

Iowa Department of Administrative Services – Human Resources Enterprise
Job Classification Description

Engineering Operations Technician

Definition

Assists in the preservation and operation of the transportation system by preparing and approving access and utility permits and providing customer service to the public; performs related work as required.

The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

Work Examples

Prepares access permits by meeting with customers to gather information and determine access location, drawing exhibits, and filling out entrance permits; approves or denies requested action on type C and B entrances.

Reviews and prepares utility permits and right-of-way permits, which includes meeting with applicants and guiding them through the process.

Computes estimated quantities of materials needed and the time required for road repair projects.

Inspects field projects in progress to ensure all requirements of permits are being met; halts all non-permitted work.

Administers bridge painting contracts that include examining bridges, prioritizing projects, preparing proposals for work, overseeing painting by contractors, inspecting work performed, approving job, and authorizing payment vouchers.

Plans, researches, and submits repair projects which includes examining roads, gathering information, and calculating estimated quantities for maintenance projects.

Researches a wide variety of problems or requests by checking locations of intersections, crossing conditions of railroads, providing measurements, ensuring sign are placed and visible, and similar activities.

Organizes and updates construction as-built plans, right-of-way contracts, and other files.

Reviews and resolves concerns and complaints brought in by the public regarding signs, traffic problems, drainage, and related issues.

Develops detour routes over the state, county, and city highways and streets by conducting a field review, determining signing needs, and achieving detour agreement with other government agencies.

Designated positions perform duties related to snow and ice removal, which include: accessing the Roadway Weather Information System (RWIS), weather reports, and other related computers software applications to record and receive data and make decisions regarding times, temperatures, weather conditions, and material usage to operate snow and ice removal equipment such as, but not limited to single or tandem axle dump trucks that may be equipped with tailgate or hopper spreader, straight blades or V-plows, wing plows, and underside ice blades; includes preparing and spreading abrasives

and de-icing chemicals on the roadway by using a loader for mixing abrasives and chemicals; may perform other maintenance duties as assigned.

Competencies Required

Knowledge:

- Engineering and Technology – The practical application of engineering science and technology. Includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Customer Service – Principles and processes for providing customer services, including customer needs assessment, meeting quality standards for services, and evaluating customer satisfaction.
- Building and Construction – Materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Design – Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- English Language – The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Law and Government – Laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
- Clerical Procedures – Word processing, managing files and records, designing forms, and other office procedures and terminology.

Abilities:

- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning – Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- Written Comprehension – Read and understand information and ideas presented in writing.
- Written Expression – Communicate information and ideas in writing so others will understand.
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.
- Near Vision – See details at close range (within a few feet of the observer).
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Extent Flexibility – Bend, stretch, twist, or reach with your body, arms, and/or legs.

Skills:

- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Reading Comprehension – Understanding written sentences and paragraphs in work related documents.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Speaking – Talking to others to convey information effectively.
- Mathematics – Using mathematics to solve problems.
- Monitoring – Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) Graduation from an accredited college or university with an associate's degree in engineering, construction management, or a related field, and experience equal to two years of full-time work in highway construction, inspection, or surveying.
- 2) A total of four years of education and/or full-time experience (as described in number one), where thirty semester hours of accredited college or university course work in engineering, construction management, or a related field equals one year of full-time experience.
- 3) Current, continuous experience in the state executive branch that includes two years of full-time work as a Construction Technician or Highway Technician Senior.

Notes

Designated positions in this class require possession of a valid Commercial Learner's Permit upon hire. Within a timeframe determined by the appointing authority, a valid Commercial Driver's License with the required endorsements and applicable restrictions must be obtained and subsequently maintained to continue employment.

If a CDL is not required, designated positions in this class are required to have and maintain a minimum of a valid Class C Non-Commercial Operator's License.

In conjunction with Title 49 of the Code of Federal Regulations (parts 40 and 382), designated positions in this job class require a pre-employment drug screen and will require ongoing participation in the employer's random drug and alcohol testing program and will be subject to the regulations regarding the Federal drug and alcohol testing program

Prior to starting employment, persons in designated positions are required to have a post offer, pre-employment physical verifying the physical ability to perform the duties described.

Travel, including overnight travel, may be required for positions in this class. Employees must arrange transportation to and from assigned work areas.

Employees in designated positions must be able to work up to 16 consecutive hours.

Effective date: 11/20 KMJ