

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Transportation Engineer Tech	OFFICE/BRANCH/SECTION Central Region Services / D5 Surveys
WORKING TITLE Survey Crew Member	POSITION NUMBER 929-206-3175-XXX
	REVISION DATE 03/2025

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under the supervision of a Transportation Surveyor Party Chief (Caltrans) or direction of a Lead Worker, incumbent will function as a member of a field survey crew, performing a wide variety of nonprofessional land surveying work in either an office or field setting, as incumbent progresses in experience, they will be assigned more difficult work.

CORE COMPETENCIES:

As a Transportation Engineer Tech, 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.

- **Learning on the Fly:** Learns quickly, is open to change, experiments, and is flexible. (Employee Excellence - Pride)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety, Equity - Equity, Integrity, Pride)
- **Initiative:** Ability to identify what needs to be done and doing it before being asked or required by the situation. Seeks out others involved in a situation to learn their perspectives. (Employee Excellence - Equity, 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. (Employee Excellence - Innovation, Pride)
- **Interpersonal Savvy/Partnering:** Builds constructive and effective relationships, using diplomacy and tact. Is able to relate to a diverse set of individuals. (Employee Excellence - 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. (Employee Excellence - Integrity, Pride)
- **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 - Pride)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Employee Excellence - Innovation, Integrity)
- **Thoroughness:** Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Safety, Employee Excellence - Integrity, Pride)

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
45% E	<p>Assist the Transportation Surveyor Party Chief or Transportation Surveyor/Lead Worker in the research, planning and execution of assigned survey fieldwork. Assist in the use of the Total Station Survey System, Global Positioning Systems and Digital Levels.</p> <p>Assist in determining the most appropriate topographic points to be surveyed on design data surveys and act as an instrument person and rod person on complex and routine construction, topographic and land net surveys.</p> <p>Use hand and power tools such as shovels, digging bars, sledge hammers and jackhammers under the direction of a Transportation Surveyor Party Chief/Lead Worker to locate and/or set survey stakes and monuments.</p>

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

25%	E	Perform elementary calculations incidental to construction staking such as slope stakes, offset stakes and finish grade stakes. Determine the most appropriate location for any construction reference stakes to be set; and mark stake cards or stakes (lath); document all staking performed accurately, legibly and neatly. Responsible for keeping complete, accurate, neat and well organized documentation, such as survey and construction notes and calculators for field crew use.
25%	E	Set out traffic signs and perform traffic control and lookout duties in accordance with Chapter 2 or the Caltrans Surveys Manual and the Caltrans Safety Manual. This includes but no limited to; setting signs, cones, flagging traffic and location of barrier vehicles.
5%	M	Assist in maintaining equipment and material inventory and determine equipment maintenance and replacement needs and any materials needed by survey crew.

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

None.

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 surveying, computer applications and usage, Code of Safe Surveying Practices.

Ability to:

Perform the less complex nonprofessional field and office surveying work; make precise survey measurements; make and interpret the less difficult survey calculations; research, analyze, check and adjust survey data; research and compile evidence and documentation for boundary determination; perform mapping and drafting, analyze situations accurately and take effective action, prepare clear and concise notes and correspondence, 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. Effectively organize time caring for equipment, work tools and materials, follow good work practices for vehicle maintenance and personal safety. Follow good work practices operating and maintaining all precision survey instruments used by the survey crew, such as the digital level, the Total Station instrument and its data collector, GPS receivers and all associated cabling and batteries.

Analytical Requirements:

A Transportation Engineering Technician must analyze situations accurately and communicate an effective course of action to the TSPC or Lead Worker. This position requires the ability to make analytic judgment pertaining to all phases of nonprofessional land surveying. The incumbent must have a strong background in land surveying and computational skills as a basis for these analytical judgments. Example would be to assess terrain at a surveying location to determine the best way to perform the work efficiently and effectively analyze the results of survey computations for the accuracy and completeness, plan for his/her safety and that of the crew and the traveling public, review the collected field data for accuracy and completeness and ensure that administrative documents are prepared completely and accurately.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

A Transportation Engineering Technician must be responsible for the accuracy and completeness of the survey work that was subject to his/her decisions. Errors and omissions 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. Failure to work safely could endanger other employees and the traveling public and could damage the Departments reputation.

PUBLIC AND INTERNAL CONTACTS

Transportation Engineering Technician on a survey crew deals with the traveling public during signing and traffic control operations on the highway. A Transportation Engineering Technician has contact with property owners at field locations and redirects all inquires to the Party Chief, requests information from other departments as directed by the Party Chief and has contact with other governmental agencies and the public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

This position requires the use of heavy-duty work clothes and safety boots. Manual labor can be expected to be intense. 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.

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

WORK ENVIRONMENT

Incumbent must be able to travel to project locations away from their home requiring overnight travel; must be able to work overtime when needed, must be able to work on foot near heavy traffic, must be able to work in extreme weather conditions including wet, dusty and dirty environments. Possession of a valid driver's license is required when operating 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

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Junior Engineering Technician	OFFICE/BRANCH/SECTION Central Region Services / D5 Surveys	
WORKING TITLE Junior Engineering Technician Survey Crew Member	POSITION NUMBER 929-206-3008	REVISION DATE 03/2025

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under the close supervision of a Transportation Surveyor Party Chief (Caltrans), the incumbent will function as an entry-level member of a field survey crew. Incumbent will learn basic survey principles and perform sub-professional survey-related duties in a field or office setting. Utilizes basic survey equipment, performs entry-level survey calculations, prepares survey notes and documentation, and performs a variety of other survey-related duties. Possession of a valid and unrestricted California Driver's License is desirable.

CORE COMPETENCIES:

As a Junior Engineering Technician, 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.

- **Learning on the Fly:** Learns quickly, is open to change, experiments, and is flexible. (Safety - Pride)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Employee Excellence - Equity, Innovation)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Employee Excellence - 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. (Climate Action - Innovation)
- **Relationship Building:** The ability to develop and maintain internal and external trust and professional relationships, which includes listening and understanding to build rapport. (Employee Excellence - 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. (Climate Action - Integrity, Pride)
- **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 - Pride)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety - Innovation)
- **Thoroughness:** Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Safety - Stewardship)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	
45% E	Works closely with the Party Chief and survey crew on daily field and office assignments. Utilizes basic survey equipment to set points, measure distances and establish elevation points. Sets targets and back sights for construction staking line and grade. Under the direction of the Party Chief, marks survey stakes and lath with field information as directed, places a variety of construction stakes based on pre-determined survey calculations. Cuts and clears brush, debris and other materials as directed to improve lines of sight and/or facilitate other survey activities. Performs necessary manual work to rehabilitate survey monuments in both urban and rural environments.

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

35%	E	Performs entry-level survey calculations using basic mathematical principles including algebra and geometry. Provides complete, accurate, neat, and well organized documentation using Caltrans note forms, Survey Monument control sketches, Survey Control and Land Net Schemes, Corner records, and Construction Staking diagrams using a wide variety of standard and specialized office equipment such as: personal computer hardware/software, scanners, copiers, plotters and printers; operates a personal computer to prepare documents and compile information using various software applications. As directed by the Party Chief or Lead Person, sets out traffic signs and performs traffic control and lookout duties in accordance with Chapter 2 of the Caltrans Survey Manual and the Caltrans Safety Manual.
15%	E	Accurately reports worked time and charges in the Time Reporting System. Responsible for reporting daily preoperational condition, necessary repairs, sustained damage and ensure the completion of required maintenance on fleet vehicles used. Assist the Party Chief or Lead Worker with preparing for the daily assignment, including stocking material and equipment into the survey vehicles, as required, to accomplish daily task.
5%	M	Performs other survey-related functions as assigned such as cleaning of equipment, pre-operation inspection, storage organization, maintaining field office environment and fueling of survey vehicles.

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

None.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of the following:

- Principles of road safety.
- Standard measurements of length.
- Proper use of English, spelling, grammar, and punctuation.
- Simple mathematical concepts and principles.
- Basic safety issues and considerations related to working in and around vehicular traffic and moving vehicles.
- Methods and procedures for performing a variety of manual labor activities in a safe manner.
- Code of Safe Surveying Practices.

Ability to:

- Perform assigned tasks in a timely and thorough manner.
- Effectively accomplish workload and assignments, meeting overall performance objectives and specific deadlines.
- Read and follow verbal and written instructions.
- Work as a member of the survey crew to meet the goals of the project in a safe and efficient manner.
- Learn to perform pre-operation inspections of vehicles prior to operation to ensure appropriate working condition.
- To work outdoors with long hours and sometimes difficult physical demands.
- To read and comprehend simple survey measurements.
- To understand and demonstrate safe working/operating methods of assigned tools and equipment.
- Work safely in the use of all survey equipment in field and/or office locations, as well as in and around vehicles and traffic. Incumbent must demonstrate an ability to progress in surveying experience assuming more challenging work as experience allows.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Responsible for the accuracy and completeness of assigned survey work; preparing clean and clear notes and communicating effectively with survey crews. Incumbent must report any personal injury acquired during course of work to the supervisor immediately.

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

PUBLIC AND INTERNAL CONTACTS

A Junior Engineering Technician on a survey crew deals with the traveling public during signing and traffic control operations on the highway; may have contact with other governmental agencies and the public at field locations. Redirects all inquiries to the Party Chief; requests information from other departments as directed by the Party Chief.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Work assignments are typically within Central Region, District 5, but can occasionally include temporary assignments statewide. Since the Land Surveying department delivers many different products of information, changes in work assignments are frequent and unpredictable. Will be required to wear heavy-duty work clothes, safety boots; and other personal protective equipment. Will use cutting tools to clear brush, which can be dense and could include poison oak. Incumbent can expect to lift and swing a sledge hammer weighing approximately 10 pounds to place stakes, monuments, wooden stakes and to break apart material; performs a variety of heavy physical labor tasks, including the lifting and transporting of equipment/material weighing up to 60 pounds; extensive walking, often over steep and uneven terrain, while transporting stakes, supplies, and equipment is necessary. Incumbent works cooperatively and effectively with other team members in difficult situations and dangerous environments, requiring patience and composure.

Physical requirements include the:

- Ability to travel to near or remote work assignments for various lengths of time as projects dictate. Out of town assignments may be necessary. Out of town assignments are described as locations outside a 50-mile radius from the District office.
- Ability to collect survey data over rough, uneven, arid and steep terrain.
- Ability to transport heavy survey equipment, hand tools and materials in an outdoor setting through various types of terrain and within various weather conditions as needed to complete the necessary task.
- Ability to work in field conditions within southern California; work environment can and will be hot, cold, wet, dry, dusty or clear. Working in and around operating roadways and heavy equipment results in a loud and sometimes uncomfortable working environment.
- Ability to stand for prolonged periods of time' ability to perform work that includes frequent bending, stooping, kneeling and grasping.
- Ability to exercise power grasping, repetitive motion and manual dexterity when using hand tools and survey equipment such as hammers, digging bars and shovels to perform routine tasks.
- Ability to use a pick, digging bar, or a shovel to excavate material in order to set or recover monuments.
- Ability to work overtime as required; vacations may be restricted as departmental workload dictates. **EMOTIONAL**
- The position requires interaction with field survey personnel, office personnel, and the supervisor. It is important that employees work with others to develop and maintain cooperative relationships. Must be able to take direction constructively, work cooperatively as a team member and act with courtesy to coworkers and the public.
- Ability to establish and maintain friendly, business-like relations with those contacted in the course of the work.
- Must deal effectively with pressure, maintain focus and intensity, yet remain optimistic and persistent, even while working under adverse conditions.
- Is 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.
- Must be able to maintain a level head in difficult and dangerous situations. **MENTAL**
- 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 performing tasks assigned to them relating to various projects.
- Must be able to effectively communicate ideas, issues, and solutions as they relate to a particular task or project.

WORK ENVIRONMENT

The work assigned is usually along the traveled way of highways, sometimes in remote areas, and in heavy construction zones. Work may be performed in adverse weather conditions, including high heat

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POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

and freezing cold, very dry and dusty areas, as well as wet conditions. Incumbent will be required to wear heavy-duty work clothes, safety boots, and other personal protective equipment as necessary. Manual labor can be expected to be intense. Will be required to use 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. 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. Possession of a valid California driver's license Class "C" is required to operate a State 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