

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Electrical Engineer		DWR POSITION NUMBER 2741-3613-002	SAP POSITION NUMBER 50001948	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO. TBD	DIVISION/SECTION O&M/ADM-Eng/EES/EEB1/Elec Eng Section B	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☐ Confidential Related BU: ☒ Rank and File BU: R09				
RESPONSIBILITIES EXERCISED ☒ Supervisory ☐ Lead Person		IMMEDIATE SUPERVISOR (Print) Sukhbir Singh	SUPERVISOR'S CLASSIFICATION Senior Electrical Engineer, HS	
APPROVED BY (Personnel Analyst's Name) Marissa Arriaga			DATE 8/12/26	
<i>Percent of Time</i>	<i>Activity</i>			
25%	POSITION SUMMARY Under the direction of the Manager, Electrical Engineering Branch 1, Electrical Engineering Section B, the incumbent is a journey level person that assists in performing difficult engineering tasks in preparing design drawings and specifications; preparing cost estimates; assists with construction inspection and contract administration; performing start-up of electrical systems and equipment; directing investigations of problems and failures related to electrical system and equipment in the State Water Project (SWP) and other projects; and providing technical assistance in the development, design and implementation of the corrective action. Support and participate in all phases of the Cradle to Grave strategies including planning, design, manufacturing, construction, commissioning, and maintenance to enhance organizational programs, and increase expertise, safety, and sustainability. ESSENTIAL FUNCTIONS This position requires that the incumbent work cooperatively with others; maintain regular, consistent, and predictable attendance; analyze data and event reports accurately; exercise sound judgment; communicate effectively both verbally and in writing; provide timely, cost effective, and quality engineering services to meet the needs of the Department's clients; work proactively to analyze data and event reports and take effective action to complete projects on time and within budget; and coordinate efforts with other participants, and Department's clients. The specific essential duties, performed under the direction of a licensed electrical engineer include, but are not limited to the following: Prepare electrical engineering designs including layouts, drawings, technical specifications, and cost estimates and make design calculations and equipment selections for procuring new electrical systems and equipment or modernization of existing systems and equipment. Performing these tasks may require using Microsoft Word, Excel, PowerPoint, Computer Aided Design (CAD), and engineering computational software programs. Perform engineering studies such as Short Circuit, Arc Flash, and Load Flow Coordination to support Department projects.			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Sukhbir Singh		SUPERVISOR'S SIGNATURE ➤		DATE
EMPLOYEE'S STATEMENT: I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.				
EMPLOYEE'S NAME (Print) Vacant		EMPLOYEE'S SIGNATURE ➤		DATE

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Vacant		TBD	O&M/ADM-Eng/EES/EEB1/Elec Eng Section B	
Percent of Time	Activity			
25%	Review and check contractor submittals and assist with quality control inspections of material, equipment, and fabrication and assembly operations at manufacturer facilities or at the field construction site; monitor the contractors methods, procedures and processes for compliance with the quality control program and the quality standards of the contract; inspect equipment and materials for completeness and conformance to plans, specifications, and applicable codes during fabrication, assembly, installation, and testing; and perform contract administration. Perform the less complex or assist with general shop and field inspections and provide technical support for installations, testing, start-up, and commissioning. This may require extensive travel throughout the State by air or vehicle.			
25%	Develop and review electrical engineering standards and instructions with regard to equipment maintenance in the SWP pumping plants and hydroelectric facilities. Make computations and accurately interpret drawings for electrical systems and equipment. Assist or lead investigations of problems and failures related to electrical systems and equipment, and provide technical assistance in the development, design, and implement of the corrective action at the job site. Perform contract administration and/or contractor oversight utilizing service contracts on field repairs or consultation. Represent the Office or Division in the negotiation and administration of electrical maintenance and repair contracts for project equipment in a manner required to ensure safe and continued economic operation of the project. Collaborate and communicate with Field Division personnel to ensure new procedures/policies are understood and implemented. On an as needed basis, provide theoretical and/or hands-on training to other engineers or Field Division staff.			
10%	Evaluate the project preventative maintenance program to develop reports of unit annual maintenance. Monitor and evaluate costs of proposed field maintenance and equipment repair or replacement. Meet with water contractors and their representatives, regarding electrical equipment trouble, repair, and methods for improving reliability and performance. Maintain knowledge of industry capabilities with regard to shop facilities and maintenance and repair contractors in areas of project installations that are equipped to perform electrical related specialty work under contract.			
15%	Prepare clear correspondence to clients and manufacturers. Prepare clear and concise engineering reports and memoranda covering design analysis, design engineer's criteria, final design reports, project status reports, construction inspection, meetings and discussions, and participate in preparation of environmental impact reports as required. Prepare feasibility study reports.			

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	KNOWLEDGE, SKILLS, AND ABILITIES A working knowledge of engineering fundamentals and mathematics to prepare plans, layouts, and specifications for designing electrical systems and equipment used in pumping plants, hydroelectric power generating plants, and other related facilities. Familiarity with applicable codes, safety orders, and regulations governing the design, installation, and testing of electrical systems and equipment. Familiarity with the industry standards and processes used in the manufacturing of electrical systems and equipment used in pumping plants and hydroelectric power generating plants. Ability to utilize personal computers and commercial software programs to perform engineering computations and prepare design drawings. Ability to work with vendors and manufacturers in conducting market research for equipment and materials. Ability to prepare clear and concise engineering reports. Strength and ability to move objects up to 25 pounds; ability and stamina to bend, stoop, kneel, and crawl; climb stairs and uneven (sometimes steep) slopes; mobility to walk unassisted throughout the facilities of the State Water Project; and able to operate computers. Must be able and willing to work in adverse weather conditions such as extreme hot or cold; and work well with others. Must follow established safety procedures inherent in the job. SPECIAL REQUIREMENTS Must be willing to work sometimes outside of normal business hours, travel, and stay overnight in various locations throughout the State of California. Travel throughout the State may be required for extensive periods of time. Field inspections may require travel to domestic and foreign locations via air travel or other means of transportation. Work may require driving a vehicle on public roadways and/or uneven terrain to remote areas. Employee is required to successfully complete all safety training related to the functions of the job. All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination. The Department of Water Resources is committed to its mission and employees, and we are grounded in our commitment to public safety. Regular, consistent, and predictable attendance is essential to the successful performance in this position. Under the provisions of the North American Electric Reliability Corporation Critical Infrastructure Protection Standard CIP-004 as part of the Energy Policy of 2005, this position has authorized cyber access to or unescorted physical access around critical cyber assets and is subject to a satisfactory background check prior to appointment and every seven years thereafter.			

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		OTHER RESPONSIBILITIES This position provides necessary support to the Divisions of Flood Management, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, flood, dam, SWP, and other incidents and emergencies. Additionally, this position may participate in emergency operations in the capacity of area teams, field inspection, coordination, and assist agencies such as Cal OES and FEMA in disaster work, including performing fieldwork to complete damage survey reports for droughts, flooding, earthquakes, and other emergencies. This position may also serve in one of the sections as established in the Incident Command System to assist the Department in performing its emergency preparedness, response, recovery, and mitigation functions. These functions are established in the California State Emergency Plan and the Department's Administrative Orders.					