

STATE OF NEBRASKA CLASS SPECIFICATION
HIGHWAY CARTOGRAPHER/SENIOR

EST: 12/95 – REV: 10/11
CLASS CODE: M56163

DESCRIPTION: Under general to limited supervision, performs advanced Computer Aided Mapping (CAM) for the full range of highway cartography assignments; creates, edits, and maintains geospatial attributes into the Geographic Information System (GIS); uses CAM equipment, and graphics and database software; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS: (A position is assigned to this class based on the scope and level of work performed as outlined below.)

This is the highest full performance classification level of the Cartographer class series of two classes both of which perform cartography assignments but with a different level and scope of work. Positions at this level perform the broad and diverse range of advanced cartography assignments in a fully functioning capacity. Both basic and more advanced knowledge and skills is applied involving procedures, techniques, databases, materials, software, and equipment of specialized cartography work. The adaptation and application of these work tools and resources to a wide variety of assignments requires the exercising of increasing levels of latitude and independent judgment, with infrequent assistance with unusual situations. A significant portion of assigned work requires defining design and production specifications, compiling and manipulating data, selecting and applying technical standards, making decisions regarding the visual presentation and use of data from multiple databases/information resources and the use of spatial analysis and manipulation features of GIS, CAM, and other similar applications. Incumbents develop customized spatial/geographic reports, and provide solutions, instruction, and information to others, and may coordinate special projects or oversee the work of others, as assigned.

EXAMPLES OF WORK: (A position may not be assigned all the duties listed, nor do the listed examples include all the duties that may be assigned.)

Attaches geo-spatial intelligent information into the GIS to identify attributes/features of the roadway system such as centerline data, street addresses and physical features such as structures, bridges, towers, and waterways.

Creates, edits, and maintains geospatial information databases; collects, codes, prepares, enters, and updates tabular and attribute information to be tagged to spatial GIS data layers.

Makes recommendations for obtaining or verifying information used in mapping to resolve discrepancies or collect new information.

Trains new cartographers in the cartographic procedures and practices used by the agency.

Reviews mapping projects produced by less experienced and lesser skilled cartographers to ensure accuracy and completeness of the project and conformance to agency practices and standards.

Receives, analyzes, interprets, and verifies information contained in legal descriptions of city and land tract documents, lane mileage reports, highway sources of information to determine what changes need to be made to city, county, and recreation area maps.

Calculates angles and curves to accurately depict roadway and map features; computes mileage between map points.

M56163 – HIGHWAY CARTOGRAPHER/SENIOR (continued)

Creates, edits, and maintains varied and complex maps to document new and expanded roadways, corporate limits, roadway realignment, and railroad, roadway, and utility relocation or abandonment, and recreation area changes or additions; edits map legends to account for additions or deletions of physical characteristics to the map.

Verifies and incorporates physical features on maps such as bridges, towers, farmsteads, cemeteries, waterways; revises maps to account for river course changes, lake surface area and waterway flow changes due to weather conditions.

Reads and interprets roadway construction plans and aerial photographs to obtain information to create or revise maps.

Confers with agency employees, other state agency employees and local officials to obtain and provide information necessary to perform required duties; answers questions from agency staff and others regarding mapping.

Conducts quality control by critical reviews of maps completed by peers; advises less experienced cartographers on mapping and agency procedures.

Retrieves, modifies, and stores cartographic information in the agency's information system.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED: (These are needed to perform the work assigned.)

Knowledge of: the principles and practices of GIS mapping; computer graphic methods; basic geometry; the agency's cartographic methods, procedures, equipment, and software; agency information resources.

Ability to: use personal computer and GIS, CAM, CAD, or graphic design software to create and manipulate graphical information; read and interpret highway plans; interpret aerial photographs; create and manipulate computer graphics; identify and resolve Micro-Station, Auto-Cad, and/or Computer-Aided-Mapping problems; communicate in person, and by telephone, email, and correspondence technical mapping and graphic concepts, capabilities, and limitations to non-technical individuals; work alone with minimal oversight; interact with others to achieve project goals; use geo-spatial and database software to create and modify maps and mapping databases; create and maintain complex maps; identify inconsistencies in mapping source data and resolve conflicting or illogical information.

MINIMUM QUALIFICATIONS: (Applicants will be screened for possession of these qualifications. Applicants who need accommodation in the selection process should request this in advance.)

Post high school level coursework or training in and one year experience in cartography using the techniques or practices of Geographic Information System as applied in mapping, Computer-Aided-Mapping, computer design and/or graphics, geography, or geo-science work.

SPECIAL NOTES:

State agencies are responsible to evaluate each of their positions to determine their individual overtime eligibility status as required by the Fair Labor Standards Act (FLSA).