

EL DORADO IRRIGATION DISTRICT
Class Specification

CLASS TITLE: Electrical and Control Systems Supervisor

DEFINITION

Under general direction plans, organizes, directs, operates and maintains effective oversight of electrical and control systems utilized by the District; collaborates with Engineering Department on electrical, instrumentation, radio, and computerized control and communications systems plan review and project management; performs a variety of highly complex technical activities including installation, maintenance, repair, and optimization of complex electrical, instrumentation, radio, and industrial control system components; coordinates maintenance and implementation of services with other District divisions; provides first-line supervision to assigned field, technical and professional staff; performs a variety of technical tasks relative to assigned area of responsibility while ensuring effective coordination and support to the Operations and Engineering Departments.

DISTINGUISHING CHARACTERISTICS

The Supervisor level recognizes positions that perform full supervisory responsibilities for a section as identified by the District, including hiring, planning, assigning and evaluating the work of subordinates, issuing discipline and are responsible for a program area within a work unit or department.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from assigned manager or Director. Exercises direct supervision over assigned field, technical, and professional personnel.

EXAMPLES OF ESSENTIAL DUTIES: *the duties specified below are representative of the range of duties assigned to the class and are not intended to be an inclusive list.*

Plans, schedules, organizes, and oversees a comprehensive electrical and Supervisory Control and Data Acquisition (SCADA) maintenance program, including maintenance and repair of electrical, electronic systems, switch gears, instrumentation, process logic controllers, and telemetry systems; plans, manages, and coordinates the installation, maintenance, and repair of electrical, electronic, instrumentation, control systems (SCADA), and telemetry equipment.

Reviews the work of assigned personnel and consultants engaged in the design, installation, maintenance, repair, and optimization of District electrical, instrumentation, or industrial control systems; ensures that functions meet District standards, and comply with safety codes, applicable laws, and regulations.

Participates as a member of interdisciplinary teams in the preparation and/or review of special engineering reports, investigations, and economic cost benefit studies related to strategic industrial control, electrical and instrumentation, and/or radio system improvements and or provide assistance in developing and monitoring Capital Improvement Projects (CIP); reviews and evaluates radio surveys and optimization of communications systems for redundant reliable operations.

CLASS TITLE: Electrical and Control Systems Supervisor

Participates with other District divisions to develop, design, and implement new construction, maintenance, upgrades, modifications, and other special projects to improve the efficiency, reliability, safety, and effectiveness of District electrical, instrumentation, and industrial control systems. Provides technical support to the Engineering Department related to plan review, project development, project management, support of assigned staff to new or existing District infrastructure.

Effectively monitor and ensure electrical and instrumentation construction, maintenance, repair and optimization plans and specifications are compliant with local and State safety regulations and codes as well as with Cal-OSHA and District safety standards; including overseeing the District's Arc Flash Safety program.

Evaluates the work of assigned personnel engaged in the construction, installation, inspection, and testing of major computer based control system applications and components used in the operation of dam outlet works and gauging facilities, generation of hydroelectric power, storage, conveyance, or distribution of water, generation of solar voltaic electricity, and the treatment and conveyance of water and recycled water or the collection and treatment of wastewater.

Provides technical assistance, leads and troubleshoots the most complex diagnostic and resolution of electrical, electronic and computerized communications systems, or programming used in or associated with SCADA, programmable logic controllers (PLC), Human-Machine Interface (HMI), telemetry, communication hardware and software, process control systems; hydroelectric, solar voltaic/array, renewable energy systems, water and wastewater systems and related industrial facilities, programs, components, and equipment.

Provides consultation and support to project engineers in the review of project designs and contractor submittals and may review work plans, interpret wiring diagrams, electrical code requirements, and specifications with assigned personnel; inspects work in progress and work completed to ensure that the work meets professional standards and is in compliance with Federal, State, and local electrical code requirements.

Ensures the integrity and security of District control systems by collaborating on security frameworks and initiatives with various District stakeholders and divisions to promote a robust solution and best-practice approach.

Analyzes and evaluates bids and proposals for equipment and consultant services; administers contracts and agreements and recommends and negotiates changes to contract terms as required. Develops schedules and methods to accomplish assignments, ensuring work is completed in a timely and efficient manner.

Recommends the appointment of personnel; provides or coordinates staff training; conducts performance evaluations; implements discipline procedures as required; maintains high standards necessary for the efficient and professional operation of the work unit.

Builds and maintains positive working relationships with co-workers, other District employees, consultants, contractors, and the public using principles of good customer service.

CLASS TITLE: Electrical and Control Systems Supervisor

Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles, practices, and methods of electrical, electronic, or industrial controls design as applied to the planning, design, construction, operations, and maintenance of hydroelectric, water, wastewater, and recycled water systems. Applicable Federal and State laws; District regulations, codes, policies and procedures; mathematical calculations and formulas applicable to the design, construction, installation, problem diagnosis, testing, programming, and maintenance of industrial instrumentation control systems and their components; information sources for industrial control system engineering. Working knowledge of professional and technical standards, and applicable safety standards related to arc flash modeling, SCADA and radio design, and electrical maintenance scheduling and planning. Principles and practices of leadership, motivation, team building and conflict resolution. Principles and practices of organizational analysis and management. Budgeting procedures and techniques. Principles and practices of supervision, training and personnel management.

Skill/Ability to:

Organize, schedule, coordinate and direct the work of assigned staff or unit. Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of program goals. Gain cooperation through discussion and persuasion. Interpret and apply District standards and regulations and procedures as well as applicable laws and regulations related to area of supervisory assignment. Make recommendations related to existing or anticipated project budgets. Work effectively with a variety of internal and external customers to accomplish goals and objectives. Supervise, train and evaluate personnel. Establish and maintain effective working relationships with those contacted in the course of work. Communicate clearly and concisely, both orally and in writing. Ability to maintain reliable attendance is a condition of employment, subject to applicable medical and disability leave laws. On a continuous basis, analyze budget and technical reports; interpret and evaluate staff reports. On a continuous basis, sit at desk and in meetings for long periods of time; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone; write or use keyboard to communicate through written means; attend field investigations to confirm design assumptions or assist staff with troubleshooting, and lift or carry weight of 35 pounds or less.

Experience and/or Education:

Any combination of experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

Experience:

Five (5) years of increasingly responsible experience involving one or more of the following core functions:

The configuration and programming of PLCs and HMI systems; **or**, in the design, repair, installation and maintenance of electrical equipment such as instrumentation systems, transformers, switches, control panels, electronic components of telemetry systems and components in an industrial setting or as utilized in a water, wastewater treatment plant, water distribution system, recycled water system,

CLASS TITLE: Electrical and Control Systems Supervisor

solar array, and/or at a hydroelectric power plant; **or**, the operation, maintenance and repair of equipment associated with a hydroelectric power plant and/or completion of a formal multi-year apprenticeship program at a hydroelectric facility similar to the District's; **or**, the installation, maintenance, testing and repair of a variety of telecommunication equipment associated with utility operations; **and**, including one (1) year of lead or supervisory responsibility;

Public utility experience desired.

Education:


Equivalent to completion of the twelfth grade, supplemented by college or equivalent course work in electronics, instrumentation, control systems, or related field; **or**, Bachelor's degree from an accredited college or university in engineering, computer science, information systems, mathematics or a related field.

SPECIAL QUALIFICATIONS

License and Certificate:

Possession of, or ability to obtain, a valid California driver's license at the time of appointment. Individuals who do not meet this requirement due to physical disability will be reviewed on a case-by-case basis.

State of California Certification as a General Electrician or completion of a recognized apprenticeship in the electrical trade; **or**, California Water Environment Association (CWEA) Grade III PM Electrical/Instrumentation Technologist within 18 months of appointment and Grade IV PM Electrical/Instrumentation Technologist within 36 months of appointment as a condition of continued employment; **or**, Automation Society of America (ISA) Level I Certified Control Systems Technician Certificate and/or possession of an Industrial Computing and Process Control Technology Certificate of completion from an accredited college and/or technical institute and/or completion of a formal training program from a state agency, utility, or military school with verifiable equivalent competencies; **or**, Possession of a certificate of completion from a recognized telecommunication apprenticeship program or equivalent verifiable training; **or**, Federal Communication Commission Radiotelephone license with radar endorsements.

 _____ Director of Human Resources	<u>02/01/2022</u> Date
Established: 02/01/2022	
Revised:	
FLSA: Exempt	
Unit: Safety	