

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE Transportation Engineer, CT/Civil	OFFICE/BRANCH/SECTION North Region Engineering - Design North (Eureka)	
WORKING TITLE Designer	POSITION NUMBER	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 direction of a Senior Transportation Engineer, incumbent perform various transportation engineering functions in the Region. Incumbent is subject to a rotation and may be assigned a variety of positions in the office or field environment based on annual workload and seasonal needs. May work in a field environment during the Construction season (late Spring through early Fall) as necessary to complete assigned tasks. Incumbent may also be rotated to work in Design as workload and delivery commitments require.

Travel is required. Possession of a valid drivers license is desirable.

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M) ¹	Job Description
45%	E	While working in Design, incumbent develops, coordinates and review engineering reports, plans, estimates, and specifications for highway, freeway, and transportation facility projects. Review and produce projects involving layouts, profiles, typical sections, title sheets, super elevation diagrams, drainage, construction details, grading, utilities, traffic striping, stage construction, detours, and quantity summaries. Utilize Caltrans Design's computer applications to accomplish tasks.
40%		While working in North Region Construction, the incumbent will inspect contractors' construction activity to ensure compliance with the project plans and specifications. Develop and assist in the preparation of, drafting and preparing specifications, Contract Change Orders, contract estimates, and various documents and reports involved in the construction of engineering projects. Review plans, prepare cost estimates and agreements, determine costs and coordinate relocation of utility facilities. Assist with reviewing Critical Path Management (CPM) schedules. Make field investigations and laboratory analysis of materials being used on construction projects. Makes controlled tests and checks performance of materials such as: soils, aggregates, cement, asphalt, concrete, and other materials. Analyzes and approves materials incorporated in nonstandard major structures. Evaluates damage for all types of transportation facilities. Performs tests on construction materials to determine their compliance with the Standard Specifications applicable to the year the job was bid. Performs compliance inspections of Asphalt Concrete (AC) Plants and Portland Cement Concrete (PCC) plants during construction projects ensuring compliance with plans and specifications of the construction project. May provide verification for QC/QA program. Assists in documenting information used for the resolution of claims being brought against the State by the contractor.
10%	E	Performs field investigations and laboratory analysis of materials being used on construction projects. Performs controlled tests and checks performance of materials such as: soils, aggregates, cement, asphalt, concrete, and other materials to ensure compliance with the Standard Specifications. Assist in the analysis and approval of materials incorporated in non-standard major structures. Assist in evaluating damage for all types of transportation facilities. Performs compliance inspections of Asphalt Concrete (AC) plants and Portland Cement Concrete (PCC) plants during construction projects and ensure compliance with plans and specifications of the construction projects. May provide verification for QC/QA program.
5%	M	Performs miscellaneous inspection duties and nonprofessional engineering duties as assigned on various active projects. Produces meeting minutes, maintains project files, attends training, special reviews, handles telephone inquires, attends public workshops, develops other staff, attends staff

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meetings and interprets new requirements.

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

None. May act in a lead worker capacity.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Must have knowledge of basic principles of physics, chemistry, and mathematics as applied to civil engineering; transportation facility planning and design principles. The knowledge of engineering surveying, methods, materials, tools, and equipment used in construction and maintenance of transportation facilities, and the methods of proportioning and handling PCC and asphalt concrete. The handling of asphaltic oils and emulsions, testing of materials, computer application to transportation engineering; factors which influence the impact of highways and other transportation facilities on the environment; principles and practices involved in utility relocation. Must be able to understand basic design engineering principles; make accurate engineering calculations, ability to research and compile data and prepare calculations for a variety of routine transportation improvement projects, prepare accurate daily diaries and construction records.

Must have the ability to do mapping and drafting and make neat and accurate computations and engineering notes and prepare reports. Prepare designs, plans and specifications for projects and perform basic drafting; inspect construction work and determine if it meets specification requirements; evaluate and implement utility relocation plans; prepare basic correspondence and reports; communicate effectively orally and in writing.

Must be able to analyze situations accurately, identify potential conflicts, and adopt an effective course of action; review project schedules and determine appropriate level and timing of review; recognize issues that are significant and implement an effective course of action.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Responsible to make accurate engineering calculations; take effective action to avoid delays; make sound decisions in the interpretation of contract plans and specifications. Omissions in plans and reports could lead to unnecessary change orders, claims, and delays; errors in judgment could result in a design project of lesser quality, which could increase project construction costs or increase the Department's exposure to tort liability.

PUBLIC AND INTERNAL CONTACTS

Contact with Region and District staff, contractors and their employees, and engineering consultants.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Incumbent may be required to stand for long periods of time, walk on slopes or uneven terrain, move and transport bags of material samples to Materials Labs. Ability to travel and work in various locations throughout the North Region.

Incumbent must maintain cooperative working relationships within the working environment.

Must be able to establish and maintain a professional and cooperative relationship with those contacted in the course of the work, such as with Region and District functions, contractors and their employees, and engineering consultants, in order to transmit or obtain relevant engineering information. Must be able to guide project teams to issue resolution and be able to build consensus within teams.

WORK ENVIRONMENT

When at their base office setting, employee may be required to sit for long periods of time using a keyboard and video display terminal. When in the office, either a construction field office or in a design branch, incumbent will work in a climate-controlled environment with artificial lighting.

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When in construction, the incumbent will be subject to work at various locations throughout North Region Construction. Temporary assignment away from one's "headquarter location" may be required. May be required to work at night. Will be subject to noise, odors, dust, and extreme weather conditions. Incumbent must work with and about a variety of materials, construction and testing equipment.

Travel is required. Possession of a valid drivers license is required when operating a state-owned vehicle.

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.)

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)

SUPERVISOR (Signature)

DATE