ENGINEER II

DISTINGUISHING FEATURES OF THE CLASS: This is a full-performance engineering design and project management position requiring thorough knowledge and experience in a wide range of engineering duties. Work is performed in accordance with established engineering practices and principles, and the Engineer II is expected to have the ability to apply this knowledge and experience to complete complex engineering projects and tasks. General direction may be received from a higher level employee, but independence is exercised in project design and management of assigned projects and consultants. The Engineer II is expected to mentor lower level engineering staff, and may be asked to supervise and manage these staff members on a project by project basis. This position differs from Engineer III in that more direct supervision and less administrative responsibilities are involved. This position differs from that of Engineer I in that more independent design and management of more complex projects is expected at this level.

TYPICAL WORK ACTIVITIES:

Performs Engineer I responsibilities but at a higher and more responsible level with less oversight;
Manages large internal projects as the project lead and plans / coordinates the design and construction of these projects with consultants, contractors and vendor assistance;
Performs, directs and/or supervises engineering designs for roads bridges, culverts, buildings, and facilities including environmental permitting and compliance;
Evaluates and negotiates both contractor's and consultant's proposals, negotiates revisions and participates in getting final approval;
Coordinates easement and right-of-way acquisition process for County projects which includes working with consultants in the preparation of maps, title abstracts, and appraisals, negotiation of easement and right-of-way transfers with land owners, and advising the County Law Department with respect to condemnation proceedings (as needed);
Supervises the inspection of and/or is responsible for inspection of physical and operational condition of existing roads, bridges, culverts, buildings, and facilities;
Supervises the inspection of and/or is responsible for construction conformance with contract provisions;
Interprets for contractors and subordinate staff contract specifications and construction standards, and resolves differences in interpretation;
Monitors consultants work by reviewing plans and reports, evaluating compliance with policy, standards, procedures, schedules and contracts, coordinating the consultants work with the agency programs and preparing periodic reports;
Reviews work of contractors and staff for compliance with specifications, local law, codes and regulations;
Supervises the preparation and prepares cost estimates for projects, including consulting fees and construction costs;
Prepares internal project schedules and reports of project status for engineering projects;
Acts as a representative of the County Department of Public Works (including the Parks Department) in responding to citizen’s questions and complaints related to engineering projects;
Maintains and supervises the maintenance of records, project data, and

is able to use computer systems and software in daily work activities, including computer aided design and drafting systems;
Coordinates and reviews the work of contractors and subordinate staff for accuracy and anticipation of potential problems;
Trains and mentors subordinate staff involved in engineering projects;
May design and program automated systems for the control and maintenance of department records;

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES, AND PERSONAL CHARACTERISTICS:

Thorough knowledge of the principles and practices of engineering;
Thorough knowledge of construction procedures including design, specification writing, inspections and surveys;
Thorough knowledge of the tools, terminology and materials used in the construction of roads, bridges, buildings and facilities;
Thorough knowledge of the codes, laws, rules, regulations and procedures governing engineering design and construction;
Thorough knowledge and exhibited mastery of basic computer applications such as Word, Excel, Access, Power Point, etc. Knowledge of hydraulic applications a plus;
Good knowledge of CAD software and higher functions of civil applications such as preparation of surfaces and volume calculations, and creation of profiles;
Good knowledge of land acquisition procedures, including right-of-ways and condemnations;
Ability to lead, direct and review the work of others;
Ability to conduct studies pertaining to the best methods and materials used in engineering projects;
Ability to direct and supervise plans, designs, specifications, narrative reports and tabular reports related to engineering projects;
Ability to coordinate complex engineering projects;
Ability to train and mentor subordinate staff involved in engineering projects;
Ability to perform complex design and coordination without assistance of consultants or staff when projects are beyond subordinate capability or on less complex projects when workload requires;
Ability to establish cooperative relationships with consultants, contractors, vendors, co-workers, public officials and the general public;
Ability to perform complex mathematical and engineering calculations;
Ability to analyze the condition of roads, bridges, culverts, buildings and related structures;
Strong verbal and written communication skills, in public and private situations;
Strong organizational skills;
Accuracy and attention to detail;

MINIMUM QUALIFICATIONS:

A) Graduation from a New York State registered or regionally accredited college of university with a Master's Degree in engineering or engineering technology(specialties as described below); **OR**

B) Graduation from a New York State registered or regionally ABET

accredited college or university with a Bachelor's Degree in engineering or engineering technology (*specialties as described below); AND a current Engineer in Training designation AND one (1) year experience in performing:

1) Engineering design of highways, bridges, culverts and/or facilities using AutoCAD or other engineering software; **or**
2) Field inspection of highways, culverts, bridges, and/or facilities; **or**
3) Technical writing of engineering reports and project bid documents / technical specifications; **OR**

C) Graduation from a New York State registered or regionally ABET accredited college or university with a Bachelor's Degree in engineering or engineering technology (*specialties as described below), AND two (2) years** experience as defined above; OR

D) Graduation from a New York State registered or regionally ABET accredited college or university with an Associate's Degree in engineering or engineering technology (*specialties as described below), AND four (4) years** experience as defined above; OR

E) Graduation from high school or possession of an equivalency diploma, AND six (6) years** experience as experience as defined above:

F) An equivalent combination of training and experience as defined by the limits of A), B), C), D), and E) above.

* Acceptable areas of engineering education include Civil Engineering, Structural Engineering, Environmental Engineering, Mechanical Engineering, Architectural Engineering, or a closely related field. Degrees in the following fields are not acceptable: Chemical Engineering, Industrial Engineering, Public Health Engineering or Computer Technology

** One year of which must have included supervisory or project leader responsibilities of persons performing professional activities.

SPECIAL REQUIREMENTS AT TIME OF APPOINTMENT:

1) Possession of the appropriate level of Motor Vehicle Operator's License.