

 TJCAA Experience Bank - ICE

TJCAA Instrumentation, Control, and Electrical Experience Bank								
Project Description	Service Areas							
	Facility Electrical & Industrial Apps	Medium & Low Voltage Distribution	System Modeling, Analysis, & Utility Coordination	Control System Master Planning	Water & Wastewater Instrumentation & Control System Designs	Remote Telemetry & SCADA	Standby & Emergency Power Facilities	Project Management & Alternative Delivery Methods
City of Santa Cruz - Graham Hill WTP Electrical Improvements Project. Project management and electrical design for renovation, expansion and improvements to the electrical distribution system at the City's main Graham Hill WTP.	■	■	■		■	■	■	■
Napa Sanitation District - Recycled Water Pipeline and Pump Station Design. Design for service and power distribution equipment, pump station motors and motor controls, and electrical building auxiliary electrical and lighting needs.	■	■			■	■		
Redwood City Glenwood Pump Station Improvements Project. Performed design of electrical upgrades for an existing water distribution pump station.	■				■		■	
CCWD - SCADA Telemetry Improvements Project. Prepared comprehensive predesign analyses and report for development of upgrade scheme for SCADA and telemetry system.				■		■	■	■
Central Contra Costa Sanitary District - Arc Flash Labeling Implementation Analysis and Reveiw. Performed review and analysis of arc flash hazards at the District's Wastewater Treatment Plant.	■	■	■					■
Wochholz Wastewater Treatment Plant - Improved Effluent Salinity Project. Designed electrical and structural elements for the addition of a new reverse osmosis (RO) Train and ancillary equipment including chemical systems as part of the process to reduce salinity levels in the effluent water	■	■	■		■			
MCWD – SCADA Consulting Services. Review of existing system deficiencies; development of new RTU and radio standard hardware specifications; development of standard programming, submittal, and well control descriptions; and bid documents.				■	■	■		■
CVSD – Pump Station 5 Control Rehabilitation. Performed field investigations and emergency design for replacement of motor controls at a small sewage pump station.	■	■			■			■

Statement of Qualifications – Engineering Services

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Cucamonga Valley Water District - 1630 East Recycled Water Pump Station. Pump station with sizes ranging from 100 hp to 400 hp for delivering reclaimed water to the Inland Empire Utilities Agency recharge basin. Includes design of new pump station and integration of controls into CVWD and IEUA's existing SCADA systems.	■	■	■		■	■		■
Santa Clara Valley Water District - Pacheco Pump Station Adjustable Speed Drive Replacement. Designed replacement of twelve existing adjustable speed drives with newer technology drives, to operate existing 2,000 hp medium voltage wound rotor motors. Project work also included a SCADA system upgrade.	■	■			■	■		
City of Malibu - Malibu Legacy Park Project. Electrical design services for a multi-benefit facility providing stormwater management, water quality improvement, riparian habitat restoration, education, and open space for recreation. Electrical distribution system including a 480 V distribution panel with mini load centers throughout the park.	■	■	■					
Dublin San Ramon Services District - Zone 2 and 3 Pump Station Renovations. Design and construction services for electrical and mechanical renovations at four drinking water distribution pump stations. Included field inspections, conceptual approaches, use of reduced voltage starters for hydraulic surge control, replacement of all electrical equipment, and interfacing to existing SCADA.	■	■	■		■	■		■
City of Calistoga - Kimball WTP Improvements. Developed detailed electrical design documents for pressure filter based treatment facility for the City's main water treatment plant. Work included expansion of existing motor control systems, integration to the existing control system, and addition of multiple water quality monitoring instrumentation onto a centralized water quality monitoring panel.	■	■			■			
Inland Empire Utilities Agency - Phase 2 Chino Basin Facilities Improvement Project. Predesign and design related to the improvement at several groundwater replenishment basins and water supply turnouts, conforming to MWD technical requirements and standards.	■	■	■			■		
Metropolitan Water District - Diemer Water Treatment Plant Electrical Power and Reliability Improvements, Preliminary Design. Prepared recommendations for system improvements and upgrades to the original, 40 year old electrical system elements.	■	■	■				■	

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Cucamonga Valley Water District - Wells Number 43 and 46. Provided electrical and instrumentation design for two well pump stations.	■	■	■		■	■	■	■
Sapphire Energy - Biofuel Plant Review. Value engineering review of instrumentation, control, and electrical elements for a biofuel generation plant.	■							
Inland Empire Utilities Agency - 1630 East Recycled Water Pipeline Segment A Project. Design services for power, instrumentation, and SCADA work at the San Sevaine and Victoria Basin Turnouts.		■	■			■		
Orange County Water District - Groundwater Replenishment System Initial Expansion. Engineering Support for Control Systems	■							
Dublin San Ramon Services District - Cogeneration Electrical Improvements Project. Design services for a WWTP expansion including the electrical distribution system and cogeneration facility. Included adding a third cogeneration unit, for a total internal generation capacity of over 2 MW. The project also included relocation of the 21 kV main service.	■	■	■				■	■
Cucamonga Valley Water District - Booster Stations 1C and 2C. Design of and construction services for two large booster pump stations. Integration of existing facilities, including two large (600 and 700 hp) well pumps and coordination with Southern California Edison for new service at 1C and modifications to existing service at 2C.	■	■			■	■	■	
Contra Costa Water District - Bisso O&M/Administration Buildings Emergency Generator Project. Design of a standby generator retrofit.	■	■					■	■
Orange County Water District - Groundwater Replenishment System Design. Task leader for Instrumentation & Control (I&C) and Electrical disciplines for ultimate 130 mgd water reclamation project.	■	■	■	■	■	■		■
City of Mountain View - Crittenden (stormwater) Pump Station, Sewage Pump Station, and Whisman (drinking water) Pump Station. Electrical and instrumentation design.	■	■	■		■	■	■	
City of Folsom - Folsom WTP Expansion. Electrical design of multiple phases of expansion for the existing WTP.	■	■		■	■	■	■	■
United Water of Idaho - Columbia WTP. Design/build electrical and I&C design of ultrafiltration membrane treatment process.	■	■	■		■	■		■

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Contra Costa Water District - Treated Water Generators and Seismic Valves Project. Designed addition of engine generators and seismic shutoff valves at treated water pump stations and reservoirs.	■	■			■	■	■	■
Alameda County Water District - Brackish Water Treatment Facility. Designed electrical systems for a major new reverse osmosis desalination project.	■	■	■		■		■	
City of Santa Fe, NM - Transfer Station. Electrical facility design for new solid waste transfer station.	■	■	■					
Metropolitan Water District - Skinner Oxidation Retrofit Program. Discipline task leader for ICE design elements on the extensive retrofit to MWD's 630-mgd Skinner Water Treatment Plant (WTP).	■	■	■		■		■	
City of Salem, Oregon - River Road Wet Weather Treatment Facility. Electrical and I&C design for new high rate clarification and ultraviolet disinfection processes.	■	■	■		■	■	■	■
Contra Costa Water District - Bollman WTP Surface Water Quality (SWQ) Project. Plant upgrade to the 75 mgd Ralph D. Bollman surface water treatment plant.	■	■	■		■	■	■	
Contra Costa Water District - Bollman Emergency Generator Design/Build Project and 5 kV Master Plan. Design/build contract to install two new 2 MW trailer mounted engine generator sets.	■	■	■			■	■	■
Contra Costa Water District – 5 kV Electrical System Upgrade Phases 1 and 2. Bollman plant 5 kV distribution renovation project.	■	■	■			■	■	■
Seattle Public Utilities, Tolt Water Treatment Plant. Design/build of a grassroots 120-mgd treatment plant.	■	■	■	■	■	■	■	
Sultanate of Oman - Salalah Wastewater Treatment Plant (WWTP). Lead electrical design for a new WWTP.	■	■	■				■	
City of San Buenaventura WWRF - Control System Master Plan. Control system master plan consistent with the plant's existing system and long-term goals.				■	■	■		

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National Park Service - Yosemite National Park Electrical Distribution Upgrade. Rehabilitation of the electrical distribution system for Yosemite National Park.	■	■	■				■	■
East Bay Municipal Utilities District - Walnut Creek WTP Upgrades. Detailed electrical design services for major upgrades and capacity expansion.	■	■	■				■	
City San Buenaventura - Wastewater Reclamation Facility (WWRF) Upgrades Project. Upgrades at the reclamation facility.	■	■	■		■	■	■	
Department of Defense - March Air Force Base Electrical Distribution Upgrades. Rehabilitation and reconfiguration of the Base's overhead 12 kV electrical system under a design/build structure.	■	■						■
City of Santa Cruz - Graham Hill WTP Expansion Power Study. Development of planning level report, including power analyses for process improvements at the facility.	■	■	■				■	
Coastside Water District - Electrical System Study. Conceptual level power study and analysis for supporting planned process improvements.	■	■	■				■	
Metropolitan Water District - Diemer WTP Electrical Reliability Study. System analysis and report to evaluate the electrical reliability of the existing electrical system.	■	■	■				■	■
City of Folsom - WTP Control System Upgrade Design/Build. Control system upgrade performed under a design/build agreement.				■	■	■		■
Mercer Island, Washington – Telemetry Strategic Plan. Telemetry system strategic plan for the City's water and wastewater utilities.				■	■	■		
City of San Mateo - Wastewater Plant Supervisory Control and Data Acquisition (SCADA) System Conceptual Master Plan. Master Plan providing a blueprint for development and phased implementation of in-plant SCADA.				■	■	■		■
City of San Bernardino - Vulnerability Assessment. Security vulnerability assesment for the City's SCADA and telemetry system.				■	■	■		■
Santa Ana Watershed Project Authority - Telemetry Master Plan. Site inventories, technology review, and needs assessments.				■	■	■		■
Delta Diablo Sanitation District - Discovery Bay Telemetry System. Radio based telemetry system included design, replacement of RTUs, installation of central computers, system programming, and integration.				■	■	■		■

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City of San Diego - Miramar WTP Expansion. I&C Task leader for the plant expansion, with associated instrumentation and distributed control PLC configured in a redundant, hot-standby arrangement.				■	■	■		■
City of Glendale - Remediation Project. Design and construction of electrical and I&C project elements, including remote telemetry to off-site wells, interlocks to central treatment facility, programmable logic-based controls and instrumentation for liquid and vapor stripping technologies.	■	■		■	■	■		■
City of San Francisco - WTP Design/Build Control System Upgrade. Major control system upgrades at the Harry Tracy WTP and Sunol WTP, which supply drinking water to the City of San Francisco. Project included new PLCs, computer workstations, and networking.				■	■	■		■
City of Santa Cruz - Graham Hill Water Treatment Plant Control System Upgrade. Design/build upgrade, including vendor selection, system design, panel fabrication, coordination of subcontractors, installation, startup, testing, training, and followup/warranty tasks.				■	■	■		■
San Jose Water Company - Montevina WTP, Electrical Upgrades. Installation of upgraded PLC system configured in a remote input/output architecture to minimize new wiring complications.	■	■	■	■	■	■	■	■
City of Livermore - Altamont Pump Station and Reservoir Improvements. Electrical and I&C design for rehabilitation of existing pump station to increase capacity and replace aging equipment.	■	■			■	■	■	
City of Mountain View - Turnouts Controls Design/Build. Project management for design/build project that included controls and SCADA interfaces for water purveyors' turnouts.				■	■	■		■
City of Mountain View - Whisman Pump Station. Project management for the electrical design for rehabilitation of the City's main drinking water pump station. The facility was sited at City's corporation yard and required installation of a large standby generator for both pumping and corporation yard facility loads.	■	■	■	■	■	■	■	■
Diablo Water District - Generator Replacement Project. Project manager for the electrical design for procurement and installation of new on-site diesel engine generator for the District's central facility and Corporation yard.	■	■	■				■	■

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Las Virgenes Municipal Water District - Tapia Water Reclamation Facility, Headworks Improvements Project. Prepared design/build bidding documents for upgrades to the Tapia WRF Headworks.	■	■			■			■
City of Folsom - WTP Control System Upgrade. Control system upgrade executed under a design/build approach, including design of control system architecture and interface to remote telemetry, fabrication/installation of PLC backpanels, testing, training, and start-up.				■	■	■		■
Contra Costa Water District - Randall-Bold WTP Design/Build DCS Upgrade. Project Manager for design/build replacement of the plant's DCS. Developed bid/proposal documents for the designer/builder, defined proposal evaluation method, facilitated project interviews, and participated in the selection of the design/build firm.				■	■	■		■
South Bayside System Authority - Solids Handling Control Room. Design of electrical supply for new scrubber, heat pump, and other ventilation equipment associated with odor control systems at the solids handling building.					■			
South Bayside System Authority - Waste Gas Burner System Rehabilitation. Review and development of new waste gas burner ignition systems.					■	■		