ENGINEERING AIDE I/II

BARGAINING UNIT/CLASS CODE:
SMEA / 26.5071 (I)/26.5066 (II)

DEFINITION

To perform a variety of paraprofessional office and field engineering work, including drafting using AutoCAD, Civil 3-D, raster design, Microsoft Office, photo shop, traffic, and development engineering studies/surveys; assist in the preparation of cost estimates and records handling, and/or serve as an engineering design team member.

DISTINGUISHING CHARACTERISTICS

Engineering Aide I: This is the entry-level class in the paraprofessional engineering class series. Incumbents perform routine drafting, office and field engineering work that does not require previous specialized experience. Generally, work is observed and reviewed both during performance and upon completion, and changes in procedures or exceptions to rules are explained in detail as they arise. Under this training concept, positions assigned to the class of Engineering Aide I may reasonably expect to progress to the Engineering Aide II level with experience and satisfactory job performance.

Engineering Aide II: Positions in this class are normally filled by advancement from the lower class of Engineering Aide I, or when filled from the outside, require substantial prior paraprofessional level engineering work experience. Appointment to the higher class requires that the employee be performing the full range of duties in drafting, office and field engineering work, and meet the qualification standards for the class. Work in this class is distinguished from that of Engineering Aide I class by the greater complexity and variety of the assignments received, and by the greater independence with which an incumbent is expected to operate.

SUPERVISION RECEIVED AND EXERCISED

Receives general, technical and functional supervision from higher-level engineering personnel. Assignments of the Engineering Aide II may occasionally require technical supervision of the Engineering Aide I positions.

ESSENTIAL JOB FUNCTIONS OF THE POSITION Duties may include, but are not limited to the following:

Prepare minor to challenging engineering design layouts. Locate utilities, easements, property lines and other information on plans. Prepare topographical plan and profile maps of property and pertinent features from survey notes and legal descriptions. Check parcel maps, subdivisions and various other drawings. Maintain city maps utilizing AutoCAD. Participate in the preparation, filing, and retrieval of a variety of engineering maps, documents and records. Locate and duplicate drawings. Read and interpret engineering plans. Assist traffic engineering staff in conducting traffic studies, preparing diagrams and reports, and other traffic related duties. Install radar recorders, screenline traffic counter tubes, and perform radar speed surveys. Take field measurements, process transportation permits, monthly transportation billing and special curb markings. Maintain engineering base maps, reports, and drawing files. Enter addresses to all parcels in geo-base records. Prepare final drawings of existing improvements, rights-of-way, and other utilities using field notes, maps and photographs; check calculations used in designs and estimates. Assist in performing other surveying activities. Assist in measuring accurate distances to be used in the determination of locations of boundaries, easements, improvements, structures and topographic features; keep notes on measurements made. Prepare traffic and transportation reports, council reports, turn movement counts, and screenline counts. Utilize a variety of software to prepare back up material for presentations. Answer routine questions and provide information to the public concerning engineering activities. Make and check mathematical calculations related to surveying and basic engineering. Handle citizen complaints and communicate with the public. Perform a variety of general office procedures including printing maps and documents, use of plotters, filing, and ordering supplies. Promote and maintain safety in the work place. Perform related duties as assigned.
CITY OF SALINAS
ENGINEERING AIDE III (continued)

PHYSICAL AND MENTAL CHARACTERISTICS

Physical, mental and emotional stamina to perform the duties and responsibilities of the position; manual dexterity sufficient to write, use telephone, computer, business machines and related equipment; vision sufficient to read fine printed materials, visual display terminals and distinguish between different colors; hearing sufficient to conduct in person and telephone conversations; speaking ability in an understandable voice with sufficient volume to be heard in a normal conversational distance, on the telephone and in addressing groups; physical agility to push/pull, squat, twist, turn, bend, stoop and reach overhead; physical mobility sufficient to move about the work environment, physical strength to lift up to 30 pounds and carry items of that weight up to 200 feet; able to hammer nails in pavement; physical stamina sufficient to sit for prolonged periods of time; mental acuity to collect and interpret data, evaluate, reason, define problems, establish facts, draw valid conclusions, and make valid judgments and decisions.

WORKING CONDITIONS

Business office working environment subject to sitting at a desk, standing at a counter for long periods of time bending, crouching, or kneeling at files, pushing/pulling of file drawers and supplies, reaching in all directions and prolonged periods of time working at a computer terminal. Outdoor work, walking on uneven surfaces in all weather conditions, marking pavement with hammer and nails, marking pavement, sidewalk, curb and gutter with paint, field measurements, photography of project site and may work around potentially toxic chemicals.

QUALIFICATIONS

Knowledge of:

Engineering Aide I: Terminology, methods, practices and techniques of AutoCAD drafting; Civil 3-D design, Microsoft Office, Photoshop; basic engineering mathematics, including algebra, geometry, and trigonometry as applied to the computation of angles, areas, distances and traverses; drafting practices; elementary surveying; traffic monitoring and surveying techniques and practices; drafting engineering maps and records on the computer; computer file management; modern office methods and practices. Engineering Aide II: Also, engineering policies and procedures; engineering construction, design, engineering economics, survey and land use regulations and ordinances.

Ability to:

Engineering Aide I: Perform engineering and mathematical calculations with speed and accuracy; understand and follow oral and written instructions; ability to produce minor engineering plans and profile cross sections using AutoCAD; Civil 3-D, raster design, Microsoft Office, photo shop, use and care for drafting, surveying, traffic and mathematical instruments, tools and computers; produce, interpret, and apply basic field notes to prepare engineering plans; read and interpret engineering plans; lift up to 30 pounds; communicate clearly both orally and written and establish effective working relationships with others. Engineering Aide II: Also, make moderately complex engineering and field survey computations; perform moderately complex engineering plans and profile cross sections using AutoCAD; produce, interpret, and apply field notes; compile rough data and prepare statistical and narrative reports from field studies; make accurate computations of material quantities, application rates and production measures; perform work with minimum supervision.

Skills to:

Engineering Aide I: Prepare minor engineering plans using AutoCAD software; assist in the preparation of specifications and engineer cost estimates. Engineering Aide II: Also, prepare more challenging engineering plans. Operate surveying equipment; provide technical assistance to less experienced Engineering Aides. Evaluate traffic-related problems and submit recommendations.

License or Certificate:

Possession of a valid California Driver’s License.
Education and Experience:

Engineering Aide I: An example of the education and experience which most likely demonstrates the skills, knowledge and abilities required to perform the duties would be any combination equivalent to graduation from high school. Engineering Aide II: Examples of the experience or education which most likely demonstrates the skills and abilities required to perform the duties would be equivalent to two years of Engineering Aide I level work or a degree in Civil Engineering.

Reviewed  
Department Director

Approved  
Human Resources Officer

Approval Date 8/4/17