

## Engineering Technician

Job Code	Job Title	Pay Grade
8265B1	Engineering Technician	21
8266B1	Engineering Technician Senior	25
8267B1	Engineering Technician Specialist	28

### CONCEPT:

Conducts research reviews, gathers and analyzes data, prepares statistical and other reports, conducts on-site bridge/structure and project construction inspections, maintains automated engineering related data and performs materials sampling and testing. Employees perform duties ranging from entry level to skilled level. Employees may be required to have applicable certifications or licenses.

### TASKS:

#### ET

- Independently makes a wide variety of tests and visual inspections and prepares required documentation on a variety of projects in order to assure conformity to plans and specifications.
- Prepares and/or reviews difficult tracings; performs detailed inking and plotting duties; makes required computations in a variety of plans, maps, graphs, charts, and related material; computes material and other volume quantities; details final plans for preliminary sketches and interprets notes from survey crews.
- Makes field investigations to gather information for water rights evaluations; gathers hydrologic data for map and report publications.
- Uses computer software and hardware which may include CAD/CAM, creative line drawing, or a symmetric drawing from library or symbols.
- Reviews information to ascertain correct legal description and ownership records for real property rights.
- Acts as recorder or operator for precise theodolite angle, electro-optical distance, or precise level survey crews. May serve as lead chain person or operator over a crew of lower level technicians.
- Directs the collection and validation of well location and utility data using computer equipment to compile, calculate, and batch load data
- Directs the collection and validation of field data for traffic control planning studies. Uses electronic and or mechanical equipment to collect information on traffic volume and patterns, compliance with speed limits, and physical properties of highways. Surveys motorists to collect data on highway use.
- Independently conducts specialized or complex laboratory tests of materials such as metal, cement, asphalt, or paint; makes computations, documents test results and compiles reports.

#### ET Senior

- Serves as assistant chief of a survey crew by overseeing and reviewing the work on-site of several lower level technicians; obtains copies of legal property descriptions, roadway easements, and land surveys by searching local and state records; contacts utility companies regarding location of utilities along highways; and obtains permission from owners to enter private property.
- Operates an analytical stereo plotter to create planimetric maps; reviews and interprets data from aerial photographs and survey notes; and performs calculations to create maps in proper scale.
- Uses computer software and hardware which may include data collection, CAD/CAM, map projection management, database management systems, and plotting functions.
- Compiles and interprets a variety of data such as traffic projections, survey notes, aerial photographs, environmental studies, prior construction plans, and geotechnical reports in order to design various components of road projects; draws detail plans from sketches or computations furnished by designers; computes information such as horizontal offsets and grade elevations; checks calculations and detail drawings done by engineers and other technicians; and may serve as lead worker on a less complex design project.

- Serves as lead inspector on complex highway, bridge, building, or water control construction or maintenance projects; recommends and makes decisions on necessary changes in construction, signing, safety measures, or EEO check procedures.
- Assists local entities by performing technical reviews of road and street plans to assure compliance with state and federal standards, design criteria, and specifications; assists engineers in performing field checks of local projects; and prepares reports of review and field check findings.
- Oversees collection of a wide variety of traffic surveys to determine data such as truck traffic on both urban and rural highways, motorist destinations, and traffic volume; collects data regarding physical features and conditions of highways and bridges.
- Directs all material testing activities in a unit laboratory or performs material research work of equivalent scope or complexity.
- Conducts field investigations and audits appropriation rights to determine the pumping rates of approved water diversions works and the amount of water used annually; reviews with applicants their new applications for permits to appropriate water; investigates allegations of water rights impairments, unlawful diversion of water, and the waste of water.

#### ET Specialist

- Directs the collection, analysis and dissemination of major engineering information, including annual reports as required by state and federal laws.
- Develops schedules, determines scope of research and assigns duties for traffic studies and other highway projects, employing the most advanced technological tools.
- Reviews and develops reports and recommends action on a wide range of complex matters such as change orders, special provisions, highway permit requests, changes in traffic patterns, and advises supervisors of any problems or special considerations.
- Prepares updated manuals of standard specifications and special provisions for use agency-wide, ensuring that all additions and changes of pertinent laws and regulations are incorporated within them.
- Uses computer software and hardware which may include data collection, CAD/CAM, map projection management, database management systems, and plotting functions.
- Prepares technical water resources reports and special investigative reports for critical water areas and water rights problems.
- Reviews plans and estimates costs of construction and maintenance projects prior to bid letting.
- Serves as unlicensed party chief of a survey crew under the direction of a licensed surveyor by overseeing all procedures, reviewing all data, compiling reports of survey findings, and making individual work assignments to subordinates; obtains permission to survey private property and explains scope and purpose to property owners.
- Assists a senior engineer in providing coordination, consultation and review of the processes and procedures within an area of engineering such as materials inspection, complex bridge design, or complex road design.
- Monitors complex projects for conformity to current federal guidelines and regulations with responsibility for acquiring and developing permits and reports as needed.
- Conducts investigations or otherwise responds to a wide range of complex and technical questions within an area of expertise from the public, federal and local officials, other agencies or private companies.
- Assigns work; performs and oversees analysis of data for development of highway and traffic places.

#### LEVELS OF WORK

- Class Group consists of three classes.

**Engineering Technician:** This is technical work in an engineering or scientific field. Work involves serving in a wide range of work settings using a variety of engineering or scientific instruments and techniques which require a basic mathematics background and broad experience and training. Work may be limited in scope but complex and exacting in nature.

**Minimum Requirements:** One year of experience in engineering technical support. Education may be substituted for experience as determined relevant by the agency.

**Engineering Technician Senior:** This is advanced technical or supervisory work in an engineering or scientific field. Work involves planning, directing and coordinating the activities of technicians in completing a variety of projects which may range from routine to complex, with responsibility for their timely completion according to all the requirements, principles, and guidelines which apply; or performing equally important work in a specialized or complex phase of an engineering process.

**Minimum Requirements:** Four years of experience in engineering technical support. Education may be substituted for experience as determined relevant by the agency.

**Engineering Technician Specialist:** This is supervisory or technical administrative work involving a variety of complex engineering functions. Work typically involves planning, coordinating, directing and reviewing work of others that may be diverse or narrowly focused; explaining agency procedures or requirements to engineering firms, utility representatives, local units of government or others; or applying technical expertise to plan the use of resources to accomplish the desired result in a timely manner.

**Minimum Requirements:** Five years of experience in engineering technical support. Education may be substituted for experience as determined relevant by the agency.

**Necessary Special Requirements:**

Some positions in this class require that incumbents possess a Fundamentals of Surveying certificate from the Kansas Board of Technical Professions within the time frame set by the agency.

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