

**POSITION DUTY STATEMENT**

DOT PM-0924 (REV 01/2025)

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|---|--|-----------------------------|
| CLASSIFICATION TITLE<br>Transportation Engineer (Civil) | OFFICE/BRANCH/SECTION<br>DES/SES/OEEAR/Engineering Applications Branch |                             |
| WORKING TITLE<br>Transportation Engineer (Civil)        | POSITION NUMBER<br>559-220-3135-063                                    | REVISION DATE<br>11/05/2025 |

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

**GENERAL STATEMENT:**

Under the direction of a Senior Bridge Engineer, the incumbent performs a wide variety of professional complex engineering work of above average difficulty for the Office of Earthquake Engineering, Analysis, and Research (OEEAR) in the Division of Engineering Services (DES). The incumbent assists in the development, maintenance, and support of bridge engineering software and seismic design guidance for the OEEAR, and is responsible for the seismic analysis and design of bridges and other transportation-related structures. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. DES employees may be given temporary assignments on DES projects throughout the State as workload demands. This will entail travel and/or temporary relocation.

As part of your employment with DES there is a mandatory TE (Civil) Professional Development Rotation Program that applies to all permanent full-time TE (Civils) hired after January 1, 2017. Temporary relocation more than 50 miles from your permanent unit may be necessary for rotation assignments.

**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.

- **Managing Change:** Demonstrating support for organizational changes needed to improve the department's effectiveness; supporting, initiating, sponsoring and implementing change. (Safety, Employee Excellence - Collaboration, Innovation, Stewardship)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety, Employee Excellence - Stewardship)
- **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 - Integrity, Pride, Stewardship)
- **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, Employee Excellence - Collaboration, Innovation, Stewardship)
- **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, Equity, Prosperity - Collaboration, Equity, Innovation, People First, Stewardship)
- **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. (Safety, Employee Excellence - Innovation, 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. (Safety, Prosperity, Employee Excellence - Collaboration, Innovation, Integrity)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety, Climate Action, Prosperity, Employee Excellence - Collaboration, Innovation, Stewardship)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety, Climate Action, Prosperity, Employee Excellence - Collaboration, Innovation, Integrity, Stewardship)

**TYPICAL DUTIES:**

| Percentage                              | Job Description |
|---|-----------------|
| Essential (E)/Marginal (M) <sup>1</sup> |                 |

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| 25% | E | Develops standards for seismic performance of bridge and related structures. Performs independent study and analysis of specific design problems. Prepares and reviews seismic design details, guidance, and policy to function within overall DES bridge design guidance, policy, and specifications.  |
| 25% | E | Develops, maintains and/or supports bridge design computer software applications used by DES engineers. In-house software applications include those for superstructure, bent, column, footing, abutment design, and earth-retaining systems. Support DES engineers with use of complex and seismic analysis software.  |
| 20% | E | Supports Project Delivery, Operations, and Maintenance. Supports DES engineers and Operations and Maintenance with analysis of bridge strength, service, and seismic performance. Reviews Type Selections and Retrofit Strategy Reports and participates in meetings. Reviews PS&E for conformance with DES policies and standards, with emphasis on seismic-design performance and compliance. Provides support to DES staff completing project delivery tasks and construction oversight of new and retrofit bridge construction. |
| 20% | E | Supports the Geotechnical/Structures Research Program. Manages research projects performed by universities and performs research-related calculations for quality control proposes. Prepares and reviews seismic design details, guidance, and policy to implement research-derived advancements in seismic design practice of bridge and related structures.   |
| 10% | M | Makes field inspections of structures for seismic-related evaluations and writes reports with findings and recommendations.   |

<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.

**SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS**

This position does not require supervision of other employees.

**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS**

Must be able to prepare plans and reports for structural projects; make independent decisions and take an effective course of action related to analyzing and solving complex design, construction and maintenance issues and work effectively with other engineers and drafting personnel in completing a project. Must be able to effectively communicate both verbally and in writing. Knowledge of programming languages and the ability to develop, maintain, and support bridge engineering software is desirable. The work involves analysis of a wide range of structural problems usually of a complex nature. Must have considerable skill in analysis of structures and related research, and the ability to operate complex computer analysis programs.

**RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR**

Responsible for the structural integrity and cost effectiveness of structural elements designed or analyzed and projects produced. Also, responsible for the development, maintenance, and support of bridge engineering software. Consequences of error may include bridge designs that are not in compliance with federal and California bridge standards and guidance and could result in bridge structures that are vulnerable to significant damage or collapse or being unsafe for the traveling public.

**PUBLIC AND INTERNAL CONTACTS**

Maintains communications with all personnel working on the projects assigned. Meets with and discusses project issues with other functional units within the DES including Bridge Design, Geotechnical Services, Structure Construction, and Structure Maintenance and Investigations (SM&I) to resolve issues concerning the projects. Also, may be called upon to communicate with university personnel and external consultants concerning projects under contract with Caltrans. Assists in Technical Committee work and with the DES Bridge Academy training.

**PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS**

Employee will be required to sustain mental activity necessary for report writing, problem solving, analyzing and reasoning. Employee will be required to develop and maintain cooperative working relationships, respond appropriately to difficult situations, recognize emotionally charged issues or problems, acknowledge various responses, and resolve problems. Employee may be required to sit for long periods of time using keyboard and video display terminal. Employee may be required to move large or cumbersome plans and diagrams from one location to another. May be required to lift/move/carry various types of portable equipment around the work site or out in the field.

**WORK ENVIRONMENT**

Employee will be required to sustain mental activity necessary for report writing, problem solving, analyzing and reasoning. Employee will be required to develop and maintain cooperative working relationships, respond appropriately to difficult situations, recognize emotionally charged issues or problems, acknowledge various responses, and resolve problems. Employee may be required to sit for long periods of time using keyboard and video display terminal. Employee may be required to move large or

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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