

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT

(ENGINEERING SERVICES DIVISION - ASSET MANAGEMENT - LOCATION - 77 JAMES ST. N., SUITE 320)

ANALYST – INFRASTRUCTURE PROGRAMMING AND PLANNING - CUPE 5167

SUMMARY OF DUTIES

Reports to Project Manager, Asset Management Section, Engineering Services Division. Facilitates the effective use of business technologies, databases, and applications to meet the Infrastructure Management, Engineering, and GIS needs of both internal and external corporate clients.

Through project and operational roles, this position undertakes business system requirement analysis, functional design specifications, technical design specifications, development and implementation of applications and supporting technologies and documentation, user training and general user support.

Analyzes, designs, develops, implements, maintains, and integrates numerous Infrastructure Management and GIS enabled systems for the Engineering Services Division and the Public Works department. Performs GIS spatial analysis/manipulation, Asset and Engineering data QA/QC, Infrastructure and Financial report development, and spatial and relational database development/modeling to ensure data integrity, application stability and process logic.

GENERAL DUTIES

Analyzes, designs, develops, implements, maintains, and integrates numerous Infrastructure Management and GIS enabled municipal business applications, including special and ad hoc projects for the Asset Management Section, Engineering Services Division, Public Works Department. Analyzes and reviews corporate and functional-specific business application requirements, including resources, hardware/software, data sources, training and preparing preliminary impact analysis.

Collaborates on the development, implementation and maintenance of Infrastructure Management application development standards, and the development and review of business specification and design documents for both "in-house" and contracted applications development.

Analyzes, designs, develops, implements, and maintains standard workflows and procedures, Audit System, and application accesses to ensure that security policies and data standards are being applied and are effective. Undertakes and assists in the analysis and reconciliation of conflicting data, whether from a spatial or relational database sources.

Records, analyzes and co-ordinates solutions to complex technical problems related to the operation and performance of Infrastructure Management Systems, GIS databases and/or applications within various departments and external partners, and recommends any necessary enhancements to these systems. Assists with the creation and maintenance of custom applications using programming and spatial and relational database knowledge.

Designs, plans, and conducts queries to identify data that will support the business needs of the Division. Compiles results and prepares special data reports. Plots plans/maps and creates custom thematic maps.

Identifies topics where additional education and training is required, develops training programs and supplementary documentation, co-ordinates and conducts training programs for the user community, and analyzes, designs, develops, implements and maintains on-line metadata and/or application help databases to include new or revised business data layers and/or application functionality.

Liaises with the Department's other functional sections with respect to network and database security, client support, data management, project and resource management, and customer relationships with respect to application implementation, use, and maintenance.

Collaborates on cross-functional teams with other City staff and consultants that may be involved in application development projects throughout the Corporation.

Collaborates on the planning, scheduling and purchasing of business applications, prepares and contributes to Requests for Proposals, Request for Information, and evaluates bids for purchasing additional software and services.

Assists in the preparation of project plans and estimates for current budgets required for the analysis, design, development and implementation and maintenance of Infrastructure Management Systems.

Contributes to and assists in the preparation of annual divisional training and budget plans and recommends future budget appropriations.

Employs existing software tools and procedures to analyze, extract and distribute data in a variety of standard and media formats, maintaining a detailed data service request log, ensuring data distribution contracts, copyright and statement of liability are complete and properly authorized.

Receives data from external agencies and, using existing tools, analyzes, verifies and documents the content and quality of the data, imports it into the business environment, and proposes a maintenance plan that meets the business user's requirements.

Identifies and assists in the resolution of problems related to geo-spatial software, geo-spatial data and the department's Geographic Information System as a whole.

Receives and answers enquiries from staff and provides daily support to users in a multi-disciplinary environment.

Works in accordance with the provisions of applicable Health and Safety legislation and all City of Hamilton corporate and departmental policies and procedures related to Occupational Health and Safety.

Perform other duties as assigned which are directly related to the major responsibilities of the job.

QUALIFICATIONS

1. Demonstrated level of expertise related to the duties described above, normally acquired through a Bachelor of Computer Science or other related discipline or a combination of University education as well as relevant work-related experience in GIS and Asset Management. Able to analyze major problems and develop solutions by using a broad knowledge required at the university level of education.
2. Practical experience in analysing, designing, developing, implementing, maintaining and integrating GIS and Infrastructure Management Systems including practical experience working with business applications technology and providing user support preferably in a municipal environment.
3. Demonstrated ability to compile, prepare and analyze source documents for conversion, perform manual and automated quality assurance/quality control data validity checks,
4. Proven ability to establish and maintain strategies, policies and procedures that relate to GIS and Infrastructure Management applications and to work with user groups.
5. Must have and be able to demonstrate a working knowledge of Intergraph GeoMedia or related GIS System such as ESRI ArcGIS.

6. Working knowledge of spatial and relational database management system software (ORACLE Spatial, SQL Server along with Microsoft Access) and SQL (Structured Query Language).
7. Ability to write, interpret and modify at least one standard computer programming and scripting language commonly used in the development of GIS/business client and web-based applications (such as ASP.NET, C#.NET, VB.Net, VBA, C++, Python, Java, PSQL, HTML5).
8. Excellent presentation, analytical, report writing, and interpersonal skills to communicate effectively with all levels of City staff, external consultants and suppliers.
9. Must be able to handle multiple changing priorities.
10. Thorough working knowledge of Project Management principals and techniques.
11. Experience with Infrastructure Management Systems such as Hansen 8, IRISS (Integrated Right of Way Infrastructure Support System), CPMS (Capital Project Management System), OBMS (Ontario Bridge Management System), and Asset Planner would be an asset
12. Eligible for Geographic Information Systems Professional (GISP) certification through GISCI considered an asset
13. Eligible for Certified Engineering Technologist (C.E.T) certification through OACETT considered an asset
14. Must possess a Class "G" Driver's Licence.

THIS POSITION REQUIRES A VALID CLASS "G" DRIVER'S LICENCE AND PROOF THEREOF IS REQUIRED AFTER HIRE.