

Proposal to Provide Professional Engineering Services

Beaumont Mesa Lift Station and Forcemain Project





January 10, 2022

Table of Contents

Section A. Cover Letter	1
Section B. Introduction/Information	3
Section C. Approach	7
Section D. Firm Profile1	10
Section E. Location1	11
Section F. Organization, Key Personnel, and Resumes	11
Section G. Project Experiences1	13
Section H. References1	14
Section I. Scope of Services1	15
Section J. Cost Proposal2	20
Section K. Additional Information2	20
Section L. Insurance/ Certification	20
Appendix A. Project Team Resumes	\1
Appendix B. Detailed Project Experience	31
Appendix C. CEQA Technical Study Detailed Scopes of WorkC) 1
Appendix D. Project Schedule)1



Corporate Headquarters

3788 McCray Street Riverside, CA 92506 T: 951.686.1070

Murrieta Office

41870 Kalmia Street #160 Murrieta, CA 92562 T: 951.686.1070 January 10, 2022

Dustin Christensen, PE Public Works Department City of Beaumont 550 E. 6th Street Beaumont, CA 92223

RE: Request for Proposal for Professional Engineering Services for Beaumont Mesa Lift Station and Force Main Project

Dear Mr. Christensen:

Enclosed is Albert A. Webb Associates (WEBB) proposal to provide engineering services for the Beaumont Mesa Lift Station and Force Main Project for the City of Beaumont (City). The City needs a trusted and experienced technical team to manage and lead this project.

The WEBB Team fully understands that the Beaumont Mesa Lift Station and force main is a critical component of the City's overall sewage collection system and that this lift station needs a high level of reliability and redundancy to prevent sanitary sewer overflows.

In selecting the WEBB Team, you will have a trusted local partner with the technical experience in lift station design and assessment to efficiently develop the right approach for the lift station and force main alignment upgrade options.

WEBB's proposal delves into the critical project issues providing the City a clear path to meeting project objectives, illustrates our approach, and lays out a detailed scope of work to successfully complete the project.

Below are some specific valuable characteristics this WEBB Team delivers to this project:

Detailed Project Experience and Expertise: Our team has very specific and detailed experience with this project that will be invaluable to the City. We performed an initial evaluation of the Mesa Lift Station as part of a sewer study completed for Calimesa. We have also been working on PLC and SCADA upgrades and this and other City lift stations. Our experience designing and overseeing construction of the City's Brineline along a significant portion of the alignment allows our team to jump start this project.



Brief Project Understanding and Approach: WEBB has reviewed the scope of work, documents provided, visited the site and understands the critical nature of this facility. The Mesa Lift Station and Force Main are critically important because they handle all of the sewer flows north of the 60 Freeway and west of the Interstate 10. The current facilities lack sufficient redundancy and storage and must operate nearly perfectly to avoid sewer backups and overflows. During certain high flow conditions, the Mesa Lift Station has less than 30 minutes of storage volume, which creates a very precarious situation for the City's Operations Staff.

A key element of our project approach is to work closely with City Staff in determining the best approach for the lift station modifications, additional storage, and the best alignment for the force main considering available right-of-way and Caltrans permitting requirements.

Experienced Team: Our core team has the experience on similar sized facilities under similar requirements. The WEBB team is intimately aware of the current issues at the lift station and the challenges for the alignment based on our recent experience with several recent City projects. We will need little time to get up to speed on the intricacies of this project. We understand how to unravel and investigate older facilities, and we understand how to reduce risks and challenges on just this type of project.

Efficient: The same team has worked together seamlessly and has similar experience. With our knowledge of the current status, we avoid unnecessary tasks and quickly assess the lift station condition and force main alignment options. We will work together to eliminate unnecessary tasks. In addition, our team has experience with equipment procurement strategies and construction delivery alternatives to achieve the best product at the best price.

Commitment: The City will benefit from a team committed to identifying the best alternatives, developing the preliminary designs, and determining the most efficient procurement and implementation strategy for the best value. Our team is capable of launching straight into this project, will be responsive to your requests, and will provide expedited completion.

On behalf of our entire project team, I would like to thank the City for this opportunity to submit our proposal for this very important project. We look forward to discussing our team, our scope, and ideas with you in greater detail.

Our team members will remain available throughout the duration of the project. As a result, you can be confident your sewer system improvements will be successfully completed in a timely and professional manner. We look forward to the opportunity to continue working together. If you have any questions regarding our proposal, please contact me directly at 951.830.3389, or by email at brian.knoll@webbassociates.com.

Our Cost Proposal has been submitted separate from this proposal per the City's request.

WEBB acknowledges the receipt of Addendum 1.

Sincerely,

Brian Knoll, PE - Chief Operations Officer

Work Phone: 951.248.4279 Mobile Phone: 951.830.3389 brian.knoll@webbassociates.com

Section B. Introduction/Information

Legal Name: Albert A. Webb Associates

Legal Form of Company: Corporation

Representative: Brian Knoll, PE

Chief Operations Officer 3788 McCray Street Riverside, CA 92506

951.248.4279

California Business License Number: C0262218

Department of Industrial Relations (DIR): 1000006209



Above Grade Piping at Beaumont Mesa LS

Project Understanding

The City of Beaumont (City) is requesting a proposal for the preparation of designs of upgrades for the Beaumont Mesa Lift Station with new pumps, flow meters, piping and additional wet well volume for additional emergency storage and a new 16-in diameter force main along Potrero Blvd and Western Knolls Avenue. The City's goal is to install this critical infrastructure to meet the current and near-term needs of the City's sewer collection system. According to the addendum, the realignment of the existing 12-in diameter force main has already been designed to 95% and will be differed until the Western Knolls Avenue is realigned.

The City service area covers approximately 26 square miles of the western portion of Riverside County bound by Calimesa, Cherry Valley, San Jacinto, and Banning. Wastewater generated in the City's service area is collected and conveyed to the treatment facilities. The City's sewer system consists of approximately 175 miles of gravity sewer pipelines, 20 miles of sewer force main pipelines, and nine active lift stations. The Beaumont Mesa Lift Station and Force Main were constructed in 2008 to convey wastewater from the northwest side of the City to the WWTP. Based on the data provided, it has been confirmed that an active 12-inch diameter force main crosses State Highway 60 along its alignment to the WWTP and there is a 16-in diameter force main paralleling a portion of this alignment along Western Knolls Avenue, under the 60 Fwy and then to the WWTP.

WEBB assisted the City with their Wastewater Treatment Plant Expansion and Brine Line planning, design, environmental clearances, permitting and construction and is familiar with the City's wastewater system and facilities. Specifically, our experience with the brine line alignment selection between the Beaumont Mesa Lift Station and the Wastewater Treatment Plant will be invaluable for the design of the proposed force main alignment.

Previously, WEBB has completed the Country Village Wastewater Capacity Study that reviewed upstream development, ultimately a tributary area to the Beaumont Mesa Lift Station and identified preliminary evaluation and data requirements for the lift station. WEBB understands how important this facility is to the City's collection system and that the lift station reliability and emergency storage are critical to prevent major sanitary sewer overflows. During high flow conditions, the Mesa Lift Station has less than 30 minutes of storage, thus creating a very precarious situation for the City's Operations Staff.

For the environmental clearance, most of the proposed alignment of the 16-inch force main was evaluated as part of the preferred alignment for the Brine Pipeline, which was analyzed in the Initial Study and Mitigated Negative Declaration for the Beaumont Wastewater Treatment Plant Upgrade/Expansion and Brine Pipeline. The Beaumont City Council adopted the mitigated negative declaration and approved the project on March 20, 2018.

For addenda to existing CEQA documents, the following state guidelines apply: State CEQA Guidelines Section 15164(b) states:

"An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred."

An addendum would avoid the requirement for the AB 52 consultation and potential delays from this process.

Management Philosophy

WEBB understands the absolute need for strong project management. Our team will factor in all critical issues associated with schedules. Communication and coordination between an engineering consultant and the City is paramount to each project. To guarantee continuous and effective communication, **Brad Sackett**, our project manager is assigned to serve as the primary point of contact to the City and **Brian Knoll**, our principal-in-charge will be monitoring the process as a whole. This will ensure a constant and effective way of communication resulting in strong schedule control and meeting design milestones.

WEBB's project manager will be responsible for the day-to-day project and technical management of the project including:

- Facilitating frequent and consistent communications with the City
- Implementing the overall delivery plan
- Managing the overall scope, schedule, and budget
- Implementing the QA/QC Program
- Weekly e-mail updates and monthly status reports on progress

The project manager will be responsible for facilitating final decisions by the City, coordination, management, communicating with the project team and the City Project Manager, and preparing and reviewing design deliverables.

Brad Sackett led the design of the City's Brineline and will lead the force main design. Shane Bloomfield will take the role of project engineer for the lift station evaluation and design work and will be supported by Dave Algranti, our chief design engineer, SKM, will lead electrical and SCADA design, our design sub-consultant and Klienfelder will lead structural design. This is the same team that worked together on the City's Wastewater Treatment Plant Upgrade project.

Schedule Management

A preliminary schedule has been prepared and included in the proposal. In collaboration with the City, the project schedule and milestones will be evaluated and modifications will be made to set the final baseline schedule during the initial project kick-off process. The baseline schedule will be monitored and tracked by our project manager to maintain the project milestones and manage critical path items. A tracking schedule will be provided with monthly updates and all schedule variances identified. Actions required to correct schedule deviations will be developed and implemented by the team. The project schedule is an effective management tool when developed and maintained to guide the design team through the tasks required to successfully complete a project. WEBB uses Microsoft Project software to schedule and track project tasks.

Key components of maintaining the project schedule revolve around the following actions between the WEBB team and the City:

- 1. Close coordination with the City Project Manager.
- 2. Effectively and thoroughly addressing City comments and concerns throughout this project.
- 3. Early coordination and follow up with SCE if a new electrical service is needed.
- 4. Early coordination and follow up with Caltrans for the parallel encroachment permit application.

WEBB will perform initial coordination with the agencies which establishes the basis for completion of these items through the preliminary and final design phases. The project manager continually reviews the project schedule, project budget, and work completed to date. The project manager will then discuss the results of this review with the City and provide updates every week. If necessary, corrective measures will be implemented and the project schedule updated.

Cost/Budget Management Plan

The proposed project budget will be prepared based on the project RFP requirements. Our project manager will track the final budget compared to the tasks completed and costs-to-date, and will identify any project cost variance at least monthly. Corrective actions will be taken to maintain the project budget. If changes to the scope and budget are deemed necessary, our project manager will work with the City to justify the need and clearly define the impacts.

Issue Management/Risk Management

The tracking of project issues and management of risks is facilitated through a tracking log and available to the City and the project team. With issues being raised through e-mail, phone calls, and meetings throughout the duration of the project, having a centralized document ensures project impacts are identified, logged, assigned, analyzed, acted upon, and addressed as part of the design process.

Communication Plan and Management

Communication between all team members and City Staff is critical to its success. A key differentiator between our project team and our competitors is our physical locations and our ability to meet with City Staff and stakeholders quickly. Whether it is City Council meetings, a community workshop, or a strategy meeting with the City, representatives from the Project Team can be there within 30 minutes. We also have full access through Microsoft Teams to facilitate meetings in a timely and cost effective manner.

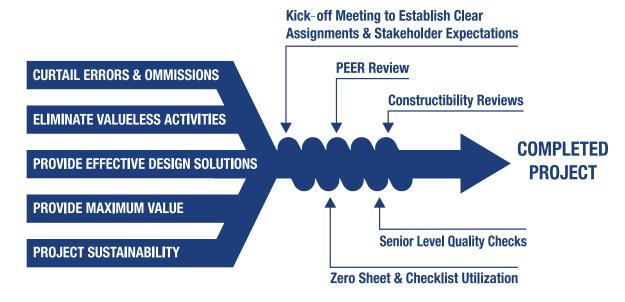
Quality Management

WEBB has established an extensive in-house Quality Assurance/Quality Control (QA/QC) Program that all project managers must conform to for all of our projects. This program is overseen by our chief operations officer, who continually monitors compliance with our in-house QA/QC Program. Our team utilizes WEBB's detailed approach to quality assurance and quality control. It demands our principal leaders rigorously scrutinize every critical aspect of a project. Our quality assurance begins with developing a close and continuous line of communication between the WEBB Team and the City. Our past experience indicates good communication is a critical element to project success. Under our project protocol, we keep an organized directory of all project-related communication, meeting minutes and action items, documents, images, data, and plan sets which allows us to respond quickly to requests. We will seek the input of operations and engineering staff throughout the project development to ensure the project meets the needs of the client.

The quality control for all projects is embedded in every stage of the project development. Our QA/QC Program is designed to enhance the cooperation and synergy between the disciplines inhouse, our design teams, subconsultants, and the City. Our entire staff is part of the QA/QC Program and each plays a significant role in its implementation. As an underlying principle of our QA/QC Program, WEBB will utilize senior level staff to review the work product to utilize the experience and knowledge to each aspect of the project. By bringing these disciplines together early in the project, we are able to recommend the best project alternative and develop a list of critical design issues that need to be addressed as detailed design is implemented.

After the preliminary design has been developed, the project will receive a comprehensive internal peer review prior to submittal. The peer review panel consists of WEBB professionals apart from the design team. This peer review will be utilized to ensure the preliminary design is clear, concise, comprehensive, and most importantly, meets the objectives of the City. Final approval at 100% is achieved only after the associate responsible for each portion of the project signs off on our internal QA/QC approved document, known as the "Zero Sheet", prior to submittal to the City.

QA/QC Process



Section C. Approach

Based on review of available plans for the force mains, the design intent appears to be for both the 12-inch and 16-inch force mains to convey the ultimate flows to the WWTP. There were several places that the force mains would be inter-tied for redundancy and future maintenance purposes.

WEBB will confirm the exact end point of the existing 16-inch diameter force main along Western Knolls Avenue and confirm what other proposed appurtenances were previously constructed by on-site inspection and potholing. WEBB will also confirm whether the existing 16-in diameter force main is currently active and the configuration of all existing force main appurtenances and vaults to ensure they are suitable for the proposed 16-in diameter force main.

The Beaumont Mesa Lift Station receives flow from multiple lift stations and then pumps this sewage to the WWTP. Based on previous discussions with the City, none of the available as-built plans accurately reflect the existing condition of the lift station. As part of the wastewater master plan, Akel and Cannon prepared some updated as-built drawings. WEBB's first task will be to thoroughly review those as-built drawings and other available data as part of our on-site verification of existing facilities. WEBB will supplement this information to document the existing condition such that there is a definitive set of as-builts to be used as the basis of the redesign work.

The WEBB team will then assess each of the lift station components; (wet well, emergency storage, pumps, valves, piping, electrical, emergency genset, SCADA, electrical service connection, site paving and access, etc.), determine the ultimate pump sizes/HP's and make recommendations for the ultimate facility and appropriate phasing for this work. WEBB will review the operating points of the existing multiple low flow and one high flow pumps currently installed and compare against the system head curves for the 12-in force main, the 16-in force-main operating both together and separately. Operating outside the recommended pump curve may be the cause of wear and tear on the pumps. If a new SCE service connection is required, the application will be submitted to SCE as quickly as possible to minimize the impact to the project schedule. The WEBB team will also develop a carefully thought out cut over plan for the electrical service to essentially eliminate or minimize any service interruptions for this critical facility.

Our team includes **SKM**, **Inc.** who is familiar with the electrical systems and SCADA operation systems of the City's multitude of lift stations and is currently working on some interim upgrades to the existing lift station's electrical and SCADA system.

It is understood that the emergency storage volume at the lift station is to be expanded to provide additional emergency storage. WEBB will review the findings of the previous work in the master plan and confirm with the City which approach will be implemented. WEBB has included **Kleinfelder** on our team to prepare the necessary structural design/details for the additional emergency storage.

Currently, the area fronting the lift station is unimproved. WEBB will propose an access driveway to the existing pavement in Potrero Blvd. WEBB also has landscape architects on staff who can propose low maintenance improvements to area around the lift station owned by the City to screen the lift station and minimize maintenance costs. Ultimately, the City may want the lift station to blend into the surrounding development.

The City could condition future development to appropriately landscape around the lift station consistent with their future landscaping scheme.

This project will design a parallel 16-in force main approximately 6,200 If from the Beaumont Mesa Lift Station along Potrero Blvd and Western Knolls Avenue to the connection point near the front of an existing mini storage facility.

This location is based on the available plans for the force mains. WEBB will leverage its previous work on the brine line design for this project. WEBB has identified some key issues along this alignment, confirming the connection point to the existing 16-in force main on Western Knolls, confirming the location/configuration of any of the existing appurtenances along this alignment, confirming the location of the existing 12-in force main, and permitting the proposed 16-in force main within Caltrans jurisdiction. There are some major regional gas and petroleum lines within this alignment which will be identified as part of the utility research. WEBB will coordinate with these major utilities for both potholing and construction plans.

Based on review of available plans for the force mains, the design intent appears to be for both the 12-in and 16-in force mains to convey the ultimate flows to the WWTP. There were several places that the force mains could be intertied for redundancy and future maintenance purposes, consistent with the original design concept. WEBB has the original construction plans for the force mains and



Location of 12 and 16 in diameter force mains prior to crossing the 60 Fwy





(Left) Marker for Questar 16-in pipeline along the realignment of Western Knolls Avenue

(Right) Existing Force Main appurtenance along Western Knolls Avenue

will confirm the exact end point of the existing 16-in diameter force main along Western Knolls Avenue and confirm what other proposed appurtenances were previously constructed by on-site inspection, utility locating and potholing. It will also be confirmed whether the existing 16-in diameter force main is currently active, however, it is anticipated that the 16-in diameter force main is not currently active.

WEBB will be able to use previous data developed for the brine line associated with surveying, mapping, potholing, and geotechnical investigation for this project. WEBB will only have to supplement this work for this proposed project, saving the City time and money on these tasks. Updated aerial will be inserted into the existing mapping files as recent improvements along Potrero Blvd need to be included. Some additional potholing will also be completed by the team.

WEBB's approach to environmental compliance for the proposed 16-inch force main and improvements at the Mesa Lift Station is to prepare an Addendum to the Initial Study and Mitigated Negative Declaration for the Beaumont Wastewater Treatment Plant Upgrade/Expansion and Brine Pipeline. Most of the proposed alignment of the 16-inch force main was evaluated as part of the preferred alignment for the Brine Pipeline, which was analyzed in the Initial Study and Mitigated Negative Declaration for the Beaumont Wastewater Treatment Plant Upgrade/Expansion and Brine Pipeline (WTP MND), which was adopted March 2018. Although the RFP provides the Caltrans CEQA/NEPA document for their State Route 60 Project, we believe, the Proposed Project fits best using the city's MND as the foundational CEQA document for the Proposed Project. We propose to provide

an Addendum pursuant to section 15164 of the CEQA Guidelines to the City's WTP MND. The benefit of the Addendum is that no Public Review period is needed, and AB 52 Tribal Consultation is not triggered, thereby saving the City time and money. Updated technical studies for air quality/ greenhouse gas emissions, biological resources, and cultural resources will be prepared as further described in our scope of services in Task 4.1 and Task 4.2 of this proposal.



Appurtenances for ex. 12-in Force Main along Potrero Blvd

Communication will be key in the early stages of

this project as the investigations proceed, the alternatives are analyzed, and results are documented in the technical memorandum. WEBB proposes that key personnel from the City and the WEBB team are included in weekly coordination meetings to keep the investigation process on track and obtain input from City Staff. In our technical memorandum, WEBB will outline the opportunities and challenges for the project in terms of CEQA documentation, jurisdictional delineations, regulatory permits, encroachment permits, any right-of-way or easement requirements, existing force mains, lift station upgrades and emergency storage expansion and summarize our recommendations for the final design phase.

WEBB has assembled a design team very familiar with the project, the area and these types of projects. Brad Sackett, PE will be the overall project manager leveraging his experience with the planning, design, and construction support of the brine line. Brad will also take the lead on the force main alignment selection and design aspects of the project. Brad will be supported by Brian Knoll, PE as our principal in charge. Brian was intimately involved in the WWTP upgrades and brine line project as overall program manager for these two projects.

For the lift station, **Shane Bloomfield**, **PE** will head up the evaluation and design efforts. Shane was the lead engineer on the civil design for the WWTP project and has over 20 years of experience with pump station and lift station design. Shane will be supported by **Dave Algranti**, **PE**, WEBB's Chief Design Engineer, with over 40 years of experience on pump station and lift station design.

Cheryl DeGano will lead up the environmental documentation for the project. Cheryl was the lead environmental analyst for the brine line CEQA documentation, and she will leverage her knowledge and experience from that work. Cheryl will be supported by Stephanie Standerfer, WEBB's environmental department director. Autumn DeWoody will track the permitting on the project, again leveraging her area-specific knowledge from the permitting for the brine line project. WEBB's same survey team will prepare the mapping and topography, building on the mapping already completed for the brine line project.

Mark Jeppsen from SKM, Inc. will be the lead electrical engineer and will build on his specific experience with on-going interim improvements at the Beaumont Mesa Lift Station and his experience with the City's WWTP work. SKM also provided electrical design and SCADA programming for the WWTP Upgrade Project and has extensive experience with the City's facilities, standards and operating procedures. Converse Consultants will provide the geotechnical investigation, leveraging their specific work on geotechnical work for the brine line project. Kleinfelder will provide the structural design of the emergency storage and wet well expansions, similar to their work on the WWTP upgrades and the brineline vault structures. C-Below will provide potholing services, similar to those provided as part of the brine line project.

Overall, this team has worked together on many projects and specifically for the City's Brine Line and WWTP projects and is committed to successfully completing these upgrades to the City's critical sewer collection system infrastructure in a timely and professional manner.

Section D. Firm Profile

Albert A. Webb Associates (WEBB), a **Corporation**, has consistently provided civil engineering services to public sector clients throughout California since 1945. This means our clients receive the benefit of a financially stable firm that has withstood many diverse economic times. WEBB is a mid-size consulting firm with offices in Riverside and Murrieta to best meet the needs of all of our clients. WEBB has over 165 associates and the in-house expertise to address the needs of cities, water and special districts, counties, regional agencies, and our partner firms within the industry. WEBB offers a broad range of services to meet the objectives of our clients which include project development, planning, design, entitlement, funding, permitting, construction management, and inspection.

Service Departments

- Water Resources
- Construction Management and Inspection
- Land Development Engineering
- Traffic and Transportation Engineering
- Planning and Environmental
- Land Survey and Mapping Services
- Landscape Architecture
- Geographic Information Systems

Owner and Principal Parties

- Matthew Webb, PE, TE, LS President/CEO
- Scott Webb Senior Vice President
- Steve Webb Director of Risk Management
- Brian Knoll, PE Chief Operations Officer
- Kevin W.M. Ferguson Chief Development Officer
- Todd Smith Chief Financial Officer
- Sam Gershon, RCE Senior Vice President
- Scott Hildebrandt, PE Senior Vice President
- Bruce Davis, PE Senior Vice President
- Dilesh Sheth, PE, TE Senior Vice President
- Stephanie Standerfer Vice President
- Jason Ardery, PE, TE, LLS, CPESC, QSD Vice President
- Joseph Caldwell, PE, CPESC, CPSWQ, QSD, QSP, CFM - Director
- Emily Webb, J.D. Senior Land Use and Entitlement Specialist

Firm Specifics

1945

Founding Year



Corporate Headquarters:

3788 McCray Street Riverside, CA 92506 951.686.1070 165

Number of Employees



Palm Desert Office:

74967 Sheryl Avenue Palm Desert, CA 92260 T: 951.686.1070 **53**

Professional Licenses



Murrieta:

41870 Kalmia Street #160 Murrieta, CA 92562 951,686,1070

Section E. Location

Office Location: 3788 McCray Street, Riverside, CA 92506

Phone Number: 951.686.1070

Section F. Organization, Key Personnel, and Resumes



Bradley A. Sackett, PE Senior Engineer Project Manager Highlights

- Twenty-one years of pertinent experience with WEBB
- Project Manager for the City's Brineline project
- Extensive experience on water and sewer system design and implementation
- Strong technical background on lift station design
- Long-standing relationship with our subconsultants

Brad will serve as Project Manager and will be the City's primary point-of-contact for the project. Brad will act as an extension of the City to ensure a successful outcome of this project from beginning to end. This will include a strict adherence to the project schedules and QA/QC standards that will be developed and maintained at the project's onset. Brad will be supported by a highly qualified project team with experience on similar well projects. The experience of this team will improve overall project management and provide very effective and efficient services.

Our assigned project team consists of senior level professionals who will perform the required tasks for the City. By taking this hands-on approach, an experienced professional always has in-depth and intimate knowledge of each project task. This improves overall project management, reduces the opportunity for costly mistakes and delays, and allows our staff to provide very effective and efficient service to you. Coordination is critical for your project. Every project assigned to WEBB includes principal involvement.

Brad will be the lead on the force main for this project and will supported by our Key Project Engineers, **Shane Bloomfield, PE** and **David Algranti, PE**. Shane and Dave will assist with key components of the lift station as they have worked on multiple lift station projects. WEBB's Principal Environmental Analyst, **Cheryl Degano**, will lead the environmental documentation for this project. Our team members are readily available to you and remain accessible throughout the project to the extent required to successfully complete it.

We have also fortified our project team with our specialty subconsultants - **SKM**, **Inc.** will provide electrical engineering services, **C Below** will provide potholing services, **Converse Consultants** will provide geotechnical engineering services, and **Kleinfelder** will provide structural design services. These subconsultants have worked with the WEBB Team on a variety of water and sewer infrastructure projects throughout Inland Southern California.

Detailed resumes for key WEBB project team members can be found in **Appendix A**.

Organizational Chart

We have assembled a project team of highly experienced engineering and technical personnel with extensive experience in lift station design and lift station condition assessment.



() LEADERSHIP

Brian Knoll, PE

Chief Operations Officer

Principal-in-Charge

C 65690

Experience: 20 Years

Bradley Sackett, PE

Senior Engineer **Project Manager** C 65862

Experience: 21 Years

PROJECT ENGINEERS

Dave Algranti, PE

Chief Design Engineer
Technical Advisor
C 26817

Experience: 46 Years

Shane Bloomfield, PE

Senior Engineer

Project Engineer

C 77435

Experience: 19 Years

ENVIRONMENTAL TEAM

Stephanie Standerfer

Vice President
CEQA Manager

Experience: 22 Years

Cheryl DeGano

Principal Environmental Analyst

CEQA Analysis

Experience: 17 Years

Autumn DeWoody

Senior Environmental Analyst Water Audit Validator

Experience: 19 Years

SUBCONSULTANTS

Electrical EngineeringSKM Inc.

Geotechnical Engineering Converse

Consultants

Structural
Design
Kleinfelder

Potholing Services C-Below Biological Resources Wood Cultural Resources Æ, Inc.

Section G. Project Experience

For detailed project experience, please refer to Addendum 2.



Sewer Bond Projects (Partial List**)**

Jurupa Community Services District

- Florine Sewer Lift Station 3,500 LF 10-inch diameter Gravity Main and Force Main
- Regional Sewer Lift Station 7,500 GPM, 750 HP Capacity
- Force Main and 2,200 LF of 27-inch diameter Gravity Sewer

Client Contact: Eddie Rhee, 951.685.7434 x 118, erhee@jcsd.us



Clay Street Lift Station Replacement

Jurupa Community Services District

- New 700 GPM, 25 hp pumping units w/ a 100 kw standby generator @ Linares LS
- New 18-inch diameter regional force main segment within Clay Street
- New 8-inch diameter gravity sewers within Clay Street and General Drive
- Two new 12-inch diameter waterlines within Clay Street

Client Contact: Eddie Rhee, 951.685.7434 x 118, erhee@jcsd.us



Gateway of the Americas, Sewer Lift Station No. 2

County of Imperial - Public Works

- Replacement of two 5-hp submersible sewage pumping units
- · Wet Well Dry Pit
- New 740 GPM pumping units, new control building

Client Contact: John Gay, 442.265.1836, johngay@co.imperial.ca.us



"B" Street Lift Station Upgrades

City of Imperial

- This project constructed a dry pit adjacent to the existing wet well with new nonclog Gorman-Rupp sewage pumps
- Project included oxygenation equipment to reduce odors, new shade structures, and upgraded electrical systems

Client Contact: Jackie Loper, 760.355.1152, jloper@cityofimperial.org



River Road Lift Station

Golden State Water Company

- 60-inch diameter jacked and bore casing for 42-inch HDPE influent pipeline
- 35-FT deep pre-cast manhole with sluice gate for emergency shutoff
- 35-FT deep diversion structure to direct flows to any of the three wet well cells

Client Contact: Eddie Rhee, 951.685.7434 x 118, erhee@jcsd.us



Regional Lift Station Improvements

Jurupa Community Services District

- Facility is a wet well dry pit design with an ultimate capacity of 4,500 GPM
- Involved with all aspects of planning, phasing, design, and construction of facilities
- Approx. 3.5 miles of 24-inch dia. PVC pipeline through existing developed streets

Client Contact: Eddie Rhee, 951.685.7434 x 118, erhee@jcsd.us

Section H. References

The City will benefit from WEBB's approach to client service. Client service is our number one goal. WEBB's reputation for superior quality work, integrity, and long-standing client relationships is a direct result of our industry proven capabilities and experience. We are proud of the name WEBB as it has become synonymous with quality experience and customer service. We encourage the City to speak with your staff who have worked with our firm or to call upon our references to truly understand the commitment we all make to each of our clients and their projects.

Contact Person/Title	Agency	Contact Information
Eddie Rhee, PE Engineering Manager	Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715	951.685.7434 x118 erhee@jcsd.us
John Gay Deputy Director of Public Works	County of Imperial - Public Works 155 South 11th Street El Centro, CA 92243-2803	442.265.1836 johngay@co.imperial.ca.us
Sambo Lay Civil Engineer	Eastern Municipal Water District 2270 Trumble Road Perris, CA 92572-8300	951.928.3777 lays@emwd.org
Jackie Loper Director of Community Development	City of Imperial 420 South Imperial Avenue Imperial, California 92251	760.355.3336 jloper@cityofimperial.org
Jeff Sims General Manager	Rubidoux Community Services District 3590 Rubidoux Boulevard Riverside, CA, 92509-4525	951.684.7580 jsims@rcsd.org

Section I. Scope of Services

WEBB acknowledges the Scope of Work in the RFP and has summarized our proposed scope below.

Task 1 - Project Management

Kick-Off Meeting – WEBB will organize and conduct a project kick-off meeting with the City upon receipt of notice to proceed. The meeting will focus on confirmation of the scope of work, schedule, identify key interface points with the City, methods for communication, points-of-contact, standards and design preferences, permitting requirements, and a review of concepts to refine site layout. In addition, WEBB will review critical path items such as site acquisition and finalize our approach in close coordination with City Staff. WEBB will provide the City with a draft agenda prior to the meeting and distribute meeting minutes summarizing results of topics discussed and action items.

Electronic Project Schedule – WEBB will prepare a baseline schedule, update the schedule monthly, and submit the updates on a monthly basis for City use, review, and comment. The schedule will include all submittals and any required coordination with City staff.

Weekly Project Status Updates – WEBB will provide the City project manager with a brief weekly update summarizing the progress made on the project, as well as any schedule or budget issues. If project issues require discussion, WEBB will coordinate a conference call/meeting with the City's project manager to ensure the project issues are clearly communicated and resolved.

Monthly Coordination/Progress Meetings – WEBB will organize project meetings or conference calls with the City's project manager. During the first phases of the project, the meetings are intended to be every two weeks to maintain focus on the investigation. Once the project gets into the design phase, the meetings will be monthly. The meetings will focus on project status, action items, schedule, and budget. WEBB will provide the City with a draft agenda prior to the meeting and distribute meeting minutes summarizing results of topics discussed and action item updates. The meeting minutes will serve as the monthly report to the City and will be submitted as one hard copy and one electronic copy (pdf). Any out of-scope items will be clearly identified to the City and WEBB will seek approval prior to proceeding.

Design Workshops – WEBB will conduct presentations to City Staff at the end of each major task. This will be at the Preliminary Design phase, the 60% design and 90% design to discuss the project details, construction schedule, costs, and constraints, and receive feedback from City Staff on the design approach and follow up on previous comments. The 60% and 90% will include a field walk to confirm site conditions are consistent with the design approach.

Quality Assurance/Quality Control – WEBB will develop a quality assurance and quality control program for the project. WEBB uses a checklist approach for pipelines and lift stations based on our experience with design for other agencies. Other documents and design calculations will be reviewed and signed off by senior staff prior to submittal. The program will include constructability and operational reviews by both WEBB and City staff.

Coordination With Other Agencies – WEBB will coordinate any required meetings with the City and other agencies. For this project, this effort is anticipated to be focused on the Caltrans if an encroachment permit is required. We do not anticipate permits from Riverside County Flood Control as this drainage is improved and not within facilities that RCFC maintains. Other agency coordination

will be SCE for an electrical service plan. On the Environmental side, resource agencies such as Cal Department of Wildlife may be involved depending upon the findings of the jurisdictional delineation and the project footprint. Typically, coordination with other agencies such as existing utilities, South Coast Air Quality Management City, or Riverside County Flood Control and Water Conservation City can be handled with direct correspondence, emails, or telephone conferences. The City's project manager will be included on all communication to ensure the City is fully aware of any issues.

Task 2 - Data Gathering and Analysis

Data Gathering – WEBB will assemble all pertinent data related to the project including the WWMP, the hydraulic model, current operational data, and other related drawings and mapping from the brine line project and Caltrans recent Potrero Bridge project. WEBB will confirm critical pipeline sizes and lengths for the force main, and elevation data related to the proposed force main alignment options. WEBB will check critical parameters within the hydraulic model for accuracy and compare against existing operating set points.

Field Visits, Inquiries, and Investigations – WEBB will conduct at least one field visit to confirm parameters related to the alignment selection process. Our mapping at this stage will be based on the previously prepared mapping for the brine line, available GIS information and our field visit. We will review the alignments for potential biological and jurisdictional issues. Converse Consultants will conduct a desktop geotechnical review from published reports and available aerial data. Webb will conduct a thorough review of the lift station site, as built plans and existing mechanical and electrical equipment.

Independent Review and Analysis –WEBB will conduct a review of the Akel's recommendations from the WWMP as it relates to the lift station, any implications for facilities such as the emergency storage capacity. Any alternatives will be identified in this preliminary design phase. This review will include the environmental documents associated with previous projects.

Environmental Concerns - As part of this task, WEBB, Wood Environment and Infrastructure Solutions (Wood), and Applied Earthworks (Æ) will assist the engineering team with potential environmental concerns (i.e., environmental constraints). The identified environmental concerns and a discussion of any jurisdictional features and needed permits will be documented in the Technical Memorandum.

Workshop and Deliverables – WEBB will conduct a workshop with City Staff with our findings. A technical memorandum will be prepared with all recommendations and findings.

Task 3 - Investigations

Task 3.1 Surveying and Utility Potholing – WEBB will self-perform field survey services to provide complete topographical survey and mapping of the selected alignment rights-of-way with 1-FT contours, supplementing the previously prepare brine line mapping. Field topography with more accuracy will be done as needed for the lift station design, design of any street or drainage improvements and where recent improvements have been implemented. The mapping will identify all existing easements, assessor parcel numbers, and existing utilities on or adjacent to the proposed sites or alignments using NAD83 coordinates and NAVD88 county benchmarks.

Any required easements, right-of-way, encroachment permits, or temporary construction easements will be considered and documented for the pipeline alignment selection and alternative analysis.

Potholing – WEBB will prepare a pothole plan for the recommended potholes, coordinate with our sub-consultant, C-Below, to perform the actual potholing, and collect survey data of each pothole.

WEBB will prepare and maintain a pothole list and findings. Our budget includes effort for 10 potholes.

Deliverable: – A complete set of aerial photography and mapping to City Standards in AutoCAD format a potholing plan and potholing report as electronic files on CDs and two hard copies as requested in the RFP.

Task 3.2 Geotechnical Investigation – The geotechnical investigation will build upon the previously prepared report. Two new borings on the lift station site, laboratory testing, geological analysis, regional seismicity review, and preparation of the geotechnical report will be completed by Converse. The geotechnical investigation will include recommendations for excavations, backfill and compaction, seismic parameters, liquefaction, soil corrosivity, and suitability of onsite materials for backfill. The report will include soils parameters and design criteria such as allowable soils bearing, pipe bedding, shoring, dewatering, trench stability and site preparation, and earthwork specifications. We will also use the previous geotechnical report prepared for the brine line for the force main alignment.

Deliverables: Complete geotechnical investigation and corrosion analysis with findings, results, and recommendations.

Task 3.3 - Hydraulic Evaluation and Operational Control Strategy – WEBB will perform hydraulic evaluation for the lift station to confirm required hydraulic design parameters, including additional wetwell storage volume. WEBB will develop anticipated system curves for the proposed lift station for current and ultimate condition. All conditions will be considered including existing and ultimate dry and wet weather flow scenarios. WEBB will use model provided by the City as the basis of this analysis. WEBB has Infowater and Infosewer modeling software. We will also review the station set points, current and future operating conditions, start up and commissioning requirements, required integration programming and SCADA requirements.

WEBB will develop a detailed construction phasing and connection plan that preliminarily lays out the construction phasing and connection sequence of each required improvement to ensure that existing flows are properly handled or bypassed. This will be used as the final design is completed and updated to ensure that the contractor has a clear understanding of the required phasing and the project is constructable without service interruptions.

Deliverables: WEBB will summarize our findings, results, and recommendations into a technical memorandum. Hard copies and one electronic copy (searchable PDF) of the report shall be submitted for review. City comments shall be incorporated and hard copies and one electronic copy (searchable pdf) of the final report shall be submitted.

Task 4 - Environmental Services

WEBB will utilize a CEQA Initial Study Checklist (following Appendix G of the CEQA Guidelines) to document whether or not the Proposed Project will have new or different significance determinations as compared to the previously-prepared WTP MND. The intent of the Checklist is to be able to substantiate the findings per CEQA Guidelines §15164 that an Addendum can be supported. The Addendum will be focused only on the alignment for new 16-inch diameter force main and Mesa Lift Station and will determine if new or different impacts will result from what was previously disclosed in the prior CEQA document. The Addendum will include a Clarified Mitigation Monitoring and Reporting Program (CMMRP) that focuses mitigation measures only on potential impacts resulting from construction and operation of the Proposed Project. These measures can then be incorporated into the final construction contract documents

WEBB will support the City with filing a new Notice of Determination (NOD) once the Addendum is adopted/approved by the City.

The Addendum will be supported by updated air quality/greenhouse gas emissions, biological resources, cultural resources, and paleontological resources analysis and reports as described in **Appendix C** of this Proposal.

The following assumptions were used in developing the environmental scope of services:

- Project design will not create new or more severe impacts than were previously evaluated in the WTP MND.
- Obtaining an encroachment permit will not require preparation of a new National Environmental Policy Act (NEPA) document, NEPA-CEQA revalidation, an Archaeological Survey Report (ASR), Historic Property Survey Report (HPSR), or Paleontological Identification Report (PIR).
- No Native American consultation will be required pursuant to AB 52.
- Two (2) rounds of revisions to the Addendum are included.
- One hard copy and one electronic copy will be provided at the 1st Screencheck and two hard copies and one electronical copy will be provided of the Final Addendum.

Task 5 - Easement Acquisition and Permitting Support (if required)

Based on the proposed alignment, a permit for a parallel encroachment from Caltrans is anticipated. WEBB has recently assisted the City of Victorville acquire a similar parallel encroachment permit along Hwy 18. In addition to the typical permit application, WEBB will prepare a separate justification summary for the parallel encroachment. It is anticipated that the City would commit to constructing new force mains in the future when Western Knolls Avenue is relocated to support a new Hwy 60 interchange at Potrero Blvd. A permit from SCAQMD will be required if the emergency generator is upgraded.

As noted above, an easement may be needed based on the final force main alignment. WEBB will prepare the easement legal description and plat maps and support the City in the acquisition process.

Deliverables: Easement legal and plats, permit applications and final permits

Task 6 - SCE Electrical Service Upgrade

SKM will identify if an electrical service upgrade is required and will coordinate with SCE for a service plan for the ultimate facilities. We assume SCE will prepare the service plan and the City will pay all of the applicable fees. SKM will coordinate as early in the process as possible, however, SCE standard practice is not to prepare the service plan until the lift station plan is nearing 90%. We will work closely with the SCE planner to ensure that the service plan is moving forward.

Deliverables: Approved for construction SCE Service plan.

Task 7 - Final Design and Contract Documents

Prepare civil, mechanical, architectural, electrical, instrumentation, architectural, structural, and landscaping drawings and details for the upgraded lift station and the force mains per the selected alignment. The phasing of the commissioning of the lift station and force main connections will be coordinated with the City and described in the contract documents as the project start-up plan and operational control strategy are refined at each design phase. We do not anticipate significant traffic control impacts and therefore, we anticipate that the contractor will provide traffic control based on a performance specification to

comply with MUTCD guidelines. WEBB will prepare one set of bid documents, technical specifications, special provisions, and contract documents incorporating all phases of the project. It is anticipated the intermediate milestones will be established based on the phasing and delineation between each project milestone will be specifically identified within the contract documents.

Prepare estimates of probable cost for all three project segments. Cost estimates will be submitted with the 60%, 90%, and 100% submittals and will be refined as the design progresses.

60% and 90% Design Workshops – Conduct two additional workshops with City Staff to update the team on the progress and details of the final design. The design workshop will take place at the 60% plans and 90% plans phase to discuss the City's comments. A field walk will be conducted in coordination with these workshops. WEBB will provide a draft agenda to the City prior to each meeting and coordinate the presentation materials with the City's Project Manager. Meeting minutes and action items will be provided to the City's Project Manager after each workshop.

Deliverables: Sets of plans and specifications per City standards, construction cost estimates, and any required design calculations at 60%, 90%, and 100% submittals in hard copy format and electronic (smart PDF and original formats) as well as final signed mylars and all final documents in hard copy and electronic formats.

Task 8 - Services During Bidding

WEBB will provide services during bidding to include attending and leading the pre-bid walk, providing technical support and prepare timely responses to bidder's questions as needed, assist the City in reviewing the bid and provide rationale for award if bids are more than 10% higher than the engineer's estimate.

Deliverables: Draft and final addenda, memorandum if bid amounts are more than 10% higher than anticipated.

In accordance with the RFP, WEBB has provided the cost proposal in a separate sealed envelope.

Section K. Additional Information

No additional information at this time.

Section L. Insurance/Certification

Below is a sample insurance certificate. Upon notification of award, WEBB will provide a furnished COI to the City for the project.

Ą	CORD		т	FICATE OF LIA	DII ITV ING		BEAWE-01		AUTERJUNG MM/DD/YYYY)
C B	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.								
lf th	MPORTANT: If the certificate holder SUBROGATION IS WAIVED, subjective certificate does not confer rights to DUCER License # 0757776	t to	the	terms and conditions of the	ne policy, certain	policies may			
HUE	3 International Insurance Services Inc.				PHONE A/C, No, Ext): (951) 7		FAX (A/C, No):		
PO I Rive	Box 5345 erside, CA 92517						ibinternational.com		
	,			Ĺ			RDING COVERAGE		NAIC#
					NSURER A : Traveler	s Property C	asualty Company of An	nerica	25674
INSU	IRED				NSURER B : Lexingt	on Insuran	ce Company		19437
	Albert A. Webb Associates 3788 McCray Street			F	NSURER C :				
	Riverside, CA 92506				NSURER D :				
				_	NSURER E :				
CO	VERAGES CER	TIFIC	CATE	NUMBER:	NOOKEKT .		REVISION NUMBER:		
TI	HIS IS TO CERTIFY THAT THE POLICIE IDICATED. NOTWITHSTANDING ANY R ERTIFICATE MAY BE ISSUED OR MAY XCLUSIONS AND CONDITIONS OF SUCH I	S O	F INS	SURANCE LISTED BELOW HA	OF ANY CONTRA	TO THE INSUR	RED NAMED ABOVE FOR T	CT TO	WHICH THIS
INSR LTR	TYPE OF INSURANCE	ADDL	SUBR	POLICY NUMBER	POLICY EFF	POLICY EXP (MM/DD/YYYY)	LIMIT		
Α	X COMMERCIAL GENERAL LIABILITY	INOD	****		(MIMI/DD/1111)	(MINI/DD/1111)	EACH OCCURRENCE	s	1,000,000
	CLAIMS-MADE X OCCUR	Х		6305456P929TIL18	02/01/2018	02/01/2021	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	100,000
	X \$0 Deductible						MED EXP (Any one person)	\$	5,000
							PERSONAL & ADV INJURY	\$	1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$	2,000,000
	X POLICY PRO-						PRODUCTS - COMP/OP AGG	\$	2,000,000
Α	OTHER: AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT	\$	1.000.000
	X ANY AUTO	х		BA5456P92918CAG	02/01/2018	02/01/2021	(Ea accident) BODILY INJURY (Per person)	\$,,
	OWNED SCHEDULED AUTOS ONLY	^		27.0100.020.007.0	02.02010	02/01/2021	BODILY INJURY (Per accident)	s	
	X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$	
								\$	
Α	X UMBRELLA LIAB X OCCUR			OUBOUL40000040	00/04/0040	00/04/0004	EACH OCCURRENCE	\$	1,000,000
	EXCESS LIAB CLAIMS-MADE			CUP9H48683618	02/01/2018	02/01/2021	AGGREGATE	\$	1,000,000
Α	DED 12 KETENTIONS						X PER OTH-	\$	
^	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		x	UB4J64817818	09/01/2018	09/01/2020	X PER OTH- E.L. EACH ACCIDENT	_	1,000,000
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A	ļ ^`				E.L. DISEASE - EA EMPLOYEE	6	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	s	1,000,000
В	Professional Liab.			031711122	08/08/2018	08/08/2020	Ded \$150k/EaClaim 1M		2,000,000
CEI	RTIFICATE HOLDER				THE EXPIRATION ACCORDANCE WI	N DATE TH TH THE POLIC	ESCRIBED POLICIES BE C EREOF, NOTICE WILL Y PROVISIONS.	ANCELL BE DEI	.ED BEFORE LIVERED IN
AC	ORD 25 (2016/03)			,	Hetrullien. © 19	88-2015 AC	ORD CORPORATION.	All righ	nts reserved.

he ACORD name and logo are registered marks of ACORD

Appendix A. Project Team Resumes



REGISTRATIONSRegistered Civil Engineer C 65862 (CA)

EDUCATIONBS, Chemical Engineering Massachusetts Institute of Technology

AFFILIATIONSAmerican Water Works Association (AWWA)

Bradley A. Sackett, PE

Senior Engineer

Brad Sackett, PE, is a Senior Engineer and Project Manager with WEBB's Water Resources Department. Brad specializes in assisting major public agencies with a wide variety of water resource projects. Clients seek his expertise with pumping facilities, water pipeline design, gravity sewer main design, water and sewer system master plans, hydraulic modeling analysis, and sewer resource plans for Specific Plan Environmental Impact Reports (EIRs), among other projects.

Brad has been instrumental in assisting clients with in-house projects, while representing these agencies with their constituents as an on-site consultant. Throughout Brad's career he has been intricately involved in the design, management, and construction support of projects for such clients as Eastern Municipal Water District (EMWD), Western Municipal Water District (WMWD), and the cities of Riverside and St. Helena, to name a few.

His detailed approach ensures each project integrates flawlessly into master plan requirements from concept through construction. He specializes in operations take-over and integration of systems with a focus on cost effective and efficient transitions.

Wastewater Treatment Plant Expansion and Salt Mitigation Project, City of Beaumont (City) - Brad serves as Project Engineer for the City's project which consists of two major components:

Brine Line - Final Design - Brine disposal is an integral part of this project and was a key driver in the selection of this project. Without a safe, reliable, and cost effective way to dispose of the brine, this project cannot move forward and compliance with the Basin Plan would be impossible. The brine pipeline connecting to the Inland Empire Brine Line (IEBL) was determined to be the best option during the feasibility study, due to cost and certainty of operation. The brine line has been sized at 12-inches and will be approximately 23-miles long. The pipeline begins at the City's WWTP and ends near the City of San Bernardino's WWTP on Waterman Avenue.

South Regional Lift Station Analysis, Western Riverside County Regional Wastewater Authority - Brad served as the Project Manager for this project. WEBB obtained as-built plans, pump information, current operating conditions, and ultimate flow projections from each agency. Based on the hydraulic analysis of the systems, WEBB determined the existing system maximum capacity and compared against ultimate daily and instantaneous flow projections. Since there

Bradley A. Sackett, PE

Senior Engineer

is essentially no storage capacity in the South Regional Lift Station and conveyance system, all wet weather and peak flows must be pumped to the treatment plant to avoid sewer spills or discharges to the IEBL emergency connection. Flow projections included both dry weather and wet weather maximum flows based on estimates of peaking factors for both situations. Improvements were identified to meet the ultimate flow projects.

Baxter Road and Clearview Street Lift Stations, Eastern Municipal Water District Brad served as Senior Engineer for this project. Two lift stations were partially constructed during the mid-2000's but were never completed when the housing market collapsed. With the recovery of the housing market and a revised development proposal, WEBB analyzed the proposed development plan based on revised tributary areas, determined the ultimate station capacity, inspected the existing facilities for current condition and salvageable facilities, re-designed and specified all required improvements and installation for both the renovated Baxter Road Lift Station, Clearview Street Lift Station, and the abandonment of the Menifee Court Lift Station.

Dauchy and Gamble Lift Stations, Western Municipal Water District - Brad served as Senior Engineer for this project. As part of a large residential development, WEBB designed the Dauchy and Gamble Sewer Lift Stations, the entire collection system, and force mains to convey sewage flows from the proposed residential development to the Western Water Reclamation Facility. WEBB was involved in all aspects of the project including planning, site location, design and assistance in construction.

Enchanted Heights Sewer System Infrastracture, Eastern Municipal Water District - Brad served as Senior Engineer for this project. WEBB prepared final engineering plans and specifications for a gravity collection system and accompanying lift station. This system included approximately 23,000 LF of 8-inch gravity pipe, 3,000 LF of 6-inch diameter force main, a new sanitary sewer lift station (Lukens) and modifications to an existing lift station (Diana). WEBB completed an evaluation of three potential site locations for the proposed lift station to provide the District flexibility in acquiring the required right-of-way. Critical issues included proximity to an elementary school for the emergency generator, permitting, geotechnical conditions including shallow rock and perched groundwater, on site connections to 446 residences, and the tri-party funding source from the City of Perris, Eastern Municipal Water District, and County of Riverside.

Green Valley Lift Station, Eastern Municipal Water District - Brad is currently overseeing the design of the Green Valley List Station for a developer within Eastern Municipal Water District's service area. The station serves 460 residential units with a peak flow of 285 gpm.

Clay Street Lift Station, Jurupa Community Services District - Brad served as Project Manager for the relocation of the existing Clay Street Lift Station. The Clay Street Lift Station has a peak flow of 700 gpm, 25 hp pumping units with a 100 kw standby generator. WEBB provided design, planning, and construction management and inspection services for this project. This project consisted of 3,000 LF of 18-inch PVC sewer force main, 1,100 LF of 10-inch PVC sewer force main, 3,800 LF of 12-inch CML/CMC waterline and appurtenances, and construction of the sewer lift station.



REGISTRATIONSRegistered Civil Engineer C 65690 (CA)
Registered Civil Engineer C 42407 (AZ)

EDUCATION MS, Civil Engineering Brigham Young University BS, Civil Engineering Brigham Young University

AFFILIATIONS American Water Works Association (AWWA) American Society of Civil Engineers (ASCE) Water Environment Federation (WEF) Inland County Water Association (ICWA)

Brian Knoll, PE Chief Operations Officer

Brian Knoll, PE, is WEBB's Chief Operations Officer. Brian has been responsible for the design and direction of capital improvement projects throughout southern California. Brian's expertise lies in planning, design, and construction oversight of water and wastewater facilities. Brian has been involved in numerous large multi-discipline water and wastewater projects including the City of Riverside's 26 MGD expansion of their water quality control plant, the City of Beaumont's advanced water treatment facility and brine line, the 14 MGD expansion of the Western Riverside Wastewater Treatment Plant, and the 6 MGD expansion of the Calipatria Water Treatment Plant. He has worked extensively with the City of Imperial, Western Municipal Water District, Golden State Water Company, the City of Corona, Crestline Lake Arrowhead Water Agency, Eastern Municipal Water District, the City of Riverside, and WRCRWA. Brian has also worked closely with other engineering partners such as CDM Smith, Black & Veatch, and CH2M Hill. His macro style in water resources leadership coupled with a practical approach, enhances Brian's standing within the firm and the industry.

"B" Street Lift Station, City of Imperial - Public Works - Brian served as Principal-in-Charge for this project. The "B" Street Lift Station was originally constructed as a submersible pump lift station with pumps 20-FT below the ground surface. These pumps consistently clogged and required excessive maintenance. The lift station was also a constant odor problem for the City. This project constructed a dry pit adjacent to the existing wet well with new non-clog Gorman-Rupp sewage pumps. In addition, the project included oxygenation equipment to reduce odors, new shade structures, and upgraded electrical systems. WEBB also provided construction management and inspections services for this project.

Firehouse Sewer Lift Station, Olivenhain Municipal Water District -

Brian served as project manager for the District's project. The existing Firehouse Lift Station was constructed as a below grade packaged lift station within a steel enclosure. The enclosure was failing and also represented a safety hazard for operators due to the small exit. The existing control building was also in disrepair with a leaking roof. This project included the construction of a new dry pit, with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.

Brian Knoll, PE

Chief Operations Officer

Claypool Lift Station and Force Main, City of Imperial - Brian served as a Principal-in-Charge for the replacement of the Claypool Lift Station and new associated force main. The City of Imperial was experiencing reduced pumping capabilities in a damaged portion of force main that required the replacement of an existing pump station and the installation of a new force main. The project included the removal of the existing pump station, installation of two new pumps with controls, and the installation of 3,100 LF of 8-inch diameter PVC force main.

Sewer Lift Station #12, Lake Arrowhead Community Services District - Brian served as a Principal-in-Charge for the Sewer Lift Station #12 project for the District. WEBB provide engineering design services associated with the design of additional emergency storage at Sewer Lift Station #12. peak flow there is approximately fifteen minutes of emergency storage in the existing wet well. WEBB designed a new below grade emergency storage vault immediately adjacent to the existing wetwell to expand that capacity to approximately one hour. The proposed vault will is located within the existing access road for Lift Station #12. The vault has an overflow weir to accept sewage flows when the sewage level in the existing wet well exceeds the high water level, a level sensor and alarm intertied to the existing SCADA system, a bottom outlet with slide gate to drain the vault and a sloped bottom to facilitate cleaning.

Wastewater Treatment Plant Expansion and Salt Mitigation Project, City of Beaumont (City) - Brian serves as Principal-in-Charge and Project Manager for the City's project which consists of two major components:

Waste Water Treatment Plant (WWTP) Expansion and Upgrade - Final Design The existing WWTP needs to be expanded and upgraded. The WWTP is currently treating over 75% of its permitted capacity and therefore must begin the expansion process. Per the new Regional Water Quality Control Board's updated Basin Plan, the City must begin reducing TDS being discharged from the plant. The City completed a feasibility study to identify the best way to expand and upgrade the plant. The Plant will be converted to an MBR process followed by RO for TDS reduction. The Plant will also add screening, EQ, sludge dewatering, and drying.

Brine Line - Final Design - Brine disposal is an integral part of this project and was a key driver in the selection of this project. Without a safe, reliable, and cost effective way to dispose of the brine, this project cannot move forward and compliance with the Basin Plan would be impossible. The brine pipeline connecting to the Inland Empire Brine Line (IEBL) was determined to be the best option during the feasibility study, due to cost and certainty of operation. The brine line has been sized at 12-inches and will be approximately 23-miles long. The pipeline begins at the City's WWTP and ends near the City of San Bernardino's WWTP on Waterman Avenue.



REGISTRATIONSRegistered Civil Engineer C 26817 (CA)

EDUCATION

BS, Civil Engineering, California Polytechnic University, Pomona

AFFILIATIONS

American Water Works Association (AWWA)

David Algranti, PE

Chief Design Engineer

David (Dave) Algranti, PE, is a Chief Design Engineer with WEBB's Water Resources Department. Dave has years of experience in the planning, design, and construction of water resources projects. With such deep knowledge of water-related systems, he assists as technical advisor for all WEBB teams handling such projects for clients. Dave helped develop WEBB's quality management program, enabling him to coordinate and directly perform project quality control and assurance - making sure project technical issues are recognized early and resolved efficiently by an expert in the firm.

He has provided design and supervisory services for a wide range of water systems projects that provide reliable infrastructure to improve communities. These include water storage reservoirs, major water pumping plants, surge and water hammer control equipment, water treatment plants, water wells, and water transmission mains. Clients also look to Dave for his experience with pressure station and metering facilities, utility relocation projects for state freeway projects, Clean Water Grant sewer construction projects, Department of Water Resources and U.S. Department of Agriculture Rural Development-funded water and sewer system upgrade projects, and sewage lift stations and force mains. In addition, he is well-versed in all aspects of construction management - ensuring projects proceed smoothly, remain on-schedule, and stay within budget.

Due to his recognized excellence in the industry, Dave is a member of the American Water Works Association (AWWA) Standards Committee on Steel Elevated Tanks, Standpipes, and Reservoirs.

River Road Lift Station, Jurupa Community Services District Dave served as Chief Design Engineer for this project. WEBB was responsible for the preliminary engineering and final design of this 19,000 GPM (27.3 MGD) ultimate capacity sewer lift station, utilizing 75 HP and 150 HP VFD vertical turbine solids handling pumping units. In addition, WEBB also developed an implementation plan to provide uninterrupted service during construction and startup of the lift station facilities. Once construction began, our team was responsible for coordination, on-site inspection services, and overall construction management. The 55-FT deep wet well is a special design with a three compartment cast-in-place reinforced concrete structure self-cleaning wet well to better match flows at both interim and ultimate condition. The design also included a separate 35-FT deep diversion structure with sluice gates directing flow to each wet well compartment, connection to the plant headworks, grinder/comminutor, and standby emergency generator.

David Algranti, PE

Chief Design Engineer

Regional Lift Station Improvements, Jurupa Community Services District - Dave served as Chief Design Engineer for this project. The Regional Sewer Lift Station, commonly referred to as Plant 1, is the main pumping station for the eastern half of the Jurupa Community Services District sewer service area to pump wastewater to the City of Riverside Regional Water Quality Control Plant for treatment. The facility is a wet well dry pit design with an ultimate capacity of 4,500 GPM.

The District has completed various improvements and modifications since Plant 1 and the associated Regional Force Main was originally constructed in the mid 1970's. WEBB has been involved with nearly all aspects of planning, phasing, design, and construction of the facilities. The District has added 5 MG of emergency storage (equalization ponds and bypass pump station) which allows sewage to be bypassed for maintenance and repairs and inspection of the internal condition of the existing force main. Recent improvements included electrical and SCADA upgrades to improve reliability and site security, new wet well coating, and regional force main replacement. The Regional Force Main Replacement Project included approximately 3.5 miles of 24-inch diameter PVC pipeline through existing developed streets. Planned improvements included VFD and pump replacements to better match existing flow conditions and a final connection to the treatment plant.

"B" Street Lift Station, City of Imperial - Public Works - Dave served as Chief Design Engineer for this project. The "B" Street Lift Station was originally constructed as a submersible pump lift station with pumps 20-FT below the ground surface. These pumps consistently clogged and required excessive maintenance. The lift station was also a constant odor problem for the City. This project constructed a dry pit adjacent to the existing wet well with new non-clog Gorman-Rupp sewage pumps. In addition, the project included oxygenation equipment to reduce odors, new shade structures, and upgraded electrical systems. WEBB also provided construction management and inspections services for this project.

Firehouse Sewer Lift Station Replacement, Olivenhain Municipal Water District - Dave served as Chief Design Engineer for this project. The existing Firehouse Lift Station was constructed as a below grade packaged lift station within a steel enclosure. The enclosure was failing and also represented a safety hazard for operators due to the small exit as shown in the photo above. The existing control building was also in disrepair with a leaking roof. This project included the construction of a new dry pit with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction. WEBB also provided construction management and inspection services for this project.

Gateway of the Americas, Sewer Lift Station No. 2, County of Imperial - Public Works - Dave served as Chief Design Engineer for this project. The existing sewer lift station required a complete overhaul and replacement. The project included replacement of two 5-hp submersible sewage pumping units, replacement equipment and pump appurtenances including pump guide rail system (to support three pumps), level control system, all hardware inside the wet well, and replacement of motor control center and electrical wiring. This project included the construction of a new dry pit with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.



REGISTRATIONSRegistered Civil Engineer C 77435 (CA)

EDUCATION

BS, Geology/Hydrology' Brigham Young University MS, Environmental Science & Engineering Colorado School of Mines

AFFILIATIONS

National Groundwater Association (NGWA)

Shane Bloomfield, PE

Senior Engineer

Shane Bloomfield, PE, is a Senior Engineer with WEBB's Water Resources Department. Shane specializes in the design of public works projects consisting of major pumping plants, groundwater pumping wells, sewer collection system design, wet well rehabilitation, water distribution system design, wastewater treatment plant design, and hydraulic system modeling using various computer models. He has engineering design responsibilities for several projects for public works agency clients including the City of Ontario, City of Riverside, Jurupa Community Services District, Eastern Municipal Water District, and Crestline-Lake Arrowhead Water Agency.

Replacement of Two Lift Station Pumps - Gateway of the Americas, Sewer Lift Station No. 2, Imperial County Department of Public Works (ICDPW) - Shane served as the Project Manager for the replacement of two 5-hp submersible sewage pumping units for ICDPW's Lift Station No. 2. Project specifications included the replacements of equipment and pump appurtenances systems, pump guide rail system (to support three pumps), level control system, and all hardware inside the wet well, replacement of motor control center, and electrical wiring.

Sewer System Improvement Projects Jurupa Community Services District - Shane served as the Project Engineer for a major project with several components to improve sewer system efficiency within the Jurupa Community Services District. The project included the Trunk Sewer System Improvements, the Regional Wastewater Pump System Expansion and New Force Main to the City of Riverside's Water Quality Control Plant, and the Lakeside Lift Station Renovation. Working with the WEBB Team, Shane proposed a preliminary design for the various components of the project that facilitated the final design within the timeline specified by the Capital Improvement Program.

Claypool Lift Station and Force Main, City of Imperial - Shane served as a Project Engineer for the replacement of the Claypool Lift Station and new associated force main. The City of Imperial was experiencing reduced pumping capabilities in a damaged portion of force main that required the replacement of an existing pump station and the installation of a new force main. The project included the removal of the existing pump station, installation of two new pumps with controls, and the installation of 3,100 LF of 8-inch diameter PVC force main.

Shane Bloomfield, PE

Senior Engineer

Lakeside Lift Station, Jurupa Community Services District - Shane served as a Project manager for the recommissioning of the Lakeside Lift Station. The Lakeside Lift Station and force main was decommissioned by the District when the Indian Hills Wastewater Reclamation Plant "Plant 2" was abandoned. The lift station had an 8-inch diameter overflow connection within its wet well structure. Wastewater within the wet well surcharged and flowed into the overflow connection which outlet into a 12-inch diameter gravity main on Limonite Avenue, also known as the "Plant 2 Overflow Line". Final evaluation indicated re-commissioning the station was feasible and cost effective. The design project consisted of preparing plans and specifications to re-commission the sewer lift station by removing the existing mechanical and electrical equipment and replace it with new equipment, including a new electrical service and vactor truck turnout.

Firehouse Sewer Lift Station, Olivenhain Municipal Water District - Shane served as Project Engineer for the District's project. The existing Firehouse Lift Station was constructed as a below grade packaged lift station within a steel enclosure. The enclosure was failing and also represented a safety hazard for operators due to the small exit. The existing control building was also in disrepair with a leaking roof. This project included the construction of a new dry pit, with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.

Claypool Lift Station and Force Main, City of Imperial - Brian served as a Principal-in-Charge for the replacement of the Claypool Lift Station and new associated force main. The City of Imperial was experiencing reduced pumping capabilities in a damaged portion of force main that required the replacement of an existing pump station and the installation of a new force main. The project included the removal of the existing pump station, installation of two new pumps with controls, and the installation of 3,100 LF of 8-inch diameter PVC force main.

Well Design & Equipping of Jurupa Community Services District Well Nos. 27 & 28, Jurupa Community Services District - Shane served as Project Manager on the well design & equipping of these wells. His responsibilities included pump (4,500 gpm to 4,000 gpm) and motor sizing (800 hp), emergency generator sizing, on-site chlorine generation system sizing, preparation of all civil and mechanical and coordination of the electrical and architectural drawings, preparation of bid documents, and technical specifications.

Well Drilling, Design, & Equipping of City of Ontario Well Nos. 40, 41, 45, 46, 47, 49, & 50, City of Ontario Municipal Utility Company - Shane served as Project Manager on the well drilling, design, & equipping of these City of Ontario wells. His responsibilities included pump (2,500 gpm to 3,500 gpm) and motor sizing (350 hp to 800 hp), emergency generator sizing, on-site chlorine generation system sizing, preparation of all civil and mechanical, and coordination of the electrical drawings, and preparation of bid documents and technical specifications for numerous groundwater drinking wells for the City of Ontario.



EDUCATION

BA, Biology University of California, Riverside

AFFILIATIONS

American Planning Association (APA) Association of Environmental Professionals (AEP)

AEP Co-Vice President of Programs 2019 AEP Inland Empire Chapter President 2013

Cheryl DeGano

Principal Environmental Analyst

Cheryl DeGano serves as a Principal Environmental Analyst with WEBB's Planning and Environmental Department. Cheryl manages the preparation and approval of environmental and planning documents for public and private sector clients. During her consulting career, Cheryl has been responsible for the preparation and processing of environmental and planning documents including environmental impact reports, environmental assessments, initial studies and mitigated negative declarations, mitigation monitoring and reporting programs (MMRPs), specific plans, development impact fee ("Nexus") studies per California Government Code 66000 et seg., and development and entitlement applications. Cheryl has been responsible for all aspects of these projects including research, data collection and analysis, report writing, quality assurance/quality control review, preparation of distribution lists, direction of public noticing, project management, representation at public meetings and hearings, and agency and client coordination. Cheryl is also experienced in the analysis of construction using the Federal Highway Administration's Roadway Construction Noise Model (RCNM). In addition to her environmental and planning background, Cheryl has assisted public agencies and private sector clients finance public facilities/services through the formation and administration of special finance districts and is well versed in socio-economic issues.

Cheryl possesses strong communication and analytical skills and establishes and maintains excellent client relationships. Cheryl has a proven ability to take over large projects with minimal disruption to the client, experience with high profile and controversial studies, and the ability to work effectively and collaboratively within the increasingly complex regulatory and environmental context of development in southern California to develop solutions, strategies, and feasible alternatives for complex projects.

Cheryl is experienced in the preparation of environmental and planning documents and assisting public agencies and private sector clients finance public facilities/services through the formation and administration of special finance districts and the preparation of development impact fee studies. Strengths include communication and analytical skills, establishment and maintenance of excellent client relationships, proven ability to take over large projects with minimal disruption to client, experience with high profile and controversial studies, and a desire to work collaboratively toward a common goal.



EDUCATION

MS, Environmental Sciences, Washington State University, Pullman, WA BS, Environmental Sciences, University of California, Riverside

AFFILIATIONS

American Planning Association (APA) Association of Environmental Professionals (AEP)

City of Riverside Cultural Heritage Board, Chair (2003–2011)

Stephanie Standerfer

Vice President

Stephanie Standerfer is a Vice President and Director of WEBB's Planning and Environmental Department. Stephanie has worked as an environmental planning project manager, focusing on California Environmental Quality Act (CEQA) matters for small, medium, and large public and private projects. Stephanie has managed all levels of CEQA documents for healthcare clients, community college districts, water districts, cities, counties, and private developers. Her varied project experience allows her to foresee and navigate challenges that arise during CEQA compliance. As an expert in CEQA implementation throughout Inland Southern California, she also provides local agencies training in CEQA processing. She regularly oversees and coordinates with large teams of environmental planners, engineers, and architects and actively assists her clients through the environmental compliance gauntlet.

Stephanie served as contract staff to the Western Riverside County Regional Conservation Authority (RCA), the agency responsible for implementing the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). In this role, she provided processing, review, and consultation on MSHCP implementation procedures and policies. She provided training and policy guidance documents to not only the RCA but all permittees which included all 17 cities in western Riverside County. In this capacity she regularly interfaced with regulatory agencies working toward solutions to MSHCP compliance issues. Stephanie's experience with the RCA has resulted in a solid amicable working relationship with the regulatory agencies which allows her to anticipate issues on projects before they arise and advise clients accordingly.

Clients benefit from Stephanie's interdisciplinary environmental planning background which includes experience on general plan updates, specific plans, planning studies, environmental constraints analyses, air quality impact studies, health risk assessments, noise studies, biological resource surveys, and cultural resource studies. She has managed small and large teams of subconsultants, engineers, and architects on a variety of controversial public works and private development projects over the years and often spearheads making public presentations on her projects.

Because of her reputation as a CEQA authority, clients seek out Stephanie's assistance in peer reviewing CEQA documents and guidance on CEQA and MSHCP processing strategies. She enjoys working closely with her clients and establishing long-standing professional relationships with her clients.



EDUCATION

MS, Environmental Sciences University of California, Riverside BS, Environmental Sciences University of California, Riverside

CERTIFICATIONS

CPSWQ No. 0927 Certified Level 1 Water Audit Validator

AFFILIATIONS

Association of Environmental Professionals
(AEP)
Groundwater Resources Association of
California (GRA),
Southern California Chapter

Autumn DeWoody, CPSWQ

Senior Environmental Analyst

Autumn DeWoody, CPSWQ, is a Senior Environmental Analyst with WEBB's Planning and Environmental Department. Autumn offers clients a bridge between our technical municipal and stormwater engineering services and environmental documentation. She regularly partners with WEBB's project managers to prepare various planning documents on behalf of our water, wastewater, and flood control district clients. In addition, Autumn offers private and public clients jurisdictional delineations and regulatory permitting services as well as environmental monitoring at construction sites to ensure compliance with Mitigation, Monitoring, and Reporting Plans (MMRPs). She has been repeatedly commended by clients on the frequency and helpfulness of timely updates during permit processing.

Autumn is a certified Level 1 Water Audit Validator and has also prepared Water Supply Assessments and Urban Water Management Plans for a variety of public and private clients. As a result, she appreciates the importance of timely client communication in order to collect pertinent data that is sufficiently detailed and accurate to provide a thorough reflection of the project. This data collection, communication, and collaboration early in the project has proven to keep projects on schedule and budget. She is familiar with the intricacies of complex water supply portfolios and the technical components of planning for future water demands.

Autumn brings a decade of water-related experiences in the Inland Empire including local university research in stormwater management, to non-profit water quality advocacy and on the-ground improvement projects, to commercial wet-chemistry laboratory work. Using her strong analytical skills at WEBB, Autumn reviews the hydraulic and/or hydrologic technical studies and ensures clients are provided the most current data on permitting regulation, surface and ground water quality, and local hydrology.

SKM, Inc.

Electrical Engineering

SKM, Inc. (SKM) will provide electrical engineering services for the District's project. SKM, Inc. is a premier electrical engineering firm specializing in SCADA (supervisory control and data acquisition), telemetry, and electrical and control design. They employ a staff of highly trained electrical engineers with extensive experience in electrical design, instrumentation and controls, and PLC and HMI programming and design services. Their focus on wastewater and water systems provide clients with extensive process knowledge and understanding of water well and treatment projects.

Converse Consultants

Geotechnical Engineering

Converse Consultants provides professional services in the fields of geotechnical engineering, engineering geology, groundwater sciences, environmental sciences, and soils and materials testing and inspection. Their mission is to work together with clients to provide them with responsive and quality services, resulting in the development of long-term relationships. Clients include public agencies and private sector clients in the transportation, water/wastewater, educational, residential, commercial, and other market segments.

Kleinfelder

Structural Design

Kleinfelder will provide structural engineering services for the WEBB Team. Kleinfelder's structural engineering services are delivered by a multi-disciplinary team of experts to various public agencies and private companies. During the past 25 years, their experienced structural engineers have gradually adapted to changing technology, codes, and standards. Kleinfelder's structural design is fully integrated with technology using the most recent software developments such as BIM (Building Information Modeling), SAP 2000, Larsa 4D Bridge Plus, and others.

Kleinfelder's structural engineers have extensive experience in the design and construction management support for a variety of projects utilizing current guidelines, codes, and standards. They have an outstanding reputation of accomplishing projects on time and within the original negotiated budget.

C-Below

Potholing Services

C Below Subsurface Imaging (C Below) will provide potholing services for the WEBB Team. WEBB has worked on numerous water and sewer infrastructure projects with C Below. C Below specializes in subsurface imaging including utility locating, ground penetrating radar (GPR), and radiography. C Below is a certified SBE and will be providing potholing services for our team. One of the key advantages to using C Below for potholing is the training their technicians and operators undergo. Each new team member undergoes months of training in all processes before they are staffed on projects. The result is potholers that can locate and have a greater understanding of your needs.

Wood Environment and Infrastructure Solutions, Inc. (Wood E&I)

Biological Resources

WEBB will team with a long-term partner, Wood E&I, to provide biological services including MSHCP surveys and regulatory permitting. Wood E&I is dedicated to technical excellence in the fields of biological issues including, but not limited to focused surveys for threatened and endangered species, Wetland Delineations, CRAM Assessments, Habitat Mitigation and Monitoring Plans, Wildlife Corridor Studies, Acoustic Studies, Mitigation/Restoration Planning and Monitoring, WEAP Training, Pre Construction Surveys, Construction Monitoring, and Post Construction Monitoring. WEBB has worked with Wood E&I for more than 60 years.

Wood E&I is dedicated to technical excellence in the fields of biological issues including, but not limited to focused surveys for threatened and endangered species, Wetland Delineations, CRAM Assessments, Habitat Mitigation and Monitoring Plans, Wildlife Corridor Studies, Acoustic Studies, Mitigation/Restoration Planning and Monitoring, WEAP Training, Pre Construction Surveys, Construction Monitoring, and Post Construction Monitoring. WEBB has worked with Wood E&I for more than 20 years. This long term relationship allows Wood to work as an extension of WEBB's Staff and Project Managers.

Applied Earthworks, Inc. (Æ)

Cultural Resources

AE specializes in history, archaeology, paleontology, and cultural resources management. Current laws and regulations mandate consideration of prehistoric and historical remains. They use a variety of procedures to manage these resources without impeding progress. Through effective communication, technical expertise, economical and efficient project management, and creative solutions, AE makes it possible to build for the future without sacrificing our cultural heritage. WEBB and AE are currently working through AB52 compliance issues for other jurisdictions.

WEBB has partnered on multiple projects with AE over the past five years.

Appendix B. Detailed Project Experience

Design Project Experience



Sewer Bond Projects (JCSD)

Jurupa Community Services District

Eddie Rhee, PE, Engineering Manager Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715 951.685.7434 x 118 erhee@jcsd.us

- Florine Sewer Lift Station 3,500 LF 10-inch diameter Gravity Main and Force Main (Complete)
- Regional Sewer Lift Station 7,500 GPM, 750 HP Capacity (Design)
- Van Buren Bridge Force Main Crossing 2,400 LF of 24-inch diameter Sewer (Complete)
- Upgrades and Enhancements to Electrical/SCADA at Plant 1 (Complete)
- Regional Force Main to City of Riverside WWTP 17,600 LF of 24-inch diameter Force Main and 2,200 LF of 27-inch diameter Gravity Sewer (Complete)
- Pyrite Creek Trunk Sewer 10,300 LF of 30-inch and 36-inch diameter Sewer Main, 7,200 LF of 8-inch to 21 inch diameter Sewer Main, 3,000 LF of Slip Lining and small Sewer Lift Station (Complete)
- Jurupa Road Trunk Sewer 14, 600 LF of 10-inch, 18-inch, and 21-inch diameter Sewer Main (Complete)
- Sky Country Trunk Sewer 8,100 LF of 12-inch and 18-inch diameter Sewer Main (Design)
- Sky Country Trunk Sewer 8,100 LF of 12-inch and 18-inch diameter Sewer Main (Complete)

Condition Assessment Experience



Clay Street Lift Station Replacement

Jurupa Community Services District

Eddie Rhee, PE, Engineering Manager Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715 951.685.7434 x 118 erhee@jcsd.us

- New 700 GPM, 25 hp pumping units with a 100 kw standby generator at the Linares Lift Station
- A new 18-inch diameter regional force main segment within Clay Street
- New 8-inch diameter gravity sewers within Clay Street and General Drive
- Two new 12-inch diameter waterlines within Clay Street
- A new 10-inch diameter sewer force main within Clay Street from railroad tracks to north of Linares Avenue
- Replacement of the pumps and electrical system for the existing Clay/Van Buren Lift Station, along with a new standby generator



Lakeside Lift Station
Jurupa Community Services District

Eddie Rhee, PE, Engineering Manager Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715 951.685.7434 x 118 erhee@jcsd.us

The Lakeside Lift Station and force main was decommissioned by the District when the Indian Hills Wastewater Reclamation "Plant 2" was abandoned. The lift station has an existing 8-inch diameter overflow connection within its wet well structure. Currently, wastewater within the wet well surcharges and flows into this overflow connection which outlets into an existing 12-inch diameter gravity main on Limonite Avenue, also known as the "Plant 2 Overflow Line". Because the wastewater must surcharge to flow into the Limonite Avenue line, there is an excessive build up of grease in the wet well that requires cleaning on a constant basis. The cleaning process to remove grease and waste build up creates a maintenance issue for the District. The original solution to resolve the maintenance issue was to convert the wet well to a "flow through" manhole to eliminate the surcharging and tie into the 12-inch gravity main in Limonite Avenue. During the design of the gravity system, utility potholing discovered a conflict with multiple utility lines in Limonite Avenue. It would not be feasible to avoid this conflict with the gas main by a proposed gravity line and therefore the original design concept was abandoned, and it was determined the lift station would be re-commissioned to avoid maintenance issues.



"B" Street Lift Station Upgrades County of Imperial - Public Works

Jackie Loper, Community Development Director County of Imperial - Public Works 420 S. Imperial Avenue Imperial, CA 92251-1637 760.355.1152 jloper@cityofimperial.org

The "B" Street Lift Station was originally constructed as a submersible pump lift station with pumps 20-FT below the ground surface. These pumps consistently clogged and required excessive maintenance. The lift station was also a constant odor problem for the City. This project constructed a dry pit adjacent to the existing wet well with new non-clog Gorman-Rupp sewage pumps. In addition, the project included oxygenation equipment to reduce odors, new shade structures, and upgraded electrical systems. WEBB also provided construction management and inspections services for this project.



River Road Lift Station

Jurupa Community Services District

Eddie Rhee, PE, Engineering Manager Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715 951.685.7434 x 118 erhee@jcsd.us

- 60-inch diameter jacked and bore casing for 42-inch HDPE influent pipeline
- 35-FT deep pre-cast manhole with sluice gate for emergency shutoff
- 35-FT deep diversion structure to direct flows to any of the three wet well cells
- SCADA operated 4-FT x 4-FT sluice gates in diversion structure
- Hydraulically operated channel grinder
- Four sequentially operated, 75 HP VFD controlled vertical turbine solids handling pumps for initial capacity of 8,200 GPM; planned capacity increases up to 19,000 GPM
- 20-FT x 60-FT x 60-FT deep cast-in-place wet well divided into three cells, each with two pumps in self cleaning sumps
- 20-inch diameter HDPE sewer force main to the WRCRWA Treatment Plant with provisions for a future parallel 30-inch SFM
- 650 KW standby generator
- Provisions for future odor control equipment

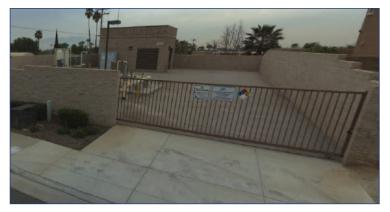


Regional Lift Station Improvements

Jurupa Community Services District

Eddie Rhee, PE, Engineering Manager Jurupa Community Services District 11201 Harrel Street Jurupa Valley, CA 91752-3715 951.685.7434 x 118 erhee@jcsd.us

The Regional Sewer Lift Station, commonly referred to as Plant 1, is the main pumping station for the eastern half of the Jurupa Community Services District sewer service area to pump wastewater to the City of Riverside Regional Water Quality Control Plant for treatment. The facility is a wet well dry pit design with an ultimate capacity of 4,500 GPM. WEBB has been involved with nearly all aspects of planning, phasing, design, and construction of the facilities. Recent improvements included electrical and SCADA upgrades to improve reliability and site security, new wet well coating, and regional force main replacement. The Regional Force Main Replacement Project included approximately 3.5 miles of 24-inch diameter PVC pipeline through existing developed streets. Planned improvements included VFD and pump replacements to better match existing flow conditions and a final connection to the treatment plant.



Dauchy and Gamble Lift Stations

Western Municipal Water District

Derek Kawaii, PE, Director of Engineering Western Municipal Water District 14205 Meridian Parkway Riverside, CA 92518-3045 (951) 571-7100 dkawaii@wmwd.com

As part of a large residential development, WEBB designed the Dauchy and Gamble Sewer Lift Stations, the entire collection system, and force mains to convey sewage flows from the proposed residential development to the Western Water Reclamation Facility. WEBB was involved in all aspects of the project including planning, site location, design, and assistance in construction.

Critical Issues

- Odor
- Space Constraints
- Sound Attenuation



Gateway of the Americas, Sewer Lift Station No. 2

County of Imperial - Public Works

John Gay, Deputy Director of Public Works County of Imperial - Public Works 155 South 11th Street El Centro, CA 92243-2803 442.265.1836 johngay@co.imperial.ca.us

The existing sewer lift station required a complete overhaul and replacement. The project included replacement of two 5-hp submersible sewage pumping units, replacement equipment and pump appurtenances including pump guide rail system (to support three pumps), level control system, all hardware inside the wet well, and replacement of motor control center and electrical wiring. This project included the construction of a new dry pit with improved access, new 750 GPM pumping units, new control building, bridge crane for pump removal, and miscellaneous site improvements. Our work also included preparation of a sewer bypass plan to allow uninterrupted service during construction.

Applicable Issues:

- Wet Well Dry Pit
- Bypassing plan of Existing Flows

WEBB Sewer Lift Station Projects (Representative List)

Capacity (GPM)	Project	Client
400	Lukens Lift Station	EMWD
300	Diana Lift Station Improvements	EMWD
130	Baxter Lift Station Retrofit	EMWD
320	Clearview Lift Station Retrofit	EMWD
285	Green Valley Lift Station	EMWD
800	"B" Street Lift Station	City of Imperial
1,000	Sandalwood Glen Lift Station Rehabilitation	City of Imperial
700	Victoria Ranch Sewer Lift Station	City of Imperial
500	Claypool Lift Station Improvements	City of Imperial
750	Gateway of the Americas #2	Imperial County
19,000	River Road Lift Station	JCSD
1,750	Chandler & Archibald Lift Station	JCSD
1,000	Florine Lift Station Replacement	JCSD
350	Lakeside Lift Station Rehabilitation	JCSD
250	Sky Country Lift Station Rehabilitation	JCSD
4500	Regional (Plant 1) Lift Station	JCSD
700	Clay/Van Buren Lift Station	JCSD
750	Linares Lift Staion	JCSD
750	Firehouse Lift Station	Olivenhain MWD
4,000	Horno Lift Station Evaluation	Santa Margarita WD
750	Ripley Lift Station	Riverside County-EDA
500	Green River Lift Station	City of Corona
350	Gamble Lift Station	WMWD
750	Dauchy Lift Station	WMWD
3,500	South Regional Lift Station Analysis	WMWD
800	1269 Lift Station Analysis	WMWD

Appendix C. CEQA Technical Study Detailed Scopes of Work

Air Quality/Greenhouse Gas Emissions

WEBB will prepare an Air Quality/Greenhouse Gas (AQ/GHG) Analysis in accordance with the South Coast Air Quality Management District (SCAQMD) requirements for the construction of the pipeline alignment. The analysis will

- Calculate emissions from construction activities using the SCAQMD's CalEEMod (version 2020.4.0) program
- Prepare a regional significance threshold analysis as well as a localized significance threshold analysis using the LST Look-Up Tables, per SCAQMD requirements
- Compare project emissions to SCAQMD draft GHG thresholds
- Analyze model results and incorporate mitigation measures, as appropriate, into the computer model.

A technical memorandum will summarize project-related emissions, identify potential impacts from the project, and recommend mitigation measures to reduce those impacts, as appropriate. WEBB will also calculate the energy consumption from both construction activities and long-term energy usage, if applicable, associated with the proposed project. Energy calculations will be presented in tables and included under separate cover. This scope includes revisions from one round of City comments that are editorial in nature.

Biological Resources

Wood will prepare an MSHCP Consistency Report, and (if needed) Jurisdictional Delineation, Protocol Burrowing Owl Survey, and Narrow Endemic Plant Surveys.

To prepare the MSHCP Consistency report Wood will:

- Perform an updated literature review of the project site and immediate vicinity to determine MSHCP consistency issues associated with the project site. A field survey will be conducted; using methodologies appropriate for the detection of special-status elements identified by the MSHCP. Depending on the timing of the field survey, certain elements may be undetectable, such as vernal pools. Habitat suitability will be assessed for all special-status elements potentially occurring on the site including burrowing owl, narrow-endemic plants, and vernal pools. If suitable habitat is present for the afore mentioned species within the project area and/or immediate vicinity, focused surveys may be required.
- Prepare a habitat suitability report which will include supporting documentation including a
 comprehensive species list, photographic figures, and maps according to the standards of the
 MSHCP. The report will describe the results of the biological assessment for the project. An
 electronic copy of the draft report will be provided for review. Following one round of review
 comments, any necessary changes will be incorporated into a final electronic report.

To complete the Jurisdictional Delineation Wood will:

 Update the Jurisdictional Delineation of jurisdictional areas in the vicinity of the proposed project in accordance with methodology in the Army Corps of Engineers 1987 Wetlands Delineation Manual, Arid West Supplement and applicable definitions in the California Fish and Game Code. To make a jurisdictional determination and delineate potential waters, a Wood wetland specialist review of background information and visit the site to collect data upstream and downstream of the site location.

If suitable habitat to support burrowing owls is present, Wood will:

• Wood will perform focused Burrowing Owl surveys in accordance with the methodology described in MSHCP, augmented by the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [now CDFW], March 7, 2012). The protocol focused BUOW surveys will include a survey of BUOW burrows on the site followed by focused BUOW surveys, on four separate days during the breeding season, based on the MSHCP requirements. If Burrowing Owl are present, a habitat loss mitigation and relocation program may be necessary. This proposal does not include costs for any type of BUOW habitat loss mitigation development or relocation program. If any additional tasks are indicated because of survey work, a separate cost proposal will be prepared.

Plant Surveys

Surveys for Munz's onion and many-stemmed dudleya will be performed in all potentially suitable habitat areas within the project alignment during the appropriate flowering period, early April and late May. Surveys will be conducted in accordance with the guidelines established by the California Native Plant Society and California Department of Fish and Game (CDFG). The first site visit will be conducted in early April to account for the early blooming period and again in late May to account for the mid to late blooming period.

Following the field surveys, Wood will prepare a letter report of findings that will document the findings of the focused survey and, if applicable, will include a map of any observed sensitive plant species, including additional sensitive species not included in the list of species from the RCIP Conservation Summary Report Generator. Although USFWS and CDFG do not have a standard requirement for written reports, a letter report of findings will be prepared and submitted to the client and regulatory agencies as appropriate. Wood will also conduct a recent search of the California Native Plant Species Electronic Inventory (CNPSEI) and California Natural Diversity Database (CNDDB). In addition to the site description, methodology, and findings, the report will describe the areas of the site that are occupied by Munz's onion and many-stemmed dudleya and provide an estimate of the number of occupied acres. Mitigation recommendations for potential impacts to sensitive plant species observed on the project site will also be included in the report.

Cultural Resources

Applied Earthworks will:

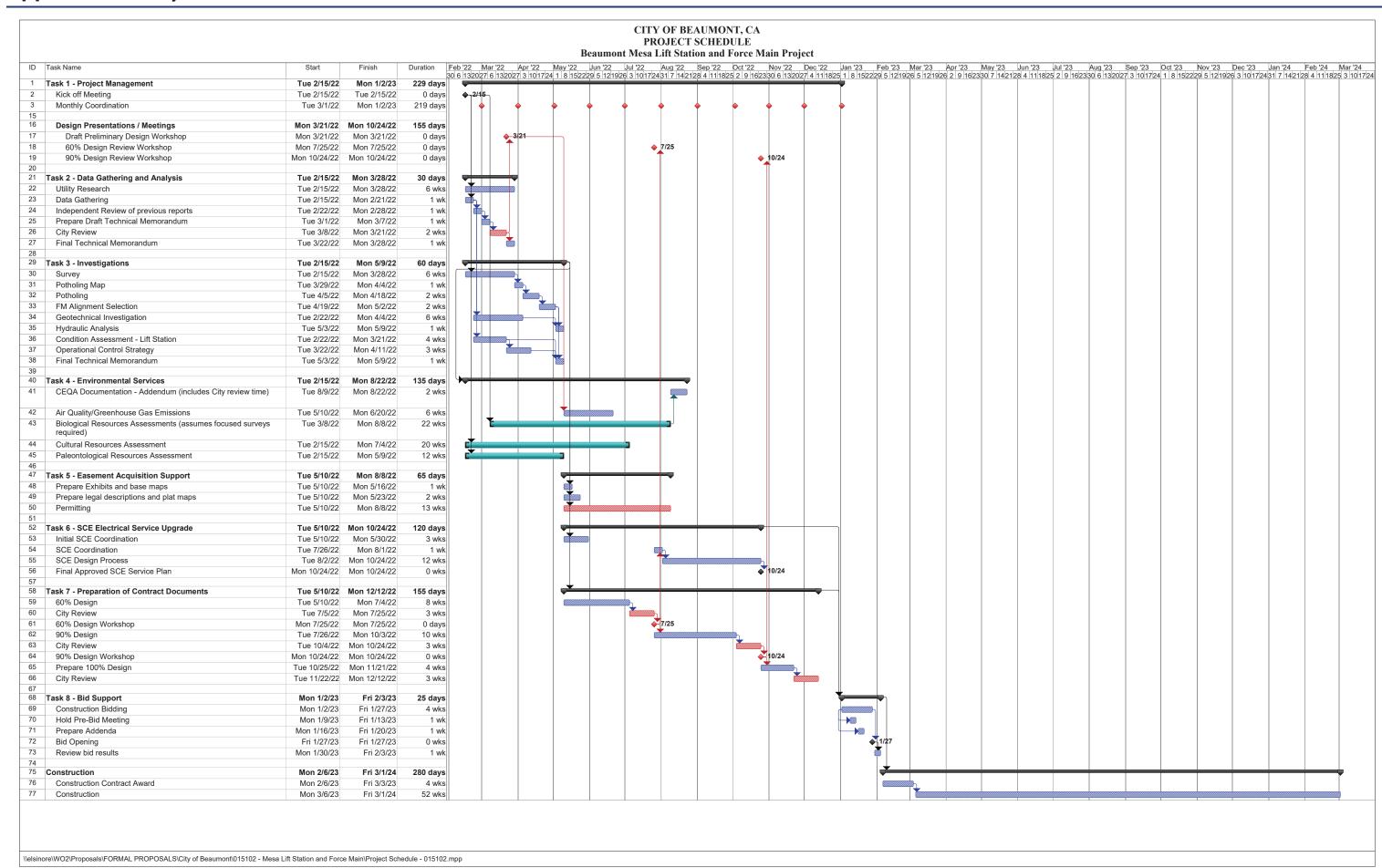
- Complete a cultural resource literature and records search at the Eastern Information Center (EIC), housed at the University of California, Riverside.
- Contact the Native American Heritage Commission (NAHC) for a search of the Sacred Lands Files (SLF). Æ also will contact Tribes/individuals identified by the NAHC with local Traditional Use Areas that may have information regarding Native American cultural resources within the vicinity of the APE. Æ will initiate contact by emailed letter to be followed-up by email or telephone.
- Conduct an intensive pedestrian field survey of the Project area. Survey transect spacing will range
 from 10 to 15 meters (30 to 50 feet) insofar as possible and the ground surface of all landforms
 with likely intact and significant cultural resources, if any, also will be examined. Additionally, Æ's
 Archaeologist will investigate any unusual contours, soil changes, distinctive vegetation patterns,
 features (e.g., road cuts, ditches, and stream cuts), and other potential cultural site markers.

- Prepare a report of findings, to Section 106 and CEQA standards. This report will describe the Project, cultural setting, desktop and field investigation methods, survey results, and management recommendations. The report also will incorporate the results of the records search from the EIC as well as communication with local Native American tribes.
- Submit draft reports electronically in MS Word format for ease of review and submit final report
 electronically as a PDF file. After the City and federal agency has approved the report, Æ will
 submit one hardcopy of the final report to the EIC.

Paleontological Resources

Applied Earthworks will:

- Request museum records searches from the Natural History Museum of Los Angeles County (NHMLAC) and the Western Science Center (WSC) for recorded paleontological resource localities within and in the vicinity of the project boundary. we also will complete reviews of online paleontological records at the University of California Museum of Paleontology (UCMP) and the Paleobiology Database.
- Supplement museum collections records by reviewing published and unpublished geologic mapping and literature to identify the geology and paleontology of the project area. Upon receipt of the museum records search results and completion of the desktop study, Æ will conduct a pedestrian field survey to verify the High paleontological sensitivity of the project area. The field paleontologist will visually inspect the ground surface for exposed fossils within the project area and evaluate geologic exposures in and adjacent to the project area for their potential to include preserved fossil material in the subsurface.
- Prepare a paleontological technical memorandum documenting the desktop and field findings and will provide project-specific recommendations. All paleontological work will meet the Society of Vertebrate Paleontology's (SVP) guidelines. One round of minor comments will be addressed following City and federal regulatory agency review of the draft memorandum.





Beaumont Mesa Lift Station and Force Main Project City of Beaumont, CA

						-							-			_					
Item Description Billout Rate	Brian Knoll Brian III	Bradley Sackett Principal I	Shane Bloomfield Principal I	David Algranti		Assistant IV	Michael Johnson	Jordan Moretti Assistant III	Matthew Sievers Party Chief/2-Person Survey Crew	Project Coordinator	Stephanie Standerfer Principal II	Cheryl DeGano	Autumn DeWoody Associate II	Eliza Laws Senior I	Jacqueline Gamboa	Total Hours	Subtotal - Labor	Sub-consultant budget	Expenses	Total/task	Total/task ¹
	4	67	16	12	2	Ψ 100	W ZIO	Ψ	9 002	10	Ψ 200	14	Ψ 101	Ψ LOΣ		125	\$ 32,701	£ 2300	\$ 4	\$ 35,001	\$ 35,001
Task 1 - Project Management and Meetings		The second second	10	12	2						_	2				12	\$ 3,110		\$ -	\$ 3,110	
1.1 Kick off Meeting	2	6 9	_				_			2	_	4				15		\$ -	\$ -	\$ 3,749	
1.2 Schedule Updates		12				-	_		_	4	-	4				16			\$ -	\$ 3,808	\$ 3,749
1.3 Project Updates	-	12	12							4	_	8				36		\$ - \$ -	\$ -	\$ 9,172	\$ 9,172
1.4 Coordination with other agencies			4	40		_	-			4		0				20	\$ 5,580				
1.5 Quality Assurance/Quality Control	-	4	4	12			-	_		-	-					26			-	\$ 5,580	
1.6 Project Management	2	24							_		-					26	\$ 7,282	\$ 2,300	ъ -	\$ 9,582	\$ 9,582
Task 2 - Data Gathering and Analysis	2	38	64	34	54	40	- 1	2		28	2	- 8		- 2		275	\$ 60,965	\$ 10,925	\$ 750	\$ 72,640	\$ 72,640
2.1 Utility Research		2			2	8				16						28	\$ 3,992	\$ -	\$ 500	\$ 4,492	\$ 4,492
2.2 Review Previous Studies		4	8	4												16	\$ 4,464	\$ -	\$ -	\$ 4,464	\$ 4,464
2.3 Field Visits and Investigations		8	8													16	\$ 4,464	\$ -	\$ 100	\$ 4,564	\$ 4,564
2.4 Acquire base mapping and topo							1	2								3	\$ 567	\$ -	\$ -	\$ 567	\$ 567
2.5 Review Existing condition of lift station			12	12												24	\$ 6,696	\$ 5,313	\$ 50	\$ 12,059	\$ 12,059
2.6 Complete independent reviews		4	8	8												20	\$ 5,580	\$ -	\$ -	\$ 5,580	\$ 5,580
2.7 City Workshop	2	4	4	2												12	\$ 3,376	\$ -	\$ 50	\$ 3,426	\$ 3,426
2.8 Prepare Technical Memorandum		16	16	8	40	16				12	2	8		2		120	\$ 25,022	\$ 3,312	\$ 50	\$ 28,384	\$ 28,384
2.9 Update As-Builts for Lift Station			8		12	16										36	\$ 6,804	\$ 2,300		\$ 9,104	\$ 9,104
Task 3 - Preliminary Design		16	12	8	20	10	4	8	8	(14						90	\$ 20,208			\$ 62,287	
3.1 Surveying and Potholing		2				2	4	8	8	2						26	\$ 5,784				\$ 23,540
3.2 Geotechnical Investigation		4	2							2						8		\$ 22,023		\$ 23,927	
3.3 Hydraulic Evaluation & Emergency Storage		4	4	4	8											20	\$ 4,732			\$ 5,882	
3.4 Operational Control Strategy		6	6	4	12	8										36	\$ 7,788	\$ 1,150	\$ -	\$ 8,938	\$ 8,938
Task 4 - Environmental Services											12	48	40	20	20					\$ 80,813	
4.1 CEQA Addendum to MND (includes AQ)											4	20	40	20	16	100	\$ 20,300		\$ -		\$ 20,300
4.2 Coordination/Meetings											8	24				32	\$ 8,392		\$ -	\$ 8,392	
4.3 Bio Studies -Wood												2			2	4			\$ -		\$ 33,245
4.4 Cultural Studies -AE												2			2	4	\$ 700	\$ 18,176	\$ -	\$ 18,876	\$ 18,876
									<u> </u>												
Task 5 - Easement Acquisition and Permitting Support		15	H		9		3	18					12			57	\$ 11,535		\$ -		\$ 11,535
5.1 Confirm ROW availability		2					1	2								5	\$ 1,125		\$ -	\$ 1,125	
5.2 Easement Support		1			1		2	8											\$ -	\$ 2,162	
5.3 Permits Support - Caltrans		12			8			8					12			40	\$ 8,248	\$ -		\$ 8,248	\$ 8,248
Task 6 - SCE Electrical Service Upgrade			4							2						6	\$ 1,346	\$ 13 915		\$ 15,261	\$ 15.261
6.1 SCE Service Plan Coordination			4							2						6	\$ 1,346		18. AL 12.		\$ 15,261
U.1 GGE GETVICE FIRST COORDINATION			7		-					-							# 11949	+ 10,010		- 10(20)	+
Task 7 - Final Design and Contract Documents	·	28	28	26	288	288			11-1	100		i i				658	\$117,630	\$131,859	\$ 100	\$ 249,589	\$ 249,589
7.1 Prepare 60%, 90% and 100% Plans	1	12	12	8	200	200										432				\$ 171,313	
7.2 Prepare 60%, 90% and 100% Specs		12	12	16	80	80										200	\$ 37,480				\$ 72,854
7.3 Prepare Cost Estimate for project		4	4	2	8	8										26	\$ 5,422			\$ 5,422	
																	,				1,
Task 8 - Bid Support		8	4	2	8	8											\$ 6,538			\$ 9,659	
8.1 Pre-Bid Meeting		4															\$ 1,116		\$ 50		
8.2 Bid Interpretation		4	4	2	8	8										26	\$ 5,422	\$ 3,071		\$ 8,493	\$ 8,493
																-					
Total	6	172	128	82	381	346	8	28	8	44	14	70	52	22	20	1381	\$281,015	\$254,869	\$ 900	\$ 536,784	\$ 536,785

^{1.} Rounded to the nearest \$1.