

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

CLASSIFICATION TITLE Transportation Engineer Tech	OFFICE/BRANCH/SECTION HQ/Maintenance/SM&I/Office of Specialty Investigations	
WORKING TITLE Underwater Bridge Inspection Diver	POSITION NUMBER 913-624-3175-918	REVISION DATE 12/12/2024

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 the supervision of the Branch Chief, a Senior Bridge Engineer in the Office of Specialty Inspections at Structure Maintenance and Investigations (SM&I), the incumbent is primarily responsible for: (i) performing underwater inspections of up to 200 in-service highway bridges per year in the capacity of an inspector (i.e. a diver or a standby diver) and/or a Team Leader, (ii) preparing written reports of results of underwater inspections, (iii) preparing for underwater inspections, and (iv) preparing daily activity reports for underwater inspections performed by consultants and acting as a Team Leader for underwater inspections performed by diving contractors. The detailed job duties are described in the Typical Duties section below. The underwater inspections will be primarily performed utilizing compressed gas surface-supplied diving but may require the use of other forms of diving and/or access such as: wade/probe, snorkel, or SCUBA. Diving in water known or suspected to be contaminated may be required.

The incumbent must possess and maintain an Association of Diving Contractors International (ADCI) entry level tender/diver certification or higher (expired certifications will be excepted but must be renewed upon hiring). Certifications in dry-suit, enriched-air (NITROX) and contaminated-water diving are preferred but not required.

The incumbent shall successfully complete the FHWA-NHI-130091 Underwater Bridge Inspection training course at its first delivery by Caltrans after being hired in this position.

The incumbent shall successfully complete the FHWA-NHI-130055 Safety Inspection of In-Service Bridges training course at its first delivery by Caltrans after being hired in this position.

The incumbent shall become certified as a Team Leader in accordance with the National Bridge Inspection Standards (NBIS), 23 CFR Part 650, § 650.309 (b) (1), as soon as possible after being hired in this position and maintain such certification thereafter.

The incumbent must possess a California Class C Driver's License. Possession of a California Class A commercial driver's license (CDL) is desirable but not required.

CORE COMPETENCIES:

As a Transportation Engineer Tech, 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. (Safety First, Cultivate Excellence - Engagement)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety First - Innovation)
- **Reliability:** Ability to demonstrate dependability in meeting commitments, and providing a consistent work product. Takes responsibility for individual actions in order to meet deadline demands. (Cultivate Excellence - Integrity)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Strengthen Stewardship and Drive Efficiency - Innovation)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Safety First - Engagement)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Safety First - Equity)
- **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. (Strengthen Stewardship and Drive Efficiency - Integrity)

ADA Notice

This document is available in alternative accessible formats. For more information, please contact the Forms Management Unit at (279) 234-2284, TTY 711, in writing at Forms Management Unit, 1120 N Street, MS-89, Sacramento, CA 95814, or by email at Forms.Management.Unit@dot.ca.gov.

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

- **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 - Engagement)
- **Thoroughness:** Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Cultivate Excellence - Engagement, Innovation)

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M) ¹	Job Description
40%	E	Perform underwater inspections of up to 200 in-service highway bridges per year primarily in the capacity of an inspector (i.e. a diver or a standby diver) and/or a Team Leader. May also work as a tender, manifold operator, dive supervisor or deck hand during the diving operations. Operate various size boats, trucks, and trailers before, during, and after the diving operations. Occasionally, perform routine, damage, in-depth, and special inspections of highway bridges in the capacity of an inspector and/or a Team Leader. The bridge inspections shall be conducted in accordance with the National Bridge Inspection Standards, the Bridge Inspector's Reference Manual, the Manual for Bridge Evaluation, the Underwater Bridge Inspection Manual, the SM&I Inspection Procedures Manual, the Caltrans Bridge Element Inspection Manual, and the SM&I Manual for Diving Safety. Prepare daily activity reports for underwater inspections performed by consultants. Act as a Team Leader for underwater inspections performed by diving contractors.
30%	E	Prepare for underwater inspections of up to 200 in-service highway bridges per year in the capacity of an inspector (i.e. a diver or a standby diver) and/or a Team Leader. At a minimum, the preparation shall include a review of: (i) the bridge elements to be inspected; (ii) the methods of inspection to be used; (iii) the bridge records, including: as-built plans, previous underwater, routine and hydraulic inspection reports, and underwater inspection plan; (iv) the diving, access and inspection equipment needed, (v) the safety procedures to be followed, and (vi) the traffic and waterway access coordination needed. Where necessary, initially develop and subsequently update the specific inspection procedures (inspection plan) for each bridge to be inspected and inventoried. Occasionally, prepare for routine, damage, in-depth, and special inspections of highway bridges. Maintain dive team vehicles, vessels and diving equipment in a state of readiness in accordance with Caltrans, Cal OSHA and manufacturers requirements, including updating equipment maintenance records. Maintain certifications required to perform dive equipment maintenance. Identify equipment budget needs, perform budget tracking, and perform all aspects of equipment acquisition. Perform handling and refilling of high pressure compressed gas cylinders.
20%	E	Prepare written reports of results of underwater inspections of up to 200 in-service highway bridges per year, which include the inspection findings, quantities and condition states of the elements and defects, maintenance work recommendations, and inventory data using a computerized Bridge Management System. Occasionally, prepare written reports of results of routine, damage, in-depth, and special inspections of highway bridges. Critical findings shall be identified, reported and managed in accordance with the SM&I Inspection Procedures Manual. The inspection reports shall comply with the National Bridge Inspection Standards, the Bridge Inspector's Reference Manual, the Manual for Bridge Evaluation, the Underwater Bridge Inspection Manual, the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges, the Caltrans Bridge Element Inspection Manual and the SM&I Inspection Procedures Manual.
5%	E	Participate in Annual Diver Basic Safety Training, First-Aid Training, Annual Diving Physical Exams, and Bridge Inspector Refresher Training.
5%	M	Perform miscellaneous engineering or administrative functions related to bridge maintenance, as directed by the Branch Chief or the Office Chief.

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

This position does not supervise other employees.

ADA Notice

This document is available in alternative accessible formats. For more information, please contact the Forms Management Unit at (279) 234-2284, TTY 711, in writing at Forms Management Unit, 1120 N Street, MS-89, Sacramento, CA 95814, or by email at Forms.Management.Unit@dot.ca.gov.

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

The incumbent must be competent in the policies, procedures and methods used for the inspections and maintenance of highway bridges. They must be thoroughly familiar with the causes and mitigation of scour damage to bridge substructures. They must have intermediate computer skills including word processing, spreadsheets and database entry.

The incumbent should have basic mechanical ability and experience in the maintenance and repair of diving equipment.

The incumbent must be able to make accurate and effective decisions during stressful situations, such as during an emergency response, diving accidents or difficult dive conditions.

The following abilities are essential for inspection work: (i) apply sound judgment in identifying damage and deterioration of bridge elements or components that may significantly affect the structural capacity, stability, serviceability, or safety, (ii) take neat notes and prepare accurate engineering reports, (iii) collect precise physical and statistical data during inspections, and enter and maintain that data in a Bridge Management System (BMS), (iv) work independently and make decisions with minimum direction or supervision, and (v) safely drive State vehicles and vessels and operate a variety of bridge inspection tools and equipment including under bridge inspection trucks and lift equipment.

The incumbent must be thoroughly familiar the National Bridge Inspection Standards, the ACDI International Consensus Standards for Commercial Diving and Underwater Operations, and the OSHA, Cal-OSHA and US Coast Guard regulations as applied to commercial diving operations.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent will be required to make decisions regarding the structural condition and load-carrying capacity of highway bridges. Errors in judgment or decisions could endanger the safety of the traveling public and/or cause reduction of mobility. Incomplete or delayed bridge inspections or reports may result in unidentified structural damage or deterioration, increased maintenance/operations costs, inaccurate project scope, unnecessary delays in bridge rehabilitation or replacement projects and potential tort liability for the Department. Errors in judgment and/or lack of knowledge regarding diving safety could have life-threatening consequences for the incumbent and other divers.

PUBLIC AND INTERNAL CONTACTS

The incumbent will have written and verbal contacts with staff from various Caltrans districts and divisions, other State departments, local agencies, FHWA, US Coast Guard, and the diving and water safety personnel of local law enforcement. They may be required to discuss or present critical findings, inspection results and work recommendations to Caltrans and Local Agency staff.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent will be required to work on boats, docks and barges in varying sea states and weather conditions. They may be required to lift, carry, wear and operate equipment and tools, which weigh as much as 65 pounds. The inspection activities may include diving, wading, floating, probing, grasping, fine manipulation, reaching overhead, twisting, lifting, squatting, crouching, balancing or bending. During inspections, the incumbent may need to walk up or down steep inclines, climb fences as high as 4 feet, push or pull doors or gates, climb ladders and scaffolding, and enter confined spaces.

The incumbent must pass a hyperbaric physical exam prior to being offered a position and also on an annual basis. Both are at the expense of Caltrans. The ability to consistently be physically able to dive is required to perform essential typical duties. Initial immunization and verification of continuing immunity against Hepatitis-A virus (HAV), Hepatitis-B virus (HBV), and Tetanus are required as a condition of employment. While working in the role of a diving inspector or standby diver, the applicant must possess basic swimming ability as determined by a standard swim test.

Hearing and sight are essential for job performance because the incumbent must be able to see traffic, equipment, obstructions, gages, controls, warning signs and warning lights, and hear traffic, equipment, directions and warning sounds in order to perform their duties safely.

The incumbent should be highly motivated, have a positive attitude and have the ability to effectively lead other members of the team in a demanding and challenging work environment.

The incumbent may need to make critical decisions in emergency situations involving employee or bridge safety, with or without supervision or direction. They must participate in first aid/safety training and may be required to administer first aid in the field in the event of an injury.

The incumbent can perform underwater diving only if they are certified as a Diver by Caltrans or in accordance with the ADCI Consensus Standards for Commercial Diving and Underwater Operations. The incumbent can perform dive supervision only if they are certified as a Diving Supervisor by Caltrans or in accordance with the ADCI Consensus Standards for Commercial

ADA Notice

This document is available in alternative accessible formats. For more information, please contact the Forms Management Unit at (279) 234-2284, TTY 711, in writing at Forms Management Unit, 1120 N Street, MS-89, Sacramento, CA 95814, or by email at Forms.Management.Unit@dot.ca.gov.

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

Diving and Underwater Operations. The incumbent must participate in the SM&I Annual Basic Diver Safety Training.

WORK ENVIRONMENT

The incumbent will work in the office in Sacramento and at various bridge locations throughout California. The time split between the office and field activities is dictated by the workload and is expected to fluctuate.

The incumbent must be able to travel to the field locations using State vehicles, personal vehicles or commercial transportation. Travel may be overnight and away from their base of operations for extended periods of time. The position may require up to 20 weeks of inspection trips during the year. Inspection trips are typically one-week long and, occasionally, two-weeks long. In addition, the incumbent may need to respond to emergency situations related to bridge damage. Overtime may be required.

While in the office, the incumbent may be required to work in a climate-controlled environment under artificial lighting. While in the field, they will work outdoors, on boats, around and/or under water, with exposure to highway and marine traffic, construction activities, loud noises, dust, dirt, chemicals, uneven surfaces, steep slopes, animals, plants, and a variety of sometimes extreme weather conditions and climates that occur in California.

The underwater inspections are performed in a physically and emotionally challenging environment with potential hazards related to the diving operations. To mitigate these hazards, the Department provides the divers with the necessary training and equipment to safely perform their work. Working depths are up to 100 feet of sea water yet average 30 feet state-wide.

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.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

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