

New York State Department of Civil Service

DIVISION OF CLASSIFICATION & COMPENSATION

Classification Standard

Occ. Code 4063105

Professional Engineer 1 (Civil), Grade 24	4063105
Professional Engineer 1 (Civil/Construction), Grade 24	4063110
Professional Engineer 1 (Civil/Geotechnical), Grade 24	4063115
Professional Engineer 1 (Civil/Structural), Grade 24	4063120
Professional Engineer 1 (Civil/Transportation), Grade 24	4063125
Professional Engineer 1 (Electrical), Grade 24	4063130
Professional Engineer 1 (Environmental), Grade 24	4063135
Professional Engineer 1 (Fire Protection), Grade 24	4063140
Professional Engineer 1 (Gas Pipeline Safety), Grade 24	4063160
Professional Engineer 1 (Industrial), Grade 24	4063145
Professional Engineer 1 (Mechanical), Grade 24	4063150
Professional Engineer 1 (Mechanical/HVAC), Grade 24	4063155

Brief Description of Class Series

Incumbents of these positions apply their knowledge of the mathematical, physical, and engineering sciences in several specialty areas. They provide the full range of professional engineering services including consultation, evaluation, planning, systems design, engineering surveys, or project oversight in order to ensure work conforms to accepted engineering standards. They may supervise and evaluate the work of subordinate engineers and technicians in projects such as the construction, extension, alteration, remodeling, and maintenance of roads, buildings, public and private water and sewer systems, electrical and power supply systems, fire protection systems, and large structures including major roads, environmental remediation systems, and bridges.

These positions are classified in several State agencies, although the majority of positions are in the Office of General Services, the Department of Transportation, the Department of Environmental Conservation, and the Thruway Authority.

Distinguishing Characteristics

Professional Engineer 1 (All Parenthetics): performance level; under the general direction of higher level staff, independently apply engineering knowledge and offer a variety of consultative or evaluative services in various stages of an engineering project, from the design phase of planned projects through completion. They typically indicate by their seal on project plans that work conforms to accepted engineering standards

and/or review and comment on an engineering submittal whereby the comment or approval letter must be under the signature of a licensed professional engineer. They may supervise subordinate technical, engineering, administrative or support staff as required.

Related Classes

Assistant Engineers (all parentheses) are assigned to smaller and less complex projects or parts of projects, the performance of work not requiring a license, and with closer supervision and review exercised over their activities.

Professional Engineers 2 (all parentheses) are characterized by their predominant assignment to supervising subordinate licensed professional engineering and technical staff, planning, directing, and reviewing major projects, and serving as head of an engineering section. Positions at this level may also be assigned to serve as the principal assistant to a higher level professional engineer responsible for an engineering program in a region or responsible for a statewide engineering program. For any assignment, Professional Engineers 2 (all parentheses) supervise at least two teams headed by Professional Engineers 1 (all parentheses) engaged in a wide variety of engineering activities.

Illustrative Duties

Professional Engineer 1 (Civil)

Perform professional engineering duties related to new construction, renovation, or long term maintenance projects; report to a Professional Engineer 2 or higher level staff for a group of complex projects that are related by location or by type; recommend construction or rehabilitation projects; determine sequencing of phases of projects; review and approve estimates, specifications, reports and offering plans and contract changes through the life of the project; and provide technical advice to engineers, legal staff, consultants and department or institution contract management and budget representatives on the financial, structural or construction requirements of projects.

Professional Engineer 1 (Civil/Construction)

Perform professional engineering duties related to construction design, project budget, estimates, work plans and contract changes; review, analyze, report, and recommend new or revised provisions of law concerning structural safety, adequacy and stability.

Professional Engineer 1 (Civil/Geotechnical)

Perform professional engineering duties related to geotechnical engineering projects primarily focusing on determining soil and field material, ground seepage and detailed

soil mechanics; gather data relating to bedrock, foundations, and aquifer mapping and recommend subsurface construction plans; investigate subsurface conditions and materials, determine the associated engineering properties, and evaluate and/or make design decisions based upon findings; and ensure that project plans and changes from project design through to project completion are consistent with accepted standards..

Professional Engineer 1 (Civil/Structural)

Perform professional engineering duties related to structures; analyze the appropriateness of plans focusing on types of loads; recommend design of structural systems; design and review difficult plans complicated by need to coordinate architectural, mechanical, electrical and plumbing designs; and may evaluate and advise on the revision of the Building Code and manuals of construction design, and the American Association of State Highway Transportation Officials (AASHTO) bridge specifications and standards.

Professional Engineer 1 (Civil/Transportation)

Perform professional engineering duties related to projects concerned with new or rehabilitated roads, bridges, railroads, airport structures, materials, and waterways; and select, from a wide variety of alternatives, the most efficient and effective plan of work.

Professional Engineer 1 (Electrical)

Perform professional engineering duties related to a group of electrical systems projects that may be complicated by such aspects as large scope or multiple agency use, and advise on electrical systems design construction, operations or management of new or ongoing rehabilitation of new or existing electrical equipment including electric utility transmission, distribution, and generation facilities; assist a higher level professional engineer overseeing subcontractors or development of electrical specifications writing and estimates of work; and evaluate operations problems in existing electrical systems.

Professional Engineer 1 (Environmental)

Perform professional engineering duties in a major segment of an environmental quality program such as wastewater management, materials waste management, public water supply protection, water or air pollution control, hazardous waste minimization, multi-media pollution prevention, response and remediation; prepare and/or review engineering designs, plans, and environmental assessments for environmental facilities; analyze site physical data to ensure appropriate environmental laws, regulations and engineering standards are satisfied; may develop scope of investigations and review data resulting, for remediation sites; evaluate water system operation to minimize public health risks; evaluate emerging technologies for drinking water systems; develop regulations and technical guidance for water system operators and other facility officials; respond to environmental health emergencies; and develop standards used to transport

natural gas and hazardous liquids; evaluate operations and maintenance of natural gas and petroleum transmission and gathering lines.

Professional Engineer 1 (Fire Protection)

Perform professional engineering duties related to projects primarily concerned with fire protection; analyze and evaluate systems that provide fire risk management; inspect and recommend fire protection maintenance programs; recommend systems for mitigating risks, including active and passive fire suppressant systems; and provide information on fire hazard systems design, including fire alarm and explosion avoidance protection.

Professional Engineer 1 (Gas Pipeline Safety)

Perform professional engineering duties related to the regulation of natural gas, hazardous liquid, liquefied natural gas, liquefied petroleum gas, and steam pipeline systems; perform the more complex construction inspections, investigations of incidents involving natural gas and hazardous liquids pipelines, and facility design reviews including proposed modifications for design plans of construction projects and facilities involved in incidents; review inspection reports completed by Assistant Engineers; evaluate operator programs and procedures to assess, manage, and control pipeline risks; and use professional engineering expertise to testify as part of administrative proceedings on behalf of the Department of Public Service.

Professional Engineer 1 (Industrial)

Perform professional engineering duties related to design and evaluation of industry standards that affect safety and health of workers and the general public; evaluate work standards that support worksite conditions such as exposure to materials that may affect health and safety; analyze human factors affecting the work environment and environmental factors that affect worker and the general public's exposure to risks to air, water and land quality; review plans and variances or modifications from mandated safety performance and specification standards.

Professional Engineer 1 (Mechanical)

Perform professional engineering duties related to construction and/or reconstruction of operations and/or maintenance of mechanical elements in buildings, hospitals, utility energy facilities or public housing projects; review and consult on plans, specifications and estimates for mechanical systems and their installations; and advise on new engineering methods and materials.

Professional Engineer 1 (Mechanical/HVAC)

Perform professional engineering duties related to projects concerned primarily with the design and evaluation of operating systems for heating, ventilating and air conditioning;

and advise and recommend systems for energy and power transmission, conservation and distribution, heat transfer and various systems such as for cooling towers, boilers, air quality and ventilation.

Minimum Qualifications

Professional Engineer 1 (Civil)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Civil).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Civil/Construction)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Civil/Construction).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Civil/Geotechnical)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Civil/Geotechnical).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Civil/Structural)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Civil/Structural).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Civil/Transportation)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Civil/Transportation).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Electrical)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Electrical).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Environmental)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Environmental).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Fire Protection)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Fire Protection).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Gas Pipeline Safety)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Gas Pipeline Safety).

Open Competitive: New York State Professional Engineers license and current registration, and possession of certificates of successful completion of the requisite federally mandated training program pertaining to pipelines and hazardous materials through the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

Professional Engineer 1 (Industrial)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (all parenthetics).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Mechanical)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Mechanical).

Open Competitive: New York State Professional Engineers license and current registration.

Professional Engineer 1 (Mechanical/HVAC)

Promotion: New York State Professional Engineers license and current registration, and one year of service as an Assistant Engineer (Mechanical/HVAC).

Open Competitive: New York State Professional Engineers license and current registration.

Note: Classification Standards illustrate the nature, extent and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all of the work that might be appropriately performed by a class. The minimum qualifications above are those which were required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum qualification requirements for appointment or examination.

Date: 3/2021

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