CALIFORNIA DEPARTMENT OF TRANSPORTATION
POSITION DUTY STATEMENT

CLASSIFICATION TITLE Transportation Engineering Technician	OFFICE/BRANCH/SECTION Central Region Construction 501, District#	
WORKING TITLE FIELD LAB / ARET	POSITION NUMBER xxx- 501-3175- __ __ __	EFFECTIVE DATE _____

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 supervision of the Area Construction Senior Transportation Engineer, incumbent performs various complex technical field / laboratory testing of highway construction materials and office tasks relating to transportation construction. Daily assignments will be under the direction of the Resident Engineer. Encumbent will be required to obtain and maintain certifications of competency for test methods as required in performing these duties. A California Driver license is required.

TYPICAL DUTIES:

Percentage
E=Essential
M=Marginal

40% (E)

Perform sampling and testing of construction materials including but not limited to the following: Sand Equivalent test, Cleanness Value test, Gradation Sieve Analysis, Compaction test with nuclear gauge for soil and asphalt concrete, Moisture Content, and Concrete Modulus of Rupture (concrete beam testing). Collects data, samples construction materials and performs materials testing per California Test Methods, standard procedures and coordinates with contractor's personnel.

35% (E)

Asphalt concrete and portland cement concrete plant inspection as required to ensure contractor contract compliance. Plant inspections shall be performed in accordance with the applicable California Test Methods, ASTM (American Society of Testing and Materials, and standard procedures.

15% (E)

Makes engineering inspections to ensure compliance with plans and specifications and to monitor the contractors work and progress. Inspects work as to the quantity, quality, and methodology. Records Manpower and equipment usage along with pertinent details. Prepares documentation of the work performed. Performs inspection of finished products and calculation of units completed for payment and monitors Contractor's operations to ensure compliance with safety order.

10% (E)

Documentation of all sampling, testing and inspection results for contract records. Documentation shall be provided in accordance with the required California Test Methods and standard procedures.

SUPERVISION EXERCISED OVER OTHERS

None. May act in absence of the lead person for a short duration. May serve as a lead for functional guidance in training and assisting less experienced staff.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Must have knowledge of methods, materials, tools, manuals, and equipment used in highway and bridge construction and maintenance work; methods of proportioning and handling portland cement concrete and bituminous surfacing materials and the handling of asphaltic oils and emulsions; highway grading, construction and maintenance; conventional state-of-the-art computer applications to transportation engineering work.

Must have the ability to make accurate mathematical calculations; make sound decisions in the implementation of contract plans, specifications and various engineering activities; evaluate work methods and traffic conditions closely, both before and during the work, to assure safety; analyze situations regarding operational features and design concepts; demonstrate the potential to assume progressive technician journey level responsibility; organize/arrange data to produce effective work products without repetitious direction; and possess interpersonal skills necessary to be an effective team member. Incumbent is expected to perform a variety of work with a certain degree of independence.

The assignments are generally routine and covered by explicit instructions in various manuals. Various assignments will require some degree of analysis. Incumbent must be able to understand test results and test parameters and how those parameters can alter test results and interpret the suitableness of in situ materials in accordance with contract specifications.

Ability to: read and write English at a level required for successful job performance; inspect construction work and enforce compliance with plans and specifications; analyze situations accurately and take effective action; prepare reports. Must be able to communicate effectively with others including Department staff, technical and professional level staff of outside agencies, contractor's personnel and members of the public regarding construction projects.

Computer experience preferred.

Must have the ability to evaluate work methods and traffic conditions closely, both before and during the work, to assure safety.

Must be able to understand and follow instructions provided, both oral and written, analyze plans and specifications accurately and take effective action. Must have the ability to become certified in many of the materials tests.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCE OF ERROR

Failure to understand and failure to incorporate appropriate standards, requirements and policies into work product may result in expensive waste of time and materials, cause additional work and project delays, and could result in excessive construction contract claims.

Acceptance or rejection of a contractor's materials and work is usually based on results of materials tests. It is imperative that tests are performed in accordance with accepted procedures. Errors in materials testing could cause the contractor undue cost and delay. Highway design is dependent on materials testing and errors in testing and interpretation of test results increases construction costs, cause defective highways, possible injury and/or damage, and potentially expose the State to liability issues.

PUBLIC AND INTERNAL CONTACTS

Contact with Department staff, technical/professional level staff of outside agencies, contractor's personnel and members of the public regarding construction projects.

PHYSICIAL, MENTAL AND EMOTIONAL REQUIREMENTS

Must possess the ability to work outdoors in cold and hot weather. Must possess the ability to work on uneven ground, climb, lift, carry, bend, squat, kneel, crouch, reach, pull, push, grasp, sit, stoop, crawl, and repetitive use of extremities. Must be able to lift and transport variety of objects that are less or equal to 50 pounds and large quantities of sampled materials. Ability to work indoors under artificial light. Ability to work in lab conditions. Incumbent must be physically capable of repetitive motion activities used in test methods.

The workload is subject to frequent, substantial, and unexpected changes. Ability to travel. Overtime and/or flexible hours may be required. Must be able to organize and prioritize. Must be able to concentrate, formulate effective strategies, be multi-tasked, adapt to changes in priorities, and complete task or projects with short notice. Ability to resolve emotionally charged issues reasonably and diplomatically. Must be able to develop and maintain cooperative working relationships.

Must be able to understand and follow instructions provided, both oral and written, analyze plans and specifications accurately and take effective action. Must have the ability to get certified in many of the materials tests.

Incumbent is responsible for his/her actions, decisions, quality of work, and proper use of State time, equipment and materials. Improper performance of duties and/or failure to adhere

to established policies, procedures and guidelines could lead to adverse action and possible termination.

WORK ENVIRONMENT

Job will have exposure to equipment, machinery, heat, cold, dust, dirt, gas, chemicals, fumes, outdoor conditions, lab equipment, indoor conditions, humidity, and high decibels of noise. Hard hat, safety vest or approved safety shirt, safety boots and safety glasses must be worn at all times in the lab and field, no exceptions. While at the Construction office employees will normally work in a climate-controlled office under artificial light. However due to periodic problems with the heating and air conditioning, the building temperature may fluctuate. Lab work may not also be in a climate-controlled lab. Workload may subject employee to frequent changes of shift, frequent changes of work hours and workdays, and geographic transfer. Travel is required. A valid California driver's license is required. Vacations may be restricted during peak times. Overtime may be required.

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.)

I have also read and understand the Deputy Directive titled "Information Technology Use Standards".

My supervisor has reviewed the policy and procedure I must follow when I am not able to report to work. I understand the policy and procedure.

EMPLOYEE (Print) DATE

EMPLOYEE (Signature) DATE

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

SUPERVISOR (Print) DATE

SUPERVISOR (Signature) DATE

July 2002