

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

CLASSIFICATION TITLE Transportation Surveyor	OFFICE/BRANCH/SECTION District 11 / Division of Land Surveys / Field Surveys Branch	
WORKING TITLE Field Surveyor	POSITION NUMBER 911-308-3029-911	REVISION DATE 05/21/2024

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

GENERAL STATEMENT:

Under the direction of a Transportation Surveyor Party Chief, the Field Surveyor is assigned sub-professional or professional field responsibilities in land surveying. The incumbent determines and establishes boundaries of State-owned lands; establishes high order vertical and horizontal control; provides photogrammetric mapping and topography; prepares and records maps; makes technical studies and investigations pertaining to land or engineering surveying, property titles, descriptions, and deeds; writes memorandum and prepares reports; and performs other related work. This is the entry, first working, or journey level of professional surveying field work at Caltrans. As experience progresses, incumbent may act as lead worker of a small group engaged in a variety of survey activities. The incumbent performs field surveys throughout District 11, which includes San Diego and Imperial Counties.

CORE COMPETENCIES:

As a Transportation Surveyor, 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.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Safety First, Strengthen Stewardship and Drive Efficiency, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety First, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Safety First, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **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. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **Teamwork and Collaboration:** Sets team structure. Organizes, leads, and facilitates team activities. Promotes team cooperation and encourages participation. Capable of cross functionality and working well with others on a team to achieve personal goals, team goals, and organizational goals. Takes responsibility for individual actions in order to achieve consistent results. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Equity, Innovation)
- **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 First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency, Advance Equity and Livability in all Communities - Equity, Innovation, Integrity)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety First, Cultivate Excellence - Innovation, Integrity)
- **Organizational Skills:** Keeps work prioritized and organized. Logically approaches situations. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Equity, Innovation, Integrity)

TYPICAL DUTIES:

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

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45%	E	Assists the Party Chief in a wide variety of professional land surveying tasks in the field, inclusive of: horizontal/vertical control surveys; design data surveys; photogrammetric mapping; monumentation; and construction surveys. Makes survey judgments and decisions as experience justifies. Assists in the reconnaissance, planning, and execution of assigned field work. Organizes and uses work tools and time in caring for equipment and materials and follows good work practices for vehicle and personal safety. Makes surveying computations using programmable calculators and computer systems: Operates and maintains all precision survey instruments used by the survey crew, including digital levels, a Total Station instrument and it's data collector, Global Positioning System (GPS) receivers, and all associated cabling and batteries. Prepares the data collector for different operations and correctly and accurately enters the data coding in accordance with recognized Caltrans and District practices and procedures. Precisely sets all observation targets and accurately reports all height measurements. Determines the most appropriate terrain and topographic points to be surveyed on design data surveys. Properly operates a prism pole during observations on all types of surveys, including land net surveys, construction surveys, and utility surveys. Accurately communicates to the instrument or data collector operator the description and character of each observed point and the height of the prism pole. Performs all calculations incidental to all construction staking, including slope staking, finish grade, and string line. Determines the most appropriate location for any construction reference stakes to be set, the most appropriate equipment to be utilized, and the acceptable methods and procedures to use. Accurately, legibly, and neatly marks all stake cards or stakes and documents all staking performed.
25%	E	Sets, recovers, and locates survey control, land net, or Right of Way (R/W) monuments in accordance with Caltrans and District practices and procedures. Prepares and provides complete, accurate, neat, and well organized documentation using Caltrans and District note forms, Survey Monument control sketches, Survey Control and Land Net Schemes, Comer records, and Construction Staking diagrams.
20%	E	Operates the survey crew's field computer and uses supplied programs to review and edit survey observation data. Transfers needed survey data to and from the Total Station data. Reviews and edits survey control data and coding, computes field closures and adjustments to determine acceptability, and analyzes control problems. Reviews and edits terrain and topographic data and coding to ensure accuracy and completeness and, in all cases, recommends corrective action when needed.
10%	M	Reports daily pre-operational condition, necessary repairs, sustained damage and ensures the completion of required maintenance on fleet vehicles used. Assists the Transportation Surveyor Party Chief with preparation of daily assignments, including stocking material onto vehicles, as required, to accomplish tasks. Immediately reports any personal injury acquired during the course of work to the supervisor. Accurately reports worked time and charges in the Time Reporting System provided. Assists in preparing safety meetings every ten days, or more often as site conditions change. Adheres to and assists other survey crew members in following procedures in conformance with the Surveys and Safety Manuals. Sets out traffic signs and performs traffic control and lookout duties in accordance with Chapter 2 of the Caltrans Surveys Manual and Caltrans Safety Manual. Participates in the safety program 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

As experience progresses, may act as lead worker of a small group engaged in a variety of survey activities.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of: Fundamental surveying, mathematics, and basic science as applied to surveying; methods of precise survey measuring; use and adjustment of precision surveying instruments; procedures, equipment, and materials used in surveying, including conventional and state of the art; mapping and drafting techniques; mathematics and procedures used in plane and geodetic surveying; computer applications and usage; the California Coordinate System; Code of Safe Surveying Practices; photogrammetric mapping procedures; principles and practices of boundary determination, land title research, and surveying; legal descriptions of real property; methods and terminology used in searching for land titles and factors involved in determining ownership of property; real property acquisition and mapping laws pertaining to public and private ownership of real property; monumentation of facilities; the Land Surveyors' Act; the Subdivision Map Act; factors which influence the impact of departmental projects on property and basic net; right of way engineering projects; planning, design, construction, and right of way procedures and policies as they relate to surveys.

Ability to: Perform the less complex field and office surveying work; make precise survey measurements; interpret legal descriptions of real property; make and interpret the less difficult survey calculations; apply and utilize the principles of the

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California Coordinate System; research, analyze, check, and adjust survey data; research and compile evidence and documentation for boundary determination; assist in planning, directing, and coordinating the work of a group of survey or right of way engineering personnel; do mapping and drafting; analyze situations accurately and take effective action; prepare clear and concise reports and correspondence; write property descriptions and prepare legal land documents and descriptions; operate precise surveying instruments (conventional and state of the art); establish and maintain friendly, business-like relations with those contacted in the course of the work; communicate effectively.

Analytical requirements: Must be able to analyze situations accurately and adopt an effective course of action; this position requires the ability to make analytical judgments pertaining to all phases of land surveying; ability to analyze the results of survey computations for accuracy and completeness; plan for his/her safety and that of the crew and the traveling public; ability to review the collected field data for accuracy and completeness, and ensure that administrative documents are prepared completely and accurately.

Transportation Surveyor Range A, B, or C must possess a valid California Land Surveyor in Training certificate issued by the California Board for Professional Engineers, Land Surveyors and Geologists, or a Bachelor of Science degree in Land Surveying. A Transportation Surveyor Range D must possess a valid California Land Surveyor's license issued by the California Board for Professional Engineers, Land Surveyors and Geologists, or a valid California Civil Engineer's license issued prior to 1982.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for the accuracy and completeness of the survey work that was subject to his/her decisions, direction, or review. Errors and omission in survey data could require costly returns to the job site for corrections and adversely affect project delivery. Errors in construction stakes could lead to costly changes, which reflects poorly on the Department.

PUBLIC AND INTERNAL CONTACTS

The incumbent has continual dialogue with co-workers, frequent dialogue with Party Chiefs, inspectors, contractor personnel, and occasional contact with property owners and the traveling public. Maturity, confidence, and diplomacy are essential elements to successful relations with these contacts.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

On occasion, training and work assignments may require the incumbent to work outside of their assigned District. Since the Land Survey Division delivers many different work products, changes in work assignments are frequent and unpredictable. Since the physical environment is directly linked to work assignments, all of the following conditions must be met:

- This position requires the use of heavy-duty work clothes and safety boots.
 - Manual labor is intensive and frequent, from clearing brush in tick-infested areas to driving survey stakes with 12-pound sledgehammers.
 - Frequent, substantial or unexpected workload changes which can dictate rescheduling or reassigning of work as needed.
 - Must travel to work on assignments remotely for various lengths of time as projects dictate. Out of town assignments are described as locations outside a 50-mile radius from the District office or the incumbent's assigned regional survey office.
 - Must be able to transport survey equipment, hand tools and materials in an outdoor setting through various types of terrain as needed to complete the necessary task up to 60 pounds.
 - Requires frequent bending, stooping and kneeling.
 - Ability to exercise power grasping, repetitive motion and manual dexterity when using hand tools and survey equipment such as hammers, 12-pound sledgehammers, digging bars, picks and shovels for hours on end to perform tasks such as setting stakes or recovering monuments.
 - Requires operating a motor vehicle for prolonged periods of time while traveling to and from various work locations.
 - Overtime may be required and vacations may be restricted as departmental workload dictates.
 - Must have the ability to multi-task, adapt to changes in priorities, and complete tasks or projects with short notice.
 - Must be able to maintain a sustained mental alertness and concentration for prolonged periods of time while working around heavy equipment and while working within close proximity to high-speed vehicle traffic, as well as noisy conditions.
 - The position requires constant interaction with the survey crew-members, party chief and management. It is important that the incumbent works with others to develop and maintain cooperative relationships.
 - Must have the ability to diffuse challenging situations and disputes in a calm and professional manner.
 - Must effectively manage pressure and maintain focus while remaining optimistic and persistent, even while working in adverse conditions.
 - Open to change, adapts behavior and work methods when presented with new ideas, changing conditions or unexpected obstacles.
 - Behaves in a fair and ethical manner toward others and demonstrates a sense of responsibility and commitment to public service.
 - Values cultural diversity and other individual differences in the workforce.
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WORK ENVIRONMENT

This position is based in the Field Surveys Branch of the District 11 Division of Land Surveys (Kearny Mesa Operations Center). Work is usually accomplished out-of-doors in remote areas, along the travel way of highways, wetlands, in heavy construction zones, on bridge caps and piles, mountain tops and on the property of private citizens. Incumbent will be subject to adverse weather conditions including high heat and freezing cold. Manual labor may be intense. This position requires using cutting tools to clear brush which can be dense and could include poison oak. Survey locations are often set in tick infested terrain. Incumbent can expect to drive survey stakes and markers with sledgehammers for extended periods of time. Extensive walking, often over steep and uneven terrain, while transporting stakes, supplies, and equipment is necessary. The incumbent can expect to work under very noisy conditions and is required to be tolerant of working within close range of high-speed traffic and heavy equipment. Travel throughout District 11 is expected, which includes San Diego and Imperial Counties. Possession of a valid driver's license is required to operate a State-owned or leased vehicle.

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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