

SUPERVISING ENGINEER

JOB DESCRIPTION

Classification Responsibilities: Under general supervision, a Supervising Engineer performs responsible professional-level engineering design and construction work, and related duties as required.

Engineering Assignment: The Supervising Engineer assigned to the Engineering Department requires extensive knowledge of all facets of civil engineering, natural gas, electrical utility, and/or the development and project management of City infrastructure projects and acts as the City's technical expert and representative in these areas. This class supervises professional-level engineers and project managers and paraprofessional-level technicians responsible for planning, scoping, and managing capital improvement projects, including negotiating, and managing design and construction contracts.

Transportation Assignment: The Supervising Engineer assigned to the Transportation Department requires extensive knowledge of all facets of traffic engineering projects and acts as the City's technical expert and representative in these areas. This class supervises professional-level staff (examples: engineers, planners, etc.) responsible for planning, scoping, and reviewing Transportation capital improvement projects, Bicycle and Pedestrian Program, and Transportation Planning Program.

Water Resources Assignment: The Supervising Engineer assigned to the Water Resources Department requires extensive knowledge of all facets of water and wastewater systems including pipelines, treatment plants, wells, lift stations, sulfide stations, and pump stations, and acts as the City's technical expert and representative in these areas. This class supervises professional-level engineers and paraprofessional-level technicians responsible for planning, scoping, and reviewing Capital Improvement Projects (CIPs); master planning using system hydraulic models; and managing an asset management program.

Distinguishing Features: Employees in this class perform the full-range of professional-level engineering design and construction tasks, and supervisory duties including conducting performance reviews, and directing and reviewing the work performed by professional-level engineers and paraprofessional technicians. Assignments are broad in scope and require the use of independent judgment and initiative in making technical and supervisory decisions of considerable difficulty. The Supervising Engineer shall have a broad knowledge of engineering projects (examples: natural gas, electrical utility, storm drainage, streets, sewer and water, buildings, transportation, etc.) and act as the City's technical expert and representative. Additionally, Supervising Engineers are responsible for representing the City on projects involving state and federal agencies, private utility companies, and other municipalities. Work is performed under the general direction of a Deputy Engineer, Assistant City Engineer, Water Resources Assistant Director, Deputy Transportation Director, or other management-level staff. 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. Any combination of training, education, and experience equivalent to graduation from an accredited college or university with a Bachelor's Degree in Civil Engineering or related field. Extensive (5+ years) engineering experience. At least five years supervisory experience with three of those years supervising in the engineering industry. Experience in traffic engineering is required for the assignment to Transportation Department. Experience in water and wastewater engineering is required for the assignment to the Water Resources Department

Special Requirements. Must be registered as a Professional Engineer (Civil, Mechanical, Electrical), Landscape Architect, or Architect by hire date. Registration in the state of Arizona is required within six months of hire. Must possess a valid Class D Arizona Driver's License by hire or promotion 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 (*by assignment*).

Preferred/Desirable Qualifications. Experience with roadways, utilities, and building projects is desirable. Experience in water and wastewater master planning, system modeling, design, asset management, treatment, and operations is desirable (*Water Resources Assignment*).

ESSENTIAL FUNCTIONS

Communication: Communicates with the general public, other City employees, vendors, management, contractors, public officials, and others to perform assigned duties. Instructs and trains subordinates or others in a classroom setting regarding engineering standards and procedures, and the City's Capital Improvement Program. Prepares written documents such as: emails, letters, memos, specifications, reports, and studies with clearly organized thoughts and using the proper sentence structure, punctuation, and grammar in order to convey or obtain information. Communicates clearly, both verbally and in writing, complex, technical, and controversial issues.

Manual/Physical: Reviews the work products of others to ensure compliance with standard operating procedures, and federal and state regulations such as: Environmental Protection Agency (EPA), Department of Transportation (DOT), Federal Highway Administration (FHWA), United States Geological Survey (USGS), Corps of Engineers, Arizona Department of Transportation (ADOT), Arizona Department of Environmental Quality (ADEQ), Arizona Department of Water Resources (ADWR), and other standards, regulations, and guidelines. Operates a motor vehicle requiring a valid Class D Arizona Driver's License to perform field reviews of projects as well as to meet with outside agencies and utility companies. Operates a variety of standard office equipment such as a personal computer (PC), copier, telephone, and calculator. Enters data or information into a PC and other similar equipment in order to prepare reports, evaluate data, perform calculations, prepare drawings, and complete other duties. Prepares bundles of material including plans, specifications, and reports for distribution or mailing to other agencies, other City departments, and private consultants. Moves material, including plans, specifications, and files for distances of up to 50 feet using carts.

Mental: Plans, organizes, and directs project designs, storm water programs, bridge inspection programs, and other assigned duties. Supervises and evaluates the work of subordinate personnel including computer-aided drafting, digitizing, design, calculations, utility coordination, problem resolution, and program administration. Prioritizes and assigns work to personnel and prioritizes own work. Resolves procedural, operational, and other work-related problems by analysis, reviews with

involved parties, and develops and evaluates alternatives. Coordinates work activities, program functions, and other tasks with other City departments; other cities; or other state, federal, and local agencies. Develops unit policies and procedures, short- and long-term objectives, or other plans, standards, and formats. Conducts research and analyzes data such as: regulatory standards, as-built drawings, service data, and operations data. Performs mathematical calculations, statistical computations, financial and cost analysis, and design calculations. Assists in preparing the department budget as it relates to capital projects and program budgets. Comprehends and makes inferences from written material including specifications, standards, letters, plans, and memos. Understands and interprets engineering plans, schematic drawings, layouts, or models to perform design and plan review. Estimates labor and material costs from plans. Learns job-related material through on-the-job training regarding new rules, procedures, and designs. Learns job-related material in a classroom setting regarding new federal, state, and local rules regarding new methods or technologies.

Knowledge and Abilities:

Knowledge of:

engineering design and construction standards and materials;
the principles and practices of civil engineering, and the methods and techniques used in the delivery of public water, sanitary sewer, storm sewer, underground utility lines, retention basins, pump stations, water storage tank sites, treatment plants, and public street improvements;
federal, state, and local regulations and codes, and the engineering standards pertaining to the delivery of the projects assigned; and
symbols and terminology used in engineering drawings.

Ability to:

determine, upon receipt of a design project, the approach to be taken for completion, including what elements may be assigned to subordinate personnel;
direct the research and compilation of data necessary for the fulfillment of engineering objectives;
coordinate related workflow, both within the City organization and with outside agencies;
supervise an engineering team by assigning work, selecting work methods, answering questions, and reviewing and approving engineering work performed by professional and paraprofessional team members, for compliance to instructions given and for conformity to sound engineering principles; assist team members in the resolution of design and construction problems;
perform the more difficult design and construction work;
review subdivision development construction plans by checking for such factors as proper sewer and water line slopes, sizes, and depths to ensure adequate flows and capacities, compliance with county health department requirements and standard civil engineering practices for sewer line design, and for correct manhole spacing and location of cleanouts;
review subdivision development construction plans by checking for such factors as proper street and right-of-way widths, alignment and grades of curbs, gutters, and pavement sections and compatibility with existing improvements within the adjacent areas already developed;
coordinate the design and construction of City projects being designed by consulting engineers; review outside design work for aspects identical or similar to those of work performed in-house; provide general engineering advice to other City departments and to the general public;
prepare oral and written reports of a technical nature;

establish and maintain effective working relationships with City officials, other professionals, contractors, coworkers, and the general public;
determine adherence to specifications on a variety of construction jobs and communicate effectively and persuasively with contractors and developers in securing compliance with specifications, plans, and ordinances;
apply fractions, percentages, ratios and proportions, algebra, geometric constructions, and the essentials of trigonometry;
work quickly and accurately under pressure to meet deadlines for project completion or issuing an addendum;
write project special provisions and construction notes precisely so there is little possibility of misinterpretation by contractors;
read and interpret construction drawings; compute quantities and make cost estimates; and
conduct engineering research work.

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.

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