



CITY OF URBANA
Human Resources Division

CIVIL ENGINEER I

JOB DESCRIPTION

Department: Public Works	Division: Engineering
Work Location: Urbana Public Works Department	Percent Time: 100%
Job Type: Civil Service	FLSA Status: Exempt
Reports To: City Engineer	Union: Non-Union

JOB SUMMARY:

Designs improvements and prepares construction plans for municipal infrastructure projects; conducts field investigations; prepares technical reports; monitors construction work; supervises work of part-time staff.

Defining Characteristics of the Class

This is the entry-level class in the Civil Engineer series. This class is distinguished from the Civil Engineer II and III levels by the performance of the more routine tasks and duties assigned to positions within the series. Since this class is typically used as a training class, employees may have only limited or no directly related work experience. The incumbent performs beginning-level professional engineering work which involves responsibility for coordinating projects of limited scope in the Public Works Department. Assignments require the application of basic professional knowledge and skills to various public works engineering matters. Work is performed under the supervision of a higher-level professional engineer who reviews work procedures and results.

This job description reflects the general concept and intent of the classification and should not be construed as a detailed statement of all of the job requirements that may be inherent in the position.

JOB DUTIES:

- Collects and analyzes field data, researches property histories and old project plans, prepares technical reports and cost estimates, and recommends improvements;
- Designs and prepares plans, specifications, contract documents, and estimates of cost and monitors construction and maintenance of municipal infrastructure projects;
- Monitors construction of contract work to ensure work is performed in compliance with contract plans and specifications and required quality is obtained; measures quantities and prepares pay estimates;

- Supervises work of survey parties, observing and recording data, establishing line and grade control;
- Prepares documentation and facilitates acquisition of easements and rights-of-way;
- Maintains files on correspondence and documentation on projects;
- Maintains effective relations with governmental officials, community leaders, citizens, Illinois Department of Transportation (IDOT), Illinois Environmental Protection Agency (IEPA), Village of Savoy, City of Champaign, University of Illinois, Champaign County, adjacent rural townships, the Urbana Park District, Urbana School District 116, Illinois American Water, Ameren, various communication utility companies, engineering consultants, contractors, and other City departments;
- Provides technical support to various City departments;
- Handles requests for information, service or complaints over the phone, via electronic or regular mail and in person, or makes referrals to appropriate staff in a concerned manner that reflects an effort to be helpful while at the same time acting responsibly on behalf of the City of Urbana; all calls are promptly returned;
- Serves as a Public Works Department/Engineering Division representative on special intergovernmental and interagency committees, when necessary;
- Investigates problems, designing improvements, and preparing construction plans;
- Monitors construction of municipal infrastructure type projects;
- Supervises the work of Engineering part-time personnel;
- Performs other related duties as assigned.

JOB REQUIREMENTS:

EDUCATION & EXPERIENCE

Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. Typical ways the knowledge and abilities would be attained are:

- Bachelor of Science degree in Civil Engineering or related engineering field from an Accreditation Board for Technology, Inc. (ABET)/Engineering Accreditation Commission (EAC) accredited program. A degree in agricultural engineering may be considered depending on the courses taken and major emphasis.
- Previous internship or cooperative education experience in municipal, county, state, or federal engineering, or engineering consulting is preferred

LICENSES AND CERTIFICATIONS

- Successful completion of the Fundamentals of Engineering examination and registration as an Engineering Intern in the State of Illinois or in another state with the ability to reciprocate with Illinois within six months of beginning employment.
- Possess or obtain a valid State of Illinois Class D driver's license within fifteen (15) days of employment.

KNOWLEDGE OF:

- Demonstrated ability to apply principles and practices of civil engineering toward the completion of projects;
- Knowledge and skill in the use of field survey instruments and knowledge of operation of construction machinery;
- Basic operations, services and activities of a comprehensive Civil Engineering program;
- Principles and practices of Civil Engineering program development and implementation; and/or
- Study of recent developments, current literature and information related to Civil Engineering.
- Knowledge of Microsoft Office applications, including Word, Excel, Access, PowerPoint and Outlook; AutoCAD or Microstation; and the Internet.

ABILITY TO:

- Organize, analyze, interpret, and evaluate scientific civil engineering problems and provide practical, cost effective solutions;
- Keep abreast of changes in scientific knowledge and engineering technology, and utilize such changes in solution of theoretical or practical civil engineering problems;
- Prepare written analytical reports;
- Produce written documents in the English language with clearly-organized thoughts with proper sentence construction, punctuation, and grammar;
- Observe, compare, or monitor objects and data to determine compliance with prescribed operating or safety standards;
- Measure distances using calibrated instruments;
- Use graphic instructions, such as blue prints, schematic drawings, layouts, or other visual aids;
- Use a personal computer, engineering applications, and data management software;
- Communicate clearly and concisely, both orally and in writing, applying strong verbal and written skills for the preparation of technical and administrative reports and the presentation of recommendations;
- Learn and interpret IDOT design and construction manuals, standard specifications and highway standards as well as American Association of State Highway and Transportation Officials (AASHTO) design manuals, Standard Specifications of Water and Sewer Construction in Illinois and Manual on Uniform Traffic Control Devices (MUTCD) standards;
- Work effectively and cooperatively with others, monitor contractors, and manage work of paraprofessional staff;
- Manage work to conform to project scope, schedule, and budget;
- Facilitate public meetings to gather input from various shareholders;
- Work with confidential information;
- Make public presentations to City Council, government agencies, and other organizations;
- Learn procedures, methods and techniques of budget preparation and control;
- Learn principles and practices of civil engineering project management;

- Learn principles and practices of construction administration including inspection, materials testing, project scheduling and related functional areas;
- Learn to prepare and administer assigned project budgets;
- Learn to allocate limited resources in a cost-effective manner;
- Perform a variety of civil engineering projects;
- Ensure contractual compliance as related to construction and other assigned activities;
- Inspect work sites to ensure compliance with all applicable federal, state and local laws, codes and regulations;
- Interpret and explain City policies and procedures.

CONTACTS: INTERNAL/EXTERNAL

- Daily contact with construction contractors and general public.
- Frequent contact with other Public Works employees, other City departments, City Council, utilities, businesses, and government agencies.

WORK ENVIRONMENT:

- Works indoors and out-of-doors year round.
- Works around traffic and automobile fumes.

SUPPLEMENTAL INFORMATION:

WORKING ENVIRONMENT:

The work environment characteristics described herein are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The work will occur in an office and field environment. Incumbents may be subjected to dusts, fumes, extreme temperatures, inadequate lighting, and intense noises. Typical work schedule: Monday - Friday, 8:00 a.m. - 5:00 p.m. with flexibility depending upon the needs of the department. May be required to work in excess of 40 hours a week and/or work irregular hours, particularly during construction projects or emergency situations.

PHYSICAL REQUIREMENTS:

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Sit for extended periods, frequently stand and walk;
- Have manual dexterity and eye-hand coordination needed to use a variety of office equipment such as computers, telephones, calculators, copiers, and topographic surveying equipment;
- Have corrected vision in order to review plans and specifications and perform other essential functions of the job; and

- Occasionally walk on uneven terrain at construction sites, etc.

VISION AND HEARING

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; visually inspect work in progress. Ability to hear in the normal audio range with or without correction.

Equivalent American Society of Civil Engineers (ASCE) Grade: III

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

Class Specification History

Class established: 12/10/2014

General revision: 08/31/2022

For HR/Finance Use

Title Code 109	Pay Grade
EEO Category 2– Professionals	