

## ASSISTANT ENGINEER (MECHANICAL)

DISTINGUISHING FEATURES OF THE CLASS: Under general supervision, incumbents of this class perform engineering work by preparing preliminary and final mechanical engineering designs and plans. This is the full-performance level of the Engineering series where incumbents are expected to use independent judgment in performing work on projects of considerable size or on several smaller projects. Other duties involve coordinating activities with other sections of the division as necessary; preparing and implementing project timelines; preparing reports and keeping detailed records relating to work completed; collaborating with municipal agencies as needed, and dealing with contract personnel to ensure project objectives are met. While each level in the engineering series participates in producing details, plans, specifications, etc., this level differs from higher level Senior Engineer level in that incumbents in that title are responsible for a broader scope of work, directing and reviewing the work of lower-level engineering staff, and the requirement to possess a Professional Engineer's license. While supervision is not a responsibility of this class, incumbents provide guidance to lower-level engineer and support staff as required. Does related work as required.

### EXAMPLES OF WORK: (Illustrative Only)

Prepares and assists in the preparation of plans, cost estimates, specifications for mechanical systems in new or altered buildings, for example: heating, air conditioning, plumbing, ventilation, and sprinkler installations in accordance with engineering standards and various codes;

Prepares cost estimates for all types of mechanical equipment and systems as part of the annual budget proposal for proposed contracts and capital projects;

Prepares mechanical design details including HVAC, plumbing, piping, pumps and associated mechanical systems, so that mechanical systems will operate efficiently and effectively, and to insure the most economic use of fuel and electricity;

Makes field inspections of mechanical installations for conformance to specifications, environmental and safety standards, and makes final inspections and capacity tests;

Prepares contract plans and specifications from information gathered from contacts with manufacturers which will produce a high quality technical product and yet not limit the competition unduly, as part of the County bidding process;

Studies existing structures to ascertain feasibility of proposed innovations and makes reports and recommendations;

Prepares and assists in the preparation of reports and recommendations;

Coordinates work with other engineering sections in the division including the electrical, structural and architectural sections to insure that all work is in compliance with New York State, NFPA and local codes;

May provide guidance and instruction to engineering students on an assigned basis;

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, e-mail and database software in performing work assignments;

May perform other incidental tasks, as needed.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND ATTRIBUTES: Good knowledge of the principles and practices of mechanical engineering; good knowledge of engineering problems involved in the design, utilization and installation of heating, ventilation and air conditioning (HVAC) equipment; good knowledge of mechanical systems including pumps, plumbing, piping and associated systems; good knowledge of construction estimating including relative cost of materials related to useful life; good knowledge of the practices of specification writing; good knowledge of the legal principles of and practices of contract preparation; good knowledge of computer assisted design, CAD; ability to perform complex engineering computations; ability to lay out and oversee the work of sub-professional engineers and technicians; ability to get along well with others; ability to deal effectively with contractors; ability to read, write, speak, understand, and communicate in English sufficiently to perform the essential duties of the position; ability to use computer applications such as spreadsheets, word processing, e-mail and database software; accuracy; resourcefulness; sound professional judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: Either: (a) a Bachelor's Degree\* in mechanical engineering or related field in engineering four years of mechanical engineering experience; or (b) a Bachelor's Degree\* in mechanical technology and five years of mechanical engineering experience.

\*SPECIAL NOTE: Education beyond the secondary level must be from an institution recognized or accredited by the Board of Regents of the New York State Education Department as a post-secondary, degree-granting institution.

SPECIAL REQUIREMENT: Depending on work assignment, must meet standards of OSHA regulation 1910.134 Respiratory Protection, and will be required to meet Federal, State and local standards with respect to health and safety.

NOTE: Unless otherwise noted, only experience gained after attaining the minimum education level indicated in the minimum qualifications will be considered in evaluating experience.

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Job Class Code: C0107  
Job Group: XII