

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE Senior Mechanical Engineer, Caltrans (Specialist)	OFFICE/BRANCH/SECTION DES/Structure Design/OEMWWW	
WORKING TITLE Staff Specialist, Machinery	POSITION NUMBER 559-240-2178-xxx	EFFECTIVE DATE July 2014

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:

This is the technical specialist level of professional engineering work in Caltrans. Under the direction of the Office Chief, a Supervising Mechanical & Electrical Engineer, incumbent performs a wide variety of professional engineering work in either an office or field setting and is responsible for providing mechanical engineering staff support to the Maintenance and Special Projects Branch Chief in meeting delivery and service commitments for transportation facilities. A California certificate of registration as a Mechanical Engineer is required. A valid California driver license is required. Travel is required. Duties include but are not limited to:

TYPICAL DUTIES:

Percentage		Job Description
30%	E	Provides staff work in the form of recommendation to the Office Chief in the areas of mechanical machinery and equipment technology associated with storm water pumping plants, movable bridges, vehicular tunnels and other transportation related facilities.
25%	E	Evaluates, develops, and implements Caltrans policies for the design, construction, operation, and maintenance of mechanical machinery and equipment.
15%	E	Provides consultation to designers, resident engineers, District maintenance personnel, liaison engineers and consultants on special problems relating to mechanical machinery and equipment
15%	E	Develops and prepares standard plans and specifications used in California contracts. Writes reports, analyzes data and prepares correspondence. Initiates and oversees research dealing with the subject of mechanical machinery and equipment as it relates to efficiency, reliability, and state of the art design. Works with Translab and Equipment Shop personnel in developing criteria for the design, testing and implementation of new standards for machinery systems.
15%	M	Provides training as required. As part of quality assurance protocols, accompanies and evaluates staff training during field inspections. Responds to emergencies as a result of equipment or facility failures.

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

No direct supervision. May act as lead over the activities of various engineering and technical personnel.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Requires a high level of experience, competence and background in Mechanical Engineering as it relates to design, specification development, construction, operation, and maintenance of mechanical machinery and equipment.

Requires ability to communicate, both orally and in writing, with Caltrans employees at all levels, Caltrans consultants, FHWA, Cal-OSHA, Coast Guard, California Highway Patrol Officers, American Association of State Highway Transportation Officials (AASHTO), Uniform Building Code (UBC) officials, State and Local officials, and the general public concerning Caltrans policies and procedures for the design, construction, operation, and maintenance of mechanical equipment and systems.

Requires ability to conduct research and implement findings.

Requires ability to prepare and check plans, specifications and cost estimates for mechanical systems.

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Requires ability to conduct and evaluate construction and maintenance inspections and prepare reports and correspondence related to mechanical systems.

Requires ability to analyze situations and adopt an effective course of action

Requires ability to work collaboratively with individuals, groups, and teams to efficiently deliver quality products and services.

Registration in the field of Mechanical Engineering is required. Must be literate in Computer-Aided Drafting and Design (CADD).

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Responsible for the development of Caltrans' policy and standards relating to the design, construction and maintenance of mechanical machinery and equipment. Also responsible for related research and input to national and state standards in this field. Standards established will affect the operation, safety, and economy of mechanical machinery and equipment associated with highway facilities in California.

Errors in judgment and decisions could affect public safety or result in liability for the Department. Failures could be catastrophic due to public and employee safety, disruption in goods movement, or delays to the traveling public.

PUBLIC AND INTERNAL CONTACTS

Maintains communication with all personnel assigned to various projects. Meets with and discusses job progress and issues with other branches, offices, divisions and districts at the rank-and-file level, senior level and office chief level. Communicates with outside agencies and departments concerning permits and approvals. Examples of these agencies include the FHWA, Cal-OSHA, U.S. Coast Guard, California Highway Patrol, American Association of State Highway

Transportation Officials (AASHTO), Uniform Building Code (UBC) officials, Division of the State Architect, local utilities, State and Local officials. Most outside agency contacts are at the working level and the supervising or manager level. Communicates with construction personnel, at the rank-and-file level, senior level and office chief level. Communicates with contractors and suppliers at the working level such as sales person and engineers and also at the supervising level. Communicates with maintenance personnel on routine and emergency issues, at the working level, lead worker level and at the manager level.

Attends and conducts meetings and discussions with Caltrans technical committees and national organizations. Responds to many requests for information relating to mechanical machinery and equipment used on movable bridges, storm water pumping plants, tunnels, tubes, maintenance stations, equipment shops, safety roadside rest areas, truck weigh and inspection facilities and other transportation related facilities.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Incumbent must be able to:

- Move, lift or carry for a medium distance up to 40 pounds (for example, a tool case or test equipment);
 - Move or remove utility and manhole covers with tools (up to 100 pounds);
 - Climb and descend ladders up to 20 feet in length at a time for total distances of up to 90 feet;
 - Work on elevated catwalks and landings;
 - Work in confined spaces, near operating heavy machinery and with energized low voltage (less than 600 volts) power systems;
 - Work along highways and near construction sites;
 - Fly in commercial aircraft routinely throughout the State;
 - Drive a State automobile for up to eight hours a day.
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WORK ENVIRONMENT

While at his or her base of operation, the incumbent will work in a climate-controlled office under artificial lighting. Travel and work outdoors is required and incumbent may be exposed to dirt, noise, uneven surfaces and/or extreme heat or cold.

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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
