

**New York State Department of Civil Service**  
DIVISION OF CLASSIFICATION & COMPENSATION

*Occ. Code 4063005*

<b>Assistant Engineer (Civil), Grade 20</b>	<b>4063005</b>
<b>Assistant Engineer (Civil/Construction), Grade 20</b>	<b>4063010</b>
<b>Assistant Engineer (Civil/Geotechnical), Grade 20</b>	<b>4063015</b>
<b>Assistant Engineer (Civil/Structural), Grade 20</b>	<b>4063020</b>
<b>Assistant Engineer (Civil/Transportation), Grade 20</b>	<b>4063025</b>
<b>Assistant Engineer (Electrical), Grade 20</b>	<b>4063030</b>
<b>Assistant Engineer (Environmental), Grade 20</b>	<b>4063035</b>
<b>Assistant Engineer (Fire Protection), Grade 20</b>	<b>4063040</b>
<b>Assistant Engineer (Mechanical), Grade 20</b>	<b>4063045</b>
<b>Assistant Engineer (Mechanical/HVAC), Grade 20</b>	<b>4063050</b>
<b>Assistant Engineer (Chemical), Grade 20</b>	<b>4063055</b>
<b>Assistant Engineer (Gas Pipeline Safety), Grade 20</b>	<b>4063060</b>

Brief Description of Class

Incumbents of these positions apply their knowledge of the mathematical, physical, and engineering sciences in several specialty areas. They provide 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 technicians in projects such as the construction, extension, alteration, remodeling, and maintenance of roads, buildings, public and private water and sewer systems, public health regulation and monitoring of water 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

*Assistant Engineer (All Parenthetics)*: entry level; under the close supervision of higher level staff, 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 may supervise subordinate technical, engineering, administrative or support staff as required.

### Related Classes:

Engineering Technicians perform a variety of technical duties supportive of the preparation of work and building plans.

Professional Engineers 1 (Various Parenthetics) independently perform the full range of engineering services, are licensed, and 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.

### Illustrative Duties:

#### *Assistant Engineer (Civil)*

Perform engineering duties related to new construction, renovation, or long term maintenance projects; report to a Professional Engineer 1 or higher level staff for projects that are related by location or 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.

#### *Assistant Engineer (Civil/Construction)*

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

#### *Assistant Engineer (Civil/Geotechnical)*

Perform engineering services 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; and ensure that project plans and changes from project design through to project completion are consistent with accepted standards.

#### *Assistant Engineer (Civil/Structural)*

Perform engineering duties related to large structures subject to high loads or high winds; check drawings, specifications and estimates on construction; analyze the appropriateness of investment protection plans; inspect properties focusing on types of

loads; recommend design of structural systems; ensure compliance with American Association of State Highway Transportation Officials (AASHTO) bridge specifications and standards; and may evaluate and advise legal staff reviewing offering plans.

*Assistant Engineer (Civil/Transportation)*

Perform engineering duties related to projects concerned with new or rehabilitated roads, bridges, railroads, airport structures, construction materials, and waterways; select, from a wide variety of alternatives, the most efficient and effective plan of work; review consultant and contractor plans and estimates; and recommend road pavement, drainage construction, and traffic management and safety systems.

*Assistant Engineer (Electrical)*

Perform engineering duties related to a group of electrical systems projects, and advise on electrical systems design or management of ongoing rehabilitation of existing electrical equipment; 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.

*Assistant Engineer (Environmental)*

Perform engineering duties related to environmental quality programs such as public drinking water protection; wastewater management, radiological health, indoor air pollution, solid waste management, water or air pollution control, hazardous waste management spill prevention, response and remediation; evaluate hazardous waste sites and locations affected by pollution control initiatives for compliance; analyze site physical data and design systems that ensure appropriate hydraulic loading; recommend systems for pressure conduits, storm water, ground and well water or waste water collection or treatment; and develop environmental pollution prevention and abatement programs.

*Assistant Engineer (Fire Protection)*

Perform engineering duties related to projects primarily concerned with fire protection; analyze and evaluate systems that provide fire risk management; inspect and recommend 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.

*Assistant Engineer (Mechanical)*

Perform engineering duties related to construction and/or reconstruction of mechanical elements in buildings, schools and 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.

### *Assistant Engineer (Mechanical/HVAC)*

Perform engineering duties related to projects concerned primarily with the design and evaluation of operating systems for heating, ventilating and air conditioning; advise and recommend systems for energy and power distribution, energy conservation, adapting systems to existing facilities; evaluate heat transfer and recommend various systems for heating, cooling, boilers, air quality and ventilation.

### *Assistant Engineer (Chemical)*

Perform engineering duties related to projects concerned with the chemical properties of systems and material science associated with infrastructure, including energy transportation systems, utilizing special knowledge of thermodynamic properties incorporated into energy transfer systems design.

### *Assistant Engineer (Gas Pipeline Safety)*

Perform engineering analysis and services related to the regulation of natural gas, hazardous liquid, liquefied natural gas, liquefied petroleum gas, and steam pipeline systems; perform facility design review, including review of design plans of construction projects, perform construction inspections, document field activities and prepare inspection reports; perform investigations of incidents involving natural gas and hazardous liquids pipelines and prepare associated reports and memoranda; perform design review of the facilities involved in an incident, design necessary testing, and perform failure analysis to determine the cause of the incident; and perform additional design related and advanced technical tasks, including engineering review of facility and procedure design and modification.

### Minimum Qualifications

#### *Assistant Engineer (All Parenthetics)*

Open Competitive: successful completion of a National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) examination; or successful completion of 52 weeks of service as an Engineer Trainee and a National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) examination.

**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.

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