

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE Senior Transportation Engineer	DISTRICT/DIVISION/OFFICE 59/DES/METS-GS/OGDN	
WORKING TITLE Senior Transportation Engineer	POSITION NUMBER 559-323-3161-002	EFFECTIVE Aug 3, 2015

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: Under the direction of the Chief, Geotechnical Design North (GDN), the Senior Transportation Engineer directs staff in fulfilling the Department's geotechnical needs primarily within District 5, personally providing direct technical support on difficult geotechnical problems. In addition, the Senior Transportation Engineer will direct his/her staff in providing geotechnical workload leveling services with other senior transportation engineers and senior engineering geologists within Geotechnical Services. Directs a staff of 4 to 8 transportation engineers, geologists and engineering technicians, including acting as lead worker for Senior Specialists. Additionally, this position is responsible for reviewing work completed by consultants for quality assurance and final approval of the work product. Duties include, but are not limited to:

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
45% (E)	Supervises staff in the conduct of geotechnical investigations including site reconnaissance, literature review, exploration, sampling, laboratory testing, analysis, recommendations, specifications and preparation of geotechnical reports; assists District Project Development and Structures Design to incorporate geotechnical recommendations into the plans and specifications; reviews draft designs for conformity to geotechnical recommendations. Ensures task management principles are followed in the branch.

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

- 20% (E) Supervises staff in providing geotechnical support to District, Structures Construction and Maintenance units to monitor geotechnical conditions exposed during emergency events or construction, and to assess instances of unsatisfactory performance related to geotechnical issues.
- 20% (E) Supervises staff oversight of the geotechnical aspects of externally financed projects including review of consultant generated geotechnical reports and meeting with local entities to facilitate incorporation of the Department's geotechnical needs into the projects.
- 10% (E) Fulfills typical supervisory responsibilities, involving such areas as implementing the Illness and Injury Prevention Program and preparing Individual Development Plans.
- 5% (M) Work on special projects designated by the Office Chief.

SUPERVISION EXERCISED OVER OTHERS

Exercises technical and administrative supervision over a staff of engineers, engineering geologists and engineering technicians. May act as a lead worker over employees in the Engineer, Geologist, Transportation Engineering Technician, Materials and Research Engineering Associate, or Foundation Driller classifications.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Satisfactory performance in this position requires:

- A thorough knowledge of soil mechanics principles; soil behavior under various stress paths and stress conditions; laboratory and field soil and rock testing methods and procedures; site exploration and sampling techniques and equipment; and geotechnical field instrumentation methods and practices.
- Ability to perform and review geotechnical engineering calculations. Must be capable of analyzing lab and in-situ test results and understand the significance and application of the results.
- Knowledge of ground improvements, slope stability analysis, landslide mitigation, cuts and excavations, embankments, and minor structure foundations.
- Knowledge regarding design of shallow and deep foundations for bridges. Including seismic analysis of existing foundations and seismic recommendations.

- Knowledge regarding various types of retaining wall structures.
- Knowledge of foundation construction methods, including specifications, and quality control practices.
- Knowledge of emergency response work such as identifying slope/embankment stability concerns, making recommendations and coordinating with District and Maintenance.
- Pile driving and pile testing experience, including compression/tension capacities, gamma-gamma logging, cross-hole logging and shaft inspection.
- Knowledge of the Caltrans Project Development Process.
- Ability to work independently and to make sound engineering decisions on limited available information and to develop accurate estimates of the scope and time required for conducting geotechnical and geologic investigations.
- The ability to communicate effectively, both in written and oral form.
- Ability to supervise a diverse, multi-disciplinary staff and to interact with individuals and groups from the Department, governmental agencies and private consulting firms and the public.
- Advanced course work directed specifically toward geotechnical engineering and soil mechanics.
- Registration as a Civil Engineer in California.
- Must possess a valid California driver's license.

This position requires substantial analysis of engineering and engineering geology data involving geotechnical engineering related to specific site conditions. The incumbent must recognize potential geotechnical problems and reliably assess their probable effects on design study options and constructability, accurately determine the major factors leading to specific field problems, and ensure that viable geotechnical options are developed to effectively deal with the project.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

This position requires effective and timely response in all aspects of preparing and reviewing geotechnical design reports developed by Department personnel and private consultants. Delays in response to requests for services or failure to detect omissions and/or inadequacies in design recommendations could affect public safety, result in tort liability, and result in contract delays, construction difficulties, and sub-standard performance of completed facilities and loss of public funds

PUBLIC AND INTERNAL CONTACTS

This position requires frequent contact with personnel in the Department concerning engineering and project management issues related to in-house developed projects and projects developed by engineering consultants. Incumbent will also have regular communication with engineering consultants, contractors, manufacturers, vendors, local agencies, and other State personnel.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

The incumbent will be required to visit or work on field and construction sites, possibly transport heavy equipment and materials, work with exploratory equipment and collect field data. Landslide and undeveloped sites are often rugged and heavily vegetated. Construction site surfaces are often uneven, may have open excavations and may be located on steep slopes. Weather conditions can vary between icy, slippery and wet to hot and dry. The incumbent must have the ability to traverse these sites and withstand exposure to the aforementioned environments for short to moderate periods of time.

While in the office, the employee may be required to sit for long periods of time using a keyboard and video display terminal. They may also be required to move large or cumbersome plans and diagrams from one location to another.

The incumbent will be responsible to ensure that assigned tasks are carried out in a professional, safe, and exacting manner and in accordance with existing policy, specifications, rules, work planes and guidelines.

The incumbent must actively work to develop and maintain cooperative working relationships, have a positive and friendly attitude and strive to promote branch teamwork.

WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office setting under artificial lighting. When employee is required to travel and work outdoors, the incumbent may be exposed to dirt, noise, wet or dry conditions, extreme heat or cold, and the need to traverse rugged terrain. This position may require travel outside the geographical area of assigned responsibility for periods of several days. The incumbent also may be exposed to some of the most beautiful scenery that California has to offer.

I have read, and understand the duties listed above and can perform them either with or without reasonable accommodation. (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's Name

Signature

Date

I have discussed the duties with and provided a copy of this duty statement to the employee named above.

Supervisor's Name

Signature

Date