of working with a diverse work group, including but not limited to differences in race, nationality, culture, age, gender, and differently able. Makes everyone feel valuable regardless of diversity in personality, culture, or background. Fosters a diverse culture to create best solutions. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Equity)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Planning and Results Oriented:** Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation)
- **Managing Performance:** Responsible for employee performance, setting clear goals and expectations, tracking progress against departmental and unit goals, providing feedback, and addressing performance issues promptly. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Equity)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	
25% E	Plans, directs, and coordinates the preparation of project-specific structure plans. Schedules and assigns bridge design work within his/her branch; monitors design progress to ensure completion on time and within allocated resources.

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POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

25%	E	Supervises staff consisting of engineers and detailers; counsels staff on appropriate work ethic and conduct; monitors attendance and work throughout; disciplines staff as necessary to maintain cohesive working unit. Counsels staff on effective work habits and guidelines for efficient, quality design. Develops staff knowledge and ability through training and work assignments. Recruits and hires new staff to fill vacancies.
25%	E	Reviews and approves structural transportation-related designs, both in-house and consultant design; reviews and comments on technical and project delivery guidance documents. Encourages innovation and keeps up on advances in the field of bridge engineering. Addresses technical and project delivery challenges through creative problem solving. Sets technical, design and project delivery policy and practices for branch within the framework of the policy and procedures of the Structure Design subdivision. Performs quality assurance on all projects and actively seeks to improve quality and efficiency of the project delivery process. Performs independent constructability, risk and quality review of each project delivered by the branch.
20%	E	Meets with and communicates verbally and in written form with other DES units, District design and project management staff on project delivery related issues. Such issues include project status, support resourcing, schedule, cost, risk management and quality management to ensure cost effective and timely project delivery. Acts as Task Manager for WBS Tasks assigned to Structure Design. Proactively reviews project scope and schedule for each project from task 150 through task 250, to ensure successful delivery. Proactively coordinates with other functional units within DES to meet delivery commitments and considers site and environmental restrictions and other project risks in developing the scope and schedule.
5%	M	Acts as a consultant and primary DES contact to the Districts, cities and counties on questions involving bridge and structural concerns. In this capacity, attends meetings with District staff to address technical and project delivery issues related to bridge design.

¹ESSENTIAL 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.

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

Directly supervises the work of Transportation Engineers and Structural Design Technicians. Supervisory duties include monitoring attendance, maintaining product quality, disciplining, etc. May perform as a lead worker to Senior Bridge Engineers, (Specialists) in the branch.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Employee must hold a valid certification of registration as a Civil Engineer. Must have education equivalent to graduation from college with major work in civil engineering with emphasis on structural work.

Knowledge of:

- Purposes, organization, policies, and procedures of the Department of Transportation and the Division of Engineering Services.
- Methods of design and construction of various types of bridges and transportation-related structures.
- Characteristics of materials and equipment used in structure design and construction of bridges and transportation-related structures.
- Methods of stress analysis for both statically determinate and indeterminate structures, methods for the determination of structure deflections, and the influence of the deflections on the stresses in structures.
- Design practices of bridge or structure engineering as applied to transportation-related structures.
- Factors affecting structure type selection, constructability, maintenance inspection and load rating of structures.
- Structure seismic design criteria and program, modern seismic design philosophy, factors affecting seismic behavior of bridges.
- Geotechnical conditions/parameters that affect the design of bridges and walls, and the potential impact of liquefaction and scour on bridge design
- Risk and quality management principles.
- Principles of project management including scope, schedule, and budget.
- 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.
- Principles of personnel management including related Department guidelines, such as the "Supervisor's Guide to Employee Conduct and Discipline."

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PM-0924 (REV 01/2022)

Ability to:

- Plan, direct and coordinate the work of a group of engineering and technical staff.
 - Perform engineering calculations and develop engineering sketches.
 - Perform estimating and inspection work on all types of bridges, major structures or transportation-related buildings, including foundations.
 - 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 financing reports.
 - Effectively write and review technical papers, memos, and reports.
 - Work successfully with others to gain respect and confidence.
 - Be flexible and adaptive to changes.
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RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

- 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 program delivery, lead to costly contract change orders, impact 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.
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PUBLIC AND INTERNAL CONTACTS

Employee maintains communication with all personnel assigned to his/her project, including bridge designers and staff from other DES functional units such as Geotechnical Services, as well as District project managers and designers. Communicates with outside agencies on project issues such as scope, cost and schedule. Examples of outside contacts include regional transportation agencies and local communities with a vested stake in a particular project. Works with maintenance personnel on routine and emergency issues as a technical advisor. Maintains communication with appropriate vendors and other industry representatives.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employees may be required to sit for long periods of time using keyboard and video display terminal. They may also be required to move large or cumbersome plans and diagrams from one location to another. May be required to lift/move/carry various types of portable equipment weighing up to 20 pounds around the work site or when out in the field. Will be required to travel to meetings statewide. Will be required to meet at construction sites and work in the field. Must be able to adapt to changes in priorities and complete tasks or projects with short notice. Must be able to work with others in a cooperative manner and treat others with respect.

WORK ENVIRONMENT

While at their base of operation, incumbent will work in a climate-controlled office under artificial lighting. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. Incumbent will be required to travel and perform fieldwork and will be exposed to dirt, uneven surfaces, extreme temperatures, noise, vibration, and odor associated with fieldwork. May work around bulky/heavy materials and equipment used in the vicinity of inspection areas. May also be exposed to the motoring public. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

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I have read, understand and can perform the duties listed above. (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 (Print)

EMPLOYEE (Signature)

DATE

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

SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE