

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION Highway Operations	
WORKING TITLE Transportation Engineer	POSITION Number 2070-904-351-3135-XXX	REVISION DATE 07/02/2025

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 general direction of a Senior Transportation Engineer, the incumbent performs duties and activities that are representative of Highway Operations functions. Typical duties includes traffic operations investigations and congestion mitigation analysis, traffic impact studies/analysis, Managed Lanes performance monitoring/reporting, and developing Operational Improvement (OI) projects following the Transportation System Improvement Program (TSIP) guidelines. Duties also include Encroachment Permits and IGR/CEQA reviews for operational impacts of projects administered by private parties and public agencies.

Transportation Engineer (Civil), Range D requires registration as a Professional Engineer in the State of California and is expected to perform duties independently or with minimal supervision.

Possession of a valid California driver's license is also required.

CORE COMPETENCIES:

As a Transportation Engineer (Civil), 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.

- **Learning on the Fly:** Learns quickly, is open to change, experiments, and is flexible. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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 First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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 First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

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- Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

TYPICAL DUTIES:

Percentage		Job Description
Essential (E)/Marginal (M) ¹		
50%	E	Conduct traffic operations investigations, respond to complaints regarding traffic operations and congestion from the public as well as state and local officials. Identify and develop conceptual operational improvement projects following the Transportation System Improvement Program (TSIP) guidelines. Monitor and Report freeway traffic conditions and conduct detailed congestion analyses using data from the Caltrans Performance Measurement System (PeMS), INRIX, and probe vehicles. Coordinate with Bay Area Toll Authority (BATA) on the operation and improvements for all seven state-owned toll bridges, including FasTrak lanes.
25%	E	Participate in managing the Bay Area Managed Lane system, comprised of High Occupancy Vehicle (HOV) and Express lanes. This includes monitoring, performance reporting, identifying degradation, and developing improvement needs such as conversion from High Occupancy Vehicle Lane to High Occupancy Toll Lanes, adjusting hours of operation, raising occupancy requirements, capacity improvements. Participate in developing and implementing the Bay Area Managed Lane Master Plan for conducting routine monitoring of its operational throughput and occupancy violation rates.
15%	E	Perform traffic operational analyses for capital projects and review traffic operational analyses for projects sponsored by other local agencies. Provide Operations and TMP deliverables, such as various traffic/TMP related reports - lane closure hours, detour routes, assessment of delay impacts, and construction support. Review Encroachment Permits and IGR/CEQA documents.
10%	M	Performs other duties, including but not limited to work on various technical or non-technical traffic operational issues. Supports the emergency operations center (EOC) as required.

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 is non-supervisory. However, the incumbent may be assigned as a lead worker within the branch, providing routine or clerical authority over others. May occasionally act as the senior transportation engineer.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS
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Knowledge of:

- Traffic engineering principles and their application to traffic analysis, highway design, and operations
- Good personal interaction skills and the ability to effectively deal with others in various situations
- Available resources to supplement his/her knowledge to make specific, definitive, and defensible decisions regarding traffic operations applications
- Computer applications for traffic analysis procedures and database management, spreadsheets, word processing, computer aided design and drafting (CADD)/Microstation/Autocad

Ability to:

- Analyze and summarize traffic data and highway operation scenarios using software tools including modeling and analytical applications
- Perform field trips for investigation and possess a valid California Driver's License
- Work independently and collaborate as part of a team

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- Represent the Department in meetings
- Perform complex mathematical calculations
- Effectively communicate both verbally and in writing at a level required for successful job performance
- Prepare technical reports and other project related documentation
- Make appropriate, reasonable, feasible, defensible decisions and recommendations.

Analytically:

- Check accuracy of own work and the work of others
- Develop, review, and recommend project alternatives
- Understand engineering principles and design standards
- Analyze situations accurately and take effective action

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

These duties are sensitive to the consequence of error. Errors or delays could result in increased travel delay to the traveling public. Errors and delays may also result in increased project costs or inappropriate measures being selected. In addition, the State could suffer serious loss of credibility and image arising from congestion and delay. This type of inconvenience is often publicized in the media and repetition could result in the loss of political and public support for Caltrans' programs.

PUBLIC AND INTERNAL CONTACTS

Daily contact with the public, contractors, engineers and architects, and with Caltrans and local agency staff, and law enforcement agencies is common. The incumbent establishes and maintains good working relationships with other divisions in the district and headquarters' managers and staff.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Physical Requirements:

The physical demands described here represent those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Employee may be required to sit or stand for long periods of time using a keyboard, mouse, and video display terminal.
- Other physical requirements include, but are not limited to climbing stairs, lifting/carrying/moving objects (i.e. files, books, binders, plan sheets, boxed collision reports, etc.); walking on uneven surfaces, up/down slopes, and adjacent to traffic.
- Employee will be required to use hands for computer keyboarding.
- Employee may be required to use graphic design software applications, designing and creating professional and attractive products.
- Specific vision abilities required by this job include close vision, distance vision, color vision, and the ability to adjust focus.
- Employee will be required to travel to the field, and on occasion to travel to public meeting sites and set up products, answer questions, or make presentations.

Mental Requirements:

- Grasp the essence of new information and master new technical knowledge.
- Simultaneously work on several work assignments and/or deadlines.
- Work within a noisy and occasionally distracting work environment.
- Evaluate and understand critical calculations, data and other material that may require long periods of mental concentration.

Emotional Requirements:

- Deal with all contacts in a calm and respectful manner, maintaining composure in the face of confrontation and in highly charged emotional situations.
- Must have the emotional ability to maintain a positive, customer service oriented attitude.
- Resolve emotionally charged issues reasonably and diplomatically.
- Develop and maintain cooperative working relationships with all contacts.
- Receptive to change, new information, and new situations.
- Overtime may be required and vacation restricted during peak times.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While at their base of operation, employees will work in a climate-controlled office under artificial lighting. The noise level in the

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work environment is usually moderate.

While performing the duties of this job, the employee frequently drives a state vehicle, works outside to conduct field reviews or collect field data. Fieldwork may expose the incumbent to various field conditions such as loud noise, dirt, uneven surfaces, airborne particles, cold or hot weather, rain, heights, and moving vehicles or equipment.

While performing duties and conducting official State business, the State vehicle may be equipped with a Global Positioning System (GPS).

Travel, including on day and overnight trips, may be required.

Night work and overtime may be required.

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
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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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