

# Geographic Information System (GIS) Senior Analyst

## Position Details

Class Code: 4297

Job Family: Information Systems

Classification: Support Professional

Terms of Employment: [Pay Grade 63 on the Support Professional Salary Schedule](#)

FLSA STATUS: NON-EXEMPT

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## Position Summary

Under general direction, coordinates, plans, schedules, and supervises activities related to the design, implementation, maintenance, and support of the Geographic Information System (GIS) of the Demographics, Zoning, and GIS Department. This person serves as District/Department representative on the Attendance Zone Advisory Commission (AZAC), as well as a variety of school zone safety and population projection related committees.

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## Essential Duties and Responsibilities

This list of Essential Duties and Responsibilities is not exhaustive and may be supplemented.

1. Develops and executes tactical plans for information systems that support strategic objectives allowing for the management and analysis of accurate data.
2. Plans, directs, and participates in the programming, testing, maintenance, and operation of the GIS.
3. Provides in-depth analysis for enhancements to new and existing systems; defines programming requirements.
4. Troubleshoots, tests, and modifies existing department computer programs; analyzes efficiency of current system and procedures; coordinates, schedules, and oversees modifications and enhancements.

5. Provides analytical and programming support to professional and technical staff districtwide; assists with interface of various applications, programs, and datasets that interact with departmental database and mainframe systems.
6. Serves as departmental database administrator; responsible for the modeling, planning, development, implementation, and troubleshooting of advanced database systems.
7. Designs, implements, troubleshoots, and provides enhancements to GIS applications and other technical programs.
8. Develops procedures for converting data into GIS form; develops for integration and extraction of GIS data for mapping analysis.
9. Provides research, analysis, and tracking on a variety of data including, but not limited to: student demographics, student yield multipliers for residential housing types, housing market conditions, attendance zone boundary growth, population projections, and related matters.
10. Utilizes GIS as a planning tool for student assignment and provides reports in multiple formats including, but not limited to: spreadsheets, charts, graphs, and cartographic representations.
11. Generates maps, spreadsheets, and reports for internal District publication and external release.
12. Defines and executes programming requirements, develops and revises standards for programming, documentation, maintenance, and quality control of development tracking system for new residential construction permits, including, but not limited to: project features, build status, and impact of anticipated growth on projected school enrollment, identification of new streets for mapping and school assignment, and potential school zone safety hazards.
13. Manages the school assignment file in GIS and District mainframe computer, assigning new and existing streets to school zones. Ensures file accuracy, and responds to District staff and end users when questions arise.
14. Updates and maintains annual zoning publications used by schools, departments, and public, including, but not limited to: Student Information Attendance Permit Manual and School Assignment Directory.
15. Assists in developing school attendance boundary scenarios and enrollment projections by performing research and analyses of technical and statistical data.
16. Evaluates economic and housing trends to create and maintain student migration pattern methodology.
17. Serves as department liaison, and provides necessary support to the Attendance Zone Advisory Committee (AZAC).
18. Serves on and responds to requests from the Clark County School District Board appointed committees, under director's guidance.

19. Serves as liaison/District representative with public agency executives and general public regarding population, projections, and development tracking for current and advanced planning.
  20. Coordinates District school zone traffic safety program including, but not limited to: distribution of school zone boundary changes, school bell times, and District calendars to traffic engineers and law enforcement agencies.
  21. Provides department and districtwide training, as needed.
  22. Plans, schedules, supervises, reviews, and evaluates department staff.
  23. Conforms to safety standards, as prescribed.
  24. Performs other tasks related to the position, as assigned.
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## **Distinguishing Characteristics**

Involves project management, data conversion, program development, implementation, and support of GIS applications and systems, as well as day-to-day supervision of activities of the Demographics, Zoning, and GIS project team of programmers and analysts.

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## **Knowledge, Skills, and Abilities (Position Expectations)**

1. Extensive knowledge of principles and skilled practice in ArcGIS software commands, GIS mapping, coordinate systems, projections, scale, and accuracy standards.
2. Extensive knowledge of principles and practices of system software, application programming language, and workflow processes, as well as database design, analysis, and management.
3. Knowledge of project management, research and analysis techniques, recordkeeping, and technical report preparation.
4. Knowledge of Nevada Revised Statutes (NRS) related to school zones, including school zone flasher requirements.
5. Knowledge of both theory and practice in demographic and statistical analysis, and the ability to perform complex mathematical computations.
6. Knowledge of and skill in, advanced Microsoft Excel, spreadsheets, and databases.
7. Knowledge of principles, practices, and methods of computer programming, systems analysis, hardware/software design and function, and the development of new computer applications.

8. Ability to plan, manage, and coordinate resources for projects and work independently or as part of a team; ability to work on multiple projects and prioritize workload while undergoing changing and challenging demands.
  9. Ability to compile, analyze, and interpret demographic, socio-economic, and cartographic data, complex relational databases, maps, and geographically coded information.
  10. Ability to create comprehensive reports of significant complexity utilizing graphics and datasets extracted from multiple sources.
  11. Ability to prepare clear and concise programming documentation, user procedures, and reports of analyses performed.
  12. Ability to develop training manuals and materials, and provide training presentations to office and districtwide staff.
  13. Ability to operate digitizer, scanner, plotter, and printer as needed for input/output of maps and reports.
  14. Ability to review and analyze department computer system requirements; select appropriate hardware and software for system design and develop hardware and software solutions.
  15. Ability to analyze and make recommendations for new computer systems, applications, and procedures; ability to develop detailed programming specifications with the ability to assist programmers and technicians in the development, interface, and execution of relational programs used districtwide.
  16. Ability to interpret written and verbal instructions and communicate clearly, both verbally and in writing.
  17. Ability to contribute to the efficiency and effectiveness of departments and provide service to schools, departments, and the public by offering suggestions and participating as an active member of a work team.
  18. Ability to work cooperatively with employees, students, parents, state and federal agencies, organizations, and members of the public in matters including, but not limited to: customer service, conflict resolution, release of information, and matters that may materially affect the District's practices and procedures.
  19. Ability to create and present formal and informal presentations and articulate effectively in public forums when dealing with complex issues and irate individuals that must be handled with tact and good judgment.
  20. Ability to work flexible work hours and shifts.
  21. Ability to supervise, train, and evaluate assigned staff.
  22. Possess physical and mental stamina commensurate with the responsibilities of the position.
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# Position Requirements

## Education, Training, and Experience

1. High school graduation or other equivalent (i.e., General Educational Development (GED), foreign equivalency, etc.).
2. Five (5) years of experience in a related field (i.e., urban/regional planning, demography, statistics, etc.) utilizing Geographic Information Systems; or, Associate's degree or certificate of completion in computing and information technology with an emphasis in Geographic Information Systems; plus, three (3) years of experience in a related field (i.e., urban/regional planning, demography, statistics, etc.) utilizing Geographic Information Systems; or, Bachelor's degree in a related field (i.e. computer science, statistics, mathematics, geography, etc.), which includes a minimum of one (1) semester in Geographic Information Systems; plus, one (1) year of experience in the above related fields.
3. Two (2) years of experience working with student enrollment projection methodology and demographic analysis.

## Licenses and Certifications

1. A valid driver's license or state-issued identification card.
2. Certification in ArcGIS I and ArcGIS II from Environmental Systems Research Institute, Inc. (ESRI) or equivalent; including, a minimum of 40 hours of Geographic Information System instruction.
3. ArcGIS Desktop, ArcGIS Spatial Analyst, and Network Analysis from a nationally recognized professional organization, such as, ESRI, CMCUS, or other comparable equivalent.

## Preferred Qualifications

1. Experience working with ArcGIS and Microsoft Excel.
2. Knowledge of small and large area projections for an educational institution.
3. Public speaking experience preferred.
4. Extreme accuracy.

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## Document(s) Required at Time of Application

1. Copy of a valid driver's license or state-issued identification card.
2. High school transcript or other equivalent (i.e., GED, foreign equivalency, etc.).
3. College transcript(s), if applicable.

4. Copy of ArcGIS I and ArcGIS II certification from Environmental Systems Research Institute, Inc. (ESRI) or equivalent; including, a minimum of 40 hours of Geographic Information System instruction.
  5. Copy of ArcGIS Desktop, ArcGIS Spatial Analyst, and Network Analysis certificate from a nationally recognized professional organization, such as, ESRI, CMCUS, or other comparable equivalent.
  6. Specific documented evidence of training and experience to satisfy qualifications.
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## **Examples of Assigned Work Areas**

Clark County School District facilities – offices and schools, as well as travel to and from District offices, schools, rural areas, vacant land developments, and construction sites.

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## **Work Environment**

### **Strength**

Medium/heavy – exert force of 25-50 lbs., occasionally; 10-25 lbs., frequently; or up to 10 lbs., constantly.

### **Physical Demand**

Frequent sitting, standing, walking pushing, pulling, reaching, kneeling, crouching, reaching, handling, and repetitive fine motor activities. Mobility to work in a typical office setting and use standard office equipment. Stamina to remain seated and to maintain concentration for an extended period of time. Hearing and speech to communicate in person, via video conference and computers, or over the telephone. Vision: Frequent near acuity, occasional far acuity, and color vision. Vision to read printed and online materials, a Video Display Terminal (VDT) screen, or other monitoring devices.

### **Environmental Conditions**

Varies from a climate-controlled office setting to work outdoors with temperatures ranging from mild to moderate. Exposure to noise levels ranging from moderate to loud for occasional to frequent time periods.

### **Hazards**

Furniture, playground/office equipment, communicable diseases, chemicals and fumes (as related to specific assignment), and power/hand-operated equipment and machinery (as related to specific assignment).

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## Examples of Equipment/Supplies Used to Perform Tasks

District-issued/personal vehicle, various computers, printers, plotters, scanners, copy machines, modems, telephones, fax machines, calculators, filing cabinets, vehicles, etc.

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### AA/EOE Statement

The Clark County School District is proud to be an equal opportunity employer. The Clark County School District is committed to providing all applicants and employees equal employment opportunities without regard to race, color, religion, sex, gender identity or expression, sexual orientation, national origin, genetics, disability, age, military status, or other characteristics protected by applicable law. Here at Clark County School District, we are a diverse group of people who honor the differences that drive innovative solutions to meet the needs of our students and employees. We believe that through a culture of inclusivity, we have the power to reflect the community we serve.

### Job Revision Information

- Revised: 05/08/23
- Created: 10/24/12