

CLASSIFICATION TITLE Transportation Engineer Tech	OFFICE/BRANCH/SECTION District 03/North Region Division of Project Development	
WORKING TITLE Transportation Engineering Technician	POSITION NUMBER 927-200-3175-XXX	REVISION DATE

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

GENERAL STATEMENT:

Transportation Engineering Technician can be tasked in several engineering functions in the region. Based on annual workload and seasonal needs, the incumbent may be assigned by Caltrans to a variety of positions in an office or field environment. The incumbent TET is permanently assigned to the North Region Project Development (NRPD) and will be under the direct supervision of a NRPD, Senior Transportation Engineer, and may receive direction from a Project Engineer (Lead Worker). When the incumbent TET is temporarily assigned in North Region (NR) Construction, the incumbent will be under the direct supervision of a NR Construction, Senior Transportation Engineer, and may receive direction from a Resident Engineer (Lead Worker). In either environment, the incumbent will perform various transportation engineering tasks. Travel to project sites will be required. Possession of a valid Driver's License is required when operating a state owned or leased vehicle.

CORE COMPETENCIES:

As a Transportation Engineer Tech, 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. (Climate Action - Innovation, Stewardship)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Employee Excellence - Innovation, Integrity, Pride)
- **Reliability:** Ability to demonstrate dependability in meeting commitments, and providing a consistent work product. Takes responsibility for individual actions in order to meet deadline demands. (Employee Excellence - Collaboration, People First)
- **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. (Employee Excellence - Collaboration, Pride)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Equity - Equity, People First)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety, Equity, Prosperity - Stewardship)
- **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. (Equity - Collaboration, Equity)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Employee Excellence - Integrity, Pride)
- **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)

TYPICAL DUTIES:

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

POSITION DUTY STATEMENT

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50%	E	When working in NRPD the incumbent will prepare project designs, plans, maps, estimates, specifications and reports under the direction of the engineer using computer programs and the latest Computer Aided Design and Drafting (CADD) software on the Caltrans engineering workstation. Gathers and analyzes technical information as a team member for the design of transportation projects. Performs mathematical calculations related to plans, maps, and estimates (quantities and costs). Assist in the preparation of roadway alignments, profile grades, superelevation, drainage facilities and other geometric features. Performs drafting of all types of plans, maps, working drawings and detailed drawings involved with transportation project contract plans, boundary line maps, as-built maps and utility conflict maps. Analyzes utility relocation plans as submitted by outside agencies and ensures data is retained in the Statewide Utility Database using Bentley Map. Act as the quality assurance technician for the branch, responsible for the accurate and efficient set up and delivery of project plans, maps, and estimates; prepares related reports and correspondence. Act as trainer for the branch with regard to the accurate and efficient set up and delivery of project plans, maps, and estimates; in that plans and maps are in conformance with the Plans Preparation Manual. Obtain and utilize the latest updates of the Plans Preparation Manual and drafting standards from HQ Division of Design and the CADD/GIS Support Office. Checks plans, maps, and estimates for completeness accuracy and conformity to standards. Attend project development team meetings, safety and constructability review meetings. Perform field work at project locations for design site investigations, utility verification, coordination and potholing.
40%	E	When working in North Region Construction the incumbent will make inspections of construction projects. Ensure compliance with plans and specifications, collect engineering data, assist in drafting and prepare specifications, change orders, contract estimates, and other documents and reports involved in the construction of projects. Check engineering calculations for accuracy; assist in the preparation of and processing of Extra Work Bills, checking against the Resident Engineers and Assistant Engineers' diaries, verify hours and dollar amounts against diaries, make field investigations and laboratory analysis of materials being used in construction projects and advise Resident Engineer of problems or situations on project sites.
10%	M	Perform special technical studies, investigations, and transportation engineering surveys or road inventories: prepares related reports and correspondence.

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

This position does not supervise or act in a lead worker capacity; however responsibilities include a leadership role in the CAD and CADD technology aspects of project development within the design branch.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of: methods, materials, and equipment used in construction, surveying, and maintenance of transportation facilities; standards of alignment, grade of highways and other transportation facilities. Incumbent must have extensive knowledge of Computer Aided Drafting and Design software, the Highway Design Manual and the Caltrans Plans Preparation Manual, and knowledge of word processing and spreadsheet software.

Ability to: prepare plans, and estimates for construction or maintenance of transportation facilities; make accurate, neat, and concise engineering calculations, documents, and correspondence; use Computer Aided Design and Drafting (CADD) software, word processing and spreadsheet software, access and extract information from databases, make nonprofessional engineering decisions; perform drafting and mapping. Work with others cooperatively in a project team relationship; communicate effectively, both written and oral, with supervisors, fellow workers, and others. Must have the ability to incorporate new procedures or techniques and be able to receive instruction from the transportation engineer supervisor, leadworker, or designer on a continuous basis.

Analytical Requirements: must be capable of understanding transportation-engineering problems; must have a solid understanding of Geometry and Trigonometry; must understand traverse computations by conventional calculations and by computer applications. Must be able to obtain and analyze information from field survey notes and computer aided design programs; using and processing this information into earthwork quantities. Must know how contract item quantities are computed, and know the method of payment. Must be familiar with safe field review practices.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for the timely initiation and prosecution of project development tasks assigned and that all work complies with all applicable manuals, circular letters and directives. The incumbent is required to coordinate work with Headquarters, other Regions/Districts, their functional units, as well as other involved departments.

POSITION DUTY STATEMENT

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Failure to diligently prosecute the above may delay projects, increase cost, and result in a less than satisfactory product.

PUBLIC AND INTERNAL CONTACTS

At all times this assignment requires working effectively with other people. This includes personnel at levels within the North Region, other Districts, Headquarters, local agencies, FHWA, private industry, and the general public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employees will be required to sit for long periods of time using a keyboard and video display terminal. Employee must be congenial and tactful when dealing with others while effectively and cooperatively accomplishing tasks. Frequent telephone interaction is common and necessary. Employees will also work under field conditions, which will entail walking on uneven terrain under variable weather conditions.

WORK ENVIRONMENT

While working in the NRPD office, the incumbent will work in a climate-controlled office under artificial lighting. There will be periodic field trips to project sites, travel to meet with agencies, the public, and for training classes.

During the construction season, the individual may be loaned to construction to work as a construction inspector or materials tester, or in surveys. Incumbent may be required to live away from their permanent residence during the workweek.

When working outdoors, incumbent may be exposed to dirt, noise, uneven surfaces, and/or extreme heat or cold. During field work, use of heavy duty clothes and boots is required. Periodic overtime work and out of town overnight travel may be required. Travel may require the use of State supplied vehicles that vary in size.

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

SUPERVISOR (Print)

SUPERVISOR (Signature)	DATE
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