

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION North Region Project Development	
WORKING TITLE Project Delivery	POSITION NUMBER 927-200-3135-XXX	REVISION DATE

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 District Office Engineer Branch Chief, a Senior Transportation Engineer, the incumbent is responsible for: 1) the preparation of specifications, special provisions and non-standard special provisions, 2) the quality assurance (QA) review of plans, specifications, and estimates (PS&E), 3) participating in "pre-P&E to DOE" (M300) activities and 4) the preparation and processing of a complete PS&E package, completing various forms and entering database information for submittal to the Division of Engineering Service Office Engineer (DES-OE), leading to a biddable and buildable project. Incumbent will train new staff in the Office Engineer process and perform support duties involved with the preparation of various engineering reports, cost estimates and value analysis reviews. Incumbent must work independently and as a team member during the project development process. The incumbent will perform utility research, field investigation, and preparation of utility plans using Computer Aided Design and Drafting (CADD) software. Possession of a valid California Drivers License is required when operating a state owned vehicle as travel may be required. Registration as a California Professional Civil Engineer is required when range D.

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.

- **Flexibility and Managing Uncertainty** : Adjusts thinking and behavior in order to adapt to changes in the job and work environment. (Employee Excellence - Innovation, Integrity)
- **Decision Making**: Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety - Innovation)
- **Continuous Professional Development**: Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Employee Excellence - Integrity, Pride)
- **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. (Equity - Innovation)
- **Teamwork/Partnership**: Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Employee Excellence - Collaboration)
- **Customer Focus**: Considers, prioritizes, and takes action on the needs of both internal and external customers. (Climate Action - Collaboration, Equity, 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. (Employee Excellence - Collaboration, People First, Pride)
- **Analytical Skills**: Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Prosperity - Collaboration, Integrity)
- **Technical Expertise**: Depth of knowledge and skill in a technical area. (Safety - Collaboration, Integrity, Pride)

TYPICAL DUTIES:

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

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25%	E	Prepare special provisions and specifications for State Major Capital Improvement and Minor transportation projects designed by Caltrans or Consultants. Obtain approval to use existing non-standard special provisions, prepare new non-standard special provisions and obtain approval as required. Help maintain and update North Region nonstandard special provision (NSSP) database. Circulate draft P&E. Resolve and respond to draft PS&E circulation review comments as well as constructibility review comments related to specifications. Transfer and store project files and information at Office Engineer process milestones in the Office Engineer folder of the North Region Project Development project filing system (P: Drive) and update DESOE AADD database information as required. Monitor and meet project scheduled milestones on assigned projects.
20%	E	Review engineering documents, reports, plans, estimates and other engineering related information for projects providing quality assurance. Plans included but not limited to layouts, profiles, typical sections, title sheets, superelevation diagrams, drainage, construction details, grading, utilities, traffic striping, stage construction, detours, and quantities as well as the incorporated plans, specifications and estimate from DES and other functional divisions providing independent quality assurance with regards to the PS&E. Review, understand, and apply Caltrans standards, manuals, guidelines, policies and directives to project reviews and the development of the specifications to provide quality assurance. Review for consistency in accordance with QC/QA checklists, Drafting and Plan Preparation Manual, Best Bid Standards Guide and Construction Contract Development Guide. Verify construction work shown is consistent, accurate and clearly defined through the plans, standard specifications, special provisions, nonstandard special provisions and construction cost estimate.
15%	E	Coordinate with Design Branch and other functional units for PS&E required submittals, certifications, informational handouts and other related activities leading to a biddable and buildable project. Prepare and process a complete PS&E package consisting of a full, complete and accurate set of plans, specifications, estimates and supplemental information as well as the accurate completion of various submittal forms and database entries for submittal to the Division of Engineering Service Office Engineer (DES-OE). The preparation of the PS&E package may include preparing specifications for, but not limited to, layouts, profiles, typical sections, title sheets, superelevation diagrams, drainage, construction details, grading, utilities, traffic striping, stage construction, detours and quantities. Incorporate plans, specifications and estimate from DES, the District electrical specifications engineer and other functional divisions.
15%	E	Provide support and participate in M300 Engineering Services Branch pre-P&E project review activities prior to the submittal of the project plans and estimate to District Office Engineer. Provide support as needed to various functional units. Provide construction support by responding to construction questions. Provide support with the preparation of various engineering reports, cost estimates and value analysis reviews.
		Respond to bidder inquiries and prepare contract addenda. Review bid summaries prior to contract award. Train new staff in the Office Engineer process.
10%	E	Perform utility research and prepare utility plans using Computer Aided Design and Drafting (CADD) software. Develop utility specifications and estimates for transportation projects. Coordinate with Project Development Team (PDT) members on proposed project scope, positive utility locations, utility conflicts, and utility relocations. Review technical studies and reports. Review and comment on utility plans from consultants and local agencies. Perform utility field investigations to determine locations of existing utilities. Collect and analyze data in the field using various types of electronic equipment. Meet with Project Development Team (PDT) members in the field on utility impacts from proposed transportation projects. Oversight of positive location contractor during field activities. Oversight of utility relocations by utility companies and contractors to ensure compliance with approved plans and specifications.
5%	E	Monitor quality and performance measures related to plans and estimates submitted to Office Engineer. Document recurring QC/QA issues and coordinate outreach and corrective action with the NR design units and Engineering Services constructability unit.
5%	E	Effectively communicate and coordinate the efforts between Design Branch members, other functional units, project development team members, Headquarters, other agencies, and the public to provide recommendations on the plans, specifications and estimate.

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5%	M	Prepare and/or assist with other North Region engineering reports and bulletins as directed. Attend and participate in Caltrans sponsored staff and project related meetings, trainings, workshops, job-related special assignments and other career development activities.
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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 does not supervise, but on occasion, could act in a lead worker capacity. The incumbent will receive supervision from a Senior Transportation Engineer and/or direction from a Transportation Engineer/Civil, working as a lead worker.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

The incumbent must have knowledge of basic principles of physics, chemistry, and mathematics as applied to civil engineering; transportation facility planning and design principles. The knowledge of engineering surveying, methods, materials, tools, and equipment used in construction and maintenance of transportation facilities, and the methods of proportioning and handling Portland Cement Concrete and asphalt concrete. The handling of asphaltic oils and emulsions, testing of materials, computer application to transportation engineering; factors which influence the impact of highways and other transportation facilities on the environment; principles and practices involved in utility relocation.

The incumbent must have the ability to use Computer Aided Design and Drafting (CADD) software, word processing and spreadsheet software, access and extract information from database, do mapping and drafting and make neat and accurate computations and engineering notes and prepare reports. Prepare designs, plans and specifications for projects and perform basic drafting; inspect construction work and determine if it meets specification requirements; evaluate and implement utility relocation plans; prepare basic correspondence and reports; communicate effectively orally and in writing.

The incumbent must be able to analyze situations accurately, identify potential conflicts, and adopt an effective course of action; review project schedules and determine appropriate level and timing of review; recognize issues that are significant and implement an effective course of action.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent will be responsible to make accurate engineering calculations; take effective action to avoid delays; make sound decisions in the interpretation of contract plans and specifications. Omissions in plans and reports could lead to unnecessary change orders, claims, and delays; errors in judgment could result in a design project of lesser quality, which could increase project construction costs or increase the Department's exposure to tort liability.

PUBLIC AND INTERNAL CONTACTS

The incumbent must be able to establish and maintain a professional and cooperative relationship with those contacted in the course of the work, such as with Region and District functions, contractors and their employees, local agencies and officials, regulatory agencies, utility companies, engineering consultants, developers and public stakeholders in order to transmit or obtain relevant engineering information. These contacts could be verbal or written, as needed, to perform assignments with the goal of protecting the State's interests and providing quality products on and for the State's infrastructure. Must be able to guide project teams to issue resolution and be able to build consensus within teams, identifying potential conflicts and using resolution techniques to resolve at the lowest level.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent may be required to stand for long periods of time, walk on slopes or uneven terrain, move and transport bags of material samples to Materials Labs. May be required to lift and carry samples of materials, which weigh up to 50 pounds. Drive to and work at, various locations throughout the North Region. When at their base office setting, employee may be required to sit for long periods of time using a keyboard and video display terminal. In the course of the work, the incumbent must maintain cooperative working relationships within the working environment. Will be required to understand basic design engineering principles; make accurate engineering calculations, ability to research and compile data and prepare calculations for a variety of routine transportation improvement projects, prepare accurate daily diaries and construction records.

WORK ENVIRONMENT

The incumbent will be required to work at various locations throughout the North Region. Temporary assignment away from one's "headquarter location" may be required. Employee will be notified of a change of assignment under the terms of the current Collective Bargaining Agreement. Employee will be reimbursed for travel expenses according to the Department's Travel Policies. May be required to work at night. Will be subject to noise, odors, dust, and extreme weather conditions. Incumbent must work with and about a variety of materials, construction and testing equipment. When in the office, either a construction field office or in a North Region Project Development branch, employees will work in a climate-controlled environment with artificial lighting.

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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.

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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