

**POSITION DUTY STATEMENT**

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Senior Transportation Electrical Engineer, Supervisor	OFFICE/BRANCH/SECTION District 11/Traffic Safety & Ops-Transportation Mgmt Center	
WORKING TITLE Branch Chief, Ramp Metering, VDS & Traffic Census	POSITION NUMBER 911-350-3164-003	REVISION DATE 03/03/2025

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

**GENERAL STATEMENT:**

Under the general direction of the Supervising Transportation Electrical Engineer (District Division Chief of the Traffic Safety & Operations (TSO)-Transportation Management Center (TMC), the Senior Transportation Electrical Engineer, Supervisor serves as the Branch Chief of the Ramp Metering, Vehicle Detection Stations (VDS), and Traffic Census. This role supervises and provides leadership to a team of journey level engineers in the planning, scope, development, management, and operation in the Ramp Metering, VDS & Traffic Census Branch and ensures the efficient performance of critical traffic management infrastructure. The duties and responsibilities of this position also includes collaborating with engineers, planners, regional partners, and other stakeholders to integrate transportation solutions into project development and operations. Additionally, the incumbent, provides technical expertise, optimizing system performance, evaluating emerging technologies, and managing resources to ensure compliance with department objectives, policies, and budget constraints.

Possession of a valid certificate of registration as an electrical engineer issued by the California Board of Registration for Professional Engineers is required for this position.

Appointment to this position is contingent on passing the Department of Justice (DOJ) background check.

**CORE COMPETENCIES:**

As a Senior Transportation Electrical Engineer, Supervisor, 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.

- **Change Leadership:** Develops new and innovative approaches needed to improve effectiveness and efficiency of work products. Encourages others to value change. Considers impact and recommends changes. (Safety, Employee Excellence - Collaboration, Equity)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety, Employee Excellence - Collaboration)
- **Ethics and Integrity:** Demonstrated concern to be perceived as responsible, reliable, and trustworthy. Respects the confidentiality of information or concern shared by others. Honest and forthright. Conforms to accepted standards of conduct. (Safety, Employee Excellence - Collaboration, Equity, Integrity)
- **Conflict Management:** Recognizes differences in opinions and encourages open discussion. Uses appropriate interpersonal styles. Finds agreement on issues as appropriate. Deals effectively with others in conflict situation. (Safety, Employee Excellence - Collaboration, Equity, Integrity)
- **Teamwork and Collaboration:** Sets team structure. Organizes, leads, and facilitates team activities. Promotes team cooperation and encourages participation. Capable of cross functionality and working well with others on a team to achieve personal goals, team goals, and organizational goals. Takes responsibility for individual actions in order to achieve consistent results. (Safety, Employee Excellence - Collaboration, Equity, Integrity)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety, Employee Excellence - Collaboration, Equity, 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. (Safety, Equity, Climate Action, Employee Excellence - Collaboration, Equity, Innovation, Integrity, Pride)
- **Workforce Management:** Hires and retains appropriate staff. Conducts workforce and succession planning. Provides feedback on performance. Addresses employee issues in a timely manner. (Safety, Employee Excellence - Collaboration, Innovation)
- **Managing Performance:** Responsible for employee performance, setting clear goals and expectations, tracking progress against departmental and unit goals, providing feedback, and addressing performance issues promptly. (Safety, Equity, Employee Excellence - Collaboration, Equity, Innovation)

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**TYPICAL DUTIES:**

Percentage	Essential (E)/Marginal (M) <sup>1</sup>	Job Description
30%	E	Plans, directs, supervises, and provides leadership to a team of journey level engineers and other staff responsible for monitoring, maintaining, troubleshooting, and optimizing the operational efficiency and performance of the District's Ramp Metering Information System (RMIS), Traffic Management System (TMS), Vehicle Detection Stations (VDS), and the District Census Program. Implements and oversees preventative maintenance programs to minimize downtime and improve system reliability. Analyzes system data, diagnoses technical issues, and develops strategies to enhance performance. Coordinates planning for system communications between the TMC and TMS field elements, hardware and software support of the RMIS, and/or other systems, and provides expert input to the District's Project Development team and the Construction and Maintenance Divisions regarding system expansion, system reliability, long-term sustainability, and system maintenance of the network. Reviews engineering plans, technical specifications, and project proposals to ensure alignment with transportation system requirements. Recommends improvements and enhancements to existing infrastructure to support future growth and operational efficiency. Evaluates new technologies and determines applicability to the existing TMC system architecture.
25%	E	Sets and implements the vision, goals, and objectives for the branch's involvement in Traffic System Management and Operations (TSMO) to enhance transportation efficiency and safety. Works closely with other TMC seniors staff, Information Technology (IT) staff, regional partners, consultants, and Headquarters (HQ) functional managers to coordinate TSMO initiatives. Provides system network optimization for corridor-wide ramp metering, construction demand management, and main-lane speed harmonization. Maintains data reliability for vehicle detection stations across the network. Ensures that staff charges for Traffic Operations work-related activities are appropriately accounted for in Department budget reports and time-charging practices. Oversees financial planning and resource distribution to support operational needs and project objectives.
20%	E	Collaborates with planners, project managers, Corridor managers, project engineers, and regional/local agencies to integrate ramp metering, VDS, and traffic census elements into transportation funding programs and projects. Advocates for funding and ensures alignment with regional transportation goals and initiatives. Reviews and provides input on Regional Transportation Improvement Program (RTIP) documents, Transportation Concept Reports (TCRs), Project Study Reports (PSRs), Project Reports (PRs), permits, Constructibility Reviews, and District Circulation Reviews. Participates in Project Development Team (PDT) meetings to help identify and incorporate TSMO needs into project scopes. Ensures the branch's capital project activities are properly resourced in the Project Resourcing and Schedule Management (PRSM) system and that expenditures are appropriately charged by staff and remain within the branch's resourced budget. Provides expert guidance on traffic operations and system management considerations throughout project planning and design phases.
20%	E	Provides constructive feedback on staff performance appraisals and addresses disciplinary matters promptly and appropriately. Prepares comprehensive Annual Performance Reviews and Individual Development Plans (IDP) and works directly with staff to identify training, equipment needs, and career development opportunities. Ensures staff is aware and adheres to the Director's Policies and Deputy Directives, including the Staff Expectations Memos. Leads regular staff meetings to foster a team-oriented, innovative work environment that upholds principles of diversity, equity, and inclusion, free from discrimination and harassment. Maintains an effective Injury and Illness Prevention Program (IIPP) by promoting a safe workplace. Attends training courses, provides formal and informal training, and actively participates in internal and external teams and committees. Ensures efficient resource management, approves time reporting, and provides clear communication channels between management and staff.
5%	M	Takes on special assignments as directed by the District Division Chief of Traffic Operations (TMC), such as those that develop, promote, and communicate the District's TMC Vision Plan with internal and external customers and stakeholders. Responds to public inquires and makes presentations as necessary. Acts as backup to the Division Chief or other Branch Chiefs during their absences ensuring seamless operations. Performs other related responsibilities as required by adapting to evolving needs and contributing to the overall success of the team and the District.

<sup>1</sup>ESSENTIAL 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.

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**SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS**

The incumbent plans, directs, and supervises a team of up to twelve (12) engineering professionals. This position provides support, guidance, and mentorship to staff ensuring that projects align with the District's goals and objectives. Through effective leadership, the incumbent ensures that all team members are equipped with the necessary skills and resources to successfully fulfill their responsibilities and contribute to the overall success of the District.

**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS**

This supervisory role requires knowledge of principles and techniques of personnel management including leading, planning, directing, and supervising the work of a diverse team. The incumbent must foster an inclusive work environment that promotes equal opportunities in employment, employee development, and promotion while ensuring a workplace free from discrimination and harassment. Effective leadership is essential to actively contribute to the District's strategic goals.

Due to the complexity of transportation facilities, the incumbent must possess in-depth knowledge of Caltrans Ramp Metering Information System (RMIS), the Advanced Traffic Management System, (ATMS), and the Performance Measurement System (PeMS). The ability to analyze situations effectively, develop, and implement an effective course of action is essential, especially when responding to emergencies affecting transportation infrastructure. Collaboration with various District staff, HQ personnel, external agencies, and various partners is crucial to achieving program objectives.

A broad knowledge of all phases of transportation electrical engineering and departmental operations and their inter-relationship with maintenance operations is required. A high degree of expertise in electrical engineering, electronic theory and practices, electrical systems, and communication technology is vital. The incumbent must be proficient in direct and alternating current circuits as well as methods, materials, tools, and techniques used in electrical construction and operation. An understanding of safety regulations, including Title 8 Industrial Relations, the National Electrical Code, and Occupational Safety and Health Administration (OSHA) Electrical Safety Orders is essential, along with knowledge of the Department's IIPP and occupational safety protocols. This role requires strong proficiency in planning processes, system planning, economics, financing, environmental considerations, design, construction, and maintenance procedures. The incumbent must be capable of developing clear correspondence, preparing detailed reports, and delivering effective presentations. The incumbent must apply sound engineering judgment and a cost-effective approach to solving unusual and extraordinary challenges to the management of highway maintenance activities.

Proficiency in digital electronics, personal computers, engineering and design workstations and programs, and various computer applications (e.g., word processing, spreadsheets, PowerPoint, databases, project/asset management, and communications software) is necessary. The incumbent must also have strong interpersonal skills, with the ability to motivate others, make compelling presentations, negotiate, resolve conflicts, and communicate effectively both verbally and in writing.

**RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR**

The incumbent holds significant responsibility for decisions, actions, and outcomes related to the planning, direction, and oversight of the Ramp Metering, VDS & Traffic Census Branch. Failure to effectively execute these responsibilities could have serious repercussions, including compromising public safety, increasing tort liability for Caltrans, and escalating costs due to disruptions in the operational efficiency of the branch. In addition, an inability to meet the position's objectives could hinder the District's ability to quantify performance against strategic goals such as safety and mobility commitments, resulting in financial loss of key transportation infrastructure assets across California. This may lead to millions of dollars in lost transportation investments and Federal funding and loss of credibility and public trust in Caltrans as a reliable and competent public agency.

**PUBLIC AND INTERNAL CONTACTS**

Regular communication and coordination with other TMC seniors, District managers, project managers, functional managers, Corridor managers, consultants, San Diego Association of Governments (SANDAG) staff, and HQ staff is required. Additional communication is required with the Division of Research Innovation and System Information (DRISI), Federal Highway Administration (FHWA), local agencies, academia, and private partners. The incumbent provides guidance to TMC engineers and other District staff to accomplish the TMC vision plan and achieve performance goals. Meetings with internal and external contacts, the public, and other agencies may occur during and outside normal working hours. The incumbent may also represent the District for the District Division Chief of TMC as necessary.

**PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS**

The incumbent may be required to stay stationary for extended periods while working at a computer using a keyboard and video display terminal, engineering workstations, and other office equipment. Travel is an essential part of the job that involves driving to various Caltrans facilities, field sites, vendor locations, and other Caltrans Districts, including areas adjacent to or near roadways and freeways that have high traffic volumes. Sites may require the incumbent to move on uneven terrain, including steep slopes or through dense vegetation. This position demands adherence to strict deadlines and the ability to manage multiple tasks efficiently within time constraints. The incumbent must also develop and maintain positive cooperative working relationships while recognizing and effectively managing emotionally charged or challenging situations, and responding appropriately, tactfully, and professionally. Occasionally, the incumbent may be required to work beyond regular work hours including nights and weekends due to unforeseen emergencies.

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Possession of a valid driver's license is required when operating a State owned or leased vehicle.

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### WORK ENVIRONMENT

This position involves both office and fieldwork. While working in an office environment, the incumbent works in a climate-controlled office under artificial lighting. Multi-floor buildings are equipped with elevators and stairs for accessibility. The incumbent travels occasionally to conduct field reviews outdoors and may be exposed to traffic conditions, dirt, dust, chemicals, loud noise, uneven surfaces, and severe weather conditions. The incumbent must remain vigilant and adhere to established field safety procedures to mitigate risks when working in the field. Furthermore, it is the incumbent's responsibility to communicate and enforce proper safety precautions among staff to ensure a safe working environment for all team members.

This position may be eligible for telework. The amount of telework is at the discretion of the Department and is based on Caltrans's evolving telework policy. Caltrans supports telework, recognizing that in-person attendance may be required based on operational needs. The incumbent is expected to be able to report to their worksites with minimum notification if an urgent need arises. The incumbent is required to commute to the headquartered location as needed to meet operational needs. Business travel may be required, and reimbursement considers an incumbent's designated headquartered location or primary residence and may be subject to CalHR regulations or applicable bargaining unit contract provisions. All commute expenses to the headquartered location are the responsibility of the incumbent.

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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.

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EMPLOYEE (Print)

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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.

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SUPERVISOR (Print)

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SUPERVISOR (Signature)

DATE