

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

CLASSIFICATION TITLE Transportation Engineer Tech	OFFICE/BRANCH/SECTION D2/MTCE & Operations/Traffic Management	
WORKING TITLE Census Technician	POSITION NUMBER 902-367-3175-	REVISION DATE

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

Under the supervision of the Senior Transportation Engineer of the District 2 Office of Traffic Management, the incumbent installs, configures, tests and troubleshoots systems that are part of the District's Traffic Monitoring Stations (TMS) which includes equipment not limited to modems, counters, and solar panel power systems. The incumbent works at an entry level of expertise and engages in basic layout work, assisting in the preparation and/or review of plans, specifications and cost estimates for capital projects that are installing TMS elements for the District's Census program. During the winter months, the incumbent will work the swing or graveyard shift in the Transportation Management Center (TMC) during winter storms for chain control or severe weather. Census duties include but are not limited to: meeting Caltrans and Federal traffic count requirements; providing accurate count data; processing, analyzing, and correcting collected count data; maintaining a high level of count station health; and providing special counts as needed. Traffic Management duties include but are not limited to: monitoring, evaluating and managing rural highway and freeway system operations; minimizing delay caused by non-recurrent congestion; and providing timely and accurate en-route traveler information.

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.

- **Flexibility and Managing Uncertainty** : Adjusts thinking and behavior in order to adapt to changes in the job and work environment. (Safety First, Enhance and Connect the Multimodal Transportation Network - Engagement, Integrity)
- **Dealing with Ambiguity (Risk)**: Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Cultivate Excellence - Innovation, Integrity)
- **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. (Strengthen Stewardship and Drive Efficiency - Engagement)
- **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. (Safety First, Strengthen Stewardship and Drive Efficiency - Engagement, Equity)
- **Teamwork/Partnership**: Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Organizational Awareness**: Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Integrity)
- **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. (Cultivate Excellence - Engagement)
- **Planning and Results Oriented**: Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Cultivate Excellence - Integrity)
- **Computer literacy and application**: Appropriate knowledge of computer applications and other tools necessary to successfully perform tasks. (Strengthen Stewardship and Drive Efficiency - Engagement, Integrity)

TYPICAL DUTIES:

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

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50%	E	Work as a Census lead to provide data collection which includes: conducting field investigations to verify data accuracy, put-down and pick-up of vehicle count hoses; verify TMS count stations are working properly and troubleshoot and repair electrical circuits, modems, solar panels, charging systems, batteries and counters as needed. Some field visits will require overnight travel. Provide accurate data input to the Transportation Systems Network (TSN) database on schedule. Calculate Annual Average Daily Traffic and provide this to the HQ Census program. Conduct and attend safety meeting and ensure compliance with departmental policies and procedures. These duties are typically split approximately 1/2 field and 1/2 office work.
35%	E	Work as a TMC support member, primarily during winter storm season (December 1 to March 30) as needed 24/7. Monitor and analyze real time traffic and highway data through the Districts Closed Circuit Televisions (CCTV), Roadside Weather Information Systems (RWIS), California Highway Patrol Computer Aided Dispatch (CHP CAD), Transportation Management Computer Aided Logger (TMCAL), CHP Radio, Caltrans Dispatch, and other inputs. Prepare and disseminate timely and accurate traveler information messages on various TMC devices and public information outreaches including changeable message signs (CMS) and highway advisory radios (HAR). Closely coordinate with District Dispatch, CHP, and other Caltrans and state TMC's. Operate various equipment and software in the TMC such as IRIS, SOCCS, HAR software, Lane Closure System (LCS) database, Caltrans Highway Information Network (CHIN) system, District weather information system, CHP CAD, telephone, Caltrans 2-way radio system and fax. After-Hours Callout: Take calls from CHP or field maintenance to activate or deactivate field elements using state cell and computer.
10%	E	Use engineering and computer orientated processes to compile data for the design, construction, alteration, maintenance and operation of a wide variety of transportation engineering projects; analyze engineering data; gather and compile traffic data; may assist in the preparation and review of special studies, design, plans, estimates, reports and specifications for all types of highway and bridge projects, especially in regards to traffic census installation and repairs.
5%	M	Review, test and inspect encroachment permit work pertaining to TMS facilities. Respond to public inquires related to traffic count data. Other duties as assigned

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

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Should have knowledge of the following:

Principles and practices of electronic and computer technology and theory; Principles and practices of telecommunications technology and theory; Principles and practices of electrical technology and theory; implementation of traffic monitoring and control systems, including communications and electronic theory and instrumentation for physical testing and research; Practical -application of Traffic Management Systems (TMS) components; Modern data network and communications systems; Effects of weather and time on electrical and electronic equipment and their operation; Solar power generation systems; Power distribution systems; Communication systems; Electrical control schematic and wiring diagrams; Engineering technology mathematics; Computers and their use; Caltrans Injury and Illness Prevention Program; Department Policies and Procedures.

Ability to:

Inspect the installation and operation of highway TMS components and recommend revisions; Read and understand highway plans, drawings, and field data which are related to highway TMS devices; Install, configure, test, deploy and troubleshoot TMS highway systems; Assist in the preparation of plans, cost estimates, and specifications for TMS projects; Inspect and oversee TMS installations and determine if the product meets specification requirements for functionality; Implement effective TMS maintenance procedures to meet specified system reliability requirements; Interpret all drawings, plans and specifications of any kind encountered in the work and incorporate electrical, electronic and associated drawings, plans and specifications into general design and contract documents. Analyze situations accurately and take effective action; Establish and maintain friendly and cooperative relations with those contacted in the course of the work; Communicate effectively orally and in writing; Report the status of work and the completed results; Prepare correspondence and minor reports. Must be able to effectively use a personal computer and related software.

Special Personal Characteristics:

Manages time efficiently and is well organized; Works well with others; Commitment to do what is necessary to complete the job at hand; Demonstrated commitment to continuous improvement in the Districts TMS infrastructure; Commitment to being available for after hours TMC support and other activities via use of personal communication devices such as home or cellular

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phone; Customer focus.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Incumbent is responsible for decisions necessary to complete the specific job assignments listed above. Errors in judgment, analysis, actions, conduct, directions and decisions could result in inefficient use of resources, employee injuries and death, injuries and death to members of the general public, loss of individual and departmental credibility, poor employee moral and affect the ability of Caltrans to deliver its work program on schedule.

PUBLIC AND INTERNAL CONTACTS

Contact with the public will be primarily through phone and written contact requires a professional manner. This position also requires extensive contact within the District and North Region, including Project Development, Program Management, Advanced Planning, Construction, Permits, and Maintenance. Plan reviews will require contact with local agencies and consultants. Contact with Headquarters Traffic will be required on a regular basis.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Incumbent will be required to use personal computers and telephones for long periods of time; Sustain mental activity needed for data analysis, problem solving, researching, analysis and reasoning, and participating in meeting; Engage in extensive field work, lifting up to 70 pounds, occasionally driving for long periods of time and routine exposure to severe winter and summer weather; Will be required to sit for extended periods of time at a desk in the TMC during winter storms; Develop and maintain cooperative working relationships.

WORK ENVIRONMENT

At their base of operations, incumbent will work in a climate-controlled office under artificial lighting. Incumbent will be required to traverse office complexes, parking lots, equipment repair shops, highways, sidewalks, roadside cut and fill slopes, and drainage facilities. Incumbent will be required to travel and work outdoors routinely and will be exposed to dirt, chemicals, noise, uneven surfaces, extreme heat, extreme wet conditions and extreme cold. Incumbent will be required to engage in field work during severe winter weather that routinely requires hiking over snow and manually removing accumulated snow from the work area.

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

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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