SENIOR GEOGRAPHIC INFORMATION SYSTEMS (GIS) TECHNICIAN

SUMMARY/PURPOSE
To perform paraprofessional work related to public works infrastructure including providing support and maintenance of Geographic Information Systems (GIS) data. Guidance within the GIS environment comes from GIS Specialists.

ESSENTIAL DUTIES AND RESPONSIBILITIES
1. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
2. Use automated methods to update GIS computer data records.
3. Provide custom maps for City divisions and external agencies.
4. Incorporate various formats of spatial data into GIS database.
5. Develop automated editing tools to enhance GIS data updating, analysis and retrieval procedures.
6. Verify data integrity of new and existing GIS data.
7. Ensure data integrity of relational databases containing GIS data.
8. Train City staff on GIS software, data formats, and standards.
9. Work with City staff to create data standards for GIS data.
10. Participate in planning and oversight of City staff working on GIS data entry and map editing to ensure correct data entry and project schedule completion.
11. Develop standards for data capture through GPS equipment to provide data from field staff to GIS staff for record updates.
12. Participate in setting GIS priorities for City staff.
13. Prepare graphic representations of Geographic Information Systems using GIS software.
14. Review existing or incoming GIS data for accuracy, quality, and completeness.
15. Receive and respond to requests for GIS support.
16. Other duties may be assigned.

JOB REQUIREMENTS
To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skills, and abilities required.

1. Education & Experience Requirements
   A. Bachelor's Degree in GIS, Geography, Cartography, Computer Science, Engineering Technology or related field of study with course work in mapping, surveying, computer science and spatial analysis; and
   B. Two years of experience as a GIS Technician with the City of Duluth; or
   C. A combination of education/experience determined to be equivalent.

2. Knowledge Requirements
   A. Knowledge of algebra, geometry, and trigonometry.
   B. Knowledge of surveying techniques and methods.
   C. Knowledge in use of interpreting aerial and ortho photography.
   D. Knowledge of public infrastructure material and construction methods.
   E. Knowledge of computerized mapping technology and software as it relates to GIS database management and GIS analysis and map production.
   F. Knowledge of database management, software programming, and network management.
   G. Knowledge in the use of various computer peripherals and data acquisition and output, devices such as printers, scanners, plotters, digitizers, GPS equipment, etc.

3. Skill Requirements
   A. Skill in the use of various computer peripherals, data acquisition tools and output devices, including printers, scanners, plotters, and GPS equipment.
   B. Skill in effectively communicating and maintaining working relationships with employees of the City of Duluth, other agencies, and the general public.
   C. Skill in preparing written materials such as procedures, policies, plans, and recommendations.
   D. Skill in using ESRI ArcGIS software environment to display, edit, query, and manipulate GIS data.
   E. Skill in making printed maps, publishing maps, and exporting data using ESRI ArcGIS software.

4. Ability Requirements
   A. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
   B. Ability to communicate effectively in oral and written forms.
   C. Ability to provide training to staff.
   D. Ability to assist in oversight and training of non-permanent employees.
   E. Ability to read and interpret engineering drawings.
   F. Ability to research, analyze, and solve problems.

5. Physical Ability Requirements
   A. Ability to transport oneself to, from, and around sites of projects, tests, and other assignments.
   B. Ability to attend work on a regular basis.
   C. Ability to frequently sit, type, talk, see, and hear.
   D. Ability to occasionally stand and walk.
   E. Ability to work outdoors year-round.
   F. Ability to walk for long distances.
   G. Ability to transport and erect survey equipment weighing up to 25 pounds.
   H. Ability to work at a computer for extended periods.

HR: HD	Union: Basic	EEOC:	CSB: 07/07/2020	Class No:
WC:	Pay:	EEOF:	CC:	Resolution: