

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Transportation Surveyor	OFFICE/BRANCH/SECTION North Region Office of Surveyors / GIS	
WORKING TITLE GIS Analyst	POSITION NUMBER 903-201-3029-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 branch chief, a Senior Transportation Surveyor, the incumbent will perform a wide variety of professional land surveying and geographic information systems (GIS) work. As a member of the North Region GIS branch the incumbent will perform technical evaluations and develop sound conclusions utilizing geographic information systems (GIS) based on land surveying knowledge and methodologies. With a journeyman level of knowledge the incumbent will independently develop geospatial data, provide mapping, topography, prepare maps, provide technical studies, and investigations pertaining to land surveying.

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. (Prosperity, Employee Excellence - Collaboration, Innovation, Stewardship)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Climate Action, Prosperity, Employee Excellence - Collaboration, Innovation, Integrity, People First, Stewardship)
- **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. (Prosperity, Employee Excellence - Collaboration, Innovation, Integrity, People First, Stewardship)
- **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, Climate Action, Prosperity - Collaboration, Innovation, Integrity, People First, Stewardship)
- **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. (Equity, Employee Excellence - Collaboration, Equity, Integrity, People First)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Equity, Prosperity, Employee Excellence - Collaboration, Equity, Integrity, Pride, 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. (Safety, Equity, Climate Action, Prosperity, Employee Excellence - Collaboration, Equity, Integrity, People First, Pride)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety, Climate Action, Prosperity, Employee Excellence - Innovation, Integrity, People First, Stewardship)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Prosperity, Employee Excellence - Innovation, Pride, Stewardship)

TYPICAL DUTIES:

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

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25%	E	Incumbent performs journeyman level land surveying technical evaluations and develops sound conclusions about project development and asset management efforts in support of the Caltrans North Region. These evaluations and conclusions are complex in nature, utilizing geographic information systems (GIS), computer aided drafting (CAD), and land survey methods and techniques. These evaluations and conclusions will include mathematics, mapping and drafting, plane and geodetic surveying, California Coordinate System, boundary determination, monumentation of facilities, the Land Surveyors' Act, the Subdivision Map Act, the project development process. These evaluations and conclusions will aid in the development of geospatial data, imagery, applications, tools and models. Using these evaluations and conclusions the incumbent will develop applications, data management plans, and innovative technology based solutions to meet the needs of the Caltran North Region.
25%	E	Incumbent performs technical land surveying evaluations on many datasets provided to the North Region GIS unit. Incumbent will use these evaluations to determine the best way to utilize this data in the North Region GIS effort. Using proper land surveying methods and techniques the incumbent will process the data into the format that is best suited and access the accuracy of each dataset. These datasets include Cadastre data, Elevations data, Geodetic Control data, Governmental Units data, Imagery data, Transportation data, Water data, Biodiversity data, Ecosystems data, Climate and Weather data, Land Use data, Real Property data, Soils data, Utilities data, and many more.
20%	E	Incumbent participates in training, committees and activities to insure the Caltrans North Region has a coordinated integration of geographic information systems (GIS) into the project development and asset management processes. Incumbent may schedule the meetings, lead the training, develop the agendas, facilitate the meetings, compile the results and prepare written reports of progress for management. Incumbent engages in partnership activities within the North Region of Caltrans, Caltrans HQ, local government agencies and other partners related to the development of geospatial data and products. Incumbent may participate in Statewide geographic information system (GIS) activities.
10%	E	Incumbent designs, develops and maintains geospatial databases which include survey monuments, photogrammetric mapping, ortho-photography, digital terrain models, point clouds, Right of Way Engineering data, and project history file using their knowledge of land surveying and project development. The incumbent will use their knowledge of survey methods and procedures to ensure that these databases meet accuracy standards and are usable by data collection applications.
15%	M	Incumbent designs, develops and maintains North Region GIS maps and mapping services utilizing the Departments Enterprise GIS system. Using the expertise of the HQ GIS unit and North Region GIS branch Research Analysts (GIS) the incumbent will create and publish Internet based geographic information systems (GIS) web maps.
5%	M	Participates as a member of a field crew collecting routine survey data, lay out of survey points as leadworker, instrument person, or crew member.

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

May act as a lead worker in the North Region GIS Branch and have responsibility for training and assisting Caltrans North Region staff with geographic information systems (GIS).

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of the basic principles of land surveying: mathematics as applied to land surveying and photogrammetry; properties of survey-acquired and other forms of geospatial data.
Knowledge of geodetic survey control; land record systems; 3-dimensional digital modeling, data capture methods, mapping standards and data accuracy.
Knowledge of raster and vector graphics, relational database systems, CADD systems, geographic information systems (GIS), geography, computer programming and office productivity software.
Knowledge of ESRI ArcGIS products and database tools.
Knowledge of survey software such as Trimble Business Center, Trimble Trident Analyst, and TopoDot.
Ability to prepare reports, summaries, correspondence and presentations.
Ability to communicate effectively both verbally and written to perform assignments and provide customer service.
Ability to establish and maintain friendly and cooperative relations with departmental employees, the public, and other State agencies.
Ability to travel to and work at various office and remote locations throughout California.
Ability to comprehend and analyze geospatial data for data accuracy, standards compliance and completeness as it relates to data submittal and data requests from the geospatial library.

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Ability to work independently.
Ability to understand the various needs of the Caltrans North Region and District functional units they support in order to identify, develop and implement the data services needed.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR
Errors in judgment or decisions could result in project delays, rework or the production of unnecessary work. Inaccurate or incomplete work may result in added costs, or litigation, and reflect negatively on the North Region GIS Branch, North Region Office of Surveyors, and the Department.

PUBLIC AND INTERNAL CONTACTS
The employee will routinely contact other Caltrans personnel, surveying/engineering consultants, personnel from other State agencies, personnel from other government agencies and the public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS
Employee may be required to sit for long periods of time using a keyboard and video display terminal. He or she may also be required to move large or cumbersome plans and diagrams from one location or another. He or she may be required to stand for periods of time operating survey instruments or office devices such as optical scanners. May be required to drive long distances.

WORK ENVIRONMENT
While at their base of operation, employees will work in a climate-controlled office under artificial lighting. Incumbent will occasionally be required to travel and work outdoors and can expect to be exposed to traffic, dirt, noise, uneven surfaces, and extreme heat or cold.

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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