



## ENGINEERING TECHNICIAN, CERTIFIED, SENIOR

### CHARACTERISTICS OF WORK:

This is the second and final level of certification of the engineering technician job series. This work requires strict compliance with set procedures, general supervision by professional engineers, and general decision making. Duties performed are mainly in the functional areas of traffic control and safety, research and development, roadway design, right-of-ways, testing, transportation planning, bridges, and field work. Incumbents in this class supervise subordinate employees in the completion of project areas assigned.

### EXAMPLES OF WORK:

**Examples of work performed in this classification include, but are not limited to, the following:**

Supervises and administers a section or subdivision; schedules work-load, trains personnel, and supervises subordinate personnel; and prepares standard operating procedures manuals.

Finalizes projects for clearance of materials; prepares and issues testing engineer letter of materials and tests; and provides recommendations and advice to testing, district and project engineers, and other divisions.

Conducts in-phase inspection; develops testing or inspection procedures; and provides recommendations and advice to testing, district and project engineers, and other divisions.

Assists in development of material specifications; determines cost estimate of simple structures; and researches records to determine ROW on existing roads.

Checks and reviews specifications, special provisions and other contract documents; prepares proposals and contracts.

Checks and reviews construction plans for compliance with design specifications; supervises all aspects of major construction projects.

Maintains an established cooperative working relationship with engineering personnel of the state, federal, and private sector.

Assists traffic engineer in developing sign and signal installation plans; and assists in development of budget requirements for the division.

Assists in the development of traffic operation programs including studies related to traffic signals, speed limits, accident investigations, and hazard elimination; develops operation programs to ensure that standards are utilized.

Performs as a design squad leader or equivalent and supervises others in preparing designs; supervises all phases of stereo compilation and aero-triangulation.

Provides input data to the computer and analyzes output from the computer in computing such items of work as earth work quantities, profile grades, and slope stakes, and in calculating research items.

Serves as Field Data Coordinator for more than one major research project, and as Assistant Principal Investigator.

Performs related or similar duties as required or assigned.

**COMPETENCIES:**

The following competencies describe the knowledge, skills, abilities, and attributes that lead to a successful employee in this position. An applicant will be expected to exhibit these competencies or the ability to reach competency achievement within a specified time. These competencies are linked to the essential functions of the job. Employees in this position may be evaluated on these competencies as part of the performance appraisal system. Example behaviors are listed below each competency and are used for illustrative purposes only. Specific behaviors may be identified and included later by the hiring agency. It is understood that some of these behaviors might not be acquired until a reasonable time after hire. Failure of an employee to successfully demonstrate some or all of these competencies, as deemed important by his or her reporting official, may result in the employee being placed on a performance improvement plan. If after a reasonable period of time, usually three (3) months, the employee fails to demonstrate successful performance, the employee may be terminated. These competencies include, but are not limited to, the following:

**PUBLIC SECTOR COMPETENCIES:**

**Integrity:** Demonstrates a sense of responsibility and commitment to the public trust through statements and actions.

Models and demonstrates high standards of integrity, trust, openness, and respect for others. Demonstrates integrity by honoring commitments and promises. Demonstrates integrity by maintaining necessary confidentiality.

**Work Ethic:** Is productive, diligent, conscientious, timely, and loyal.

Conscientiously abides by the rules, regulations, and procedures governing work.

Meets deadlines. Work product is of a high quality. Follows through on assigned tasks until they are completed correctly. Takes ownership of tasks and duties.

**Service Orientation:** Demonstrates a commitment to quality public service through statements and actions.

Seeks to understand and meet and/or exceed the needs and expectations of customers.

Treats customers with respect, responding to requests in a professional manner, even in difficult circumstances.

Provides accurate and timely service.

Develops positive relationships with customers.

Obtains first-hand customer information and uses it to improve projects and/or services.

**Accountability:** Accepts responsibility for actions and results.

Is productive and carries fair share of the workload. Focuses on quality and expends the necessary time and effort to achieve goals. Demonstrates loyalty to the job and the agency and is a good steward for state assets.

Steadfastly persists in overcoming obstacles and pushes self for results. Maintains necessary attention to detail to achieve high level performance. Deals effectively with pressure and recovers quickly from setbacks.

Takes ownership of tasks, performance standards and mistakes. Knows the organization's mission and functions and how it fits into state government.

**Self Management Skills:** Effectively manages emotions and impulses and maintains a positive attitude.

Encourage and facilitates cooperation, pride, trust and group identity. Fosters commitment and team spirit. Works effectively and cooperatively with others to achieve goals. Treats all people with respect, courtesy, and consideration. Communicates effectively. Remains open to new ideas and approaches. Avoids conflicts of interest. Promotes cooperation and teamwork. Continuously evaluates, adapts, and copes effectively with change. Allows self and others to make mistakes and learns from those mistakes. Adheres to high ethical standards.

**Interpersonal Skills:** Shows understanding, courtesy, tact, empathy, and concern to develop and maintain relationships.

Demonstrates cross-cultural sensitivity and understanding. Identifies and seeks to solve problems and prevent or resolve conflict issues. Encourages others through positive reinforcement. Expresses facts and ideas both verbally and in writing in a clear, convincing and organized manner, helping others translate vision into action.

Models appropriate behavior. Recognizes and develops potential in others; mentors. Builds constructive and effective relationships.

**Communication Skills:** Receives, attends to, interprets, and responds to verbal messages and expresses information to individuals or groups effectively.

Receives nonverbal cues, such as body language in ways that are appropriate to listeners and situations. Takes into account the audience and nature of the information. Listens to others and responds appropriately.

May make oral presentations. Communicates ideas, suggestions and concerns as well as outcomes and progress throughout the course of an activity. Provides thorough and accurate information. Can accurately restate the opinions of others even when he/she disagrees.

**Self-Development:** Adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles.

Seeks efficient learning techniques to acquire and apply new knowledge and skills. Uses training, feedback, or other opportunities for self-learning and development. Develops and enhances skills to adapt to changing organizational needs. Remains open to change and new information and ideas. Is committed to and actively works to continuously improve himself/herself.

#### **MANAGEMENT COMPETENCIES:**

**Emotional Maturity:** Conducts oneself in a professional, consistent manner when representing the organization.

Has the ability to work through adversity and hold self and others accountable for work actions. Takes risks appropriate to one's level of responsibility. Acts as a settling influence in a crisis. Exhibits the ability to work through challenges and create opportunities.

**Macro-Oriented:** Exercises good judgment and makes sound, well-informed decisions.

Understands and appropriately applies procedures, requirements, and regulations related to specialized areas of expertise. Understands the effects of decisions on the organization and on other organizations. Acts as a change agent by initiating and supporting change within the agency when necessary.

**Working Through Others:** Supports, motivates, and is an advocate for staff

Creates effective teams; shows a willingness to get work done through others. Clearly and comfortably delegates work, trusting and empowering others to perform. Reinforces and rewards team efforts and positive behaviors. Is fair, yet firm with others. Monitors workloads and provides feedback.

**Results Oriented:** Plans effectively to achieve or exceed goals, sets and meets deadlines.

Identifies, analyzes, and solves problems. Develops standards of performance and know what and how to measure.

**Resource Management:** Acquires, effectively and efficiently administers, and allocates human, financial, material, and information resources.

Demonstrates ability to plan, prioritize, and organize.

## **TECHNICAL COMPETENCIES**

**Technical Proficiency:** The ability and willingness to exhibit competency in the technical areas needed to do a specific job.

Reads, comprehends, and correctly applies all rules, regulations, and policies applicable to work assignments. Performs work with a minimum amount of supervision in areas that are familiar. Checks the accuracy and completeness of his/her work before submitting it. Properly analyzes project plans in order to gain a better understanding of upcoming construction phases. Accurately processes field data when developing contract plans and/or proposals. Follows professional guidelines when writing supplemental agreements for project engineers. Effectively ensures that prepared reports have supporting data (e.g., field drawings, measurements, count, etc.). Knows how to accurately compute pay item quantities (both preliminary and final). Demonstrates a solid working understanding of all testing requirements for materials incorporated into projects. Proactively keeps abreast of the activities of project contractors, subcontractors, and inspectors. Conducts effective field site inspections and traffic control for projects. Effectively conducts basic surveying functions (e.g., grade checks, bridge construction). Effectively assists site managers with training and form development. Demonstrates a solid working understanding of Site Manager and its related applications (e.g., entering pay items, running monthly estimates).

**Workflow Management:** The ability and willingness to perform work within defined specifications and timelines and to manage conflicting priorities.

Operates under specific time constraints and within specified deadlines. Effectively prioritizes tasks in order to meet deadlines. Works on appropriate priorities to get the job done. Demonstrates a willingness to ask others for help when it is clear that deadlines cannot be met. Knows whom to call when more information about a particular project plan is required. Utilizes his/her time wisely. Relays specific time constraints and deadlines to contractors, utility companies and employees in an appropriate and timely manner. Prepares monthly estimates in a timely manner. Utilizes appropriate personnel, equipment and methods to achieve work goals. Knows how to develop effective "game plans" for all tasks.

**Problem Solving/Decision Making:** The ability and willingness to cooperate with other employees in identifying and solving problems in order to effectively and efficiently complete assigned tasks.

Exhibits ability to identify and address issues. Ensures that all problems encountered are addressed at the appropriate level and communicates all relevant information on a timely basis with accuracy and completeness. Exercises sound reasoning. Displays the ability and willingness to work with other offices or other divisions in order to collectively complete assigned tasks or problems as that arise. Demonstrates attention to detail when completing work assignments. Seeks input from "both sides" when addressing conflict situations. Adequately evaluates project plans for potential problems before implementing them. Addresses problems that jeopardize work goals aggressively and promptly. Demonstrates the ability to remain calm and in control of his/her emotions when confronted with problem solving situations. Takes full responsibility for his /her decisions, regardless of the outcomes. Collaborates effectively with contractor superintendents when working directly with them to solve problems. Knows where and how to locate and retrieve information to make educated/informed decisions. Collaborates effectively with land owners when solving project-related problems. Collaborates effectively with project engineers.

**Stakeholder Relations:** The ability and willingness to interact and communicate effectively with stakeholders.

Proactively provides stakeholders with proper information in an effort to reduce occurrences of future problems. Supports the agency mission and goals in all interactions with internal and external stakeholders. Acts as an advocate for agency policy. Ensures that all information given to project stakeholders is accurate and has been accurately researched. Communicates with the public in an interpersonally sensitive, professional manner. Effectively relays information related to scope of work between survey coordinator and/or project manager and stakeholders. Demonstrates the ability and willingness to be a team player within the agency. Proactively keeps contractors aware of potential safety violations.

**ESSENTIAL FUNCTIONS:**

**These essential functions include, but are not limited to, the following. Additional essential functions may be identified and included by the hiring agency.**

1. Conducts preliminary and/or final studies.
2. Performs supervisory duties.
3. Performs office duties, including completing forms and reports and computing various quantities.

**MINIMUM QUALIFICATIONS:**

These minimum qualifications have been agreed upon by Subject Matter Experts (SME's) in this job class and are based upon a job analysis and the essential functions. However, if a candidate believes he/she is qualified for the job although he/she does not have the minimum qualifications set forth below, he/she may request special consideration through substitution of related education and experience, demonstrating the ability to perform the essential functions of positions. Any request to substitute related education or experience for minimum qualifications must be addressed to the State Personnel Board in writing, identifying the related education and experience which demonstrates the candidate's ability to perform all essential functions of the position.

**Physical Requirements:** These physical requirements are not exhaustive, and additional job related physical requirements may be added to these by individual agencies on an as needed basis. Corrective devices may be used to meet physical requirements.

**Moderate Work:** May frequently exert force equivalent to lifting up to approximately 25 pounds and/or occasionally exert force equivalent to lifting up to approximately 50 pounds.

**Vision:** Requires the ability to perceive the nature of objects by the eye.

**Near Acuity:** Clarity of vision at 20 inches or less.

**Midrange:** Clarity of vision at distances of more than 20 inches and less than 20 feet.

**Far Acuity:** Clarity of vision at 20 feet or more.

**Field of Vision:** Ability to observe an area up or down, left or right while eyes are fixed on a given point.

**Depth Perception:** Three-dimensional vision. Ability to judge distance and space relationships so as to see objects where and as they actually are.

**Accommodation:** Ability to adjust focus.

**Color Vision:** Ability to identify colors.

**Motor Coordination:** While performing the duties of this job the incumbent is regularly required to use hands to finger, handle or feel objects, tools, or controls; and reach with hands and arms. The incumbent is frequently required to stand; walk; sit; and stoop kneel, crouch, or bend. The incumbent is occasionally required to climb or balance.

**Speaking/Hearing:** Ability to give and receive information through speaking and listening skills.

**Experience/Educational Requirements:**

**Certification:**

Certification as a Certified Senior Engineering Technician (CSET) from the Institute for the Certification of Engineering Technicians.

**Documentation Required**

Applicant must attach a valid copy of his/her certification as a Certified Senior Engineering Technician (CSET) from the Institute for the Certification of Engineering Technicians.

**INTERVIEW REQUIREMENTS:**

Any candidate who is called to an agency for an interview must notify the interviewing agency in writing of any reasonable accommodation needed prior to the date of the interview.

**Additional essential functions and behavioral anchors may be identified and included by the hiring agency.**