

CITY OF CEDAR RAPIDS POSITION PROFILE	JOB CODE #/TITLE: NB194 Utilities Process & Facilities Engineer II
POSITION #/TITLE: 1040, 2671, 2672 Utilities Process & Facilities Engineer II	Adopted: 10-13 Revised: 07-16

POSITION DESCRIPTION

Dept /Division: Utilities/Water Pollution Control & Water	Manager Level: Program Administrator
Salary Plan/Description: NBU/Non-Bargaining Unit	Salary Grade: 16
Reports To Position #/Job Code #/JC Title: 1695/NB067/Water System Engineering Design Manager	Dotted-line Reports To Position #/Job Code #/JC Title:
FLSA Status: Exempt	City Overtime Status (Employee Type): Exempt (Salaried)
Physical Demand Rating: Medium	Work Environment: Controlled
Pre-employment Testing: Drug and health screening after contingent offer.	Position Testing: Job fit assessment
Personal Protective Equipment: Eye, Head, Foot, Hearing, Gas Monitor, Reflective Vest	

General Statement of Duties

Develops and manages the coordination, design, budgeting, bidding and implementation of engineering plans, construction projects, reports, studies involving water and wastewater treatment processes; performs related work as required.

Distinguishing Features of the Class

Considerable leeway is granted for the exercise of independent judgment and initiative. The Utilities Process & Facilities Engineer II classification is distinguished from the Utilities Process & Facilities Engineer I classification by the increased complexity and diversity of engineering plans and reports. The Utilities Process & Facilities Engineer II provides peer review to Utilities Process & Facilities Engineer I classification.

Examples of Essential Work (Illustrative Only)

Manages Capital Improvement Projects through design, coordination, bid, document preparation and construction phases;
 Conducts or manages system hydraulic modeling and mapping;
 Prepares project budget and construction cost estimates;
 Provides input on policy and practice issues;
 Makes presentations at Public Information Meetings;
 Identifies water plant, water distribution system, and wastewater facility system infrastructure component deficiencies, prepares reports and estimates project costs;
 Prepares feasibility studies;
 Manages consulting engineering contracts;
 Directs coordination between Development Services Group and Utilities Department;
 Communicates and coordinates Utilities and Public Works Capital Improvement Projects (CIP's), attends CIP managers' meetings;

Manages capital improvement budgets including preparation and monitoring of expenses and revenues;
Develops specifications and designs, and provides design review of in-house capital improvement and construction projects;
Provides engineering support to construction, maintenance, and operations at Water Pollution Control and Water plants;
Conducts or directs Water Distribution System Modeling – Is proficient with water distribution system hydraulic analysis, responds to water system modeling requests, identifies system hydraulic deficiencies, prepares reports and estimates project costs;
Water Distribution System Asset Management – Identifies water system infrastructure component deficiencies, prepares reports & estimates project costs;
Assists in researching and analyzing contractors extra work proposals;
Prepares and submits grant applications;
Evaluates capital improvement project requests, develops options and recommends engineering actions;
Collects and analyzes data and develops construction and engineering reports for current or planned water and wastewater facility projects;
Coordinates with appropriate staff in preparing Professional Service Agreements for contract design services;
Coordinates projects for public bidding with the Consultant and the City Clerk, receives and opens bids, and prepares construction agreement with Contractors;
Conducts field review of current and proposed projects to determine project scope, needs and projected resources;
Develops and delivers presentations and attends meetings, conferences and workshops;
Performs all work duties and activities in accordance with City policies, procedures and safety practices;
Attends work regularly at the designated place and time;
Supports continuous process improvement initiatives;
Performs related work as required.

Required Knowledge and Abilities

Comprehensive knowledge of engineering principles and practices;
Comprehensive knowledge of the fundamentals of engineering design;
Thorough knowledge of and ability to learn, the processes and equipment utilized in the treatment of water and waste water;
Thorough knowledge of and ability to learn, computer applications for engineering and process modeling;
Comprehensive knowledge of public works (Civil) construction project materials and methods;
Good knowledge of Mapping (GIS), and Design (CAD) software;
Ability to interpret and develop engineering plans, specifications and contracts;
Ability to read and interpret applicable federal, state and local laws and regulations governing municipal water and wastewater treatment standards;
Ability to communicate effectively and maintain working relationships with other City employees, supervisory personnel, contractors, developers, engineers, property owners and the public both orally and in writing, using both technical and non-technical language;
Ability to prepare accurate and reliable reports containing engineering calculations and specifications, findings, conclusions and recommendations;
Knowledge of engineering and construction contract management;
Ability to understand contractor cost issues and administration of contracts.
Ability to operate a personal computer using program applications appropriate to assigned duties;
Ability to quickly learn and put to use new skills and knowledge brought about by rapidly changing information and/or technology.
Ingenuity and inventiveness in the performance of assigned tasks.

Acceptable Experience and Training

Graduation from an accredited college or university with a Bachelor's or Master's Degree in civil, environmental or mechanical engineering or related field; and
Considerable experience in water and wastewater mechanical and process system design and construction; or
Considerable experience in public works or water supply project engineering, design and construction; or
Any equivalent combination of experience and training which provides the knowledge and abilities necessary to perform the work.

Required Special Qualifications

Licensed as a Professional Engineer in the State of Iowa or the ability to obtain within six months of appointment.

Essential Physical Abilities

Requires the following, with or without reasonable accommodation:
Sufficient clarity of speech and hearing, which permits the employee to communicate effectively;
Sufficient vision, which permits the employee to perform engineering design and contract management tasks, observe and evaluate projects and processes and produce a variety of written and technical documents;
Sufficient manual dexterity, which permits the employee to operate computer keyboard and develop engineering designs and specifications;
Sufficient personal mobility, which permits the employee to inspect engineering and construction projects, including sites characterized by trenching and rough terrain.