

GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST  
CODE: 7213

GEOGRAPHIC INFORMATION SYSTEMS SUPERVISOR  
CODE: 7214

SUMMARY OF DUTIES : Operates a computerized mapping system and performs technical geographic information system input, including editing and system analysis, to produce a wide variety of maps and reports; or supervises a group of employees engaged in such work; and performs related duties.

DISTINGUISHING FEATURES: A GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST uses computer equipment to create new maps, enter information onto new or revised maps, access, manipulate and retrieve information from a computer resident data base, create and develop graphic standards, update data base information and write programs to create map features. An employee in this class may conduct research of legal descriptions, survey information and other property related data necessary for accurate map construction, as well as perform complex mathematical calculations. This class is distinguished from the class of CARTOGRAPHER in that the latter uses manual drafting machines, tools and drawing materials primarily to produce specialized maps, charts and graphs and redraw information on existing maps.

A GEOGRAPHIC INFORMATION SYSTEMS SUPERVISOR provides technical and administrative supervision and directs the work of subordinate staff in the operation and development of automated mapping systems. A GEOGRAPHIC INFORMATION SYSTEMS SUPERVISOR trains subordinate employees on the operational methods and procedures of the ARC/INFO geoprocessing system, and is responsible for checking and monitoring the accuracy of work produced. This class is distinguished from the classes of Senior and Principal Cartographer in that the latter are primarily responsible for supervising manual drafting and cartographic functions.

Examples of Duties:

GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST: Uses a computer keyboard, menu, and other digitizing devices to input written and numeric information such as map number changes, ownership and legal description changes, street widths, tract and lot numbers, and easement documentation in order to increase map detail and update or correct data base information, or, to enter various graphic features such as lines, text, symbols, arcs, and legends onto separate data files or map layers, in order to generate various types of plots of graphic displays; uses an extensive array of computer keyboard commands to retrieve various elements and data from separate data files in order to create ordinances, maps, community plans, or other special purpose maps; constructs new cadastral maps by entering lines, arcs, and points from a graphics table and menu in order to

accurately convert manually constructed base maps to a computer data base from which computer maps are produced.

Uses various software maintenance programs and/or command series in order to correct digitizing errors; writes short programs or instruction sequences in order to create map parameters, map positions, line sizes, plot scales, text type and levels used on map hard copies.

Performs various mathematical calculations using basic math, geometry, trigonometry, mathematical tables and calculation aids including computer resident software, in order to determine areas and depict locations, angles and distances on maps.

References department maps, County recorded documents, state freeway maps, engineering cadastral maps and/or case files in order to obtain relevant property and/or zone information; may reference, read and interpret additional sources such as microfiche records and other legal documents in order to ensure the accuracy of newly created computer data base and maps; and may occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

**GEOGRAPHIC INFORMATION SYSTEMS SUPERVISOR:** Plans, assigns, reviews and prioritizes work of subordinate employees; advises in the utilization and application of systems programming language;

Responsible for creating and manipulating datafiles; adding, updating and deleting records; retrieving, plotting and printing data; queries datafiles and generates reports; monitors user environment and terminal configuration, system shutdown, start-up and recovery; accesses information from multiple files and monitors system status.

Performs checking on data to be entered, map manuscripts, data entry forms and data produced; edits final plots and database reports; supervises staff in research to define existing and/or proposed zone boundaries and personally performs more difficult research.

Establishes procedures, guidelines, and standards in implementing Periodic Plan Review ordinances and plan amendments produced using computer mapping equipment. Both Classes: May occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

QUALIFICATIONS:

Knowledges:

GEO. INFO.  
SYSTEMS  
SPECIALIST

GEO. INFO.  
SYSTEMS  
SUPERVISOR

Knowledge of the underlying principles and concepts of elementary computer operations, programming, and applications;	GOOD	GOOD
Knowledge of entry, storage, retrieval and manipulation of data used in computerized cartographic systems;	GOOD	GOOD
Knowledge of mathematics up to and including trigonometry;	GOOD	GOOD
Knowledge of coordinate systems such as Cartesian or Lambert;	GOOD	WORKING
Knowledge of basic cartographic and/or drafting principles used in map construction or editing;	GOOD	WORKING
Knowledge of necessary map components;	GOOD	WORKING
Knowledge of the elements of graphic design;	GOOD	WORKING
Knowledge of land surveying principles and techniques;	WORKING	GENERAL
Knowledge of safety principles and practices related to the use of computer and reproduction equipment;	GOOD	GOOD
Knowledge of laws and regulations related to equal opportunity and affirmative action;	GENERAL	WORKING
Knowledge of City personnel rules, policies and procedures;		WORKING
	GEO. INFO. SYSTEMS <u>SPECIALIST</u>	GEO. INFO. SYSTEMS <u>SUPERVISOR</u>
Knowledge of memoranda of understanding as related to subordinate personnel;		WORKING
Knowledge of the principles of supervision;		WORKING

Skills:

Precise and accurate placement of automated graphic tools such as digitizing cursors and light pens and/or pen plotters.	X	X
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Abilities:

Read, interpret and understand a wide variety of computer instruction and training manuals describing various computer software operations, capabilities and applications;	X	X
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Apply complex concepts related to hardware and software computer applications used in automated mapping processes;	X	X
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Understand, manipulate and utilize an extensive series of command sequences and steps related to geoprocessing computer applications;	X	X
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Understand, utilize various data base organizations;	X	X
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Work independently to recognize and solve problems;	X	X
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Recognize discrepancies or errors when comparing computer generated maps to existing maps;	X	X
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Comprehend and follow general or specific oral directions;	X	X
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GEO. INFO  
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Read and carry our general or specific written directions;	X	X
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Plan and supervise the work of a group of technical employees;		X
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Coordinate the work of a group with the work of other groups and sections; X

Use courtesy, good judgment, tact and deal effectively with the public, City employees and representatives of other government and private agencies. X X

A Bachelors degree from a recognized college or university with a major in Geography, Computer Science, or related field, **or** one year experience using "ARC INFO" geographic information system processing is required for GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST.

Two years experience as a GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST with the City of Los Angeles, or in a class at least at the level of Cartographer, which provides experience in operating a geographic information system is required for GEOGRAPHIC INFORMATION SYSTEMS SUPERVISOR.

Note: One year of the above experience must be using the "Arc-Info" geographic information processing system.

PHYSICAL REQUIREMENTS: Strength to perform average lifting of less than five pounds and occasionally over 15 pounds; arm, hand, and finger dexterity, and good eyesight, speaking and hearing ability.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.