

CITY OF MADISON POSITION DESCRIPTION

1. Name of Employee (or "vacant"):

Vacant

Work Phone:

2. Class Title (i.e. payroll title):

Planning Systems Improvement Analyst

3. Working Title (if any):

Planning GIS Specialist

4. Name & Class of First-Line Supervisor:

Mark A. Olinger, Director
Department of Planning & Community & Economic Development

Work Phone: 267-8730

5. Department, Division & Section:

Department of Planning & Community & Economic Development
Office of the Director

6. Work Address:

Suite LL-100, Madison Municipal Building
215 Martin Luther King, Jr. Boulevard

7. Regular daily hours of work:

8:00 – 4:30 p.m.

Hours/Week: 19.38 (.5 FTE)

From: to

8. Date of hire in this position:

9. From approximately what date has employee performed the work currently assigned:

10. Position Summary:

This is responsible professional work in GIS/Data analysis, development and production within the Department of Planning & Community & Economic Development.

Professional technical work in report preparation and development, development, and technical support of geographic information systems (GIS) and graphic support. Advanced spatial analysis, data

conversion, data management, and production of GIS and cartographic products, and other services to the Department.

11. Functions and Worker Activities: (Do NOT include duties done on an "Out-of-Class" basis.)
- 50% A. Develop GIS and cartographic products using Arc/GIS (ArcInfo & ArcView).
 - 1. Design and production of maps for mass distribution using professional cartographic practices and techniques and/or conversion into PDF file/formats.
 - 2. Use digital prepress procedures, determine press production specifications, and perform final proofing.
 - 3. Design and print large and small format maps for staff use and public display.
 - 4. Research and test new production methods and print media.
 - 5. Develop digital map templates, base maps, and CD-based products for staff.

 - 20% B. Perform advanced GIS analysis, transformations, and data conversion.
 - 1. Merge, relate, and join GIS data with databases from different sources.
 - 2. Perform projections and coordinate system transformations on GIS data sets.
 - 3. Convert GIS data formats between different software, environments.
 - 4. Perform advanced overlay, proximity, query, extraction, and other spatial analysis on GIS data.
 - 5. Document data creation, analysis, and conversion procedures.
 - 6. Assist in the preparation of graphs, tables and other illustrative material and performs other related administrative functions.
 - 7. Prepares maps using manual techniques and assists in basic computer aided mapping using end user software packages such as Arc GIS.
 - 8. Assists in developing and maintaining information and data bases to facilitate analysis and planning activities utilizing micro computers.

 - 10% C. Perform special projects as assigned
 - 1. Assist in problem solving and systems development intra-departmentally and with other agencies as directed. Identify internal and external systems analysis and improvement resources available to assist in problem solving
 - 2. Lead group resolution efforts as a technical advisor in areas of problem solving, systems analysis and systems improvement. Provide technical assistance to data management regarding problem solving area.
 - 3. Develop methods for obtaining input from appropriate sources including internal and external customers.
 - 4. Perform special research, evaluation, and/or development projects as assigned. Prepare necessary reports, documentation, and oral presentations as required.
 - 5. Provides information to other staff members, City departments on planning activities related to City data bases, geographic information and on projects assigned.
 - 6. Assist in data collection and analysis activities to support Department Directors, Department Divisions and professional staff within the Department. Collect, organize and analyze land use, population and housing and other socio-economic data on physical and planning-related areas and prepares draft written materials for inclusion in project reports and presentations.
 - 7. Perform related work as required.

 - 10% D. Perform GIS database and application design, development, and maintenance using Arc/GIS.
 - 1. Develop written procedures and standards for GIS database creation. Maintain dictionary and metadata for all data.
 - 2. Write, test, debug, and run macros/scripts.
 - 3. Perform digitizing, editing, topology construction, and attribute entry of complex GIS data features.
 - 4. Customize GIS applications for use by staff.
 - 5. Fill mapping and GIS data requests from citizens and clients.

- 10% E. Perform GIS and computer system maintenance and support.
1. Perform hardware/software installations and upgrades for GIS and general staff computing.
 2. Advise on GIS software/hardware purchasing.
 3. Maintain and conform to GIS software licensing agreements.
 4. Provide staff leadership in using GIS data, ArcView, and ArcExplorer.
 5. Do software/hardware troubleshooting and solving for staff computers.

12. Primary knowledge, skills and abilities required:

Knowledge of efficient and effective office procedures and methods. Knowledge of microcomputer operation. Knowledge of systems and procedures analysis principles, techniques and practices, including employee involvement and statistical methodologies. Working knowledge of the types of activities conducted by the various Department of Planning & Community & Economic Development work units. Ability to prepare and present statistical and narrative reports and recommendations. Ability to use microcomputers in analytic and related activities. Ability to provide systems and procedures design expertise in a staff capacity, to perform related systems analysis and to lead team efforts. Ability to communicate effectively both orally and in writing. Ability to develop and maintain effective working relationships with City staff. Ability to work effectively as a member of Departmental team efforts.

Knowledge of cartography and GIS including working knowledge of coordinate systems, projections, and transformations. Working knowledge of digital data input methods including digitizing, scanning, and coordinate geometry; knowledge of topological data structures and relational database management systems. Strong working knowledge of computer scripting languages (Python, VBA, HTML, AML, SQL) as used within a GIS environment.

Strong knowledge of spatial data models (vector, regions, routes, raster) and spatial data formats (Geo database feature types, coverage, shape file, TIGER, and DGN). Experience with various types of geographic data used in planning.

Ability to communicate effectively orally and in writing with staff of various departments; ability to work effectively with others. Knowledge of photogrammetry, remote sensing, digital pre-press, graphic design, and illustration.

13. Special tools and equipment required:

Hardware (GIS): Graphics workstation, PC, plotters, laser printer, color laser printer, digitizing table, scanner, CD/DVD.

Software (GIS): Arc/Info 8.x and 7.x, ArcView 3.x, ArcExplorer, Spatial Analyst, 3D Analyst, and Network Analyst

Software (database): Access, Info, and File Maker.

Software (office): Excel, Word, PowerPoint, Publisher, Acrobat Professional, Illustrator, Photoshop, InDesign, Dreamweaver and Sketch-Up.

Additional tools: Engineer's scale, architect's scale, and calculator.

14. Required licenses and/or registration:

Driver's license

15. Physical requirements: N/A

16. Supervision received (level and type):

Work is performed under the supervision of the Director of the Department of Planning & Community & Economic Development.

17. Leadership Responsibilities:

- This position: is responsible for supervisory activities (Supervisory Analysis Form attached).
 has no leadership responsibility.
 provides general leadership (please provide detail under Function Statement).

18. Employee Acknowledgment:

- I prepared this form and believe that it accurately describes my position.
 I have been provided with this description of my assignment by my supervisor.
 Other comments (see attached).

EMPLOYEE

DATE

19. Supervisor Statement:

- I have prepared this form and believe that it accurately describes this position.
 I have reviewed this form, as prepared by the employee, and believe that it accurately describes this position.
 I have reviewed this form, as prepared by the employee, and find that it differs from my assessment of the position. I have discussed these concerns with the employee and provided them with my written comments (which are attached).
 I do not believe that the document should be used as the official description of this position (i.e., for purposes of official decisions).
 Other comments (see attached).

SUPERVISOR

DATE

Note: Instructions and additional forms are available from the Human Resources Dept., Room 501, City-County Bldg. or by calling 266-4615.