

# **GEOGRAPHIC INFORMATION SYSTEM (GIS) TRANSPORTATION TECHNICIAN II**

## **Position Details**

Class Code: 6352

Job Family: Service/Transportation Workers

Classification: Support Professional

Terms of Employment: Pay Grade 58 on the Support Professional Salary Schedule

FLSA STATUS: NON-EXEMPT

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## **Position Summary**

Under general direction, plans, designs, implements, operates, and maintains a geographic information system (GIS) and associated software to provide technical assistance, direction, and training to technicians and support staff in the activities of school bus transportation routing and scheduling. Maintains and deploys crucial information in appropriate formats to determine student stop assignments and generates geographical displays of walk paths, hazard areas, boundaries, etc.

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## **Essential Duties and Responsibilities**

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

1. Operates the GIS utilizing computerized software to assist in activities including, but not limited to: routing of school buses, maintaining data necessary to perform routing tasks, and developing necessary reports and maps to aid in the routing effort.

2. Maintains route feature class in a Geo-database environment by keeping streets, turn impediments, and speeds current using Global Positioning Systems (GPS) and aerial photography.
  3. Performs special studies to evaluate routing scenarios.
  4. Utilizes multiple formats of data input to complete assigned tasks.
  5. Maintains relational databases of streets, student addresses, and school node locations.
  6. Performs relational analyses of student data to street centerline information and school boundary files.
  7. Prepares graphic displays of studies and maps as requested by various departments and committees of the Clark County School District.
  8. Processes and digitizes data from outside entities to enter information into a Geo-database.
  9. Attends training meetings and expands knowledge of GIS system use; applies and documents new techniques as they are implemented.
  10. Provides GIS end user direction, training, and documentation, as required.
  11. Creates GIS products to include web-based maps, topographic maps, digital elevation models, etc.
  12. Develops procedures for converting data into GIS form.
  13. Understands ArcGIS Server functionality in order to incorporate GIS services into custom applications for electronic pupil transportation systems.
  14. Performs a variety of analytical studies related to the development and implementation of the GIS system; evaluates alternatives, makes recommendations, and prepares technical reports.
  15. Monitors developments in the field of GIS usage and determines necessary changes to ensure system efficiency.
  16. Develops and uses Web services, as needed.
  17. Conforms to safety standards, as prescribed.
  18. Performs other tasks related to the position, as assigned.
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## **Distinguishing Characteristics**

Involves the training and oversight of transportation staff to assist with and ensure the accurate updating and processing of student transportation data. Plans, reviews, and updates the efficiency of transportation daily route schedules and directions in addition to maintaining relational databases. Assists in coordinating data conversion for the District's GIS and provides technical support to District staff. Works with other District departments and outside entities to maintain accurate and up-to-date maps, road speeds, barriers, and other road network attributes.

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

1. Knowledge of hardware and software design and functions.
2. Knowledge of ArcGIS software commands.
3. Knowledge of operating systems related to assigned area.
4. Knowledge of mapping, projections, and scale standards.
5. Knowledge of computerized information systems.
6. Knowledge of research techniques, sources, and availability of information.
7. Ability to learn principles and practices of Computer-Aided Design (CAD) drafting or graphic design and land surveying.
8. Ability to learn rules and regulations to hold commercial driver's licenses (CDL) and of the Department of Transportation (DOT) as they relate to the planning of driver time and passenger/student transportation.
9. Ability to operate digitizer, scanner, plotter, and printer, as needed for input/output of maps and reports.
10. Ability to compile, analyze, and interpret relational databases.
11. Ability to plan and organize work.
12. Ability to interpret written and oral instructions.
13. Ability to communicate clearly both orally and in writing.
14. Ability to work independently and without direct supervision.
15. Ability to work flexible hours or shifts.
16. Ability to meet predetermined deadlines.
17. Ability to work cooperatively with employees, the public, and other agencies.
18. Ability to recognize and report hazards and apply safe work methods.
19. Ability to train, instruct, and provide clear verbal and written instruction of basic and advanced operations of GIS.
20. Possess physical and mental stamina commensurate with the responsibilities of the position.

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## Position Requirements

### Education, Training, and Experience

High school graduation or other equivalent (i.e., General Education Development (GED), foreign equivalency, etc.); and, four (4) years experience in a related field (i.e., urban/regional planning, demography, statistics, global positioning systems, logistics,

etc.) with emphasis in ArcGIS or other automated computer routing and logistics software and Microsoft operating systems; or,

Associate's degree in a related field (i.e., computer science, statistics, mathematics, geography, geographic information systems) or certificate of completion in ArcGIS Desktop Applications\*; Network Analyst/Analysis in ArcGIS, Editing at ArcGIS Desktop, and ArcGIS Multiuser Geo-database or ArcGIS Server Enterprise Configuration & Tuning for SQL Server; (9.x, 10.x); and, two (2) years experience in a related field (i.e., urban/regional planning, demography, statistics, global positioning systems, logistics, etc.) with emphasis in ArcGIS or other automated computer routing and logistics software and Microsoft operating systems; or,

Bachelor's degree in a related field (i.e., computer science, statistics, mathematics, geography, geographic information systems) which includes a minimum of one (1) semester of ArcGIS; and, one (1) year experience in a related field (i.e., urban/regional planning, demography, statistics, global positioning systems, logistics, etc.) with emphasis in ArcGIS or other automated computer routing and logistics software and Microsoft operating systems.

\* Certification in ArcGIS Desktop Applications from a nationally recognized professional organization, such as, ESRI or CMCUS, or other comparable equivalent (Certification older than three (3) years from date of qualified selection pool (QSP) request will not be accepted).

## **Licenses and Certifications**

1. A valid driver's license that allows the applicant/employee to legally operate a motor vehicle in Nevada. License must be maintained for the duration of the assignment.
2. Copy of current driving history (dated within six (6) months from the date printed) issued by the Department of Motor Vehicles at time of application or QSP placement and at time of interview prior to final selection.
3. Certificate of completion in ESRI's ArcGIS Desktop Applications; Network Analyst/Analysis in ArcGIS Desktop (9.x, 10.x) (if applicant does not possess an Associate's or Bachelor's Degree).

OPERATING SYSTEM(S) AND SOFTWARE APPLICATION(S) REQUIRED ARE CONTINGENT UPON THE CURRENT POSITION VACANCY, ADVERTISEMENT, OR ASSIGNMENT.

## Preferred Qualifications

1. Knowledge of Compass Software, Python, Structured Query Language (SQL) Programming, Silverlight, or Flex.
  2. Three (3) year of work experience with SQL databases.
  3. Knowledge of Zonar Systems GPS Software.
  4. Work experience in a large transportation operation.
  5. Experience in and knowledge of developing technical and visual presentations, reports, maps, and documents.
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## Document(s) Required at Time of Application

1. High school transcript or other equivalent (i.e., GED, foreign equivalency, etc.), if applicable.
  2. College transcript(s), if applicable.
  3. A valid driver's license that allows the applicant/employee to legally operate a motor vehicle in Nevada.
  4. Copy of current driving history (dated within six (6) months from the date printed) issued by the Department of Motor Vehicles.
  5. Specific documented evidence of training and experience to satisfy position requirements.
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## Examples of Assigned Work Areas

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

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## Work Environment

### Strength

Sedentary/medium – exert force 20-50 lbs., occasionally; 10-25 lbs., frequently; up to 10 lbs., constantly.

### Physical Demand

Frequent sitting, standing, walking, pushing, pulling, stooping, kneeling, crouching, reaching, handling, repetitive fine motor activities, climbing, and balancing. Mobility to work in a typical office setting and use standard office equipment. Stamina to remain seated and 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, and other monitoring devices.

## **Environmental Conditions**

Climate-controlled office settings and exposure to weather with temperatures ranging from mild/moderate to extreme cold/heat. Exposure to noise levels ranging from moderate to very 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 vehicles, computers, multimedia equipment, liquid crystal display (LCD) panels, television/videocassette recorder/digital video disc (TV/VCR/DVD), printers, copy machines, calculators, fax machines, telephones, digitizer, plotters, scanners, etc.

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## **AA/EOE Statement**

This employer does not knowingly discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, or national origin.

## **Job Revision Information**

- Revised: 03/11/20
- Created: 02/06/12