

**CALIFORNIA DEPARTMENT OF TRANSPORTATION  
DUTY STATEMENT**

<b>CLASSIFICATION TITLE</b> Transportation Engineer Civil	<b>DISTRICT/DIVISION/OFFICE</b> Dist 1 – Traffic Electrical-TMC	
<b>WORKING TITLE</b> Traffic Engineering, Surveillance and Investigations	<b>POSITION NUMBER</b> 901-350-3135-0XX	<b>EFFECTIVE</b> September 2014

**As a valued member of the Caltrans team, you make it possible for the Department to improve mobility across California by being innovative and flexible; reporting to work regularly and on time; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.**

**GENERAL STATEMENT:** Under the supervision of a Senior Transportation Engineer, the incumbent will support the development, construction, maintenance, and operation of the District Traffic Operations program. Perform Traffic Engineering, Traffic Surveillance, and Traffic Investigations. Perform field and office transportation operational engineering work; performs design, computer aided drafting, and other related work. Perform planning and maintenance engineering tasks, which support the 10-Year SHOPP and the District Highway Maintenance programs.

**TYPICAL DUTIES:**

Percentage Essential (E)/Marginal (M)	Job Description
30% (E)	<b>TRAFFIC ENGINEERING:</b> Review and recommend traffic handling and traffic control solutions for all phases of project development.
20% (E)	<b>SURVEILLANCE:</b> Conducts surveillance activities, including performing congestion monitoring and travel time studies, vehicle classification counts, pedestrian counts, traffic signal warrant studies, 4-way stop sign studies related to safety and operational improvements as required. Prepare traffic studies, including performing level of service analysis for freeway and highway segments, merge and weave analysis, signalized intersections, queuing analysis, and stop controlled intersections using various traffic engineering software.
20% (E)	<b>INVESTIGATIONS:</b> Conduct traffic safety and operational investigations and prepare appropriate reports. Evaluate locations for appropriate signing and pavement delineation. Prepare necessary signing, striping and safety device orders for action by others. Investigate high accident and other locations as required which includes preparation of collision diagram based on reviewing actual CHP Collision report, field reviewing location and completing the appropriate field review form and recommending corrective action. Prepare Project Initiation Form including preparing project concept and cost estimate.
10% (E)	<b>PROJECT SCOPING:</b> Review PSR, PSSR, PR and other engineering reports prepared for capital projects on the State Highway System designed by Caltrans engineers or consultants. Represent Traffic Operations as a member of the Constructibility Review Team at 35%, 65%, and 95% PS&E stage by ensuring layouts, cross-sections, profile, super-elevation diagram, signing and striping plan, stage construction plan, traffic control have been prepared to State Standard and Specification.

- 10% (E) **TRAFFIC PLANNING:** Immediately investigates complaints regarding excessive congestion and/or delay, and when necessary recommend modifications to the State Highway System to address the complaint. Communicate with the Traffic Manager, Dispatch/TMC, and the Public Information Officer and other field personnel as needed.
- 10% (E) **STATE HIGHWAY OPERATION PROTECTION PROGRAM:** Performs Planning and Maintenance engineering tasks to assist with completion of planned improvements on State Highways by use of 10-Year SHOPP and Highway Maintenance programs.

### **SUPERVISION EXERCISED OVER OTHERS**

May function as a leadworker for Transportation Engineers, Technicians, Student Assistants, and others in the above tasks.

### **KNOWLEDGE AND ABILITIES AND ANALYTICAL REQUIREMENTS**

Incumbent must have expertise and knowledge in civil and traffic engineering principles and standard practices of the Department. Knowledge of operational systems. Knowledge of planning, designing, creating specifications and estimates, construction, maintenance and operation of transportation systems. Knowledge of computer based processes to compile engineering data, and knowledge of the development and maintenance of transportation-related computer programs

Ability to do difficult transportation design work; prepare plans, specifications, and estimates of transportation work; make neat and accurate drawings and technical sketches; make calculations; specify necessary diagrams, and specifications; maintain cooperative relations with employees whose work is being inspected; analyze situations accurately and take effective action; make field inspections of operational facilities; prepare correspondence; make effective oral and written reports.

Understand transportation and traffic engineering design and operation principles. Make engineering calculations. Research and compile statistical data and prepare calculations for a variety of highway improvement projects. Ability to evaluate and select proper design elements and to coordinate design with highway facilities using existing Design Manuals, Traffic Manuals and computer programs. Develop completed Plans, Specifications, and Estimates. Understand traffic operations theory. Understand concept and operation of traffic management. The position requires an analytical approach to unique problems on a real-time basis. Position requires quick action and sound decisions.

### **CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS**

Incumbent will be responsible to use proper design and operations technique and theory; make accurate engineering calculations, apply sound engineering principles. If proper decisions are not made, unsafe conditions, and unnecessary delay and congestion to traffic may develop.

### **PUBLIC AND INTERNAL CONTACTS**

Must be able to respond to the public by phone, with correspondence and in person. Must be able to deal effectively with others. Will require contact with representatives of other agencies, utility companies and the public and private sector.

