

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION DES/METS/OCL/ Asphalt Binder & HMA Branch	
WORKING TITLE Transportation Engineer	POSITION NUMBER 559-320-3135-xxx	REVISION DATE 08/01/2022

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 direction of a Senior Transportation Engineer, the Transportation Engineer Civil serves as a technical expert in the field of asphalt binder and Hot Mix Asphalt (HMA) testing within the Office of Central Laboratory (OCL), Asphalt Binder & HMA Branch. The primary functions of OCL are to ensure materials and products used by the California Department of Transportation (Caltrans) construction projects comply with contract requirements and to provide recommendations and decisions using engineering judgment and principles.

The Transportation Engineer Civil will manage the Caltrans' Job Mix Formula Prequalification Program and any new or existing Authorized Materials Lists (AMLs) of products used in asphalt pavements. The incumbent will participate in the Pavement & Materials Partnering Committee (PMPC) working groups to develop and update specifications and test methods and to monitor and gather data from any pilot projects. The incumbent will assist in activities to keep AASHTO accreditation in good standing, including updating the laboratory quality manuals and procedures.

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.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Cultivate Excellence - Innovation)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Cultivate Excellence - Innovation)
- **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. (Strengthen Stewardship and Drive Efficiency - Innovation)
- **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. (Cultivate Excellence - Engagement)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Strengthen Stewardship and Drive Efficiency - Innovation)
- **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)
- **Forward Thinking:** Anticipates the implications and consequences of situations and takes appropriate actions to be prepared for possible contingencies. Anticipates and prepares for future developments. (Cultivate Excellence - Innovation)
- **Commitment/Results Oriented:** Dedicated to public service and strives for excellence and customer satisfaction. Ensures results in their organization. (Strengthen Stewardship and Drive Efficiency - Engagement)

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TYPICAL DUTIES:

Percentage		Job Description
Essential (E)/Marginal (M) ¹		
40%	E	Manages Caltrans Job Mix Formula Prequalification Program and Authorized Materials Lists. Responds to suppliers submittal, maintains lists of approved suppliers, and ensures quality control and verification test data is accurate. Makes recommendations for improvements to the programs and internal processes.
30%	E	Serves as a METS representative in PMPC working groups as well as on technical panels and committees. Attends and participates in technical meetings and conferences both within California and nationally to keep abreast of the state-of-the-art asphalt pavement materials and technology. Provides technical review and advice on HMA and asphalt binder specifications and related test methods.
20%	E	Serves as the quality manager for the Asphalt Binder and HMA Laboratories. Updates the laboratories' quality manuals and procedures and performs internal audits. Addresses issues regarding non-conformances, corrective actions, equipment maintenance and calibrations, technician trainings, and other AASHTO accreditation requirements.
5%	M	Oversees the implementation and proper use of DIME data entry. Addresses issues regarding DIME database. Prepares technical reports based on test data and provides recommendations for problem materials.
5%	M	Assists the Branch Chief with collecting information for special projects. Prepares reports and other documents that comply with the American with Disabilities Act (ADA).

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

Does not supervise staff

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge: Must have knowledge of engineering principles and materials used in highway construction, testing procedures, and quality assurance. Must have an understanding of the project development process and contracting procedures, as well as the function of the district materials engineers (DMEs). Must have knowledge of statistical concepts and computer applications. Must be capable of effectively working with other personnel representing all aspects of roadway design, construction, and maintenance. Must be capable to communicate effectively, both orally and in writing. Must be comfortable in a training situation and be able to make presentations to large groups and conventions.

Abilities: Must be able to analyze situations accurately and adopt an effective course of action in the resolution of complex engineering problems. Must be able to effectively coordinate and communicate, both orally and in writing, with all levels of management and employees in headquarters and districts, and with persons outside the Department. Must have good administrative abilities including judging work quality and performance and be able to effectively plan work for a multi-disciplinary team. Must have the ability to use quality tools and principles in seeking to continuously improve work processes. Must have the ability to effectively contribute to the Department's safety, health, equal opportunities and labor relations objectives.

Analytical Abilities: The work and responsibilities assigned to this position require the ability to assimilate technical and procedural input from various sources to evaluate that input, develop alternative courses of action and to make objective recommendations on all critical issues affecting the planning, project delivery, maintenance and applied studies related to transportation systems. Must be able to reason logically and creatively using a variety of analytical and problem-solving techniques.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for the development of work plans to develop, modify, and/or investigate materials specifications and materials test methods. The collection and the accuracy of information regarding highway materials specifications, the testing of materials, and the engineering property data of the materials affects all state highway designs and construction projects. Failure to properly identify material specifications, engineering property measurements, and record, analyze, and report the materials data in an ethical and professional manner may result in the inadequate construction of highway roadways for the environmental conditions of the project's location. The specification work and the engineering property data form the basis for roadway designs and/or improvements. Irresponsible actions and reporting may result in an inadequate new construction, rehabilitation, or reconstruction roadway designs, and may adversely impact the Department's roadway construction and maintenance expenditures.

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PUBLIC AND INTERNAL CONTACTS

The incumbent must establish and maintain working relationships on a regular basis with public and private agencies, industry representatives, university and research authorities, special transportation interests, district management and other Headquarters' divisions/program, and with state, federal, and local agencies with the common goal of providing a sound transportation system for California.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent may be required to sit for long periods of time using a keyboard/mouse and video display monitor, or while attending meetings. Must be able to use fine manipulation and/or simple grasping during the course of their workday. Some walking may be required. Must be able to effectively communicate in English, both orally and in writing, and have demonstrated ability to make presentations, lead workshops, and serve on quality teams. The incumbent must be able to sustain the mental activity needed to conduct necessary research, analysis, and synthesis of issues and make well-reasoned recommendations to management. Must be able to handle multi-tasks, adapt to changes in priorities, and complete tasks or projects with short notice and work with others in a cooperative manner. Must have the ability to develop and maintain cooperative, collaborative working relationships and recognize difficult, emotionally charged and/or sensitive situations and handle them effectively and appropriately. Must deal effectively with pressure, maintain focus, and intensity yet remain optimistic and persistent, even under adversity. In testing capacity, the incumbent may be required to stand for long periods of time (1) using various testing equipment, (2) reading and recording test results, and (3) reviewing and calculating data. May be required to sustain the mental activity needed for conducting tests and calculating results.

WORK ENVIRONMENT

The incumbent must understand the value of cultural diversity and individual differences in the workforce. The work environment is fast-paced, busy, and requires considerable flexibility in managing time, priorities, and assignments. It can be demanding and/or stressful. The incumbent may be required to travel to district offices or other meeting facilities, and/or to the sites of proposed projects. In the field the incumbent may experience all climatic conditions, including rain. The employee may occasionally be required to travel and work outdoors, and may be exposed to dirt, noise, uneven surfaces, and/or extreme heat or cold. While at base of operation, the incumbent will work in climate-controlled office under artificial light. In some instances, due to problems with the heating and air conditioning, the building temperature may fluctuate. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. Incumbent may work around bulky/heavy materials and equipment used in the vicinity of inspection areas. May also be exposed to the motoring public. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

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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.)

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