SENIOR GAS ENGINEER

JOB DESCRIPTION

Classification Responsibilities: Under general supervision, performs advanced responsible professional engineering work related to the City's natural gas systems. This class performs related duties as required.

In the ***Engineering Assignment***, the Senior Gas Engineer is responsible for designing and managing projects in the City's Capital Improvement Program (CIP) throughout the entire life of the project. Duties as project manager are comprehensive and include responsibilities such as preparing construction documents, securing necessary permits and approvals, preparing cost estimates, tracking budgets, coordinating with other City departments, performing quality control and assurance, coordinating reviews by other City departments and outside agencies, communicating with the general public and elected officials, preparing reports and calculations, mentoring other staff, overseeing the bidding and Council award processes, reviewing shop drawings, ensuring and verifying contractor compliance with the construction documents, coordinating construction with outside agencies, performing construction inspections, verifying quantities, reviewing pay applications, and negotiating change orders. The Senior Gas Engineer is also responsible for design of new commercial and residential services. The Senior Gas Engineer coordinates with the Energy Resources Department on new service requests, calculate service and meter sizes, prepares cost estimates, designs new services and prepares associated construction documents. Work is performed under the general supervision of a Supervising Engineer who reviews work through conferences, reports, inspections, and results achieved.

In the ***Energy Resources Assignment***, the Senior Gas Engineer is responsible for performing: system engineering planning assessments and preparing associated reports and studies needed to identify projects to be included in the Department's Gas System Master Plan and Capital Improvement Program (CIP); system engineering operational evaluations of the gas system's short-term and long-term operational integrity and ensuring that there is sufficient capability within the natural gas distribution system to meet the forecasted customer requirements; design studies and engineering economic analyses for selecting system improvements; system components and material specifications for components such as excess flow valves, service lines, pressure regulators, and facilities such as gate stations and pressure regulator stations; supervises tasks and reviews the work of the department's Gas Infrastructure Specialist, Gas System Operations Analyst, and the GIS (Geographic Information System) Specialist assigned to the Gas Engineering/Planning area. Work is performed under the general supervision of an Energy Resources Program Manager who reviews work through conferences, reports, inspections, and results achieved.

Distinguishing Features: Employees in this class perform the full range of professional engineering work related to the development and operation of the City's natural gas system and acts as the City's technical expert in this field. In addition, the Senior Gas Engineer directs and reviews the work performed by lower-level professional and paraprofessional engineers, technicians, inspectors, surveyors, etc. Assignments are broad in scope and require the use of independent judgment and initiative in making technical decisions of considerable difficulty. The work involves the ability to prepare routine and special reports, including the required federal documents. This class is distinguished from the Gas Engineer and Gas Planning Engineer II classes by the required registration in the State of Arizona as a Professional Engineer and by performing more difficult and varied professional engineering work assignments with minimal direct supervision. Employees may progress to this class by

noncompetitive promotion upon meeting the specific criteria-based promotion requirements of performance and professional registration. This class is FLSA exempt-professional.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Registration as a Professional Engineer (Civil or Mechanical preferred). Registration as a Professional Engineer in the State of Arizona is required within six months of hire.

Special Requirements. Must possess a valid Arizona Driver's License by hire date.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. None

ESSENTIAL FUNCTIONS

Communication: Communicates with the general public, other City employees, vendors, management, consultants, and contractors in order to prepare gas design plans for public and private improvements, and promote future gas usage. Instructs and trains subordinates regarding design of gas system improvements. Prepares written documents including letters, reports, memos, specifications, and other documents to effectively communicate technical and controversial issues.

Manual/Physical: Reviews the work products of others to ensure compliance with standard operating procedures, federal regulations, and state regulations. Monitors and evaluates gas system components to determine compliance with prescribed operating and safety standards of the Corporation Commission and the U.S. Department of Transportation. Detects traffic sounds when working near moving traffic. Operates a City vehicle requiring a standard Arizona Driver's License to drive to project sites to review field work. Operates standard office equipment, including a personal computer (PC), plotters, andreprographic machines. Prepares and updates maps, schedules, and graphs. Prepares plans and specifications for distributions to other City departments and the public.

Mental: Plans and organizes gas system designs. Supervises and evaluates the work of subordinate personnel in the design and drafting of gas system plans. Prioritizes own work and the work of others. Assigns work to personnel. Coordinates work activities with other City departments, agencies, and utility companies. Develops gas system procedures and policies. Conducts research and analyzes gas equipment and material. Performs mathematical calculations, statistical computations, and cost analysis to calculate gas load and estimate project and construction costs. Understands and interprets construction drawings, schematic drawings, layouts, or other visual aids to design gas systems. Learns job-related material through on-the-job training and classroom instruction regarding gas system design.

Knowledge and Abilities:

Knowledge of:

natural gas systems principles, practices, and methods of operation;
mapping system modeling and drafting techniques;
cathodic protection methods and tests;
the pipes, meters, regulators, and materials common to natural gas distribution systems;
public works design standards, materials, and construction; and
the principles and practices of engineering and the methods and techniques used in design.

Ability to:

design natural gas distribution systems;
design cathodic protection systems and elements;
supervise technicians in the design and drafting of gas system plans;
review requests for gas services and meters for size, location, and safety requirements;
provide information to homeowners, developers, architects, engineers, and the general public on matters relating to the gas system;
assist in performing corrosion control analysis required in the detection and resolution of problem areas;
assist Utility Construction personnel in cathodic protection methods and procedures;
prepare or oversee the preparation of reports on gas consumption;
prepare or oversee the preparation of routine and special reports, including required federal documents;
calculate gas load;
identify system improvement needs and make recommendations for the CIP plan;
estimate project and construction costs;
establish and maintain effective working relationships with City personnel, private engineers, utility owners, developers, and property owners;
perform modeling of the City's natural gas system using a PC;
research and analyze gas system materials; and
assist in promoting/marketing natural gas.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.