

Per California Code of Regulations, title 2, section 548.5, the following information will be posted to CalHR's Career Executive Assignment Action Proposals website for 30 calendar days when departments propose new CEA concepts or major revisions to existing CEA concepts. Presence of the department-submitted CEA Action Proposal information on CalHR's website does not indicate CalHR support for the proposal.

A. GENERAL INFORMATION

1. Date

2025-08-21

2. Department

Department of Transportation (Caltrans)

3. Organizational Placement (Division/Branch/Office Name)

Director's Office

4. CEA Position Title

Chief Data and Artificial Intelligence Officer

5. Summary of proposed position description and how it relates to the program's mission or purpose.
(2-3 sentences)

The Chief Data and Artificial Intelligence Officer (CDAO) is responsible for establishing policies for data management and the use of artificial intelligence (AI). These policies affect Caltrans employees, transportation stakeholders, and travelers on 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 CDAO is also responsible for leading the data and analytics function; developing talent, and maturing data and analytics culture; building trust and managing data in support of evolving technology capabilities. This includes the implementation of 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.

6. Reports to: (Class Title/Level)

Chief Deputy Director of Caltrans

7. Relationship with Department Director (Select one)

- ☒ Member of department's Executive Management Team, and has frequent contact with director on a wide range of department-wide issues.
- ☐ Not a member of department's Executive Management Team but has frequent contact with the Executive Management Team on policy issues.

(Explain):

8. Organizational Level (Select one)

- ☐ 1st ☐ 2nd ☒ 3rd ☐ 4th ☐ 5th (mega departments only - 17,001+ allocated positions)

B. SUMMARY OF REQUEST

9. What are the duties and responsibilities of the CEA position? Be specific and provide examples.

Here are the Chief Data and AI Officer's (CDAO's) duties by category:

Strategic Planning

The CDAO serves as the principal policy maker for enterprise data governance, analytics, and artificial intelligence (AI) across Caltrans. The CDAO formulates, approves, and enforces the Department's comprehensive data and AI strategy, ensuring alignment with Caltrans' mission, the 2050 California Transportation Plan, statewide digital transformation goals, and CalSTA's Core Four Priorities of Safety, Climate Action, Equity, and Economic Prosperity. The CDAO identifies and prioritizes high-impact AI use cases with statewide transportation safety, mobility, and equity benefits; sets binding policy for AI requirements and risk management; and directs adjustments to strategy in response to emerging challenges, evolving regulations, or legislative changes such as SB 896, AB 2013, and Executive Order N-12-23.

AI Development, Deployment, and Technology Oversight

The CDAO establishes enterprise policy governing the entire AI lifecycle in collaboration with the CIO's Office and other executive functions. The CDAO's policies define technical, ethical, and security requirements for AI solutions and are binding across all Caltrans divisions and districts. The CDAO provides final policy direction to interdisciplinary teams, ensuring AI deployments meet enterprise architecture standards, comply with applicable laws, and can be scaled safely to serve the traveling public and other stakeholders.

Data and Analytics

The CDAO sets data governance standards covering acquisition, stewardship, quality assurance, interoperability, accessibility, and privacy for all Caltrans data assets. These policies guide integration across programs, ensure consistent use of performance metrics, and enable secure, standards-based data sharing with other state agencies, regional planning organizations, and public partners. The CDAO's directives are the foundation for Caltrans' enterprise analytics platforms and ensure data is accurate, trusted, and actionable for decision-making at both the department and statewide levels.

Policy, Ethics, Governance, and Compliance

The CDAO is the authority for policy on ethical AI practices, data governance, and compliance with privacy laws, state technology mandates, and industry standards. This includes creating and enforcing policies to prevent bias, promote transparency, and protect individual rights in all AI-enabled systems. The CDAO ensures Caltrans' data and AI policies meet the requirements of SB 896, AB 2013, Executive Order N-12-23, and applicable federal standards. The CDAO leads the Department's ethics framework for AI and data, oversees compliance monitoring, and directs remediation actions where violations or risks are identified.

Change Management, Workforce Development, and Culture

The CDAO leads policy-driven change management to embed a data-driven and AI-literate culture throughout Caltrans. This includes issuing policies and training requirements that promote ethical, equitable, and compliant use of AI and data, and establishing statewide standards for AI literacy training across Caltrans programs. The CDAO ensures policies address workforce readiness, mitigate resistance to adoption, and align stakeholder engagement strategies with statewide technology and transportation goals.

B. SUMMARY OF REQUEST (continued)

10. How critical is the program's mission or purpose to the department's mission as a whole? Include a description of the degree to which the program is critical to the department's mission.

- ☒ Program is directly related to department's primary mission and is critical to achieving the department's goals.
- ☐ Program is indirectly related to department's primary mission.
- ☐ Program plays a supporting role in achieving department's mission (i.e., budget, personnel, other admin functions).

Description: Under the general direction of the Chief Deputy Director and in collaboration with the Chief Information Officer, the Chief Data and Artificial Intelligence Officer (CDAO), CEA-C, serves as the principal policy maker for enterprise data governance, analytics, and artificial intelligence (AI) across Caltrans. The CDAO provides executive leadership and direction for the formulation, approval, and implementation of policies and strategies that directly support Caltrans' mission to provide a safe, sustainable, integrated, and efficient transportation system.

The CDAO's responsibilities, spanning statewide data management, analytics, digital transformation, and the ethical use of AI, are critical to optimizing performance, enhancing public safety, advancing climate and equity goals, and ensuring compliance with high-profile legislative and regulatory mandates. The creation and execution of these enterprise strategies drive measurable operational improvements and innovation across all Caltrans districts and programs, making the role central to achieving the Department's core objectives.

B. SUMMARY OF REQUEST (continued)

11. Describe what has changed that makes this request necessary. Explain how the change justifies the current request. Be specific and provide examples.

In September 2023, California Governor Gavin Newsom signed Executive Order N-12-23 (GenAI EO), which focused on preparing the state for the progress of generative artificial intelligence (GenAI). The order directs state agencies to analyze the risks AI poses to California's critical infrastructure and to develop guidelines for public sector procurement of generative AI. It also emphasizes the importance of ethical, transparent, and trustworthy AI development and deployment within state government.

In February 2025, the Secretary of the California State Transportation Agency (CalSTA) issued a memo to the Caltrans Director in support of the formation of a Chief Data and Artificial Intelligence Officer (CDAO) role at Caltrans. The CDAO role helps ensure Caltrans compliance with new, and evolving State regulations and policy including:

- Senate Bill (SB) 896, the GenAI Accountability Act, which aims to regulate and mitigate risks associated with GenAI technologies in California by requiring transparency, risk assessments, and clear communication when Artificial Intelligence (AI) is used in state government services.
- Assembly Bill (AB) 2013, Generative artificial intelligence: training data transparency, which mandates the public disclosure of the data used to train GenAI models, including summaries of the data sets and their sources.

The CDAO role provides the executive leadership required to use GenAI technology safely and effectively at Caltrans. As envisioned by CalSTA, the Caltrans CDAO will ensure a cohesive strategy and approach for data governance and AI deployment at Caltrans through a direct reporting relationship to the Caltrans Director's Office.

C. ROLE IN POLICY INFLUENCE

12. Provide 3-5 specific examples of policy areas over which the CEA position will be the principle policy maker. Each example should cite a policy that would have an identifiable impact. Include a description of the statewide impact of the assigned program.

1. AI Governance and Compliance Policy

Policy Area: Develop and enforce Caltrans' enterprise-wide AI governance framework to comply with SB 896 (GenAI Accountability Act), AB 2013 (GenAI training data transparency), Executive Order N-12-23, and evolving state and federal AI regulations.

Statewide Impact: Ensures that AI and GenAI systems used in transportation planning, design, operations, and public-facing services meet rigorous transparency, safety, and ethical standards. This policy will influence how AI is deployed across all districts, setting precedent for responsible AI use in other CalSTA departments, and mitigating risks of bias, privacy breaches, or operational failures that could affect millions of Californians.

2. Enterprise Data Governance and Data Sharing Policy

Policy Area: Establish policies for Caltrans' data acquisition, stewardship, quality, interoperability, and open data publication, covering transportation asset data, mobility patterns, safety statistics, environmental data, and infrastructure performance metrics.

Statewide Impact: Supports transparent, evidence-based transportation decision-making across California. This policy enables consistent data exchange with partner agencies (e.g., CHP, DMV, regional planning bodies) and supports statewide initiatives such as climate action, equity in infrastructure investment, and improved public access to transportation data.

3. AI and Data Ethics & Risk Management Policy

Policy Area: Develop policies for risk assessment, mitigation, and ethical use of AI in transportation operations, covering algorithmic bias prevention, automated decision accountability, cybersecurity safeguards, and data privacy protections.

Statewide Impact: Protects public trust in state transportation services by ensuring that AI-enabled systems, such as predictive maintenance, traffic management, and accident interventions, do not produce discriminatory or unsafe outcomes. These policies will influence procurement, vendor requirements, and oversight mechanisms across California's transportation sector.

4. Transportation AI Innovation and Deployment Standards

Policy Area: Set statewide policies and standards for piloting, evaluating, and scaling AI solutions in transportation contexts, including automated traffic monitoring, predictive analytics for project delivery, and AI-enabled safety interventions.

Statewide Impact: Establishes a consistent, regulated pathway for innovation that ensures pilot programs (e.g., AI-driven traffic management systems and vulnerable roadway user systems) are rigorously tested, assessed, and integrated into statewide operations. This drives efficiencies, reduces accidents, and supports climate action goals across California's transportation network.

5. Inter-agency AI and Data Collaboration Policy

Policy Area: Lead the creation of inter-agency data and AI collaboration agreements, aligning Caltrans' data and AI use with CalSTA's Core Four Priorities (Safety, Climate Action, Equity, and Economic Prosperity) and statewide digital government initiatives.

Statewide Impact: Enhances cross-agency problem-solving for transportation issues such as wildfire evacuation modeling, climate resilience infrastructure planning, and equity-focused transit expansion. This policy promotes a unified, interoperable approach to data and AI use across state agencies, reducing duplication and improving statewide service delivery.

C. ROLE IN POLICY INFLUENCE (continued)

13. What is the CEA position's scope and nature of decision-making authority?

The CDAO has broad, enterprise-wide policy-making authority over Caltrans' data governance, artificial intelligence (AI), and generative AI (GenAI) programs, with direct impact on the Department's strategic direction, compliance posture, and statewide transportation outcomes. The position's decision-making authority includes:

- Establishing enterprise policies for the ethical, transparent, and compliant use of AI and GenAI technologies across all Caltrans programs, in alignment with SB 896 (GenAI Accountability Act), AB 2013 (training data transparency), Executive Order N-12-23, and evolving federal and state regulations.
- Setting data governance standards for data acquisition, stewardship, quality assurance, interoperability, and open data publication.
- Authorizing and prioritizing AI and data-driven initiatives, including proof of concept programs, enterprise deployments, and system retirements.
- Approving inter-agency agreements governing data sharing, joint AI model development, and multi-agency risk management frameworks.
- Determining risk acceptance and mitigation strategies for AI-enabled systems.

This decision-making authority is final within the assigned program area, is binding on all Caltrans divisions and districts, and has statewide impact through Caltrans' leadership role in the transportation sector. The CDAO's determinations directly affect public safety, infrastructure investment efficiency, and compliance with high-profile state technology policy mandates.

14. Will the CEA position be developing and implementing new policy, or interpreting and implementing existing policy? How?

The CDAO will both develop new policy and interpret and implement existing policy for enterprise data governance and AI. New policy efforts will establish standards for data quality, security, interoperability, and ethical AI use in alignment with SB 896, AB 2013, and Executive Order N-12-23. Implementation responsibilities include applying existing laws and directives, translating them into clear operational guidance, and ensuring consistent compliance across all Caltrans programs. This dual role ensures emerging technologies are adopted responsibly, transparently, and to the benefit of California's transportation mission.