

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Senior Transportation Engineer, CT	D4 Division of Design Services / Office of Design Support	
WORKING TITLE	POSITION NUMBER	REVISION DATE
Senior Transportation Engineer (Supervisory)	904-104-3161-XXX	

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 the Supervising Transportation Engineer, the incumbent is responsible for planning, organizing, coordinating, and managing a branch and multi-disciplinary teams which consist of staff from various divisions within Caltrans to develop standards, procedures, and tools for implementing Building Information Modeling for Infrastructure (BIM4I) design practices for delivering digital 3-D models of existing, new, and improved highway assets for project development and delivery. The incumbent serves as single focal point for the Design Division on technical and administrative issues with digital design modeling procedures, processes, and tools. The incumbent represents the Design Division to work in close partnership with executive, management level staff, design staff, functional units in the district and headquarters' divisions, as well as internal and external partners, to develop a strategic approach and implementation plan to develop and deliver 3-D highway assets models for project delivery. The incumbent is the Design Subject Matter Expert on digital 3-D model-based project development and delivery practices. The incumbent supervises, manages, organizes, leads, and directs engineering and non-engineering staff.

CORE COMPETENCIES:

As a Senior Transportation Engineer, CT, 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, Equity, Employee Excellence - Collaboration, Equity, Innovation, Stewardship)
- Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety, Equity, Prosperity, Employee Excellence - Collaboration, Equity, Innovation, Stewardship)
- Initiative:** Ability to identify what needs to be done and doing it before being asked or required by the situation. Seeks out others involved in a situation to learn their perspectives. (Safety, Equity, Climate Action, Prosperity, Employee Excellence - Collaboration, Equity, Innovation, People First, Stewardship)
- 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, Innovation, Stewardship)
- Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Safety, Equity, Employee Excellence - Collaboration, Equity, Innovation, Stewardship)
- Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety, Equity, Prosperity, Employee Excellence - Collaboration, Equity, Innovation, People First, 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, Equity, Employee Excellence - Collaboration, Equity, Innovation, People First, Stewardship)
- 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. (Safety, Equity, Prosperity, Employee Excellence - Collaboration, Equity, Innovation, Stewardship)
- Organizational Skills:** Keeps work prioritized and organized. Logically approaches situations. (Safety, Equity, Employee Excellence - Collaboration, Equity, Innovation, People First, Stewardship)

TYPICAL DUTIES:

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

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40%	E	Oversees the development of procedures, standards, guidelines, trainings, and tools relative to the deployment of Building Information Modeling for Infrastructure (BIM4I) Design facets and products. Supervises, manages, organizes, and leads a branch (engineering and non-engineering staff), and multi-disciplinary teams to develop standards, procedures, and tools for building and delivering digital 3-D models of existing, new, and improved highway assets, using Common Data Environment (CDE) workflow, 3-D Visualization for project delivery practices and design contract documents for contractors. Sets up and implements demonstration programs to pilot various BIM4I procedures, processes, and tools. Provides support and training to design staff and functional units, as well as internal and external partners. Develops performance measures to track, monitor, and report on the effectiveness and efficiency of the BIM4I practices and make continuous improvements to the procedures, processes, and tools to implement BIM4I. Develops and deploys a communication plan for the BIM4I initiatives. Manages, coordinates, tracks, and provides status of pilot projects. Establishes, manages, and coordinates BIM4I project development and delivery process. Provides status and recommendations to management on BIM4I implementation progress.
40%	E	Establishes a Project Information Model (PIM) and digital files as the project's legal document in 3-D plan set. Performs clash detection and other quality checks in Common Data Environment (CDE) to coordinate conflicts between the systems. Sets up and activates CDE for project navigation. Manages Design Collaboration by creating project folder, team spaces, and customize templates. Creates Model Coordination spaces for project files from functional units. Manages and controls project coordination spaces for project team members. Acts as an account administrator to manage access, set up projects, assign responsibility, create workflows, and manage project accounts, members, company data, member permissions, and subscriptions. Creates customize dashboards that display analytics and use of predictive insight to assess project data trends and patterns to identify gaps and problems. Captures digital as-built data during construction of the physical asset to build the Asset Information Model (AIM). Coordinates and works with project development team, design staff, functional units, project managers, and headquarters on resources management/allocations and delivery schedules for BIM4I activities.
15%	E	Represents the Design Division in various committees and task forces to work on implementing, developing, and delivering digital 3-D, 4-D, and 5-D models for construction and asset management uses. Works with design staff, functional units, headquarters, and internal and external partners on issues related to 3-D model-based project delivery products and practices including digital 3-D highway asset models, common data environment platforms, 3-D visualizations, and collaboration models.
5%	M	Provides knowledge transfer by documenting Design best practices and lessons-learned; develops and delivers trainings to Caltrans' staff. Provides the status of the innovative initiatives to the executive, management, and sponsors. Serves on special assignments as needed.

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

The incumbent has direct supervision of others (engineering and non-engineering staff). The incumbent may be asked to act in the absence of the supervisor.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Possession of a valid certificate of registration as a civil engineer issued by the California State Board of Registration for Professional Engineers. Knowledge of the Project Delivery process. Knowledge in engineering use of Caltrans Roadway Design and Drafting software and be knowledgeable in Caltrans' engineering-related processes. Knowledge of Caltrans CADD system (Civil3D, MicroStation, etc.). Knowledge of interrelations between engineering functions including Photogrammetry, Surveys, Planning, Design, Structures Design, Structures Architecture, Right of Way engineering, Office Engineer, and Construction. Ability to use good judgment based on engineering experience for analyses of engineering CADD application needs and adopt an effective course of action. Ability to effectively coordinate between engineering computer users and Information Technology. Ability to work with others, make effective presentations, prepare reports, and speak and write effectively. Ability to perform administrative tasks. Ability to review policy documents as related to project delivery process. The incumbent must be able to apply geometric standards to perform engineering design; apply traffic engineering principles to analyze various transportation alternatives; and provide technical oversight to ensure compliance with standards and accepted engineering practices. The incumbent must have a thorough knowledge of the Department's mission, goals, objectives, organization, and policy direction; policies, procedures, and standards; Federal and State laws, regulations, and concepts; all phases of a transportation project, including transportation planning, environmental, right of way, design, and construction. The incumbent must be able to analyze projects for their priority over other projects; consistent application of standards; viability

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of products developed by others; potential project delays; and corrective action plans. The incumbent must have the ability to plan, organize tasks/activities, and coordinate/direct the work of staff; track project schedules and costs; use personal computer applications including word processors, spreadsheets, Critical Path Method, and communication software; provide direction in a variety of activities to obtain program goals; develop and maintain cooperative working relationships with local, regional agencies, public and private sector; and analyze complex issues and recommend effective action.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR
The incumbent is fully responsible for personal decisions, as well as for decisions made by the staff. The incumbent is responsible for decisions related to the proper application of design standards and project development policies. Poor decisions on the part of the incumbent and/or the staff may result in multi-million dollar errors. Consequences may also include severe adverse public reaction to the District, Department, and the Administration's projects and programs. These decisions have a significant impact on the ability of the Department to meet its program goals.

PUBLIC AND INTERNAL CONTACTS
The incumbent will be required to establish and maintain a close working relationship with other District Branches/Divisions, Headquarters functions, other Districts, external partners, and general public. Must have good written and verbal communication skills. Contact with others regarding problems and development needs for applications and software will be required.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS
This position requires an excellent state of mind, and the ability to make clear, timely judgments under pressure. It also requires teamwork to openly discuss issues and reach consensus. The position requires the ability to multi-task, adapt to changes in priorities and ensure completion of tasks or projects given short notice, develop new insights into situations, foster a work environment that encourages creative thinking and innovation; and to adapt behavior and work methods in response to new information, changing conditions, or unexpected obstacles. Incumbent must be able to develop and maintain cooperative working relationships. Incumbent must value cultural diversity and other individual differences in the workforce; be tactful and treat others with respect; and ability to direct or effectively communicate expected goals and methods.

WORK ENVIRONMENT
The incumbent will work in a climate-controlled office under artificial lighting. The use of a laptop computer is essential. Incumbent may be required to sit for long periods of time using a keyboard and video display terminal. Incumbent may also be required to periodically travel and work outdoors, and may be exposed to dirt, noise, uneven surfaces, or extreme temperatures. Work hours will be set sometime between 6:00 a.m. to 6:00 p.m. Work outside the normal hours may be required, and vacations may be restricted during peak times and fiscal year-end closing.

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
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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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