MITCHELL COUNTY HIGHWAY DEPARTMENT JOB DESCRIPTION

Job Classification: Engineer's Assistant/Technician/ Inspector
Position: Assistant to the Engineer
Reports to: County Engineer

Summary: Under general supervision, performs engineering duties in the planning, designing, drafting, and inspection of county road projects; performs related work as required.

Essential Duties and Responsibilities include the following. (Other duties may be assigned.)

- Assists in planning, designing and drafting of culverts, grading, paving, bridge and other projects; assists in long range planning including vertical alignment, vertical curves, earth work calculations and mass diagrams.
- Supervises the construction, inspection, and administration of bridge and culvert, asphalt and concrete paving, road grading, and other related projects.
- Examines materials used in construction projects.
- Plots and drafts field survey notes in preparation of contract construction projects; monitors plan preparation to ensure compliance with specifications and guidelines.
- Contacts landowners in the purchase of right of way for construction projects.
- Determines quantities of materials required; submits plans to appropriate personal and agencies for approval; prepares design plans for contract bid; research records for easement; calculate area and cost of proposed right-of-way easements; field survey staking of project areas; reviews work in process and upon completion for conformance to specifications.
- Assist the County Engineer with various office and field engineering functions; keeping him/her informed on progress of all County construction projects; making estimates for contractor payments; monitor inspection personnel and weekly reports.
- Assists with maintenance projects by offering technical advice on repairs, pipe replacement plans, and general procedures.
- Handles inquiries or complaints and related public relations duties.
- Complete and submits required reports.
- Supervises technical employees by assigning work, checking work and providing instruction on safety issues.
- Uses and maintains various technical operating manuals, standards and specifications related to bridge and culvert construction, materials, paving, traffic control devices, field testing and related maintenance activities.

Qualifications/Education and/or Experience Associate Degree in Civil Engineer Technology and two years of experience in construction design, survey, inspection, including responsibility for project preparation, documentation and development preferred; or substituting additional experience for the education requirement. Must have a valid Iowa driver's license and able to obtain CDL. Must have or be able to obtain certification as an Iowa DOT aggregate, asphalt cement concrete, and Portland cement concrete plant inspector.

Physical Requirements
Stands and walks much of the time. Must be able to walk on uneven and unstable surfaces such as at construction sites or roadway and ditch embankments. Uses a variety of surveying instruments (transit, level, distance meters, locators, chains along with hand tools hammer, shovel, spade, ax and sledgehammer). While sitting operates equipment such as computer and other office equipment. Ability to do moderate lifting up to (50 to 100 lbs) is required.

Mathematical Skills
College level math, including algebra, geometry and trigonometry, is preferred. Ability to compute elevations, contours, grades, storage areas, quantities of materials, cross sections, dimensions, profiles, volumes and presenting graphic representations of project plans using CAD equipment and computer software to display, modify and produce design plans. Proficient in the use of extensive computer software programs. Proficient in the understanding and application of technical subject matter such as IDOT bridge and culvert design standards, materials and constructions manuals, paving manuals, field testing manuals, traffic control devices, specification revision manuals and maintenance standards.

Reasoning Ability
Ability to apply common sense understanding to carry out instructions furnished in written, oral or diagram form. Ability to apply safety practices and procedures to all situations. Ability to apply basic hydraulic principles when performing duties.

Language/Communication Abilities
The individual requires the knowledge of: civil and hydraulic engineering principles and practices; current specifications and design guidelines of IDOT and Federal Highway Administration. State requirements for right-of-way acquisition, surveying principles, and highway construction methods and materials. The ability to: exercise good engineering judgement in appraising situations and making decision; perform public relations duties through direct contacts, telephone calls and written communications; read and interpret technical engineering information; perform complex drafting and engineering designs; present ideas concisely and clearly and deal effectively with individuals and groups and evaluate new information to assure compliance with current and proposed projects and specifications.

Environment
Ability to express and exchange information and ideas by the spoken word and to determine/discern such sounds by acceptable hearing. Ability to speak the English language distinctly with poise, voice control and confidence. Proficient in providing appropriate guidance, training and supervision to part-time construction inspection and field survey teams. Proficient in developing and maintaining effective working relationships with Secondary Roads staff, contractors, property owners, State and local officials.

The work environment will fluctuate with the weather conditions throughout the year. The employee may be subjected to extreme weather conditions for short periods of time. The employee may be subjected to working in adverse weather conditions for extended periods of time. The employee may be subjected to working in road construction and maintenance activity environments with periodic high noise levels, dusty conditions, and hazardous conditions.