

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE C.E.A.	OFFICE/BRANCH/SECTION	
WORKING TITLE Chief Data and Artificial Intelligence Officer (CDAO)	POSITION NUMBER 900-170-7500-XXX	REVISION DATE 09/24/2025

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 Chief Deputy Director and in collaboration with Chief Information Officer, the incumbent serves as the Chief Data and Artificial Intelligence Officer (CDAO), CEA-C, for policy and operations. Provides leadership and direction for the development and implementation of policies, strategies, and operations for enterprise data management, analytics, data governance, digital transformation, and responsible for ethical use of Artificial Intelligence (AI) to optimize performance and drive innovation statewide. This includes the creation and management of data and analytics strategies, and execution of related practices that drive measurable business outcomes.

The incumbent is responsible for establishing policies for data management and the use of AI. These policies affect Caltrans employees, transportation stakeholders, and every person that uses the California State transportation system. Misuse or misinterpretation of transportation data and results from the application of AI tools could result in devastating consequences. Appropriate policies are critical for the appropriate use and interpretation of data analytics and AI generated information. The incumbent is also responsible for leading the data and analytics function; developing talent and maturing data and analytics culture; building trust and managing data and evolving technology capabilities. This includes the implementation enterprise data governance, data management, data quality and management of AI initiatives aligned with business goals, while prioritizing ethical considerations and compliance with regulations; essentially bridging the gap between data management and AI application to drive informed decision making across the enterprise.

CORE COMPETENCIES:

As a C.E.A., 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.

TYPICAL DUTIES:

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

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

30% E Strategic Planning:

The incumbent is responsible and accountable for the overall leadership and management of data, data analytics, AI (Artificial intelligence), and their overall governance within Caltrans. Serves as the chief advisor to the Department's Executive Leadership on matters related to data management, analytics, and AI. Develops a comprehensive data and AI strategy in alignment with Caltrans' business objectives, digital transformation roadmap, and strategic plan (including the 2050 California Transportation Plan). Identifies and prioritizes high-impact AI use cases that support Caltrans' mission and public safety goals; provides guidance to ensure appropriate requirements and risk considerations are met in collaboration with IT. Tracks progress of AI initiatives, measure outcomes, and adjust strategies to address new challenges or regulatory requirements.

The incumbent builds partnerships with Caltrans leadership, internal and external stakeholders to establish the vision for managing data as a business asset and to leverage data and analytics capabilities to maximize the value derived from data assets. Partners with executives to align data and AI strategies with overall business goals. Implements an enterprise operating model for data and analytics that is consistent with the capabilities and competencies required to execute the strategy. Oversees the establishment and implementation of performance measures, as well as works to align the overall data analytics and AI strategic direction with the Department's strategic plan. Tracks the impact of AI on business outcomes and adjusts as needed.

The incumbent represents Caltrans in external forums and industry events related to data, data analytics, and/or AI. Contributes to industry discussions and builds strategic partnerships with external stakeholders. Meets and consults with internal and external stakeholders, decision makers, vendors, academia, industry, and other partners of hardware, software, and services with AI to maintain technical awareness and to identify opportunities for the application and advancement of AI. Stays abreast of evolving regulatory requirements and adapting AI strategies accordingly.

25% E AI Development, Deployment and Technology Oversight:

The incumbent oversees governance and cross-functional collaboration throughout the AI project lifecycle (planning, model development, training, evaluation, and implementation) in partnership with the CIO's office and other relevant divisions. Provide expert guidance and matrix leadership to interdisciplinary teams (data scientists, engineers, and IT staff) so that AI solutions are robust, secure, and scalable. Promotes responsible AI implementation by coordinating with the CIO, Chief Technology Officer, and application development teams to ensure alignment with enterprise architecture and best practices.

The incumbent evaluates infrastructure and tools required for advanced analytics and AI; collaborates with the CIO to reduce barriers to AI access and to refine technology procurement strategies.

25% E Data and Analytics:

The incumbent provides policy and operational oversight for enterprise data programs and platforms. Leads collaborative efforts with other program areas to integrate and standardize data, ensuring consistency and usability across Caltrans. Maintains a cross-functional governance framework for data and analytics, in partnership with relevant program managers, adhering to recognized industry best practices and performance metrics.

The incumbent monitors and addresses data quality, availability, and security concerns in partnership with the Chief Information Security Officer (CISO). Champions data-driven innovation by piloting new technologies and methods, leveraging Caltrans' data assets.

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

10% E Policy, Ethics, Governance, and Compliance:

The incumbent establishes ethical AI policies and guidelines to mitigate bias, promote responsible AI development, and monitor compliance. The incumbent is responsible for establishing policy for data management and the use of AI. Leads data and AI ethics considerations in processes, systems and programs. Implements mechanisms to monitor and address potential ethical concerns related to AI. Oversees compliance with ethical guidelines, data privacy regulations, applicable State policies, and industry-specific standards for AI initiatives and deployments. Establishes and enforces ethical AI practices.

The incumbent maintains transparency in AI decision-making processes and addresses potential risks related to data bias and privacy by supporting the GenAI 5305-F Risk Assessment procedures led by the Chief Information Security Officer (CISO) to identify and mitigate biases, compliance gaps, and legal exposures. The incumbent raises data privacy and security concerns to the CISO, helping ensure departmental alignment with requirements to manage AI risk as established in relevant law and policy. Acts as a champion for data governance, data management and data quality to support business operations. Strives to have a single source of truth in the Department and to make high-quality data easily accessible statewide to all decision makers. In addition, the incumbent maintains a current inventory of all Generative AI uses under Government Code §11546.45.5 and tracks the datasets used in those systems per Civil Code §3111, ensuring transparency and traceability across Caltrans' AI initiatives.

The incumbent works with Programs and IT to ensure that these governance processes are adhered to in each and every program within the department.

10% E Change Management, Workforce Development, and Culture:

The incumbent educates Caltrans staff on the value of data governance, analytics, and AI, fostering a data-driven culture that integrates these capabilities into everyday operations. Develops and delivers training, workshops, and other resources to enhance AI literacy, emphasizing ethical and equitable use of technology, plus compliance with data privacy regulations. Addresses potential resistance to AI adoption, highlighting benefits and mitigating concerns through transparent communication and stakeholder engagement.

The incumbent also facilitates the integration of data governance and AI solutions into existing workflows.

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 provides functional leadership to staff responsible for data, analytics, and AI-related activities. This includes those in IT classifications, who maintain a direct reporting line to the CIO (per Government Code §11546.1 and SAM 4815), but coordinate closely with the CDAO for strategic direction (a dotted-line relationship).

The incumbent establishes and provides functional guidance to statewide employees responsible for data assets or GenAI related duties, across all divisions and districts. The incumbent must have the ability to assimilate and evaluate technical and procedural input from various sources, develop alternative courses of action, reason logically and creatively, and make objective recommendations on all issues related to the division.

Partners with Programs across the state to implement and advance data analytics function and GenAI strategies. Sets clear targets for implementation of key initiatives and projects within the division and districts, working to align the overall strategic direction of the program with the Department's strategic management plan and 2050 California Transportation Plan.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

This position requires an innovative, strategic, and collaborative mindset, as well as thorough knowledge of:

- Caltrans' Strategic Plan, the 2050 California Transportation Plan, and related plans and reports.
- Transportation management systems (TMS) and asset management.
- Deep understanding of data management practices and technologies.
- Strong business acumen and ability to translate business needs into technical solutions.
- Knowledge of relevant regulations and ethical considerations related to data and AI.
- Public transportation management and administration; principles and practices of project and organizational management; functions of Federal, State and local governments within the area of transportation; and budget practices.

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DOT PM-0924 (REV 01/2025)

The position requires an extensive background in preparing and delivering oral presentations, along with the ability to develop and prepare written documents, and direct cooperative working relations with representatives of all levels of government, the public, and Legislature. The incumbent must analyze and resolve highly complex and/or politically sensitive problems from inter-agency and public relations issues. The incumbent must have the ability to assimilate and evaluate technical and procedural input from various sources, develop alternative courses of action, reason logically and creatively, and make objective recommendations in all issues in relation to data analytics and AI.

Must have:

- A lens and focus on the importance of equity and community engagement.
- Strong communication and collaboration skills.
- Strong initiative and desire to pilot new technologies and innovative methods for achieving department goals.
- An understanding of the principles and techniques of personnel management and supervision, including the department's Equal Employment Opportunity (EEO) objectives and a manager's role in achieving EEO objectives.
- The ability to analyze administrative policies and organizational procedures and practices; plan, organize, and direct the work of multidisciplinary professional and administrative staff; judge work quality and performance accurately; and integrate the activities of a diverse program to attain common goals.
- The ability to analyze situations accurately, adopt an effective course of action in the resolution of complex problems, and contribute effectively to the department's safety, health, EEO, and labor relations objectives.
- The ability to gain the confidence and support of colleagues and partners, advising staff and executives about a variety of matters, develop cooperative working relationships with representatives of all levels of government and the public, and analyze complex problems and recommend effective courses of action.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for the overall policies, direction setting, and priority establishment for the development, management and administration of the Data and Analytics function and Artificial Intelligence. Expert advice to top management is essential to avoid errors that could expose Caltrans to criticism and seriously restrict the operating capability and flexibility. This is a high-profile area in which the Legislature's transportation policy staff and committee members have exhibited intense interest. The incumbent is expected to make sound decisions and take appropriate actions to reach Caltrans' objectives. The consequence of errors in strategic direction and execution can result in loss of resources, funding support, federal reimbursement, legislative support, and the opportunity to solve critical transportation problems across the entire scope of the program and Caltrans.

PUBLIC AND INTERNAL CONTACTS

The incumbent represents Caltrans and participates in meetings and dealings with Federal, State, regional and local agencies, elected officials, and the public. In addition, the incumbent makes frequent presentations and maintains good working relationships with other Programs, Districts and local jurisdictions. The incumbent may lead or participate in internal and external task force groups and committees.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Ability to work in a high-pressure and fast-paced environment while simultaneously maintaining strong communication and close interpersonal relationships. Ability to develop and lead strong teams, leverage resources, respond to difficult situations, recognize emotional and politically charged issues, and acknowledge various perspectives. The incumbent should be able to quickly adapt behavior and work methods in response to new information/priorities, and unexpected obstacles; multi-task; effectively interact with many levels of people in a cooperative manner; be decisive; take appropriate actions; and complete tasks or projects with a short notice. The incumbent should be able to deal effectively with pressure, maintain focus and intensity yet remain optimistic and persistent, even under adversity.

The incumbent may be required to sit for long periods of time using technology, engaging in meetings, writing and reviewing documents. Strong emotional intelligence required to develop and maintain productive working relationships; respond appropriately to multiple workload requests and conflicting deadlines. The incumbent shall act in a fair and ethical manner toward others and demonstrate a sense of responsibility and commitment to public services; develop new insights into situations and apply innovative solutions to make organizational improvements; create a work environment that encourages creative thinking and innovation; be willing to take risks and initiate actions that involve a deliberate risk to achieve a recognized benefit or advantage; and value cultural diversity and other individual differences in the workforce. Sustained mental activity for writing, editing, reviewing, collaborating, problem solving, conducting analysis and related tasks. 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; to adapt behavior and work methods in response to new information, changing conditions, or unexpected obstacles; and demonstrate a sense of responsibility and commitment to public service.

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WORK ENVIRONMENT

The work environment is fast-paced, busy and requires considerable flexibility in managing time, priorities, and assignments. While at their base of operation, incumbent will work in a climate-controlled office under artificial light. However, due to periodic problems with the heating and air conditioning, the building temperature may fluctuate. Incumbent will be required to travel in state, out-of-state, and internationally.

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

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

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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