

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE Material and Research Associate	DISTRICT/DIVISION/OFFICE D7-Construction/Acceptance Testing Facility	
WORKING TITLE Material and Research Associate – Acceptance Lab	POSITION NUMBER 907-506-3381-xxx	EFFECTIVE

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 regularly and on time; 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 direction of a Senior Transportation Engineer, the incumbent performs the testing and analysis on construction materials such as Soils, Aggregates, Asphalt and concrete Samples. The incumbent is required to possess current certification in the California Test Methods. The incumbent attends Pre-Construction Meetings, performs equipment calibration, assists the Senior Transportation Engineer with inventory control.

The incumbent should be capable of obtaining the certification in the California Test Methods and the certification in the Fundamentals of Radiation Safety and Nuclear Gage Operation to work in the D7 Materials Field Testing unit when directed by the Senior Transportation Engineer. The duties of the incumbent working in the D7 Materials Field Testing unit should include the following:

Attends Pre-Construction Meetings, performs equipment calibration, assists the central testing office with inventory control, and may serve in the capacity as an Assistant Radiation Safety Officer under the direction of the Radiation Safety Officer and supervision of the Senior Transportation Engineer.

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
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45% (E)	Perform technical testing of soils, aggregates, asphalt concrete (lime treated and Untreated), Portland Cement Concrete and base materials. These tests include all California Test Methods Utilized at the Construction Acceptance Testing Facility necessary to accept Hot Mix Asphalt concrete pavement, Portland cement concrete pavement and Aggregates used in roadway construction.
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25% (E)	Receive, assign, schedule, record and process samples for required tests on soils and aggregates for earthwork, sub-base, base, asphalt concrete, Portland cement and treated soils. Performs the testing of concrete beams, air content testing for concrete, sampling of soils and construction materials. Monitors testing operations to assure that technical physical test are performed in accordance with the California Test Methods and that test results are accurate.
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- 10% (E) Analyzes system flow procedures for sample flow through the testing facility to promote safety and efficiency. Establishes priorities for sample testing. Responsible for initiating District testing, utilizing the SRL and Headquarters material testing services for split sample correlation testing and determines causes for any discrepancy.
- 20% (E) Calibrates, and maintains records and monitors inventory of acceptance testing facility testing equipment in compliance with quality assurance program guidelines and California Test Methods requirements. Prepare reports, charts and graphics about materials analyzed in the laboratory. Take questions from field construction offices and other public customers. Assists in budgeting and supply acquisition for the Acceptance Testing Facility.

SUPERVISION EXERCISED OVER OTHERS

May be asked to be a Lead Worker

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

- Knowledge of materials used in state transportation projects.
- Knowledge of California Test Methods and equipment used in making physical test.
- Knowledge of how materials are placed, sampled, and tested.
- Knowledge of construction contract documents including plans and specifications.
- Knowledge of the Standard Specifications and Special Provisions relating to the properties of various types of materials and material testing.
- Knowledge of the basic principles of mathematics, chemistry and applied sciences as it applied to Civil Engineering; mechanics; properties and uses of engineering construction materials.
- Knowledge of testing frequencies shown in the Construction Manual, in the QC/QA procedures, or as outlined in the Special Provisions.
- Ability to interpret material test data and visually recognize basic material properties
- Ability to work independently, make clear recommendations, prepare concise reports/documentation, and work constructively with others.
- Analytical determination of material acceptability and interpretation of material problems.
- Ability to establish and maintain friendly and cooperative relations with those contacted in the course of work, and to communicate effectively.
- Ability to apply sound judgment in a test situations and the ability to analyze factors capable of affecting test result.
- The ability to travel to meetings within California.
- The ability to operate office equipment: i.e., computers, telephone, fax and copier machines
- Ability to maintain good safety practices.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

Must be able to effectively follow directions and testing procedures, failure to adhere to this may result to inaccurate test results that may subject the state to undue delays and to incur added expenses.

PUBLIC AND INTERNAL CONTACTS

Public and internal contact is very minimal. Contact could happen mostly when receiving or shipping materials.

PHYSICAL, MENTAL AND EMOTIONAL EQUIREMENTS

Physical activities vary and may be for a lengthy period of time. Requires manual dexterity to operate testing equipment and handle material coming into the laboratory. Due to the facility testing working environment, temperature fluctuations are common; must be capable to handle these fluctuations. Must be able to sustain mental activity to read, write and input test results. Must be able to maintain emotional control during conflicts with coworkers and maintain cooperative working relationship with them. Employees may be required to move large samples of materials weighing up to 60 pounds from one location to the other. Prolonged standing while running test may be required.

WORK ENVIRONMENT

This position requires the incumbent to work independently and to work both indoors and outdoors. While majority of the work is indoors. Outdoor activity may include but not limited to moving laboratory samples from the sample loading dock area into the laboratory facility, prepare testing samples, saw cut the samples. May exposure to loud noise, weather conditions of extreme heat and/or cold and may exposure to dust. May require working in nights, weekends and may require working at other acceptance laboratory facility within District 7 to meet the operational needs. Indoor activity may exposure to extreme heat, dusty environment, odor and contact with solvents.

I have read and understand the duties listed above and can perform them with/without reasonable accommodation. (If you believe you may require reasonable accommodation, please discuss this with the 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 name) **DATE**

SIGNATURE **DATE**

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

DATE

SUPERVISOR (print name)

SIGNATURE **DATE**