

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Senior Engineering Geologist	OFFICE/BRANCH/SECTION DES/GS/Office of Geotechnical Design - West	
WORKING TITLE Senior Engineering Geologist	POSITION NUMBER 559-315-3751-XXX	REVISION DATE 05/28/2026

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under the direction of the Chief, Office of Geotechnical Design – West, the Senior Engineering Geologist provides direct technical expertise on geologically complex projects. The specialist provides support to Districts and Division of Engineering Services partners in development of transportation projects by providing expertise and documents as necessary to support Planning, Design, Construction, Maintenance, and Legal. Duties include planning and executing investigations (desktop and field), conducting engineering geologic work and geotechnical evaluations, developing designs, and preparing preliminary and final Geotechnical Design Reports, Foundation Reports, and Plans, Specifications and Estimates (PS&E). The specialist provides oversight of consultants and service contractors working on projects funded by the Department and/or local agencies. The specialist often functions as the lead person of a team as necessary to complete a project or task and represents the Office in meetings with internal and external partners. The Senior Engineering Geologist must be a licensed Professional Geologist and will be experienced in Project Development and the discipline of Engineering Geology as related to projects on the State Highway System. A Certified Engineering Geologist license is preferred. The position is focused on the Last Chance Grade project on Route 101 in District 1. The specialist works collaboratively with the project lead Senior Transportation Engineer for the Office and the project development team will provide oversight of the consultant geotechnical design team.

CORE COMPETENCIES:

As a Senior Engineering Geologist, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Employee Excellence - Innovation, Stewardship)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety - Integrity)
- **Ethics and Integrity:** Demonstrated concern to be perceived as responsible, reliable, and trustworthy. Respects the confidentiality of information or concern shared by others. Honest and forthright. Conforms to accepted standards of conduct. (Employee Excellence - Integrity)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Safety - Collaboration)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Employee Excellence - Collaboration, Stewardship)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Employee Excellence - Innovation)
- **Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Employee Excellence - Collaboration)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Employee Excellence - Innovation)
- **Thoroughness:** Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Employee Excellence - Integrity, Stewardship)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	

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50%	E	Using engineering geology works with the District in determining what geotechnical studies are needed for the project. Performs technical reviews of the project geotechnical reports prepared by the primary consultant. Reviews investigations including site reconnaissance, literature review, engineering geologic work, site exploration, sampling, laboratory testing, analysis, recommendations, designs, specifications, and preparation of geotechnical design and foundation reports for tunnels, landslide mitigation, subsurface drainage facilities, shallow and deep foundations, roadway embankments and cuts, retaining structures, slope stability, soil improvements, and other roadway and/or structure related transportation features. Ensures the reports comply with standards. Must effectively incorporate the geotechnical studies into the project development. Coordinates with the Senior Transportation Engineer Specialist that is the lead person for the Last Chance Grade project for the Office.
20%		Providing technical support in the areas of engineering geology related to tunnels, landslides, rockfall mitigation (e.g. flexible rock fall fences, drapery systems), and rock mechanics. This support includes the investigation of, evaluation of, and preparation of recommendations regarding: slope instabilities; cut slopes in rock and rock-like materials; landslides, rockfall potential; rock mechanics; design of structure foundations (shallow and deep); groundwater occurrence and movement; material borrow and disposal sites; rippability; geologic and site seismicity hazard assessments; writing and review of geotechnical reports, recommendations and specifications; and making written and verbal presentations of study results. Occasionally serving as the technical lead in supporting emergency projects.
15%	E	Assists the Office lead for the project and the District in managing design, construction and independent review contracts for the Last Chance Grade project. Provides additional support in coordinating work among Caltrans and the consultants.
10%	E	Provides technical support in the area of landslides and rockfall to other office staff and provides input to geotechnical studies. This is achieved through one-on-one meetings, peer reviews and calculation checks for specific projects.
5%	M	Participates in Geotechnical Services technical teams, as well as quality improvement and process improvement teams

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

Supervision is not a requirement of this position but may act as a lead worker over employees in the Transportation Engineer (Civil), Engineering Geologist, Transportation Engineering Technicians, or Foundation Driller classifications. Occasionally the incumbent may serve as a team leader on a project-specific basis.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Satisfactory performance in this position requires:

- Thorough knowledge of geologic processes, concepts, and principles; engineering geologic concepts and principles; hydrogeologic and geophysical concepts and principles. Knowledge in the areas of landslides and tunneling.
- Knowledge and ability to interpret stereo aerial photographs and different types of remote sensing imagery; conduct geologic and geophysical exploration; perform geologic mapping and drafting; interpret field and laboratory test data and ability to incorporate that information into an analysis pertaining to site requirements.
- Extensive knowledge and experiences in developing and conducting geotechnical site investigation, including site readiness, filed exploration, drilling, testing and sampling, CPT, geotechnical instrumentations, geophysics, laboratory testing, and evaluation and use of geotechnical investigation results in transportation projects.
- Knowledge of geotechnical related construction of transportation projects, including construction methods, specifications, testing and quality control practices.
- Knowledge of Caltrans' project development, delivery and management processes, procedures and standards. Knowledge of Caltrans Geotechnical Services' Quality Management System and Quality Management Plans.
- Ability to accurately develop and estimate scope, schedule and cost for conducting geotechnical investigation for transportation projects.
- Ability to work independently, making sound decisions based on possibly limited available information.

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- Ability to communicate effectively, both in written and oral form.
 - Ability to interact effectively and professionally with individuals and groups, both internal and external.
 - Ability to travel to and work at construction sites and other field conditions throughout California is required.
 - Ability to conduct oversight and review of consultant-prepared and Caltrans-prepared geotechnical reports, plans, specifications, special provisions for foundation investigations, earthwork design, construction and design-build projects.
 - Ability to perform and review geotechnical and geological calculations. Must be capable of analyzing lab and in-situ test results and understand the significance and application of the said results. Must recognize potential geotechnical problems and reliably assess their impact on design and construction options.
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RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES 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 and loss of public funds. May be called upon to make on-the-spot decisions for construction problems or emergency repairs.

PUBLIC AND INTERNAL CONTACTS

The position requires frequent contact with Department personnel. Incumbent will also have regular communication with geology and engineering consultants, contractors, manufacturers, vendors, local agencies, and other State personnel. Incumbent may be required to make public presentations.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent will be required to work at field and construction sites, move and transport heavy equipment and materials, work with exploratory equipment and collect field data. Hiking up or down steep terrain will be required for assessing geohazards such as landslides as undeveloped sites that are often rugged and heavily vegetated and may contain ticks, poison oak, critters, or wood and rock debris.

Field and construction site surfaces are often uneven, may have open excavations and or located on steep slopes or may be located within a lane closure adjacent to nearby traveling vehicles. Working in existing urban/rural freeway and highway environments may contain trash or debris as well. Weather conditions can vary between icy, slippery and wet to hot and dry. The incumbent must have the ability to navigate these sites and withstand exposure to the adverse conditions for long periods of time.

Must be able to transport for long distances packing material and/or use field engineering equipment such as, but not limited to hand augers, surveying equipment, slope inclinometer equipment and core boxes (full and empty). Other physical requirements of the job include the ability to transport equipment listed above (weighing 50 lbs or less), reach overhead, push or pull, twist, climb, balance, bend, crouch, squat, crawl, and perform fine manipulation. Hearing and sight are both essential to job performance because the incumbent must be able to hear and see directions, traffic, equipment, and other warnings or hazards thereby allowing the incumbent to perform duties safely. Corrected hearing is acceptable and corrected sight must meet the CA DMV minimum visual acuity requirement. Night vision must be good for safety when working after dark since then incumbent will be required to work at night and under artificial light.

While in the office, employees will be required to remain stationary for long periods of time using a keyboard and computer.

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 geotechnical 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, have a positive, productive, and friendly attitude, and maintain a willingness to learn while exposed to a variety of work environments.

WORK ENVIRONMENT

While at the base of their operation, employees will work in a climate-controlled office setting under artificial lighting. When employee is required to travel and work outdoors, the incumbent will be exposed to dirt, noise, wet or dry conditions, extreme heat or cold, and the need to traverse rugged terrain. This position will require travel outside the geographical area of assigned responsibility for periods of several days. As a statewide organization, DES adjusts to periods of fluctuating workload to

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successfully deliver projects. Incumbent will be required to travel and perform fieldwork and will be exposed to dirt, uneven surfaces, extreme temperatures, noise, vibration, and odor associated with fieldwork. Will also be exposed to the motoring public. DES employees will be given temporary assignments on DES projects throughout the State as workload demands.

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.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

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)

Timothy J. Pokrywka

SUPERVISOR (Signature)

DATE