

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 004021
Grade 27**

SENIOR ENGINEER

DEFINITION OF CLASS:

This is non-supervisory professional engineering work involving the most complex and difficult technical assignments in the various functional areas of engineering. Contacts are with public and private officials, engineers, lawyers, contractors, consultants, community leaders and associations, and County personnel to exchange information, plan and coordinate operational matters, review plans and documents, resolve problems, provide advice/guidance, or justify County actions related to community impact of construction projects. Public service in this class is limited to the provision of information and guidance incidental to the primary purpose of the job.

Employees in this class perform field varying assignments in design, plan review, project management, environmental engineering, and engineering administration, which are characterized by significant complexity and difficulty involving, for example, several different engineering and other disciplines, large scale, high cost, and of long duration. Employees independently plan and carry out assignments based on overall policy and objectives, accepted engineering principles and practices, and available resources. Work is usually considered authoritative and is reviewed upon completion for effectiveness in meeting objectives. Guidelines, which include broad industry standards, administrative policies, and, to a limited extent, County codes and regulations, are scarce and frequently of limited use, requiring employees to develop new approaches, methods, procedures, or criteria such as code amendments, operating manuals, and procedural guides. The complexity of the work of this class is characterized by assignments that involve situations, some novel or lacking in precedent that must be closely analyzed to determine appropriate courses of action. Many situations contain uncertainties and unknowns, some the result of new technology, which call for seasoned judgment acquired through years of experience. The scope of the work typically involves engineering projects from conception through construction to final acceptance, and affects Countywide services, structures, and facilities. The work requires employees to visit sites to make field investigations, conduct surveys, and/or observe and/or inspect construction to resolve design or construction problems. Hazards include those requiring the use of hard hats, eye protection, and reflective vests worn when working in moving traffic. Physical effort involves occasional standing for long periods and/or walking over rough and uneven construction sites, and occasional stooping, bending, reaching and climbing at construction sites. Employees in this class do not ordinarily perform supervisory functions although as experienced and senior engineers are expected to provide leadership, mentoring and guidance to less experienced engineers.

EXAMPLES OF DUTIES: (Illustrative Only)

Depending on area of assignment:

- Serves on Contractor Qualification and Selection Committee, providing input to contractor qualification and selection criteria, interviewing principals of consultant firms, evaluating proposals and recommendation selection; provides engineering expertise to support contract negotiations, and for preparing statements of scope of work and technical specifications in bid documents and contracts.

- Manages engineering projects of the most complex and difficult kind, taking projects from conception through design to construction and final acceptance: Works with architecture and engineering (A&E) firms in developing and finalizing designs; participates in letting projects for bid; monitors work of contractors engaged in constructing engineering projects; visits sites to observe work and to inspect (or have inspected) materials used in construction; confers with contractors regarding schedules, safety measures, site problems, and delays; reviews and recommends on requests for changes, for payments and processes other paperwork, prepares project reports and maintains project records and files.
- Conducts environmental studies of proposed development/construction to determine effects of such development on groundwater resources and other aspects of the environment; coordinates and enforces the implementation of environmental compliance measures required of other County departments.
- Reviews and evaluates new or existing industry standards, codes, and practices to develop standards and guides for an area of technical engineering; reviews plans and proposals within the technical area for compliance with such guides, and serves as expert or technical resource in the County on matters within the technical area.
- Advises the public and others regarding engineering policies and requirements for construction and assists such persons on such matters as regulatory compliance, County policies and procedures.
- Initiates correspondence and other communications with developers, designers, contractors, property owners, other governmental agencies and the general public in response to requests for information, to explain legal/regulatory requirements, or to provide technical assistance.
- As assigned, participates in and leads meetings, work groups and task forces formed to deal with engineering related projects and issues; authorizes studies for such activities and participates in discussions, presentations and report writing resulting from such activities.
- Attends public hearings to present and defend proposals that often controversial; attends community/neighborhood organization meetings to explain Department policies and programs, and to respond complaints and requests for service.
- Confers with developers, A&E staff, contractors and their representatives regarding issues arising in the course of planning and completing projects, and negotiates agreements with such entities to resolve matters, committing the Department as authorized.
- Performs related work as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Thorough knowledge of and the ability to apply modern principles and practices of engineering to which the position is assigned.
- Knowledge of the principles, policies, practices, and regulations associated with contract administration in order to prepare project-related elements of contract documents (e.g., scope of work, specifications), review and rate proposals, provide engineering expertise during contract negotiations, and manage contracts after award.
- Knowledge of applicable codes, statutes, and regulations related to the assigned engineering field.
- Knowledge of computer engineering applications and models.
- Ability to lead, mentor and guide other technical staff.
- Ability to work with coworkers and County employees to interpret requirements, provide technical guidance, and persuade or influence individuals or groups.
- Ability to prepare written reports, contract documentation, records of unit activities, and correspondence.
- Ability independently to conduct field investigations and inspections in environmental conditions that

present moderate discomforts and risks.

- Ability to attend meetings or perform other assignments at locations outside the office.

MINIMUM QUALIFICATIONS:

Experience: Considerable (five (5) years) experience in engineering appropriate to the assigned position.

Education: Graduation from an accredited college or university with a Bachelor's Degree in engineering, or a related discipline appropriate to the assigned position. Registration as a Professional Engineer may substitute for the degree.

Equivalency: An equivalent combination of education and experience may be substituted, provided such combination includes at least sixty (60) accredited semester hours (or an equivalent amount of accredited professional training) in engineering or related courses appropriate to the assigned position.

LICENSE:

- Some positions may require possession and maintenance at all times of a valid Class "C" (or equivalent) driver's license from the applicant's state of residence or the ability to perform work at locations outside the office.
- Selected positions within this class may require a Professional Engineer (PE) certification acceptable to the State of Maryland for the performance of job-related duties.

Note: There will be no substitutions for this section.

PROBATIONARY PERIOD:

Individuals appointed to a position in this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Medical History Review.

Class Established: December 1973

Revised: July 1980

August 1987

Classification Study: February 1995 (M)

Classification Study: February 2003 (M)

March 2008

June 2013

August 2013