

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

<u>CLASSIFICATION TITLE</u> TRANSPORTATION ENGINEER TECHNICIAN	<u>DISTRICT/DIVISION/OFFICE</u> 02/MAINT./OFFICE OF ROADSIDE MAINT.	
<u>WORKING TITLE</u> Transportation Engineering Technician	<u>POSITION NUMBER</u>	<u>EFFECTIVE</u>

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 general direction of the Senior Transportation Engineer for the Office of Roadside Maintenance, and the functional direction of a Transportation Engineer, the incumbent serves as a Engineering Technician performing a variety of duties including Culvert Inspection, Project Design, and, Construction Inspection. Job assignments may be subject to rotation, changes in work shift, work hours and workdays, and may require fieldwork and travel on short notice.

TYPICAL DUTIES:

- 60% (E) Conducts culvert inspections in the field throughout the District utilizing data collectors and a remote camera. Must be able to identify culvert maintenance strategies and the types of culvert defects that lead to structural failure. Must be able to identify the condition of the culverts on the State highway system with regard to any failure of the roadbed itself that might damage adjacent property, property downstream or endanger life. Documents and organizes findings and makes recommendations regarding solutions to problematic situations. The incumbent must have the ability to lift the 60-lb. culvert crawler repeatedly, be physically capable of using hand tools for the removal of grates, metal covers, brush or debris and walking up and down steep slopes repeatedly.

- 20% (E) In office, incumbent will use computers to transfer data from data collectors to Culvert Database utilizing ArcView software and assist in quality control. Performs research into contracts and as-built plans to determine the location and characteristics of existing culverts. Prepares culvert reports, and organizes and assures integrity of the photos and files collected at the field pertinent to drainage systems.

- 5% (E) Provide construction inspection for projects developed by Roadside Maintenance including HM-2, drainage, and Storm Water Projects. Assist in maintaining project files including daily reports, quantity calculations, and filing contract documentation.

- 5% (M) The incumbent will be responsible to conduct minor repairs to the crawler and cabling in the field. The incumbent will ensure that all field persons comply to the Caltrans Maintenance Manual, Code of Safe Operating Practices, and worker protection guidelines while on field duty. The incumbent will be responsible for maintaining the culvert van, culvert crawler, and computer related equipment and ensures that the equipment is in good operating condition prior to field work.
- 5% (M) Assist in the development of design related maintenance projects including HM-2, 151 drainage, and Storm Water Projects. Develop Project Initiation Forms that include gathering field data, providing estimates, and writing reports. Duties include use of MicroStation, performing quantity calculations, assisting in field reviews, and assisting with PS&E submittals. Requests clearances from functional units for Minor projects.
- 5% (M) Conducts field inspections of existing drainage/culvert structures during storms. Keep records of storm damage to roads and drainage/culvert structures. Coordinate effort in conjunction with Hydraulics Engineers to review sites with the emergency operations center.

SUPERVISION EXERCISED OVER OTHERS:

None.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS:

Knowledge of methods, materials and equipment use in the drainage facilities. Knowledge of construction and design methods of drainage structures, Storm Water best management practices, and maintenance facilities. Knowledge of operation and care of the culvert crawler. An ability to perform culvert investigations as a member of a team is expected and the ability to effectively analyze a variety of drainage system problems and develop practical solutions, often under short time frames. Knowledge of construction inspection methods, construction manual, standard specifications, special provisions and ability to read contract plans. Knowledge of general design methods including use of Microstation and the ability to perform quantity calculations and estimates. Knowledge of ArcView, Microsoft Excel and Microsoft Word, to prepare correspondence and reports, develop spreadsheets and to communicate effectively orally and in writing.

Ability to organize and prioritize work including analyzing situations accurately and develop effective course of actions. Ability to assist in investigations, reach sound conclusions and prepare issue papers and reports for making improvements or changes to existing procedures and standards, when necessary. Ability to perform basic quantity calculations under the guidance of a project engineer. The incumbent must be able to expand on the practical application of written policies, procedures and standards.

Ability to read and write English at a level required for successful job performance. Ability to use a computer and software. Must be able to interpret departmental policy and make clear oral and written presentations.

ANALYTICAL REQUIREMENTS:

Incumbent must be able to analyze situations for correct decisions and/or recommendations on very short notice. Must be capable of understanding basic engineering solutions in drainage design and assists in determining alternatives that provide the most viable solution while considering engineering, political and economic issues.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS:

Responsible for independent action in carrying out assigned duties relating to policy development of maintenance functions.

The consequences of not considering all factors could be inconsistent or inappropriate policy setting, inappropriate application of maintenance methods, non-compliance with permits and plans.

Failure to understand and incorporate appropriate standards, requirements and policies into work product may result in harm to the environment, excess costs to the Department and damage to the District's relationship with other agencies. The incumbent is responsible for his/her actions, decisions, quality of work, and proper use of State time, equipment and materials. Error of judgment could jeopardize meeting project deadlines and loss of program dollars to the District. Improper performance of duties and/or failure to adhere to established policies, procedures and guidelines could lead to adverse action and possible termination.

PUBLIC AND INTERNAL CONTACTS:

Incumbent will be required to effectively work with others in their section and coordinate with other sections within the District or Programs and may be involved with technical staff members of outside agencies and local interest groups.

Incumbent is required to maintain good relations with members of the public and employees from the same and other Divisions within Caltrans, as well as other agencies. Contacts with other public agencies and private individuals may be daily and the incumbent is expected to maintain a favorable image for the Department.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS:

While at their base of operation, employee may be required to sit for long periods using a keyboard and video display terminal. Other physical activities will include standing, walking, bending at the neck and waist, stooping, squatting climbing, kneeling, twisting at the neck and waist. Operating a motor vehicle for long periods is also part of this function. The ability to lift 60 pounds or move large or cumbersome plans and diagrams from one location to another will be necessary. Other activities may be reaching above or at the shoulder, pushing or pulling, simple grasping or fine manipulation.

WORK ENVIRONMENT:

While at their base operation, employee will work in a climate-controlled office under artificial lighting. Employee will also be required to travel and work outdoors and may be exposed to dirt, noise, uneven surfaces and/or extreme heat and cold.

I certify that I can perform the duties listed above **with/without** reasonable accommodation.

EMPLOYEE

DATE

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

SUPERVISOR

DATE