

**POSITION DUTY STATEMENT**

PM-0924 (REV 9/2013)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Senior Transportation Engineer - Civil (Sup)	HQ/DRI/ Safety Innovation & Cooperative Research	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Chief, Safety and Infrastructure Research Branch	913-338-3161-913	07/03/2014

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 general supervision of the Chief, Office of Safety Innovation and Cooperative Research (Supervising Transportation Engineer), the incumbent serves as the Senior Transportation Engineer - Civil (Supervisor) responsible for the management and performance of safety and infrastructure research. Incumbent is responsible for development of knowledge for the use of new equipment, materials, processes, and maintenance techniques to improve the safety (operational and worker), durability, or extend the useful life, of transportation facilities with minimal adverse impacts to the environment. The incumbent will provide the engineering products needed by Caltrans to improve the safety, reliability, and cost-effectiveness of the transportation network. The incumbent is also responsible for guiding the development of automated equipment and methods for construction, asset management, surveying, right-of-way, and maintenance activities. The incumbent will also manage some Caltrans interagency agreements for research activities, such as the agreement with Advanced Highway Maintenance & Construction Technology Research Center (AHMCT) at UC Davis.

The incumbent will develop and recommend research project budgets and recommend projects to be included in the Caltrans's Research Portfolio for Maintenance, Equipment, and Right-of-Way/Land Surveying. The incumbent will be responsible for consensus building for development and execution of research partnerships, management of in-house and contract research, and working with Caltrans staff to assure dissemination and implementation of final research results within Caltrans policies and guidelines.

The incumbent will manage staff researchers, perform in-house research, and manage contract research, such as research done by the Advanced Highway Maintenance & Construction Technology Research Center at U.C. Davis. The work scope includes management of technical staff; proposal development; work plan development; project performance; project management; technology development and evaluation; report preparation and/or review; training and technology transfer. Additionally, the incumbent will provide staff work, as necessary, to the Office of Safety Innovation and Cooperative Research management and Research Project Technical Committees for projects within their area. The incumbent may also participate in related professional activities including development of technical publications and involvement in technical committees of professional societies.

**TYPICAL DUTIES:**

Percentage		Job Description
Essential (E)/Marginal (M) <sup>1</sup>		
30%	E	Direct and supervise the research activities of specialized technical staff in topics related to safety engineering, maintenance applications, surveying, equipment management, and right-of-way activities. Also responsible for research in the automation/mechanization for construction, asset management, surveying, right-of-way, and maintenance activities.
30%	E	Manage external research projects, and/or perform in-house research projects, including fulfilling day-to-day contract management responsibilities, and serving as liaison with project steering committees.
20%	E	Implement technology transfer of improved practices within Caltrans, including development of policies, specifications, guidelines and training materials.
10%	M	Provide project concepts for, and serve as liaison for partnerships in, the development of the research program.
10%	M	Provide program management support in the form of annual work plans; budget change proposals; program business/strategic plan; staffing needs; etc. to the Office.

**ADA Notice**

For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 654-6410, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

# POSITION DUTY STATEMENT

PM-0924 (REV 09/2013)

---

<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.

---

## SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

The incumbent will direct and supervise the work of a multidisciplinary technical staff in broad research areas.

---

## KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

- The incumbent must possess registration as a professional civil engineer in California and must have completed a Bachelors Degree in Engineering.
  - Graduate work in Engineering is highly desirable.
  - Experience in practices related to safety engineering and automated equipment, particularly within Caltrans, is highly desirable.
  - Should have experience using Caltrans Standard Plans, Specifications, and Caltrans Manuals (Maintenance, Design Manual, CAMUTCD, Land Surveying, etc.).
  - Must have knowledge of worker safety research methods and equipment.
  - Knowledge and experience with the following is highly desirable: Caltrans traffic control methods, snow-fighting, fleet operations, surveying, equipment automation, data analysis, design and testing of new materials including composites, and maintenance techniques.
  - Knowledge or experience in conducting, administering and managing research is highly desirable.
  - The incumbent should be knowledgeable in developing and administering projects and contracts and must be familiar with Caltrans's purpose, mission, vision and goals.
  - Must have knowledge of the principles and techniques of personnel management and supervision; supervisor's role in safety, labor relations, equal employment opportunity and the processes available to meet these program objectives; and have the ability to supervise a multidisciplinary technical staff.
  - In addition to technical, contract management and supervisory skills, the incumbent must be able to communicate effectively, both orally and in writing.
  - The incumbent must be able to perceive trends, needs and problems; integrate new discoveries into Caltrans's practices; and establish research directions that lead to successful solutions for Caltrans.
  - The needs and problems must be clearly defined with solutions properly presented for appropriate implementation within the framework of Caltrans's resources.
- 

## RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

This incumbent is responsible for managing research for safety, asset management, surveying, right-of-way, and maintenance activities. Also responsible for managing research in the automation/mechanization for construction, asset management, surveying, right-of-way, and maintenance activities. With a multimillion-dollar budget involved, this activity must be managed properly to see that expenditures are cost-effective and appropriate. Furthermore, the incumbent must perform research within the approved time and budget to comply with Caltrans and FHWA requirements.

Inappropriate decisions that delay or preclude completion of safety, asset management, surveying, right-of-way, and maintenance research for Caltrans can result in lost opportunities to improve the transportation infrastructure, safety, and maintenance procedures. The ultimate consequences include higher costs and reduction in both safety and trip quality for the traveling public. Furthermore, inappropriate decisions can result in the loss of resources, funding support, Federal reimbursement, and/or legislative support for the Program.

---

## PUBLIC AND INTERNAL CONTACTS

The incumbent has frequent contact with research customers: Caltrans managers, staff, other public employees (Federal government and other states as well as cities and counties), and the general public. The incumbent will also act as a peer to partners in research (other government and industry representatives), and provide technical direction of, and contract management for, academic personnel, consultants, and other contract principal investigators.

---

## PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employee will be required to drive to and work at various locations throughout California. Employee may be required to stand for long periods of time, when on research project sites; walk on slopes or uneven terrain. When at their base office setting, employee may be required to sit for long periods of time using a keyboard and video display terminal. In the course of the employee's work, must maintain a cooperative working relationship within the working environment, with

# POSITION DUTY STATEMENT

PM-0924 (REV 09/2013)

---

peers, subordinates, and contractors and their employees.

The incumbent will occasionally be required to assist in the use of electronics laboratory test equipment (e.g., oscilloscope, multimeter, power supply, etc.). The incumbent must be able to grasp the essence of new information and master new technical and business procedures; must have the ability to multi-task, adapt to changes in priorities, and complete tasks or projects with short notice; develop new insights into situations and apply innovative solutions to make operational improvements; and be able to develop and maintain cooperative working relationships. The incumbent must be able to consider risks, and initiate actions that involve deliberate risk to achieve a recognized benefit or advantage.

---

## WORK ENVIRONMENT

The incumbent is required to travel and work outdoors and may be exposed to dirt, noise, odors, dust, extreme weather conditions, uneven surfaces, and/or extreme heat or cold while doing field research. The incumbent must be able to work with and around a variety of materials, construction, and testing equipment. While at the base of operation, the incumbent will work in a climate-controlled office under artificial lighting.

---

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