

SENIOR ENGINEERING AIDE

DISTINGUISHING FEATURES OF THE CLASS:

This is a technical position in the Engineering division of the Department of Public Works. Incumbents in this class perform moderately difficult but not professional civil engineering duties involved in highway related projects. Work generally involves duties such as gathering information or inspecting work for conformance to plans. The work is carried out in accordance with established procedures and involves some but not all duties related to surveying, design, inspection, traffic and permits. The class differs from that of Engineering Aide by virtue of higher level technical responsibilities and greater independence. Work is performed under the general supervision of a higher level employee. Direction or daily oversight of lower level employees may occasionally be required.

TYPICAL WORK ACTIVITIES:

Typical work activities for incumbents in this title include those listed below in addition to those typical work activities performed by lower level titles in the series. They are indicative of the level and types of activities performed by incumbents in this title. It is not meant to be all inclusive and does not preclude a supervisor from assigning activities not listed which could reasonably be expected to be performed by an employee in this title.

1. Makes office computations in connection with the reduction and plotting of field survey notes; checks computations of others;
2. Operates instruments such as electronic total station, GPS survey station and level, and equipment such as level rod, laser prism target, GPS rover backpack, rod, measuring tape and hand level on a survey party;
3. Assists in the uploading of collected field data for use in computer-aided design and drafting;
4. Performs computer-aided design and drafting of construction plans, profiles, typical sections, structural details and construction notes, under the guidance of an engineer; revises drawings as necessary to complete final drawings;
5. Conducts highway facility inventories, makes periodic inspections and maintains records of information such as category, type and location for highway elements such as signs, guide rails, culverts, etc.;
6. Under the guidance of an engineer prepares or checks design calculations for drainage structures, roadway alignments, structural elements, etc.;
7. Inspects construction projects for conformance to plans and specifications governing the work, including the use of proper materials and procedures, and makes reports of such inspections;
8. Investigates field conditions for review of work permit applications; conducts periodic inspections of work authorized by permits and reports findings;
9. Sets traffic counters, gathers field data and tabulates vehicle volumes and performs traffic studies under the guidance of an engineer;
10. Drafts and traces property and acquisition maps;
11. Under the guidance of an engineer, prepares or checks engineering estimates;
12. May compile and prepare reports.

SENIOR ENGINEERING AIDE (Cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:

General knowledge of technical civil engineering and survey work;
Ability to use mechanical drawing instruments, apply mathematical formuli and make trigonometric calculations;
Ability to interpret written and oral instruments accurately;
Ability to interpret plans and blueprints and inspect construction work for compliance;
Ability to learn two and three-dimensional computer-aided drafting and design;
Personal characteristics necessary to perform the duties of the position;
Physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS:

EITHER: (A) Graduation from a regionally accredited or New York State registered college or university with an Associate's degree or higher in engineering technology, mathematics, physics or a related field;
OR: (B) Current Level II or higher Certification in Civil Engineering Technology from the National Institution for Certification in Engineering Technologies.

SPECIAL REQUIREMENT:

Possession of a valid New York State Motor Vehicle Operator License at time of appointment and to maintain position.

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