STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Transportation Engineer, Civil	DES / SD / OEMWW	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Transportation Engineer, Civil Range D	559-240-3135-xxx	6/12/14

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 position exists in the Office of Electrical, Mechanical, Water & Wastewater Engineering. This is the journey level of engineering work in Caltrans. Under the direction of a Senior Sanitary Engineer, incumbents perform a wide variety of engineering work in either an office or field setting; as incumbent progress in experience they will be assigned more difficult work and may function as a lead person over the activities of various engineering and technical personnel. A California certificate of registration as a Professional Engineer is required.

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M)[1]	Job Description
40%	E	Performs and seals as a Professional Engineer complex professional engineering design and prepares complex plans associated with transportation facilities. Design duties typically consist of conducting site visits to determine existing field conditions, using engineering principals, methods, codes, design guides, publications, equipment and computers to create engineering drawings showing the information necessary for constructing facilities requested by the customer. These drawings include layouts, typical sections, cross-sections, elevations, details and schematics. Customers include public and internal contacts defined below. Typical facilities include water and wastewater treatment systems, pumping plants, movable bridges, vehicular tunnels, safety roadside rest areas, highway maintenance stations, equipment repair shops, truck weigh and inspection stations and toll structures.
20%	E	Conducts routine and emergency maintenance investigations for transportation facilities. Investigations are performed to ensure the safety, reliability and proper operation of the facility and its systems and to preserve and protect the investment in the facility and its systems. Investigations consist of field inspections, troubleshooting, testing and providing technical engineering consultation for Caltrans maintenance personnel. Investigations are followed with reports and correspondence that outline the condition of the facility and include recommendations and estimates for necessary repairs.
15%	E	Performs construction engineering for transportation facilities that includes providing technical engineering consultation for Caltrans construction field personnel, reviewing contractor shop plans and submittals and conducting field inspections and tests of completed work to ensure compliance with contract documents. Reviews and amends the contract plans to reflect changes made and approved during construction by Caltrans construction field personnel. These plans become the official as-built drawings for the facility.
10%	E	Prepares and seals as a Professional Engineer written specifications using standard special provisions, manufacturer's data and departmental guidelines and standards. Specifications are combined with the plans discussed above to form the construction documents package. The package is used for competitive bidding and construction of the project. Prepares detailed cost estimates to ensure the cost of the project is within budget. Estimates are made using industry publications, historical data and estimating guides.
15%	M	Develops and seals as a Professional Engineer design standards and details using engineering principals, methods, codes, design guides, publications, equipment, computers and previous projects to create standard engineering drawings for constructing typical facilities requested by customers. Customers include public and internal contacts defined below. Checks plans, specifications and cost estimates for in-house designed and consultant designed transportation facilities to ensure conformance with Office and Department standards.

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[1]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

This position does not supervise, but may function as Project Engineer directing the work of a team of engineering, architectural and technical personnel.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of:

- Wastewater (sanitary) engineering methods, materials, equipment, codes and safety procedures used in the design, construction and maintenance of wastewater treatment and disposal systems
- Water supply (potable) engineering methods, materials, equipment, codes and safety procedures used in the design, construction and maintenance of water supply systems
- Computer-Aided Drafting and Design (CADD)
- Wash water systems
- Storm water grading and drainage systems

Ability to:

- Prepare and check plans, specifications and cost estimates for all types of wash water systems, storm water grading and drainage systems, water and wastewater work
- Conduct construction and maintenance inspections and prepare reports and correspondence related to wash water systems, storm water grading and drainage systems, water and wastewater installations
- Analyze situations and adopt an effective course of action
- Prepare correspondence and make effective oral and written reports

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Employee has 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 public safety or result in liability for the Department.

Failures could be catastrophic due to loss of life, disruption in goods movement, or delays to the traveling public.

PUBLIC AND INTERNAL CONTACTS

Maintains communication with all personnel assigned to the various projects. Meets with and discusses job progress and issues with other branches, offices, divisions and districts usually at the rank-and-file level, although sometimes at the senior level. Communicates with outside agencies and departments concerning permits and approvals. Examples of these agencies include the State Fire Marshal, State Health Departments, The Division of the State Architect, Regional Water Quality Control Boards, local Fire Departments and Local gas, water, sewer and electric utilities. Most outside agency contacts are at the working level although sometimes they are at the supervising or manager level. Communicates with construction personnel, usually at the rank-and-file level, although sometimes at the senior level. Communicates with contractors and suppliers usually at the working level such as sales person and engineers although sometimes at the supervising level. Communicates with maintenance personnel on routine and emergency issues, usually at the working level or lead worker level, although sometimes at the manager level.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employee 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

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• Drive a State automobile for up to 8 hours a day

WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office under artificial lighting. Employees may also be required to travel and work outdoors and may be exposed to dirt, noise, uneven surfaces and/or extreme heat or cold.

A valid California driver license is required.

Travel is required.

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