

CLASS SPECIFICATION
GIS Technician II

FLSA Status: Covered
Union Representation: Professional and Technical Employees (PTE)

GENERAL PURPOSE

Under general supervision, performs specialized duties in the operation and use of Geographic Information Systems (GIS); maintains and updates layers of the GIS; develops and maintains relational database data; performs a variety of spatial analyses; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

GIS Technicians II are responsible for performing specialized and detailed GIS mapping and analysis duties. Incumbents develop, implement and maintain GIS data, prepare and produce maps and other graphic representations, and perform various complex spatial analyses.

GIS Technician II is distinguished from GIS Technician I by the incumbent's responsibility for performing more complex and difficult mapping and analysis duties requiring a more thorough understanding of GIS techniques, processes and procedures and the greater exercise of problem-solving skills. GIS Technician II is further distinguished from GIS Technician III in that incumbents in the latter class provide lead work direction and are responsible for project coordination including development of time lines, schedules and budgets.

ESSENTIAL DUTIES AND RESPONSIBILITIES

Any one position in this class may not perform all the duties listed below, nor do the listed examples of duties include all similar and related duties that may be assigned to this class.

1. Performs difficult GIS data maintenance, manipulation, analysis, extraction and generation assignments; performs data research, investigation and verification; creates and maintains files of digital pictures of streets and street problems for bureau use; digitizes various information; prepares projects and data for archival storage; performs record keeping and inventory; documents and files data sources and map files for future reference.
2. Prepares, designs and produces a variety of maps and other graphic representations displaying layers and attribute data from the database, using cartographic techniques to represent spatial data; develops and maintains data layers, using GIS tools, CAD tools and relational databases; enters attribute data pertaining to specific features into a relational database; incorporates maps, charts, spreadsheet data and text into reports.
3. Designs, creates, plans, maintains and updates maps, drawings, plans, spreadsheets, data files and documentation for a wide variety of purposes; responds to emergency mapping and information requests.

4. Performs detailed spatial analysis including notifications, buffering, and zone consolidation; interprets detailed plans, photographs, maps and legal descriptions.
5. Codes and digitizes maps and geographical feature data into various GIS layers and performs quality control checks of own and others' work to ensure database integrity.
6. Consults with clients and section management to define requirements of mapping requests; researches and evaluates available data and proposes methods to be used; assists in the development of production schedules for smaller mapping and analysis projects where tasks will be performed solely by the individual; negotiates with individuals on smaller projects as to deadline and delivery constraints/needs; informs section management as to potential conflicts of day-to-day workload (smaller projects) versus large-scale project needs; informs section management of requests that may be elevated in scope and require management intervention; develops methods and preliminary layouts; designs final map layouts and executes design drafts.
7. Assists in installing and testing new GIS software; assists in resolving and troubleshooting GIS-related problems and requests; maintains computer hardware and accessories; provides GIS software training for bureau personnel.
8. Responds to requests from the public for GIS data.
9. Conducts site visits to verify and update data and resolve discrepancies.

OTHER DUTIES

1. Attends staff meetings, training and conferences.
2. Assists with revising, updating and applying bureau GIS policies.
3. Maintains sign data in the Sign Library program.
4. Provides GIS support for other software applications.
5. Provides limited training for general (non-GIS) staff on case-by-case basis as a general bureau support service.

MINIMUM QUALIFICATIONS

Knowledge of:

1. Geographic information system concepts, practices and techniques, including computer mapping and attribute data conversion, transfer, manipulation and analysis.
2. GIS software, tools and applications.
3. Relational database concepts, methods and practices.

4. CAD software and hardware drafting media.
5. Terminology, methods and techniques used in engineering maps and records.
6. Data gathering and research skills.
7. Use of word processing, spreadsheet and database software.
8. Operating system fundamentals and procedures for the use of computer systems and related equipment.
9. Algebra, geometry and trigonometry as applied to engineering and mapping formulas.
10. City operating policies and departmental work procedures and quality standards.

Ability to:

1. Utilize a variety of GIS software, computer-aided drafting, graphics and other applications to carry out assigned responsibilities.
2. Perform engineering computations and computer analyses.
3. Independently perform difficult and responsible GIS assignments with initiative and creativity.
4. Interpret maps, graphs, satellite and aerial images.
5. Recognize and resolve discrepancies in attribute data.
6. Perform spatial analyses and create data queries using a variety of data querying tools.
7. Prepare accurate GIS cartographic products.
8. Communicate effectively orally and in writing.
9. Establish and maintain effective working relationships with bureau staff and management, members of the public and others encountered in the course of work.
10. Manage time and workload in an independent manner, commensurate with the position.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school or G.E.D. equivalent, technical school or vocational school, supplemented by course work in architectural, civil and mechanical engineering drafting and geographical information systems; and two years of progressively responsible experience in the use and operations of GIS systems and applications; or an equivalent combination of training and experience. Experience in a public agency is preferred.

Licenses; Certificates; Special Requirements:

A valid state driver's license may be required for certain assignments.

PHYSICAL AND MENTAL DEMANDS

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depend, in part, on the specific requirements for the job, the limitations related to disability and the ability of the hiring bureau to accommodate the limitation.

Class History:

Adopted: 08-30-96 Engineering Technician II (3108) – GIS specialty created.
Revised: 07-01-01 Spec revised as part of the COPPEA Classification and Compensation study. GIS Technician II (6062) class created from the following COPPEA classes:
3108 Technician II (GIS specialty)
Revised: 08-01-06 Spec history revised to reflect pre-2001 COPPEA Study history. Spec formatting modified.
Revised: 08-07-06 Revised FLSA status from “Non-exempt” to “Covered.”
June 2009 - Change Job Class number from 6062 to 30000342, due to system change.
July 2017 – Updated union name from COPPEA to PTE