

LANCASTER COUNTY
ENGINEERING TECHNICIAN – BRIDGE INSPECTOR

NATURE OF WORK

This is responsible supervisory and technical work in connection with the County Engineering Department.

Work responsibilities may include one or more of the following: supervision of subordinate personnel; performance of manual or computer aided drafting; surveying; construction inspection; right-of-way work; reviewing plans and surveys for accuracy and design function. In addition, one of the position's primary responsibilities is for bridge inspection. Supervision is exercised over subordinate personnel engaged in any of the above areas of responsibility. Work is performed under the general supervision of a technical or administrative superior. Employees within this class routinely exercise independent judgment in the day-to-day functions of the position.

EXAMPLES OF WORK PERFORMED

Supervise and assist with the inspection of County bridges and box culverts in accordance with federal inspection requirements.

Act as survey party chief on a survey crew, supervising all phases of field work.

Monitor contractor activities to ensure work is completed according to plans and specifications; review and revise construction plans to ensure accuracy and design function; act as mediator between contractor and public affected by engineering projects.

Supervise and train subordinate personnel in performing engineering work including drafting and surveying skills, mathematical computations, field book preparation and plan interpretation.

Coordinate and supervise personnel involved in establishing a control point network used to determine exact mathematical positions for all section corners including restoring lost or obliterated monuments.

Supervise and/or perform quality control testing during construction projects as needed.

Perform preliminary and final drafting duties including drafting plans and profile sheets, plotting roadway cross-sections, stream meanders and flood plain sections; prepare final copies of irregular tract field note descriptions.

Research legal records to retrace previous surveys and obtain necessary information to execute land surveys.

Inspect culverts and bridges per federal inspection requirements; update structure inventory and appraisal sheets, and document deficiencies or safety problems discovered in the field.

Prepare right-of-way plans, appraisal sketches, surveys and condemnation and sectional plats.

Write legal descriptions based on computations; traverse and compute areas of taking.

Rate bridges in accordance with the Nebraska Department of Roads to ensure they are structurally sound and safe for public use; monitor and schedule maintenance.

Perform general labor work related to assigned engineering and/or surveying projects.

Provide State and County officials and the general public with information prepared and/or filed by the Department.

Attend all necessary classes or seminars to maintain certification as required by Federal regulations and State requirements.

DESIRABLE KNOWLEDGE, ABILITIES AND SKILLS

Considerable knowledge of the principles, methods and techniques of land surveying.

Considerable knowledge of the principles, procedures, and standard specifications involved in planning, designing and constructing roadway projects.

Considerable knowledge of general computer hardware and software systems including mapping and drafting applications.

Considerable knowledge of the operation and maintenance of land survey equipment and tools.

Considerable knowledge of quality control testing and inspection methods and practices utilized in engineering projects.

Ability to perform complex engineering computations and compile data into reports and concise summaries.

Ability to plan, train, supervise and evaluate the work of subordinate technical personnel.

Ability to communicate effectively both orally and in writing.

Ability to read and interpret maps, legal descriptions, construction plans and specifications.

Ability to establish and maintain effective working relationships with governmental officials, contractors, co-workers and the general public.

Ability to perform heavy manual work for extended periods of time under adverse weather conditions encompassing varied terrains.

Skill in the operation and maintenance of surveying and inspection equipment, tools and testing materials.

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DESIRABLE TRAINING AND EXPERIENCE

Associate's degree or equivalent in Engineering Technology or related field plus experience supervising drafting, surveying or engineering work.

MINIMUM QUALIFICATIONS

Graduation from a senior high school or equivalent supplemented by course work in Engineering Technology or similar field plus experience as an Engineering Technician; or any equivalent combination of training and experience which provides the desirable knowledge, abilities and skills.

NECESSARY SPECIAL REQUIREMENT

Certification by the State of Nebraska in accordance with 23 CFR 650 subpart c is required: In addition the following requirements must be met:

A minimum of 5 years experience at one of or any combination of the following: (a) NBI Bridge Inspecting; (b) new bridge construction; and/or (c) bridge design to be certified by the State.

In addition, an employee in this class must take and pass continuing educational courses as may be required by the Federal Highway Administration and/or the Nebraska Department of Roads to maintain Bridge Inspector Certification.

Possession of a valid driver's license when operating a vehicle is necessary to the satisfactory performance of assigned duties.

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