

DEPARTMENT: PUBLIC WORKS - ENGINEERING
CLASSIFICATION: COMPETITIVE
APPROVED: JULY 28, 2023

CIVIL ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: The work involves responsibility for performing advanced professional engineering work in rendering opinions and decisions on technical aspects of a wide variety of subjects. The incumbent will make field surveys to investigate and evaluate various engineering projects; designs and prepares bid documents for highway and bridge projects; and reviews condition of county facilities and bridges. Work is performed under the general direction of a higher level administrative employee. Supervision may be exercised over a number of engineering and/or technical personnel. Does related work as required.

TYPICAL WORK ACTIVITIES:

1. Reviews and makes comments on specific engineering studies, planned alterations and construction for bridges and highway projects;
2. Directs and investigates planning and layout of various engineering projects, including the preparation of construction plans, profiles, specifications and estimates for bidding and purchase;
3. Coordinates engineering studies with federal, state and other agencies;
4. Assists in developing policy on research and engineering for the department;
5. Interprets federal guidelines and requirements as related to transportation projects to confirm procedures and information necessary to satisfy federal agencies;
6. Interprets the procedures for locally administered federal aid projects;
7. Makes field surveys to collect data and make evaluations;
8. Prepares costs estimates for construction projects;
9. Oversees the inspection of major construction projects;
10. Advises on the preparation of right-of-way acquisition maps;
11. Advises on the design, including computer designing, of highway bridge projects;
12. Provides supervision and computer design training to assigned staff members;
13. Assigns and supervises field and office work of subordinates;
14. Prepares and submits DEC and USACOE permit applications;
15. Prepares SEQR documentation relative to projects and deals directly with environmental agency professional staff on permit requirements;
16. Coordinates with outside engineers, architects, etc. for the county;
17. Reviews hydrologic studies for bridge and culvert designs;
18. Evaluates bi-annual bridge inspection reports;
19. Updates and manages the county bridge maintenance strategy;
20. Prepares Initial Project Proposal (IPP) documents for federally funded transportation projects.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Thorough knowledge of engineering field techniques; thorough knowledge of principles, techniques and terminology of civil engineering; thorough knowledge of drafting techniques, terminology and equipment; thorough knowledge of principles of physics and mathematics as applied to civil engineering; thorough knowledge of techniques and sources of information concerning engineering research and economics; working knowledge of computer applications in the design and analysis of civil and structural engineering projects; ability to perform complex technical engineering computations rapidly and accurately; ability to perform engineering studies and to prepare detailed, analytical reports; ability to prepare detailed cost estimates, drawings and specifications; ability to plan and supervise the work of subordinates; ability to get along well with others; sound professional judgment; initiative and resourcefulness; industry and dependability; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS:

Graduation with a Bachelor's Degree in Civil Engineering or related field, and five (5) years of full-time paid civil and/or structural engineering experience, including a minimum of two (2) years which involve the inspection, evaluation and/or design of public bridge structures.

NOTE: Degrees must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education.