Steven Andrews Engineering
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STEVEN R. ANDREWS, P.E.

EDUCATION:
B.S., Environmental Engineering, Pennsylvania State University

PROFESSIONAL DATA:
Registered Professional Engineer, Civil, States of California, R.C.E. No. 31259

EXPERIENCE: Forty-three (43) years' experience in master planning, design and construction of groundwater supply, water treatment, water pipelines, water storage reservoirs; preparation of master water supply plans, wastewater treatment plants, wastewater reclamation plants, wastewater lift stations, force mains, gravity sewers and water reuse systems for large proposed and existing developments and cities.

District Engineer for Marygold Mutual Water Company, Walnut Park Mutual Water Company, Tract 180 Water Company and Terrace Water Company. Steven Andrews Engineering Provides engineering support for operation and maintenance rehabilitation and upgrades as needed. SAE specializes in field engineering support as part of the water company staff.

Principal Engineer responsible for the design and preparation of construction plans and specifications for two (2) submersible sewage grinder pumps, piping and valving for the Rancho Miramonte SPA Private Sewer Lift Station. The design included a 60-inch diameter precast wet well lined with T-lock Amerplate liner, 3-inch HDPE force main, 3-inch piping and valving, 100 gpm submersible grinder pumps with 5.4 hp motors, and electrical pump controls. All civil and electrical work was design by PENCO.

Principal Engineer responsible for the design and preparation of construction plans and specifications for the Woodland Cemetery Mausoleum Expansion – Phase 1 Sump Pump. The design included a 450 gpm submersible sump pump with a 5 HP motor, 4-inch PVC Piping, 4-inch check valves and Pump Control Panel. All civil and electrical work was performed by Kreuzer Consulting Group.

Principal Engineer responsible for the design and preparation of construction plans and specifications for the construction of the Preserve City of Chino Sewer Lift Station Project. The design consisted of the installation of two (2) 85 hp submersible sewage pump assembly, 16" steel piping and valving, 400 Kw emergency generator assembly, a 2,000 gallon above ground diesel storage tank with fuel transfer pumps, electrical control assembly placed on a 16 foot tall concrete platform and all other appurtenances as required for a complete operable system. Wet well depth was about 40 feet below grade with access ladders from ground to platform.

Principal Engineer for the design and preparation of construction plans and specifications for the storm water pump station for the Puente Hills Intermodal Facility Workman Mill Road Grade Separation Project in La Puente, CA. The project included a 7 cfs storm water pump station that

was poured in place with manway access and ventilation. It included 3 main pumps and 2 sump pumps, 25 horsepower and 7.5 horsepower respectively.

Principal Engineer for the design and preparation of construction plans and specifications for the City of Chino Hills Pine Valley Estates Sewer Lift Station in Chino Hills, CA. The project included a 35 foot deep precast wet well and two submersible sewage pumps, piping, valving, metering, odor control, MCC, standby engine generator, electrical, telemetry and controls for a new development within the City.

Principal Engineer responsible for the design and preparation of construction plans and specifications for two (2) submersible sewage pumps, piping, valving, metering, motor control center, bypass piping, emergency storage manhole, pre-cast concrete wet well, electrical, telemetry and controls for a new sewer lift station. Design included the abandonment of two existing sewer lift station, the installation of a new 8-inch VCP gravity sewer line, a new 4 inch DIP sewer force main. The total construction cost was $1,338,998.55. This project was selected to receive the 2017 APWA BEST Award for the category of Drainage, Water, Wastewater serving a population between 100,000 to 200,000.

Principal Engineer responsible for the storm water pump station engineering design for the City of Fullerton State College Grade Separation Project. The project includes preparation of construction plans and specifications for the storm water pump station portion of the project including civil, mechanical, structural and electrical design. The project included submersible pumps and motors, an above grade electrical room and above grade back-up engine generator.

Principal Engineer responsible for the storm water pump station engineering design for the City of Placentia Melrose Separation Project. The project includes preparation of plans and specifications for the storm water pump station portion of the project including civil, mechanical, structural and electrical design.

Principal Engineer for the design and preparation of construction plans and specifications for the construction of Marygold Mutual Water Company 2,000 gpm Ion Exchange Perchlorate Removal Treatment Plant. The project is treating raw water from existing onsite wells No. 7 and No. 6 that recently encountered some small traces of perchlorate just above the maximum threshold allowed by the Department of Drinking Water. The treated and disinfected water exiting the vessels is being stored in two 2 MG reservoirs and pumps out to the system for distribution. The project included an Evoqua packaged ion exchange treatment plant that consisted of two (2) twelve foot diameter vessels configured to operate in a lead/lag mode. a pre filter for each vessel, disinfection, concrete equipment pads, onsite piping modifications to existing wells and a bypass to waste pond used for initial flush.

Principal Engineer for the design and preparation of construction plans and specifications for the construction of City of Chino 3,500 gpm Ion Exchange Treatment Plant The project included a packaged ion exchange treatment plant, pre-filters, disinfection system, brine and brine waste storage tanks and an operations building. SAE design included architectural, civil, mechanical, landscaping, electrical, HVAC, structural and instrumentation. SAE obtained permits from City of Chino and City of Ontario. SAE assisted the City of Chino with obtaining the California DDW drinking water permit. SAE provided engineering support during bidding and construction and attended field meetings.

Principal Engineer for design for a 4,000 gpm stainless steel casing domestic water well for Walnut Park Mutual Water Company, vertical turbine well pump, electric motor with VFD, piping, valving, waste bypass piping, chlorination facilities and appurtenances. The well pump was installed in a concrete block building with sound attenuation system to reduce noise and provide additional security. In addition, the domestic water well included an aquifer recharge and storage (ASR) design to permit local groundwater injection.

Principal Engineer for construction plans and specifications for a 2,500 gpm domestic water well for Marygold Mutual Water Company, vertical turbine pump, electric motor, sodium hypochlorite disinfection facilities, and appurtenances to replace an existing well that serves the domestic water system. Previously, Steven Andrews Engineering prepared plans and specifications and managed the construction of Well No. 6 drilling and development.

Principal Engineer for the plans and specifications for the construction of a two (2.0) million gallon welded steel reservoir adjacent to the existing two (2) MG Reservoir No.1 for Marygold Mutual Water Company. SAE provide construction management and engineering services for the bidding and construction of the project.

Principal Engineer for construction plans and specifications for a new 0.86 and 2.3 million gallon steel reservoirs to replace existing domestic water tanks for Walnut Park Mutual Water Company. SAE provided construction management and engineering service for the bidding and construction of the project.

Principal Engineer for construction plans and specifications for the installation of a 350 kW Emergency Standby Diesel Generator Assembly with C-15 sound attenuated enclosure assembly on a 24-hr sub base fuel tank with a particulate matter filter and exhaust piping for Tract 180 Water Company**.** The project included installation of three (3) automatic transfer switches and connecting the existing wells and booster pumps to operate during a power outage. Steven Andrew Engineering also prepared a specification for the procurement of the diesel generator assembly and provided management support during bidding and construction.

Principal Engineer for the plans and specifications for the construction of a 3,000 gallon per minute booster pump station for Marygold Mutual Water Company**.** The design included three (3) 1,000 gpm horizontal split case end suction pumps with 50 hp variable speed motors and VFD's, onsite back up emergency generator assembly and bypass assembly adjacent to the existing well building.

Principal Engineer for plans and specifications for the construction of 4,680 lineal feet of 8" PVC C900 domestic water main for Tract 180 Water Company**.** This project was installed in four (4) phases to facilitate the construction activities. The water main replaced two old 6 inch steel water mains that were located outside of the street right of way. Steven Andrews Engineering provided management support during bidding and construction.

Principal Engineer for plans and specifications for the construction of 9,600 lineal feet of 24" PVC C905 domestic water main within street right of way for City of Chino. The pipeline project consisted of the installation of valves, blow offs, air-vac valves, thrust blocks, fire hydrants and street pavement replacement. The pipeline is included with the 3,500 gpm City of Chino the

Eastside Water Treatment Facility. SAE provided engineering support during bidding and construction.

Principal Engineer for the design of the Yorba Linda Water District Bastanchury Reservoir and Booster Pump Station. The design includes a new 2.0 million gallon above grade welded steel tank, a 2,000 gpm booster pump station with pumps and electric motors, a 1,500 gpm engine driven pump, an on-site chlorine generator, piping, valving, controls, motor control center and SCADA system. The design includes integration with the existing reservoirs and pump station and upgrade of the existing facilities. SAE will also provide construction management services.

Principal Engineer for domestic water, sewer and reclaimed water engineering studies for the northern and southern half of the Preserve for City of Chino. SAE assisted with the preliminary plan that established the alignment and preliminary sizing for the water, reclaimed water, and sewer lines built in the arterial and collector streets.

Principal Engineer for previous studies, report, plans, and available information relative to the existing and proposed ultimate master planned domestic water system in the vicinity of the TVOL project for City of Lakeview. SAE developed baseline facilities along with scoping level capital costs and schedule for the TVOL domestic water system utilizing construction of ultimate domestic water facilities as outlined in the October 2007 EMWD Lakeview Master Plan. Some phasing costs were already developed in the plan. Based on this previous work and understanding of EMWD policies, baseline facilities needed for Phase 1 of TVOL only was developed for an interim period to minimize initial construction costs. Based on the above work, an exhibit outlining proposed interim facilities was also prepared.

Project Manager responsible for preparation of master water and sewer plans for the City of Brawley, Walnut Park Mutual Water Company, El Toro Water District, Trabuco County Water District, City of Calexico, Rancho Matilija (Ojai, California), Fontana Special Area Plan, City of Pismo Beach, and the Orange County Water Districts' Green Acres Predesign Study. Studies included hydraulic network analysis involving computer modeling technique, engineering economic analysis and development of an implementation plan. Some studies also included preparation of water supply planning and wastewater treatment plant studies.

District Engineer for Tejon-Castac Water District responsible for master plan studies, design and plan checking and general district engineering support. The District operates domestic water, wastewater and non-potable water systems. The District facilities include a domestic water well, pipelines and reservoir, a reclaimed/raw water system including a California Aqueduct turnout, storage tank and pipelines, 33 inch and smaller, and a tertiary wastewater reclamation plant and collection system. Also designed a new membrane filtration domestic water treatment plant and upgraded the existing tertiary wastewater treatment plant.

Principal Engineer responsible for the preparation of plans for the Long Beach Water Department Cast Iron Main Replacement Program. Project includes preparation of construction plans for 6-inch, 8-inch and 12-inch ductile iron water lines. Prepared plans to replace 20,000 lineal feet of pipeline in fiscal year 96/97, 30,000 lineal feet of pipeline in fiscal year 97/98 and responsible for replacing 60,000 lineal feet in fiscal year 98/99.

EMPLOYMENT HISTORY:

1989 to Present	President, Steven Andrews Engineering
1985 to 1988	Founding Principal, IWA Engineers
1979 to 1985	Project Manager, PRC Engineering, Inc.
1974 to 1978	Project Engineer, The Chester Engineers

PROFESSIONAL AFFILIATIONS:

Orange County Water Association, President 2001
Water Environment Federation
American Water Works Association

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