

**CALIFORNIA DEPARTMENT OF TRANSPORTATION  
DUTY STATEMENT**

<b>CLASSIFICATION TITLE</b> Senior Bridge Engineer	<b>DISTRICT/DIVISION/OFFICE</b> 56 Maintenance/Structure Maintenance & Investigations – Office of Investigations (North)	
<b>WORKING TITLE</b> Senior Bridge Engineer (Supervisory)	<b>POSITION NUMBER</b> 913-622-3185-xxx	<b>EFFECTIVE DATE</b>

**As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work as scheduled; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.**

**GENERAL STATEMENT:**

Under the supervision of the Office Chief, a Supervising Bridge Engineer, the incumbent is responsible for supervising and directing engineering staff who perform routine and special field engineering investigations of existing bridge structures on the State and local highway networks, and reporting those investigations in a comprehensive written engineering report. The incumbent is responsible for the accurate and timely inspection reporting of the bridges within their designated area and reporting the findings in accordance with the National Bridge Inspection Standards. The incumbent provides quality assurance of the bridge inspection program through review of the engineers' report, provides training and performs bridge inspections with the engineers. The incumbent will be required to respond to various types of bridge emergencies, direct staff and coordinate with various Caltrans and outside units to affect emergency repairs. The incumbent provides technical assistance, planning and coordination for the Highway Maintenance-Structures Program (HM3), State Highway Operation & Protection Plan (SHOPP) and State Transportation & Improvement Program (STIP) as related to bridges in their assigned area. The incumbent will be required to act as lead expert in various fields relating to bridge inspection activities as directed by the Office Chief. The incumbent must possess and maintain a valid certificate of registration as a Civil Engineer in California, and a Class C California Driver License.

**TYPICAL DUTIES:**

Percentage Essential (E)/Marginal (M) <sup>1</sup>	Job Description
45% (E)	Supervise and direct engineering staff who perform routine and special field structural investigations of existing bridge structures on the State and local highway networks.
40% (E)	Provide quality assurance of the bridge inspection program through review of the engineers' reports. Perform bridge inspections with staff to assess

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<sup>1</sup> 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

skills, knowledge and individual training needs, while developing, coaching and training staff, through effective leadership. Delegate work assignments, appraise performance of subordinates, and identify and determine training needs.

10% (E) Provide technical assistance, planning, and coordination in support of HM3, SHOPP, and STIP programs; conduct peer reviews and resolve critical findings.

5% (M) Act as lead expert in various fields relating to bridge inspection activities as directed by the Office Chief. Respond to various types of bridge emergencies, direct staff, and coordinate with various Caltrans and outside entities to effect emergency repairs.

***SUPERVISION EXERCISED OVER OTHERS:***

The incumbent will supervise and direct a staff of several engineers who perform routine and special field structural investigations of existing bridge structures on the State and local highway networks, and reports the results of those investigations in a concise and comprehensive written engineering report.

***KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS:***

Must possess a thorough knowledge of the principles and procedures relative to the design, construction and maintenance of bridge structures, and be able to apply them on a variety of structure types that exist on both the State and local highway systems.

Must possess a thorough knowledge of the principles and techniques of personnel management and supervision.

The incumbent must possess the ability to effectively interact with various groups of people; produce sound, effective decisions during stressful situations and/or an emergency response. The incumbent must have the ability to create legible and accurate engineering field notes; prepare concise engineering reports; apply sound engineering judgment in field conditions and analyze factors affecting the safe load capacity of bridges; collect physical and statistical data in field conditions and accurately maintain that data in a comprehensive database; work independently and make decisions with a minimum of direction or supervision; travel and work throughout Northern California on a routine basis. Safely operate State vehicles and a variety of bridge inspection tools and equipment.

***CONSEQUENCES OF ERROR/RESPONSIBILITY FOR DECISIONS:***

Errors in judgment and/or decisions could directly affect public safety. Inaccurate, delayed or incomplete bridge investigation and reporting activities may result in a reduction of public mobility, increased maintenance/operations costs, inaccurate project scope, unnecessary delays in bridge rehabilitation or replacement projects and potential tort liability for the Department.

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***PUBLIC AND INTERNAL CONTACT:***

The incumbent must maintain oral and written contact with District and local agency maintenance operations, Division of Engineering Services, Office of Project Development Procedures and various Department offices and branches. The incumbent may be required to present the results of field investigations to Headquarters and District personnel. The incumbent may also be required to provide expert background and recommendations to technical committees in subjects relating to bridge maintenance and periodically attend, participate in or conduct public hearings when posting local agency bridges.

***WORK ENVIRONMENT:***

The work environment is split approximately 75% between a base of operation and 25% at various field locations throughout Northern California. Travel will be required, and the incumbent must be able to travel, operating a motor vehicle or utilizing commercial transportation. Travel might involve being away from the base of operations for significant amounts of time consecutively. While at their base of operation, the incumbent will work in a climate-controlled office under artificial lighting. While in the field, the incumbent is required to drive State vehicles and work outdoors sometimes at night. Outdoor work may expose the incumbent to: nocturnal animals such as snakes, bats or owls; outdoor exposure may include dirt, dust, loud noises, traffic, chemicals, uneven surfaces, plants, and varying extreme weather conditions and climates. While in the field, the incumbent may also be exposed to various physical conditions that exist around bridge structures, including working at heights, around water, in confined spaces, around traffic, in boats and on under bridge inspection equipment or lift equipment.

***PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS:***

The incumbent is required to make critical safety decisions in emergency conditions relative to bridge structural stability, with little supervision. Some job situations can be very stressful and the incumbent needs to be able to maintain composure and provide clear competent decisions. The incumbent must be able to participate in first aid/safety training and may be required to administer first aid in the field in the event of an injury.

Hearing and sight are both essential to job performance because the incumbent must be able to hear directions, traffic and equipment, and must see to perform their duties safely. The incumbent should be able to travel with and work closely with other engineers and act as a team member. The incumbent is required to sit for long periods of time while driving or using a keyboard and video display terminal.

A bridge inspection might require the incumbent to walk up or down a steep incline, climb fences as high as eight (8) feet and push or pull doors or scaffolding. Incumbent may be required to climb interior or exterior ladders, catwalks or scaffolding, and perform their inspection duties at heights as high as seven hundred (700) feet above water or land.

The incumbent is required to lift and operate bridge inspection tools and equipment weighing up to sixty five (65) pounds. These operations require grasping, fine manipulation, reaching overhead with

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