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CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT

CLASSIFICATION TITLE Transportation Engineer Civil	DISTRICT/DIVISION/OFFICE DES/GS/Office of Geotechnical Design North	
WORKING TITLE Transportation Engineer Civil	POSITION NUMBER 559-323-3135-XXX	EFFECTIVE

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 a Senior Transportation Engineer, the Transportation Engineer (Civil) provides technical expertise, support and recommendations on geotechnical topics as may evolve, commencing with the project planning phase and progressing through the design, construction, and operation phases of the State Transportation System.

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M)[1]	Job Description
40% (E)	Conducts geotechnical studies including site exploration, direction of laboratory testing, analysis and preparation of reports presenting recommendations, designs, and specifications including consideration of facility constructability. These studies include and are not limited to the areas of expansive soils, mechanically stabilized walls and embankments, tieback retaining walls, geotechnical earthquake engineering including earthquake response, settlement and stability of embankments, stability of earth and rock slopes, soil nail walls, and design of structure foundations (shallow and deep).
35% (E)	Develops designs and specifications to utilize various shallow and deep ground improvement techniques including prefabricated band drains, soil cement mixing, stone columns and various grouting techniques; geosynthetics as reinforcement elements; and additives such as lime, portland cement, and fly ash.
15% (E)	Reviews for both technical content and conformity to Department policies and procedures, consultant-prepared and Department-prepared materials and geotechnical reports, plans, specifications, special provisions, and estimates for the geotechnical design and construction aspects of a variety of Department and special funded projects. Prepare and manage consultant contract task orders.
10% (E)	Provides support to Division of Construction when problems arise with geotechnical aspects of the construction work.

This position requires periodic travel to field sites for periods of several days.

- ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned
- MARGINAL FUNCTIONS are minor tasks of the position that can be assigned to others

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

Supervision is not a requirement of this position but the incumbent may act as a leadworker over employees in the Transportation Engineer (Civil), Geologist, Transportation Engineering Technician, Materials and Research Engineering Associate, or Foundation Driller classifications.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

- 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. Knowledge of earthwork and foundation construction methods, specifications, and quality control practices.

- The ability to acquire additional and new knowledge of geotechnical engineering through additional course work or self-study.

- The ability to communicate effectively, both in written and oral form.

- The ability to interact with individuals and groups from the Department, governmental agencies, and private consulting firms.

This position requires considerable analysis of engineering 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.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCE OF ERROR

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 substandard performance of completed facilities.

PUBLIC AND INTERNAL CONTACTS

This position requires frequent and regular contact with personnel in the Department concerning engineering matters related to in-house developed projects and projects developed by engineering consultants. The 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 work on field and construction sites, 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 long periods of time.

While in the office, employees may be required to sit for long periods of time using a keyboard and video display terminal.

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 plans and guidelines.

The incumbent must grasp the essence of new information and master new technical and engineering knowledge; must have the ability to multi-task, adapt to changes in priorities, and complete tasks or project meeting strict deadlines with, at times, short notice.

The incumbent must possess the ability to develop and maintain cooperative working relationships and have a positive and friendly attitude and a willingness to learn.

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. The incumbent also may be exposed to some of the most beautiful scenery that California has to offer.

I have read, understand, and can perform the duties listed above. If you believe you may require accommodation, please discuss this with the hiring supervisor.

_____ _____

Employee Name (please print) Employee Signature Date

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

_____ _____

Supervisor Name (please print) Supervisor signature Date