MEETING AGENDA
for
PLANNING, RESOURCES AND OPERATIONS COMMITTEE

April 25, 2023 @ 2:30 pm
At Company Office 139 N. Euclid Ave., Upland, CA 91786 with option of Virtual/Online or Teleconference

Please join our meeting from your computer, tablet or smartphone.
https://meet.goto.com/589279365

You can also dial in using your phone.
United States: +1 (571) 317-3122
Access Code: 589-279-365

- **Call to Order**

1. Recognitions and Presentations:
2. Additions-Deletions to the Agenda:
3. Public Comments
   This is the time for any shareholder or member of the public to address the committee members on any topic under the jurisdiction of the Company, which is on or not on the agenda. Please note, pursuant to the Brown Act the Committee is prohibited from taking actions on items not listed on the agenda. For any testimony, speakers are requested to keep their comments to no more than four (4) minutes, including the use of any visual aids, and to do so in a focused and orderly manner. Anyone wishing to speak is requested to voluntarily fill out and submit a speaker's form to the manager prior to speaking.

4. Approval of Committee Meeting Minutes
   A. Regular Committee Minutes of February 28, 2023

5. Planning and Operational Issues:

6. Planning and Operational Updates:
   A. Project Status Report/Project List
      Report on on-going projects
   B. Well 31 Pipeline Replacement Proposal Review
      Discussion and Possible Action Regarding Received Proposals for Well 31 Pipeline Replacement
   C. Paloma Curve Modernization Proposal Review
      Discussion and Possible Action Regarding Received Proposals for Paloma Curve Modernization

7. Basin Issues and Updates:
   - San Antonio Canyon Watershed – Verbal report
   - Chino Basin - Verbal report
   - Six Basins - Verbal report
   - Cucamonga Basin – Verbal report

8. Closed Session: None.

9. Committee's Comments and Future Agenda Items:
   This is the time for the Committee to comment and consider future agenda items relative to planning, water resources and operations of the company and its shareholders.

Adjournment:
The next regular PROC Meeting will be held on June 27, 2023 at 3:00 p.m.

NOTE: All agenda report items and back-up materials are available for review and/or acquisition at the Company Office (139 N. Euclid Avenue, Upland, CA.) during regular office hours, Monday through Thursday [8:00 – 11:30 & 12:30 – 4:00] and alternating Fridays [8:00 – 11:30 & 12:30 – 3:00]. The agenda is also available for review and copying at the City of Upland at 460 N. Euclid Avenue and Upland Public Library located at 450 N. Euclid Avenue.

POSTING STATEMENT: On April 20, 2023 a true and correct copy of this agenda was posted at the entry of the Company Office (139 No. Euclid Avenue), at the City of Upland at 460 N. Euclid Avenue, on the public bulletin board at 450 N. Euclid Avenue (Upland Public Library), and on the Company website.

MINUTES OF THE SAN ANTONIO WATER COMPANY
PLANNING, RESOURCES, and OPERATIONS COMMITTEE
February 28, 2023

An open meeting of the Planning, Resources, and Operations Committee (PROC) of the San Antonio Water Company (SAWCo) was called to order virtually at 3:02 p.m. on the above date. Committee members present were Will Elliott, Kati Parker, and Bob Bowcock. Also in attendance were Patricia Parks of Water Systems Consultants (WSC), SAWCo's legal counsel Derek Hoffman of Fennemore, and General Manager Brian Lee. Director Elliott presided.

1. Recognitions and Presentations – None.

2. Additions-Deletions to the Agenda – None.

3. Public Comments – None.

4. Approval of Committee Meeting Minutes:
   A. Regular Committee Minutes of October 25, 2022 – Director Parker moved, and Director Bowcock seconded to approve the meeting minutes of October 25, 2022 as presented. Motion carried unanimously.

5. Planning and Operational Issues:

6. Planning and Operational Updates -
   A. Project Status Report/Project List – Mr. Lee advised things remain fairly unchanged since SAWCo's February Board meeting held the previous Tuesday. Staff is moving forward with the contract for Glendale Road Pipeline Project.

   Mr. Lee stated a news article reported 70 inches of snow this season on Mt. Baldy. Staff look forward to providing water well into the summer due to these snowstorms. A cold front moving in is expected to bring even more snow. The concern is if the weather warms too quickly, SAWCo will not be able to capture all of the water.

   B. 2020 Master Plan – Mr. Lee reported the Master Plan project began back in 2020. The reason for the length of time taken to complete the project was primarily due to the creation of a comprehensive computer simulated model of SAWCo's system, which is the first time it has been done. Staff have found the model tracks closely with their system. It will be instrumental in achieving the expansion of the Holly Drive zone. A number of capital improvement projects scheduled to take place over the next 10 years are described in the plan. A total of $1 to $2 million dollars in Master Plan projects is planned each year which falls in line with what is needed to maintain and upgrade SAWCo's water system. Many of the projects are studies therefore the total cost of projects will significantly increase from the proposed $9 million dollar estimate once the projects stemming from the studies are completed.

Director Elliott inquired whether any of the Committee members had any questions or comments on the first portion of the plan dealing with the methodology. Director Bowcock commented it was a very well-done report. He questioned the model software utilized by WSC. Ms. Parks replied it was InfoWater Pro by Innovyze. Director Bowcock inquired whether SAWCo would be purchasing the software or would they rely on WSC for updates. Mr. Lee replied he would rely on the consultants for updating.

Director Parker inquired as to a schedule for the projects outlined in the Master Plan. Mr. Lee advised there is no set schedule in the Master Plan. It will be up to staff to determine the order of projects. Keeping the projects to $1 to $2 million per year is desired.

Director Elliott moved to the Capital section of the Master Plan which shows SAWCo already handling the projects listed. Using the list as a guide.

Mr. Hoffman suggested the removal of a sentence from page 3-8. The Committee agreed to the removal.

Director Parker moved to recommend the Board approve the 2020 Master Plan and Director Bowcock seconded the motion subject to the revisions agreed upon by the AFC. Motion carried unanimously.

7. Basin Issues and Updates
   - ***San Antonio Canyon Watershed –*** Mr. Lee advised an ultrasonic meter will be installed at SAWCo's mainbox to measure overflow as means to double check the flow levels coming out of the canyon.
   - ***Chino Basin*** – No report given.
   - ***Six Basins*** – No report given.
   - ***Cucamonga Basin*** – No report given.

8. Closed session: None.

9. Committee's Comments and Future Agenda Items: None.

Adjournment: –The meeting adjourned at 3:22 p.m.

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Assistant Secretary
Brian Lee

Agenda Item No. 6A

Item Title: Projects and Operations Update

Purpose:

To update the Board and Shareholders on Company capital projects.

Updates:

1507 – Office Relocation

The Board approved a design and construction management contract at its March 2023 regular meeting. Contract has been executed and Architect is currently working on preliminary plans.

Original Budget	$4,000,000
Original Contracts	$283,550
Authorized Change Orders	NA
Current Contracts	$283,550

1602 – Holly Drive Reservoir, Phase 3

Proposed construction of a second 120,000-gallon tank at the Holly Drive Tank site. Professional services agreement has been fully executed. Contract has been executed. Waiting on material delivery. Preconstruction meeting was held Thursday, April 6th. Submittal review is underway. Notice to Proceed issues April 10th. Contractor anticipates mobilizing to site on May 23rd.

Original Budget	$985,260
Original Contracts	$985,260
Authorized Change Orders	NA
Current Contracts	$985,260

1902 – Cucamonga Crosswalls Mitigation

TKE Engineering is working with staff to close out certain State and Federal Permits. Staff is also looking into long-term maintenance permits that will allow the Company yearly access to the site for clearing and grubbing.

2007 Well 19

Project approved at April 2022 Board Meeting. Contract has been completed. Material being ordered and we are currently scheduling the start of work. Staff was informed this month that material deliveries (specifically the fiberglass casing) is delayed until early 2023. Tentative start of the test well has been scheduled for April 2023.

Original Budget	$1,130,990
Original Contracts	$1,130,990
Authorized Change Orders	NA
Current Contracts	$1,130,990

2201 Paloma Hydraulic Break

Technical study to review available options to modernize the facility and reduce low frequency noise during high waterflow events. Contract has been fully executed. Predesign meeting held. Options discussed. Draft technical report has been received by the Company. Project was authorized by the Board at the regular November

meeting for inclusion in the 2024 budget. Professional Services proposals will be reviewed by PROC in April, 2023. Three proposals were received.

Original Predesign Budget $40,000
Original Design/Const. Budget.....$1,080,000
Original Contracts $39,750
Authorized Change Orders.....NA
Current Contracts $39,750

2202 Glendale Road Pipeline

Replace aged pipelines within Glendale Road. Project was approved at the regular may Board Meeting. At the July Board meeting, the Board authorized the General Manager to execute a time and materials contract with Ardurra in the amount of $70,023. Contract has been executed. Consultant completed field survey and prepared 30% design review plans. Staff has completed review and returned comments back to consultant. 90% plan set has been reviewed and returned to consultant. Bid set scheduled was sent to six select contractors in mid-December. Contractor has completed mainline installation and is currently working on pressure testing and lateral installation. Project should be completed by end of May.

Original Budget.....$276,000
Original Professional Services Contracts.....$70,023
Original Construction Contract.....$437,931
Authorized Change Orders.....NA
Current Contracts $507,954

2203 Well 31 Pipeline

Project budgeted in the 2022 year. Replace approximately 1,400 linear feet of 14" pipeline from Well 31 delivering water to facilities at Golf Club Drive along backside of homes and within Upland Hills Country Club waterline easement. Abandon aged pipeline. The current steel pipeline was installed before 1976 and has exceeded its useful life. Identified by staff as a high maintenance pipeline. Professional Services proposals will be reviewed by PROC in April, 2023. Three proposals were received

Original Budget.....$420,000
Original Contracts $0
Authorized Change Orders.....NA
Current Contracts .....NA

2204 GIS Update

At the August Special Meeting, the Board authorized a contract with WSC to update the Company's GIS maps. Contract has been executed. Consultant working on updates.

Original Budget.....$11,110
Original Contracts $11,110
Authorized Change Orders.....NA
Current Contracts $11,110

2207 Well 31 Repair

Well 31 suffered a catastrophic failure in October 2022. The Board authorized a repair contract at its special Budget workshop in December 2022. Contract has been

executed and material is being procured. Well has been swabbed and equipment is currently being installed.

Original Budget	$220,000
Original Contracts	$200,000
Authorized Change Orders	NA
Current Contracts	$3,665

2301 Well 16 Conversion

Contractor is waiting on material delivery.

Original Budget	$405,000
Original Contracts	$390,665
Authorized Change Orders	NA
Current Contracts	$390,665

Agenda Date: April 25, 2023

Agenda Item No. 6B

Item Title: Well 31 Pipeline Relocation/Replacement

Purpose:
To discuss three proposals for design services

Issues:
Should the PROC forward a recommended proposal to the full Board with a recommendation to approve?

Manager's Recommendation:
Recommend forwarding the most qualified proposal with approval of PROC.

Background:
The Well 31 Pipeline Relocation/Replacement project was approved by the Board for inclusion in the 2023 budget. Staff issued the attached RFP to four design firms; Ardurra, CivilTech, TKE and WSC. Three firms submitted attached proposals; Ardurra, CivilTech and TKE. Staff requests that each Committee member review the attached proposals and choose the highest qualified firm for submittal to the Board with a recommendation to award. Staff prefers to discuss proposed fee at the PROC meeting, giving individual committee members an chance to review each proposal without dollar cost bias. The company prefers to hire the most qualified firm assuming proposed fees are within reasonable differences from each other.

Previous Action:
None

Impact on Budget:
Budget of $63,000 for design services
Full project cost is being developed

February 24, 2023

San Antonio Water Company
Brian C. Lee
139 North Euclid Avenue
Upland, CA 91786

REFERENCE: PROPOSAL FOR WELL 31 PIPELINE REPLACEMENT PROJECT

Dear Mr. Lee:

Thank you for the opportunity to develop a proposal for the Well 31 Pipeline Replacement Project. Ardurra is excited to partner with San Antonio Water Company (SAWCo) to provide engineering design, bidding support, construction inspection and materials testing, and construction management services for this project.

PROJECT UNDERSTANDING AND APPROACH

This SAWCo project is mostly located within Upland Hills Country Club and in the residential community of Upland, California. The project consists of replacing approximately 1,400 linear feet of 14" pipeline from Well 31 (Figure 1) delivering water to facilities at Golf Club Drive along backside of homes and within Upland Hills Country Club waterline easement.

Figure 1 – Well 31.

Ardurra will design and provide construction phase services for approximately 1,400 LF of new pipeline, mostly within Upland Hills Country Club. Existing pipeline sections to be replaced will be abandoned per industry accepted standard.

Ardurra has extensive experience in providing services, from design and through construction, for conveyance projects. We understand the unique project challenges within golf courses and planned communities such as ensuring continual access to HOA and Golf Course Representatives and not interrupting any activities withing such facilities. We will provide seamless management and coordination with SAWCo, Affected HOAs, Upland Country Club, local jurisdictions, and contractor throughout each phase of the project.

Figure 2 – Backside of Homes.

Figure 3 – Upland Hills Country Club Waterline Easment.

Figure 4 – Well 3 and 24.

SCOPE OF WORK

The Ardurra design process will include project management, surveying & mapping (by LD King), data collection, utility review, preparation of preliminary design documents, CEQA documentation, and permitting support. Ardurra will execute three submittals for replacement of the 14-inch pipe design and related appurtenances including delivery of final signed plans, specifications, and cost estimate. Additionally, Ardurra will manage the bidding phase for the project.

Ardurra construction phase services will include part-time construction inspection & soil compaction testing (by Converse), submittal reviews, RFI responses, coordination of progress payments with contractor, and project close-out.

TASK 1 – PROJECT MANAGEMENT

Ardurra will provide project management, proposed project schedule, recommendations for material and pipeline diameter selections, quality management, and progress meetings for SAWCo to ensure adherence to project scope, schedule, and budget. We propose three (3) meetings: kickoff meeting/site visit followed by two (2) virtual review meetings.

Deliverables:

- Proposed project schedule
- Meeting agendas and minutes

TASK 2 – PRELIMINARY DESIGN PHASE

Ardurra will team with LD King to provide field survey, topographic, and utility mapping. We will incorporate mapping into the design drawings. Ardurra will prepare preliminary design phase documents consisting of final design criteria, preliminary drawings, outline specifications and preliminary cost estimate. Ardurra will review and revise preliminary design phase documents based on SAWCo comments.

Deliverables:

- One (1) review copy of the preliminary design phase documents which is anticipated to consist of a Technical Memorandum and associated figures.

TASK 3 – ENVIRONMENTAL PHASE

Ardurra will review the project and make a recommendation to SAWCo for the appropriate level of CEQA document. Ardurra anticipates a categorical exemption for this project given the new pipeline and appurtenances lie within disturbed roadway, established easements or adjacent to existing SAWCo Facilities.

Deliverables:

- CEQA Notice of Exemption (NOE) documentation
- CEQA NOE filing with the County of San Bernardino

TASK 4 – FINAL DESIGN PHASE

Ardurra shall coordinate encroachment permitting, traffic control, and pavement restoration with the City of Upland. Ardurra will design the project in compliance with permit and other jurisdictional requirements. Ardurra scope includes data collection, utility review, Shut Down and Tie-In Plan, drawings, specifications, three design submittals – 50% (drawings only), 90%, and final.

Ardurra shall prepare and furnish bidding documents (plans, specifications, and estimate) for review by SAWCo and affected agencies. Ardurra will revise in accordance with comments and instructions from SAWCo and provide final documents and signed plan deliverables.

Deliverables:

- 50% plan and profile drawings – PDF Format
- 90% drawings and specifications – PDF Format
- Final signed plans, specifications, fee estimate – One (1) reproducible copy, one (1) electronic copy in native format, and one (1) full document set copy in Adobe Acrobat PDF format

Ardurra scope ***excludes*** Stormwater Pollution Prevention Plan (SWPPP), traffic control plans, shoring plans and calculations, and utility potholing – The contractor shall be responsible for these tasks, which will be required in the technical specifications for the project.

TASK 5 – BIDDING PHASE

- ✓ Ardurra will consult with SAWCo to identify 2-3 reputable construction contractors; and given Ardurra's familiarity with water construction industry in the region, will also recommend 2-3 additional constructors.
- ✓ Ardurra will notify prospective bidders of the project and coordinate and obtain bids for the work. We will provide all necessary construction bid documents to bidders and maintain a record of prospective bidders to whom project documents have been issued.
- ✓ Ardurra will coordinate a Pre-bid Meeting and process and respond to questions regarding the bid documents by of way addendum(s).
- ✓ Ardurra will coordinate a Bid Opening Date and location, and perform Bid Opening activities. We will review bids for acceptability of prime contractor, subcontractors, supplies and other individuals and entities proposed by prospective contractors.
- ✓ Ardurra will review and advise SAWCo on the acceptability of substitute materials and equipment proposed by contractor during the bidding or negotiating phase.
- ✓ Ardurra will prepare a bid evaluation sheet showing each bidder and their respective line-item bids, along with a total proposed bid price for each bidder.
- ✓ Ardurra will evaluate the apparent lowest bidder for responsiveness, accuracy, and confirm that licenses, bond/surety and insurance requirements are in order and advise SAWCo of the "Lowest Responsible Bidder".
- ✓ Ardurra will notify the "Lowest Responsible Bidder" and assemble all contract documents prior to final signature.

Deliverables:

- Record of prospective bidders
- Bid evaluation sheet
- Construction contract documents

TASK 6 – CONSTRUCTION PHASE

Engineering Design Services

Submittals and RFIs – Ardurra will review and organize shop drawings, samples, and other information which contractor is required to submit to ensure conformance with contract documents and compatibility with design, and provide six (6) submittal reviews. We will respond to two (2) Contractor Requests for Information (RFI) through appropriate addenda as necessary to correct, clarify or change the contract documents.

Construction Management Services

Kickoff Meeting – Ardurra will schedule and organize a Kickoff Meeting with contractor, SAWCo, designers, CM team, affected HOA & Golf Course representatives, and other stakeholders. At this meeting the CM will go over all the nuances of the project, such as material submittal, RFI process, and work hours and have the designer available for any pertinent questions. The Contractor shall submit a Baseline Schedule at this meeting for Ardurra to review.

Progress Meetings – Ardurra will conduct construction progress meetings and provide agenda and minutes for such.

Change Orders – The Ardurra CM team is highly experienced in providing services for water pipeline projects; therefore, any change order matters will be effectively evaluated for justification and if justifiable will be addressed by quantity change per the schedule of values or per a negotiated cost and time.

Inspection Services – Part-time inspection will be provided to not only inspect installation activities with conformance to the construction documents but will also be ahead of the production work to identify and resolve any potential construction issues to eliminate delays to the project. Our inspector will be point of contact, on site, from the public's perspective and therefore be available, to them, regarding information about the project. Given that the new pipeline alignment is located mostly on golf course waterline easement and on a residential road, Ardurra will inspect that the appropriate traffic control is in place and that access to driveways are addressed as well as postal services and trash services.

Materials Testing – Ardurra will include a materials testing firm, Converse Consultants, to provide eighteen (4) visits to the site for backfill compaction testing, backfill method observation & recommendations. Converse will run a Maximum Compaction Lab Analysis for the material to be used for backfill to ensure the contractor's compliance with contract and permits.

Contractor Payment – Ardurra will process and review contractor payment requests and final payment and file the project with the County Recorder Office, given the contractor meets all substantial completion requirements.

Closeout Activities – Ardurra will perform all Final Closeout activities, which include: Final Punchlist Site-walk and Final Approval, Warranty documentation, Delivery of all project files, close out any potential liens, receive all contractor releases, and make recommendation for Final Payment.

Deliverables:

- Meeting agendas and minutes
- Warranty documentation
- Project Files

DESIGN AND CONSTRUCTION SCHEDULE

The Ardurra Design schedule is built from a Notice to Proceed starting April 3, 2023. SAWCo will have one week for review of each submittal package. Signed Plans, Specifications, and Fee Estimate will be delivered to SAWCo July 19, 2023. The construction phase is expected to be 4 weeks in duration. See Appendix A for itemized design schedule.

FEE ESTIMATE AND HOURLY RATES

See Appendix B for itemized fee estimate and hourly rates.

RESUMES

See Appendix C for resumes.

We appreciate the opportunity to provide this proposal and encourage you to please reach out with any questions. We look forward to working with SAWCo on the Glendale Road Pipeline Replacement Project.

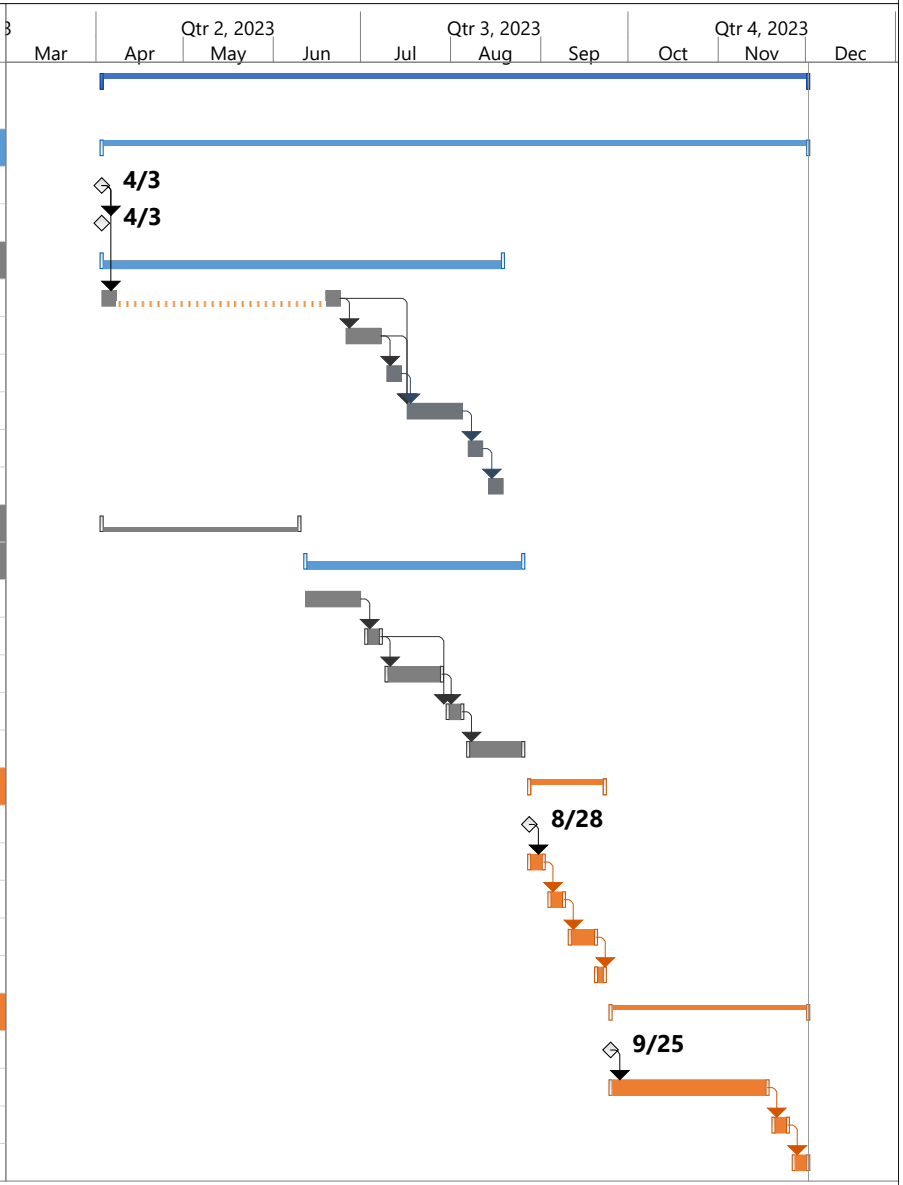
Sincerely,

Robert S. Weber, PE
Southwest Water Practice Director

Oscar Gonzalez, PE
Project Director

PROJECT SCHEDULE
San Antonio Water Company
Well 31 Pipeline Replacement Project

ID	Task Name	Duration	Start	Finish
1	**Engineering Design and Construction Services for Well 31 Pipeline Replacment**	175 days	Mon 4/3/23	Fri 12/1/23
2	**Project Management**	175 days	Mon 4/3/23	Fri 12/1/23
3	NTP	0 days	Mon 4/3/23	Mon 4/3/23
4	Kick-off Meeting/Site Visit	0 days	Mon 4/3/23	Mon 4/3/23
5	**Preliminary Design Phase**	100 days	Mon 4/3/23	Fri 8/18/23
6	Data Compilation Review	2 wks	Mon 4/3/23	Fri 6/23/23
7	Survey and Mapping	2 wks	Mon 6/26/23	Fri 7/7/23
8	Utilities Research	1 wk	Mon 7/10/23	Fri 7/14/23
9	Prepare PDR	3 wks	Mon 7/17/23	Fri 8/4/23
10	SAWCo Review	1 wk	Mon 8/7/23	Fri 8/11/23
11	Final PDR	1 wk	Mon 8/14/23	Fri 8/18/23
12	**Environmental Phase**	50 days	Mon 4/3/23	Fri 6/9/23
13	**Final Design Phase**	55 days	Mon 6/12/23	Fri 8/25/23
14	Prepare 50% Design	3 wks	Mon 6/12/23	Fri 6/30/23
15	SAWCo Review	1 wk	Mon 7/3/23	Fri 7/7/23
16	Prepare 90% Design	3 wks	Mon 7/10/23	Fri 7/28/23
17	SAWCo Review	1 wk	Mon 7/31/23	Fri 8/4/23
18	Final PS&E	3 wks	Mon 8/7/23	Fri 8/25/23
19	**Bidding Phase**	20 days	Mon 8/28/23	Fri 9/22/23
20	Advertisement	0 days	Mon 8/28/23	Mon 8/28/23
21	Questions Due	1 wk	Mon 8/28/23	Fri 9/1/23
22	Addenda	1 wk	Mon 9/4/23	Fri 9/8/23
23	Bids Due	7 days	Mon 9/11/23	Tue 9/19/23
24	Award	3 days	Wed 9/20/23	Fri 9/22/23
25	**Construction Phase**	10 wks	Mon 9/25/23	Fri 12/1/23
26	Preconstruction Conference	0 days	Mon 9/25/23	Mon 9/25/23
27	Construction	8 wks	Mon 9/25/23	Fri 11/17/23
28	Punchlist	1 wk	Mon 11/20/23	Fri 11/24/23
29	Record Drawings	1 wk	Mon 11/27/23	Fri 12/1/23



Oscar Gonzalez, PE

Project Director

Education

MS/1998/Environmental Engineering (Water/Wastewater)/California Polytechnic University, Pomona

BS/1994/Mechanical Engineering/ California State University, Los Angeles

Registrations

2004/PE/Civil/CA # C66241

Years of Experience: 35

Office Location: El Segundo, CA

Oscar Gonzalez, PE, has an extensive background in program and project leadership, construction management, and civil engineering in his more than 30-year career. He has successfully delivered water and wastewater infrastructure for treatment, conveyance, storage, and alternate delivery facilities throughout Southern California. Oscar has managed various phases in the water/wastewater practice, ranging from planning and design to construction management and facility operations start-up. His public works expertise consists of public facilities, wet and dry utilities, street improvements, recreation centers, and landscaping and masonry.

As a project management consultant for water/wastewater clients in the public sector and director of construction in the land development industry, Oscar has delivered successfully on programs for new water and wastewater facilities and for new infrastructure in planned communities. His tasks for such programs have included coordination with city staff; budget and cash flow development; schedule development; management of professional consultants and review of deliverables; permitting with cities and dry/wet utilities; procurement of construction contractors; and construction management. As the first point of contact at construction sites, Oscar was the primary source for public outreach and information for such projects. As the Chair of the Finance Committee at Cucamonga Valley Water District, Oscar oversaw and gave direction for grant application to FEMA/ Cal EMA, California Prop 1, and California Prop 50; Cucamonga received approximately $8 Million from such funding agencies.

RELEVANT EXPERIENCE

Glendale Pipeline Project, San Antonio Water Company, San Antonio Heights, CA. Provided design & bidding activities and overall project oversight for this $438K project that consisted of the installation of approximately 700 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included local public outreach, change order negotiation, and contractor payment request review. (07/2022-05/2023)

30-Inch West Pipeline Project, East Valley Water District, Highland, CA.* Construction manager for this $1.4-million project that consisted of the installation of over 5,000 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included public outreach, change order negotiation, and contractor payment request review. (01/2014-08/2014)

New Model Colonies project in the City of Ontario, CA. Served as Construction Manager for the construction of Phase 1 of the backbone infrastructure for the At build-out this program will consist of a 4,000 acre development project, comprised of 30,000LF sewer, 58,000LF storm drain, 63,000LF domestic water, 72,000LF recycled water, and 80,000LF roads. The Phase 1 construction cost is over $60million. Services include: Change Order negotiation and processing, Schedule Review, Progress Payment review and approval, RFI resolution, Submittal Review, and Construction oversight.

City of Highland: Storm Drain and Water Pipeline Project / Highland CA. Served as Construction Manager for the installation of over 17,000 lineal feet of new pipeline, including: sewer, water line, and stormdrain facilities, which included: traffic control installation, public notification, and testing and disinfection of pipeline. Duties included: constructability review, bid assistance, public outreach, change order negotiation, and contractor payment request review.

Served as Resident Engineer and Construction Manager for the construction of the Ventura Road Utility Improvements and Resurfacing Project in Oxnard, California. Included sewer line, potable water line, recycled water line, and forcemain. Each line consists of approximately 9,000 linear feet. Pipe material is PVC and diameters range from 16" to 21".

Evan's Reservoir and Inlet/Outlet System, City of Riverside Public Utilities Department, Riverside, CA.* Construction manager and resident engineer for this ASCE award-winning project, which involved the replacement of a reinforced concrete reservoir and inlet/outlet system (72-inch and 60-inch-diameter steel cement-mortar lined and coated (CML&C)). The project included demolition and construction of a 16-MG concrete reservoir, yard piping, site concrete work, electrical work, start-up and operation, and maintenance manuals covering all equipment. Construction and construction management fees totaled over $14 million.

968 Reservoir and Pump Station Replacement, City of Glendale Water and Power Department, Glendale, CA.* Project/Construction Manager, and resident engineer for the replacement of the 968 Reservoir and Pump Station, located at Chevy Chase Country Club. The project included demolition, construction of a 14.5-MG concrete reservoir, the construction of a new pump station, yard piping, concrete work, pumps and motors, modifications to the existing irrigation system, and electrical work. The project also involved HVAC, electrical, and instrumentation; electrical and instrumentation wiring and interconnections; all structural, architectural, mechanical, electrical, plumbing, and yard piping, site grading and paving, utilities, drainage, yard structures; permitting; and operation and maintenance manuals covering all equipment. Provided outreach to contentious residents who ultimately championed the project.

The Preserve at Chino Land Development Program, Lewis Management Corporation, Chino, CA.* Director of construction for over $80-million in public improvements. Improvements included the construction of backbone infrastructure and facilities that will serve new residential communities. Tasks included: budget development; coordination with the City of Chino; coordination with other public stakeholders, such as IEUA, SAWPA, County of San Bernardino, and State of California; management and coordination of design and construction management consultants; review of design deliverables; review of the Sewer Master Plan; and managing the program to re-design and re-construct street improvements to revised City ADA-compliant standards. The new construction consisted of wet utilities (including a lift station and force main), dry utilities, street improvements, recreation center, masonry walls, and landscaping. Oscar developed and managed an aggressive schedule. The timeline for completion was aggressive, due to the scheduled opening days of the new communities. (06/2017-12/2020)

North Fontana Land Development Program, Lewis Management Corporation, Fontana, CA.* Director of construction for over $70 million in public improvements. Improvements included the construction of backbone infrastructure and facilities that will serve new residential communities. Tasks included budget and cash flow development and review/updates; schedule development and review/updates; management and coordination of design and construction management consultants; coordination with the City of Fontana; coordination with other public stakeholders, such as West Valley Water District, Metropolitan Water District, and San Gabriel Valley Water District; and permitting with the City and utilities. The new construction included wet utilities, dry utilities, street improvements, masonry walls, and landscaping. The timeline for completion was aggressive, due to the scheduled opening days of the new communities. (06/2017-12/2020)

Malibu Mesa Water Reclamation Plant, Los Angeles County Department of Public Works, Malibu, CA.* Project manager for the 50% design effort of a new wastewater membrane treatment facility. The new plant will have the capacity to treat up to 200,000 gallons per day. The plant designer is Jacobs. The project includes installation of temporary filters, demolition of existing filter equipment, installation of a Parshall flume, pump station with diversion structure, fine screens, anoxic/aerobic bioreactors, membrane tanks, and permeate pumps; membrane thickening tank, new UV system, installation of new structural members in the existing building to support new electrical equipment; installation of a new standby generator, new process equipment and pump replacement; demolition of the existing generator and fuel tank; refurbishment of the existing round activated sludge process structure, refurbishment of the existing building; relocation of Southern California Edison equipment; and a paved parking area.

Replacement of Marina Del Rey Pump Station (MDRPS), Los Angeles County Department of Public Works, Marina Del Rey, CA.* Project manager for the design of the replacement and relocation of the MDRPS and rehabilitation or replacement of the existing forcemain. The facility designer is Stantec. The project includes odor control for MDRPS system, minimization of impacts to stakeholders and the public, pump station equipment, dewatering/managing tidal influence, decommissioning of existing pump station, electric systems, and site security.

Concrete Drying Beds, South San Joaquin Irrigation District, Oakdale, CA.* Construction manager for this $4-million project that

involved the construction of two new concrete drying beds and related earthwork, piping, and appurtenances. The project expands the sludge drying capacity at the Nick C. Degroot Water Treatment Plant. The project required diligent change order negotiation and potential claims avoidance. (12/2020-10/2021)

Belmont Plaza Pool Rebuild/Revitalization Project, City of Long Beach, CA. Project manager for this new, $103.1-million aquatics center that replaces the now-demolished Belmont Olympic Pool. The new facility will host swimming, water polo, and platform diving events at the local, regional, and national levels. Ardurra represents the City and its interests in all negotiations, meetings, community outreach, entitlements, permitting, design management and related activities throughout the project. Oscar is assisting with the construction management RFP/consultant selection process as well as with administering an application from the Los Angeles County Flood Control District (LACFCD) DNAP program. He is also coordinating the design and permitting of the Olympic Plaza Storm Drain upgrade.

Capital Improvement Projects, Golden State Water, Santa Fe Springs, CA.* Served as district engineer (contracted) performing the tasks of construction manager and field engineer for all capital projects under construction. Coordinated all activities for construction services including contractor approvals, bidding, awards, contracts, inspection services, negotiations during construction, liaison with city and other agency inspectors, as-builts, and job closings. Completed field checks during design of capital projects; investigated and recommended solutions to engineering or system operational problems; maintained all capital and maintenance budgets; and supervised contract administrators, inspectors, engineering technicians, and other support staff performing all new business activities within the District—from initial contact with applicants, to preparation of final contracts, and installation of facilities.

Plant 143 Improvements, East Valley Water District, Highland, CA.* Construction manager and resident engineer for the Plant 143 Improvements, which included construction of a new 5,300-gallons-per-minute (gpm) booster pump station and a 1-million-gallon (MG) welded steel storage break tank for air dissipation treatment and distribution of groundwater from the District's existing wells, as well as from future groundwater sources from other pressure zones. Developed a sequence plan with District staff and the contractor for connecting to the existing system. The project included furnishing, installing, start-up and testing of mechanical piping, thermal insulation and appurtenances; flow meters and valves; motor control centers, variable frequency drives and controls; raw water bypass and meter and control valve; emergency generator connection provisions; fire protection systems; building support systems including plumbing, HVAC, electrical, and instrumentation; electrical and instrumentation wiring and interconnections; all structural, architectural, mechanical, electrical, plumbing, and distribution piping – including installation by mining and jacking, site grading and paving, utilities, drainage, yard structures; permitting; and operation and maintenance manuals covering all equipment. Duties included construction inspection; public outreach, change order negotiation, and contractor payment request review.

Anion Exchange Plant Expansion, City of Pomona Public Works Department, Pomona, CA.* Construction manager and resident engineer for the construction of the City of Pomona's Anion Exchange Plant Expansion project, which included demolition, relocation of the sodium hypochlorite system, installation of a new resin storage tank, salt storage/brine generation system, yard piping, concrete work, pumps and motors, modifications to the existing SCADA system to control the new salt storage/brine generation system, electrical work, and the installation and start-up of the new Anion Exchange Plant.

***Work performed prior to joining Ardurra.**

Keith Forbes, QSP

Construction Inspector

Keith Forbes, QSP, has more than 30 years of construction inspection experience for public agencies, including local, regional, state, and federal, as well as large commercial and industrial clients. Keith has substantial experience with water utilities including water lines, water mains with laterals, hydrants and individual house connections, and overall water services as well as wastewater and stormwater improvements. His specific project experience includes roadways, bridges, highways, light and heavy rail, concrete structures, liquid natural gas (LNG) storage tanks, mining/tunneling, bulk earth works, LNG plants and field compression stations, coal preparation plants (CPP), petroleum refineries as well as engineer procure and construction management (EPCM) projects. Keith is well-versed at addressing the rigorous administrative and quality assurance requirements of various funding requirements.

Keith's key responsibilities have included observing and inspecting all aspects of construction to identify document and report construction performance, in addition to verifying compliance with plans, specifications and codes. Keith's background expands in many areas including onsite inspection, plans examination, project coordination, working with architects and planners, report preparation, document control, and client relations. He has extensive experience with Caltrans specifications and standards, the Standard Specifications for Public Works Construction (SSPWC, AKA "the Greenbook"), Construction Standards Institute (CSI), American Institute of Architects (AIA), Engineers Joint Contract Documents Committee (EJCDC), documentation and report procedures and systems, as well as experience with coordination and interfacing with multiple agencies and the public simultaneously. Keith is Caltrans highway safety trained, OSHA construction safety certified, and possesses multiple ICC and ACI certifications.

Education
Columbia College/Sonora, CA

U.S. Army Corps of Engineers Training

Certifications
Certified Erosion, Sediment and Storm Water Inspector (CESSWI), #4695;
Qualified SWPPP Practitioner (QSP), #25929; NICET Railway/Subway Certification;
Confined Space Entry; Working at Heights; GI Safety Induction (Coal Surface);
Resources and Infrastructure Industry Supervisor's Course;
Communicate Information, #MNCG1009/#RIICOM301;

Certificates II and III in Surface Extraction Operations, #RII20209/#RII30109;
Certificate III/Mining Exploration;
Four-Wheel Drive Vehicle, #RII30509

Years of Experience: 33

Office Location: El Segundo, CA

RELEVANT EXPERIENCE

Reclaimed Water Line, City of Ceres, CA.* Senior inspector for construction of 12.5 miles of 24-inch C900 PVC underground reclaimed water line and a pump station from the Ceres wastewater treatment plant to the Turlock water treatment plant. Project included air release valves, blow-off valves, thrust blocks, backfilling and compaction.

Elk Grove Florin Road Water Main Improvements, Elk Grove Water District, Elk Grove, CA.* Inspector for the replacement of a 1,500-linear foot, 16-inch C900 ductile iron pipe water line, including 17 one-inch water services, air relief valves and three hydrant services for residents and local businesses. Monitored bacteriological testing for compliance with specification requirements.

New Tract Division Development Utility Installation, City of Roseville, CA.* Inspector for new 1,100-linear foot, 18-inch C900 pipe water main, including 12 one-inch water services, valves and air relief valves, storm drain and sewer systems, two hydrants and associated structures. Coordinated hydro-testing and bacteriological testing of water main.

Water Line Relocation at Millbrae Avenue, Bay Area Rapid Transit (BART), Millbrae, CA.* Inspector for relocation of an 800-linear foot, 24-inch C900 pipe water main and two 6-inch laterals for future hydrants for a BART station. Monitored hydro-testing and bacteriological testing of main line and services for residential and business properties.

New Subdivision Projects, County of Mesa, AZ.* Inspector for subdivision projects involving all underground utilities. These included water mains, laterals, hydrants and individual house connections, sewer lines and storm drains, including associated structures. Monitored water line services installations, hydro-testing of mains and laterals and coordinated bacteriological testing of services and main lines.

Water and Storm Drain Installation Improvements, City of Elk Grove, CA.* Senior inspector for the inspection and documentation of a new 16-inch water main. Inspections addressed fire hydrants, one-inch water services, air release valves, backflow preventers, gate valves and thrust blocks. Project included a new 48-inch RCP storm drain with manholes and pavement overlay. Performed hydro-testing and bacteriological testing in conformance with AWWA and Florin Resource Water District standards.

Wastewater Treatment Plant No. 3 Expansion, Public Works Department, City of Bakersfield, CA.* Senior construction inspector for $373-million project that included civil works, process piping above and below ground, CMU block and concrete structures, concrete storage tanks and underground conduit duct banks.

Water and Sewer Main Infrastructure Upgrades, Public Utilities Commission, City of San Francisco, CA.* Senior construction inspector for this $8.5-million project that included 24-inch water main and sewer main installation along with concrete structures.

On-Call Inspection Services, City of Lake Forest, CA. Public works inspector for construction of capital improvements citywide. Performs wide range of inspections involving construction of new homes in the Shea Baker Ranch master-planned community. Inspecting mass grading and final precise grading for new homes in Baker Ranch neighborhoods, such as The Landing (Shea Homes), Parkside (Toll Brothers) and Encanto (Meritage). Inspections address variety of elements, such as construction of storm drains, area drains, curbs and gutters, sidewalks, ADA ramps, street lighting and wet and dry utilities. Inspects all projects requiring encroachment permits. Also performed grading inspection for two restaurants and a U-Haul facility.

Torrance Transit Park and Ride Regional Terminal, City of Torrance, CA. Senior public works inspection for a flagship terminal for the City's 11-route agency, Torrance Transit, and other public transportation providers. This LEED v2009 Gold project includes parking for buses and automobiles, covered passenger boarding areas, offices, employee break areas and retail spaces. The project also involves off-site improvements for the installation of required utilities, the widening of Crenshaw Boulevard and construction of an extension of 208th Street as well as related improvements.

Kern and Mono County Bridge Replacements and Repair Project, Caltrans, Bridgeport to Tehachapi, CA. Assistant resident engineer/inspector for this $7.5 million federally funded bridge replacement and repair project, which involved replacement and/or repair of nine bridge locations in Kern and Mono Counties. Improvements ranged from concrete and safety repairs to entire bridge removal and replacement. The project included over 330 lineal feet of guardrail removal and replacement with over 360 lineal feet of Midwest guardrail, double Midwest guardrail, transition rail, and alternative in-line terminal systems.

Sherwin Summit Shoulders Widening and Barrier Rail Project, Caltrans, Mammoth, CA. Assistant resident engineer/inspector for this $17-million project that includes eight retaining walls and a barrier rail.

Cache Creek Bridge Construction, Caltrans, Tehachapi, CA. Assistant resident engineer/inspector for construction of this new $17-million bridge. The project includes pre-cast concrete girders.

2017-22 Street Pavement Maintenance Rehabilitation Project, City of Corona, CA. Interim construction inspection services that involve localized removal and replacement of failing asphalt sections, grinding and overlay, crack sealing, application of ARAM, and slurry sealing approximately 68 lane miles of local and major street. There is also removal and replacement of PCC ADA ramps.

Oso Creek Multi-Use Trail, City of Laguna Niguel, CA. Inspector for $3-million project to construct multi-use trail. The trail is located along Oso Creek Channel between the Laguna Niguel Metrolink Station and Three Flaggs commercial center. The project involved building contiguous bicycle and pedestrian/equestrian trails, stormwater control and treatment best management practices, landscaping, lighting and street improvements. The project was partially on City street right-of-way and partially on Orange County Flood Control District right-of-way for the Oso Creek Flood Control Channel. Ardurra provided grant funding services for two grants, one from the OCTA Tier 2 Environmental Cleanup Program, the other a State Water Resources Control Board (SWRCB) Proposition 84 Stormwater grant.

La Cienega Boulevard and Fairview Boulevard, City of Inglewood, CA. Inspector for federally funded roadway project to improve traffic safety and ease congestion. This project involved widening Fairview Boulevard between La Cienega and La Tijera boulevards and constructing dedicated right- and left-turn pockets at Fairview Boulevard and La Cienega. Upgrades included traffic signal improvements, masonry retaining walls, concrete sidewalks and driveway ramps, cross-gutters, curbs and gutters, pavement resurfacing and striping. The project included rough grading, road excavation and compaction, asphalt paving over a compacted base and subgrade preparation.

Cherry Avenue Widening, City of Signal Hill, CA. Inspector for the first phase of project extending from 230 feet south of Pacific Coast Highway (PCH) to the 19th Street intersection. Services for this federally

funded project were provided in compliance with federal standards and requirements, as detailed in the Caltrans "Local Assistance Procedures Manual."

North End Projects, Alameda Corridor Transportation Authority, CA.* Inspector for a federally funded multi-mile reconstruction of a railroad bridge, widening of an existing bridge, excavation work, demolition and reconstruction of a 300-foot box culvert, landscaping, new track installation, and signal installation.

Jump Start Safety Program, Alameda Corridor East Construction Authority, City of Irwindale, CA.* Resident inspector for the federally funded, $27.8-million heavy civil and heavy rail project. Inspection involved safety improvements for up to 45 surface intersections along a 30-mile route. This project was a portion of the nationally significant, rail improvement project to improve safety and reduce traffic and rail delays in the San Gabriel Valley.

Pavement Overlay and Slurry Seal, City of Chino Hills, CA.* Senior inspector for inspection services and public relations for 91 streets that involved slurry seal, overlay, reconstruction and striping. Coordinated and inspected the installation of drainage facilities designed by CBM on a fast-track schedule after construction started.

Citywide Residential Slurry Seal Program, City of Elk Grove, CA.* Senior inspector for $500,000 citywide residential slurry seal program. Responsibilities included managing and coordinating public notifications, troubleshooting vehicle relocations, providing comprehensive quality assurance and contract administration.

Citywide Residential Slurry Seal Program, City of West Sacramento, CA.* Senior inspector for $500,000 citywide residential slurry seal program. Responsibilities included management and coordination of public notifications, troubleshooting vehicle relocations, and comprehensive quality assurance and contract administration support.

223rd and Abalone Improvements, City of Torrance, CA.* Senior inspector for comprehensive infrastructure and road improvements for $2-million project. Coordinated closely with the City's staff, contractor and public to complete project on time and within budget. The improvements included street reconstruction, overlays, curb and gutter, storm drain, waterlines, sewer and landscaping. The utilities portion of the project included a new deep sewer line and a 16-inch C900 water main with fire hydrants, water services, gate valves, backflow preventers and air release valves, hydro testing and bacteriological testing. Project compliant with Torrance Municipal Water District AWWA standards.

Pedestrian and Parking Lot Enhancements, City of Santa Monica, CA.* Lead inspector for multi-faceted, fast-track public improvements project. Project elements included streetscape improvements, pedestrian crosswalks, curb extensions, street realignments, sidewalk widening, landscaping, parking lot reconstruction, traffic signal improvements, drainage improvements, utility coordination, street reconstruction and overlays, and street and parking lot slurry seal. Construction was coordinated with five other projects scheduled for construction in the same timeframe.

I-405 Freeway Realignment, Caltrans District 7 and City of Carson, CA.* Senior construction inspector for $22-million project involving a freeway interchange realignment. Construction involved concrete bridge and stormwater realignment, new pavement sections, abutment construction and earthwork.

U.S. 101/Millbrae Avenue Interchange, Caltrans District 4, Millbrae, CA.* Senior construction inspector for $16.5-million project that involving concrete bridge work, on-ramp civil and paving work, stormwater improvements, signal conduit duct banks, signal pole work and earth work.

I-215 Freeway Western Segment, Las Vegas Beltway, Section 11A, Clark County Public Works, Clark County, NV.* Inspector for $20-million project with a 390-day schedule. Inspected a three-mile stretch of freeway, including three bridges, a storm drain system, street lighting, traffic signals and paving. The project was part of Clark County's accelerated plan to circle the Las Vegas metropolitan area to improve traffic circulation throughout the Valley. Construction created two diamond interchanges using soffit-fill construction, a twin-bridge grade separation, 12 miles of the initial four lanes of the eight-lane PCC pavement highway and associated drainage, traffic and retaining wall improvements.

New Subdivision Infrastructure, City of Rocklin, CA.* Senior inspector for the construction inspection and documentation of new subdivision infrastructure, including water mains, residential services, hydrants, backflow preventers, air release valves, tees, hydro- and bacteriological testing documentation. Project involved stormwater and sewer line installation, laterals curb and gutter and sidewalks.

Wheatstone Liquid Natural Gas (LNG) Project, Bechtel/Chevron, Western Australia.* Quality control and pipeline inspector for Bechtel/Chevron gathering and trunk lines. Inspected Wheatstone temporary camp water supply installation, including backflow preventers, services. Documented backfilling operation, hydro- and bacteriological testing.

Rail Spur Track Installation Upgrades, Former Concord Naval Weapons Station, City of Concord, CA.* Senior construction inspector for rail spur track installation. Project involved eight spur tracks leading to ammunitions storage facilities at the station's missile facility. Project involved removal of existing spurs. Responsible for inspection, documentation and testing.

Metro Red Line-Hollywood Boulevard Segment, Los Angeles County Metropolitan Transportation Authority (LA Metro), Los Angeles, CA.* Senior construction inspector for track installation for the Red Line system through the Hollywood Boulevard corridor tunnel. Addressed track installation, documentation, and testing.

Red Line Station Construction, LA Metro, Los Angeles, CA.* Inspected all reinforced steel, concrete and HDPE for $300-million station construction. Inspected all architectural finishes, mechanical and electrical installations. Tracked contractor's manpower and progress in relation to critical milestones.

Red Line B-271 Subway Station, LA Metro, Los Angeles, CA.* Senior construction inspector for $600-million project involving station excavation and backfilling, concrete placement of invert and station construction.

Hollywood Boulevard Corridor, LA Metro, Los Angeles, CA.* Senior construction inspector for tunnel invert and wall placement. The $8.6-million project included concrete segment placement, rebar and an HDPE lining.

Various Projects, U.S. Department of Defense (DoD), CA and Overseas.* Construction inspector for 10 years for various projects throughout California and overseas. Worked with three contractors on a major DoD project on the Island of Diego in Garcia. The $800-million project involved runway, control tower and runway lighting construction.

California Department of Transportation (Caltrans), CA.* Work consisted of various bridges on state highways US 395, Highway 58 in Kern and Mono counties. Scope included polyester overlay of bridge decks, new approach and departure slabs, spall repairs, installation of B seals at expansion joints, and new guard rails at approach and departure slabs. Another new bridge construction project was at Cache Creek on SR-58, No. 50-0201R. The project consisted of new abutment walls, placement of bridge deck, barrier railing and western guard railing at approach and departure slabs.

***Work performed prior to joining Ardurra.**

Robert Weber, PE

Senior Project Manager

Education
State University of New York at Buffalo
B.S. Civil Engineering, 1990

Registrations
Registered Professional Engineer
California No. C59312

Professional Affiliations
American Society of Civil Engineers

American Water Works Association

American Consulting Engineers Council – California (Water Resources Committee)

Years of Experience: 32

Office Location: Poway, CA

Mr. Weber has 32 years of civil engineering and project management experience on a variety of municipal and public works water, wastewater, and recycled water projects. Specific project experience includes conveyance pipelines, reservoirs and tanks, water pump stations, and sewer lift stations. He has also successfully managed several as-needed services contracts for municipalities and water/wastewater utilities. Mr. Weber is thoroughly familiar with design standards, techniques, and analytical methods, bid specifications, and cost estimating. His experience extends beyond civil engineering to include securing required project permits, fostering cooperative interagency approvals, and gaining community project acceptance.

Mr. Weber's project success based is on his ability to understand the client's needs and objectives and translate them into actions during execution of the project. He prides himself in involving the client in the project, and ensuring the technical staff understands the critical issues of the project. His engineering decisions and designs are based on careful considerations of project needs and specific site characteristics. His dedication to quality effectively manages project risks and controls construction and operational costs.

Designing and sizing pipelines is a relatively simple task for an experienced professional engineer. Constructing the pipeline under emergency conditions, through sensitive coastal beaches and creeks, in highly developed residential areas, across open rural property, within existing pavement traveled by daily commuters, and requiring multiple agency approvals can be extremely difficult. Mr. Weber has applied his engineering and project management talents in all of these settings to construct water transmission and distribution lines, forcemains, and gravity sewers. Mr. Weber has an ability to anticipate problems, is poised with solutions, and understands that responsiveness is critical to every construction project. He has developed plans to provide continuous uninterrupted service and peak hour uncongested traffic flow during construction.

RELEVANT EXPERIENCE

Pipeline Project CIP19005, Helix Water District. Project Manager for the design of approximately 7,500 linear feet of cast iron pipeline replacement through busy and congested/narrow streets of La Mesa. Project challenges included keeping existing service to customers during construction, tie ins and shutdowns, encroachment permitting, and keeping the project on schedule.

Ontario Ranch Phase 2 Water Main Improvements, Ontario Municipal Utilities Company/City of Ontario. Principal-in-Charge for approximately 1.5 miles of 30-in diameter cement mortar lined and coated, welded steel pipe (CML&C WSP), PZ 925, along Grove Avenue between Eucalyptus Avenue and Chino Avenue, design of an interim Pressure reducing valve (PRV) station at the intersection of Grove Avenue and Chino Avenue to break pressure from the PZ 1010 to PZ 925, situated on the north side of Chino Avenue approximately 500 feet east of Grove Avenue, 1.6 miles of 18-in diameter CML&C WSP, PZ 1010, along Chino Avenue between Grove Avenue and the Chino Avenue Bridge (Cucamonga Creek).

San Antonio Ave 30-inch Diameter Transmission Water Main, Ontario Municipal Utilities Company/City of Ontario. Principal-in-Charge for design for 2,900 linear feet of new 30-inch cement mortar lined and coated welded steel pipe (CML&C WSP); abandonment of approximately 3,700 linear feet of existing 18-inch steel pipe.

Upas Street Pipeline Replacement, City of San Diego. Principal-in-Charge. Upas Street project extend from Lindbergh Field east along Upas Street, crossing I-5 and State Route 163, and bordering Balboa Park and Morley Field through sensitive habitat, residential neighborhoods and utility-congested

streets east to 30th Street, including heavy traffic areas of Park Blvd and 5th Avenue between Upas Street and Robinson Avenue. Design details include; 14,980 lf of 8-inch through 12-inch PVC distribution main, 8,160 lf of 24-inch cement mortar lined and tape coated steel pipe with impressed current cathodic protection, 1,640 lf of 30-inch high density polyethylene (HDPE) transmission main to be installed via horizontal directional drilling, 210 lf of 18-inch HDPE transmission main to be installed via slip-lining, 4 pressure reducing stations (3 replacement and 1 new) with flow metering and SCADA telemetry, and 4.9 miles of trench paving and street resurfacing.

Mountain Avenue Gap Pipeline, Eastern Municipal Water District – Principal-in-Charge for the design of 1,800 linear feet of 18-inch diameter potable water main along Mountain Avenue (also known as Ramona Expressway) in the City of San Jacinto to close a gap between existing 18-inch potable water transmission mains at Oak Knoll Road and Old Mountain Avenue. The project team conducted a high-level review of two alternative alignments. The preferred alignment was Mountain Avenue since it is the shortest alignment, has less potential utility crossings, and will keep the pipeline in established public right of way. The new water main will provide reliability and redundancy by looping the water system in the 1807 Upper Fruitvale Pressure Zone (PZ). The proposed pipeline material is cement mortar lined and coated (CML&C), welded steel pipe (WSP). The project included coordination with the City of San Jacinto to ensure their requirements for pavement repairs were incorporated into the project.

Wolf Store Road 12-inch Waterline Inter-tie, Rancho California Water District – Principal-in-Charge. Approximately 5,000 lf of new 12-inch PVC potable water main along privately owned Wolf Store Road within the City of Temecula. The new waterline provides redundancy and improved water quality to the Vail Ranch Business Park. The waterline is adjacent to the existing Temecula Creek owned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD). Wolf Store Road is a privately owned road within the Vail Ranch Business Park. Plat and legal documents are necessary, as well as coordination with the District's real estate agent for property acquisitions. Project challenges include crossing major storm drain facilities owned by RCFC&WCD, including an existing 7'x12' RCB and a 96" RCP. Multiple agency coordination includes RCFC&WD, Vail Ranch Property Owner's Association, and City of Temecula. Other project challenges include high groundwater and various utility crossings.

Sewer Rehabilitation and Upsizing, City of Lemon Grove. Project Manager for the design of 3,480 lf of 8-inch cured-in-place pipe liner and upsizing of 4,942 lf of 6" and 8" sewer to 8" and 10", respectively.

Sewer Facilities and Access Improvements at The Woods, Irvine Rancho Water District. Project Manager for an evaluation of an existing gravity sewer network located parallel and within Upper San Diego Creek. Assessed repair and relocation alternatives, advantages/disadvantages and planning level costs and environmental constraints.

South Oceanside Water & Sewer Main Replacement, City of Oceanside. Project Manager. Design of 7,400 lf of replacement 8-inch PVC water distribution mains and 6,345 lf of sewer upsizing to 8-inch PVC, with 4 manhole rehabilitations and 8 manhole replacements, within residential areas of south Oceanside. The project encompassed evaluation of replace-in-place versus parallel alignments as well as re-routing of several existing water services in order to eliminate a problematic alley main.

Myers Street Sewer Replacement, City of Oceanside. Project Manager for the replacement and upsizing of existing gravity trunk sewers in the La Salina Service Area of the City of Oceanside. The existing sewers are currently over capacity; consequently the replacement sewer lines must accommodate the existing flows and as well as the future flows generated by new development in downtown Oceanside. New 27 and 30-inch gravity sewers were constructed in narrow residential streets, significant community impacts, and congested utility corridors added to the complexity of the project.

Gibraltar Sewer Replacement, Leucadia Wastewater District. Project Manager. Design of 500 lf of new 12-inch gravity sewer to eliminate a section of hydraulically deficient sewer that was a historical source of maintenance problems for District staff. The existing sewer traversed private property through an easement to the La Costa golf course. Pending development plans for the private property necessitated the sewer to be relocated to a more accessible area in cooperation between the District, property owner, and golf course. The new sewer will coordinate with the site development plans and will also rectify the identified hydraulic deficiencies.

Downtown Sewer Upsizing, City of National City. Project Manager. Designed 10,100 linear feet of 10, 12, and 15-inch gravity sewer main for the downtown area of the City of National City. The project was prompted by the need to upsize and replace existing gravity sewer pipes ahead of planned redevelopment in the downtown area. Included coordination with the U.S. Navy for access to existing City-owned sewers on Navy property, coordination with Caltrans for permitting for

a trenchless crossing of Interstate 5, and phasing of the project to meet the City's redevelopment timeline.

Olivenhain Trunk Sewer, City of Encinitas. Principal-in-Charge. Project to address existing maintenance issues, improve system reliability, and provide better protection for water quality and habitat values in Escondido Creek and San Elijo Lagoon. Specific objectives include; rehabilitating 54 existing sewer manholes to reduce I&I, relocating approximately 2,800 linear feet of the upper OTS out of the Escondido Creek floodplain and increasing its capacity to meet currently projected system needs, and providing environmentally appropriate access for maintenance vehicles along the remainder of the OTS. Provided comprehensive planning, design, and construction phase services for this multi-phase project.

Trunk Sewer Main Replacement, City of Escondido. Principal-in-Charge. The City of Escondido's Trunk Sewer Main is a key piece of the City's sewer infrastructure system. The trunk sewer collects sewage from approximately 30% of the City and conveys it to the Hale Avenue Resource Recovery Facility (HARRF). The trunk sewer was constructed in 1959 and originally served as the outfall from the City's treatment facility to a lift station. However, when the HARRF was constructed, the pipeline was repurposed to serve as a trunk sewer in the City's collection system. In recent years, sections of the pipeline has been failing, requiring emergency repairs to keep this key piece of infrastructure in-service.

The original pipeline was constructed of 24- and 27-inch diameter reinforced concrete pipe (RCP), however as emergency repairs were made, 30- and 36-inch diameter PVC were installed. This project replaces five (5) segments of trunk sewer remaining from the original construction, which totals 6,900 linear feet of trunk sewer.

Lori Trottier, AICP CEP

Environmental Planner

Education
University of California, Irvine, Certificate Land Use and Environmental Planning, 1991

University of California, Davis, B.S. Environmental Policy, Analysis, and Planning, 1985

Registrations
American Institute of Certified Planners, AICP, Member 107286

Certifications
Licensed Sales Agent, CalBRE #10984449

Years of Experience: 32

Office Location: Newport Beach, CA

Ms. Trottier has 32 years of experience as primary author and Environmental Project Manager for compliance with California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Her experience includes a variety of development and infrastructure projects involving master plans for large-scale phased development, roadways and intersections, energy transmission, radio and communication sites, development of residential, commercial, mixed-use, and industrial land uses, regional recreation facilities, General Plans, General Plan Elements, and Specific Plans. She has managed numerous multi-disciplinary teams and been primary author on regionally significant and high-profile CEQA documents involving considerable public input. Ms. Trottier is an expert on CEQA compliance, environmental planning, and analysis. Ms. Trottier can quickly focus on key project issues, understand client needs and develop cooperative agency and stakeholder relationships resulting in win-win outcomes. Her experience extends beyond environmental planning and includes many types of entitlement permits for development, natural resources, and construction.

RELEVANT EXPERIENCE

Darrell Tank Replacement, Town of Hillsborough – Environmental Review Task Leader for the Darrell Tank Initial Study/Mitigated Negative Declaration. Darrell Tank replacement involves demolition of two existing steel tanks with a 2-million-gallon prestressed concrete tank. Potentially significant impacts from the project involve geology, soils and seismicity, tree removals, views, noise, air quality, traffic, biological resources, cultural and tribal resources.

Mountain View Street Condominiums (301 & 305 North Mountain View St.), City of Santa Ana – IEC provided CEQA analysis and documentation for the proposed redevelopment and General Plan Amendment components for the project. IEC completed the City of Santa Ana's Environmental Checklist, a site visit, research, and technical analyses including trip generation comparison, vehicle miles travelled screening analysis, air quality, greenhouse gas, energy, noise, and historical resources. IEC produced a CEQA Initial Study documenting baseline conditions, changes from project implementation, and potentially significant impacts from construction and permanent increase in density requiring mitigation. IEC incorporated staff comments and finalized an IS/MND for the City that provided a clear administrative record for the Planning Division's Notice of Determination and Findings of Fact. IEC provided a Mitigation Monitoring and Reporting Program (MMRP), Notice of Intent to Adopt a Mitigated Negative Declaration, and Notice of Completion.

Lake Skinner Boat Launching Facility #1141, Riverside County Regional Parks & Open Space District – Researched County needs and requirements for improvements. Managed preparation and filing of a Notice of Exemption for rehabilitation of Lake Skinner boat launch and recreation facilities.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte – Environmental Project Manager. The City's existing sewer mains and manholes within the area of Nevada Avenue and Bodger Street were constructed in 1938 and are approaching the end of their useful life. In addition, many of the mains and manholes are in easements located in the back yards of private residential properties, making it difficult for the City to access and conduct maintenance. As a result, approximately 4,500-linear-feet (lf) of existing small diameter (8- and 12-inch) sewer is being replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total. This was particularly challenging because the existing

sewer connections are in the back yard, requiring realignment of laterals from the rear of properties to the street.

Oceanside Boulevard Lift Station IS/MND and Conditional Use Permit, City of Oceanside – The project involves demolition of an existing pump station, development of a new pump station, and associated pipeline upgrades in Oceanside Boulevard. Project issues include mitigation for sensitive habitat, cultural resources, AB 52 compliance, access, noise, and air quality.

La Jolla View Reservoir Replacement, City of San Diego – Coordinated CEQA-plus technical analysis of resources including biological, cultural, historic architectural, air quality, and greenhouse gas emissions, for demolition of Exchange Place Reservoir and demolition/replacement of the outdated and undersized La Jolla View Reservoir, located in La Jolla Natural Park. Project issues are related to proximity with numerous residences and challenges associated with grading, traffic and circulation, noise, air quality, dust control, and significance of biological, and cultural and historic resources. The La Jolla View site vicinity is sensitive for cultural and biological resources, and per the terms of an internal City memorandum, design will be required to include restoration of natural topography and vegetation following demolition at the site.

Lotus Street Improvements Constraints Analysis, City of Oceanside – Coordinated cultural and biological resources constraints analyses and provided alternatives analysis for the City of Oceanside Lotus Street Improvements along Mission Avenue in an unimproved canyon between San Luis Rey Road and the intersection of Lotus and Pahvant Streets. The project involves construction of two new manholes and replacement of approximately 250 lf of 6-inch cast iron sewer with 8-inch PVC sewer, and construction of approximately 340 lf of new 8-inch PVC sewer. All sewer lines will undergo open trench construction.

Golf Course Drive Improvements Constraints Analysis, City of San Diego – Coordinated cultural and biological resources constraints and provided alternatives analysis for widening approximately 2,300 lf of roadway on Golf Course Drive near the Balboa Park Golf Course. The project includes construction of curb and gutter, retaining walls, where necessary to reduce grading and environmental impact, and storm water improvements such as bio-swale and detention basins to accommodate multi-modal transportation including pedestrian, bike, and automobiles.

Olivenhain Trunk Sewer Improvements FEIR/EA, City of Encinitas – Project Manager for final environmental documents and permits. IEC is providing comprehensive design, environmental, and outreach support for relining 50 existing manholes, relocating approximately 2,800 lf of sewer line within existing roadway, and installing 21,000 lf of environmentally appropriate maintenance access way within a floodplain and wetland. The project includes re-vegetation and off-site compensatory mitigation plans for construction of permanent, improved maintenance access way within the floodplain and riparian corridor of Escondido Creek and in wetlands associated with San Elijo Lagoon. Environmental services include joint EIR/EA, Clean Water Act Section 404 permit, California Streambed Alteration Agreement, federal and state Endangered Species Act take authorization, and Coastal Development Permit, City of Encinitas Major Use Permit (MUP), San Diego County permits, Wetland Restoration Plan, and a NEPA Environmental Assessment for easement modification under the Natural Resource Conservation Service Agriculture Conservation Easement Program.

Storm Pump Station No 1. Rehabilitation, City of Sunnyvale – Responsible for a CEQA Categorical Exemption, regulatory permits, construction monitoring, and habitat mitigation monitoring plan for impacts associated with wetland habitat and species, cultural resources, and revegetation for compliance with Sections 404 and 401 of the Clean Water Act and compliance with Section 106 of the Historic Resources Preservation Act.

Leah Russell

Project Coordinator

Leah Russell is a multi-disciplinary resource encompassing water science, engineering, and policy. She is a strong communicator with several years of experience in private consulting firms and public agencies. Skills include GIS spatial analysis, mapping, data analysis, project coordination, CEQA compliance, report writing, environmental permitting, and graphics design. Additionally, Leah provides general support to Ardurra's environmental, engineering, construction management, and marketing teams. Leah strives to cultivate collaboration and build accurate, efficient systems.

Education

California State University, Fullerton
M.S. Environmental Engineering
Student – Class of 2023

University of California, Irvine
B.S. Earth System Science, Hydrology, and Terrestrial Ecosystems, 2019

Professional Affiliations

American Society of Civil Engineers, Environmental & Water Resources Institute

Association Of Environmental Planners

Years of Experience: 4

Office Location: Newport Beach, CA

RELEVANT EXPERIENCE

Glendale Pipeline Project, San Antonio Water Company, San Antonio Heights, CA. Provided design & bidding activities and overall project oversight for this $438K project that consisted of the installation of approximately 700 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included local public outreach, change order negotiation, and contractor payment request review. (07/2022-05/2023)

Sewer Facilities and Access Improvements at The Woods, Irvine Rancho Water District. Engineering support for an evaluation of an existing gravity sewer network located parallel and within Upper San Diego Creek. Assessed repair and relocation alternatives, advantages/disadvantages and planning level costs and environmental constraints. Updated Maps and Graphics utilizing GIS.

Lester J Berglund Water Treatment Plant Clearwell Bypass, City of Poway. Construction phase support for project submittal reviews and RFIs – in-house and subconsultants. Utilization of Procore for document management with construction management, client, and contractor.

Tomlin Pipeline Replacement, Elsinore Valley Municipal Water District. Engineering support for 60% submittal of specifications and technical appendices. Research for CEQA Initial Study and early coordination with environmental subconsultants.

Olivenhain Trunk Sewer Improvements, City of Encinitas. Environmental Specialist for four-mile sewer construction project in environmentally sensitive habitat. Comprehensive design, environmental, and outreach support for relining 50 existing manholes, relocating approximately 2,800 linear feet of sewer line within existing roadway, and installing 21,000 linear feet of environmentally appropriate maintenance accessway. The project includes re-vegetation and off-site compensatory mitigation plans for construction of permanent, improved maintenance accessway within the floodplain and riparian corridor of Escondido Creek and in wetlands associated with San Elijo Lagoon. Environmental services include joint EIR/EA, Clean Water Act Section 404 permit, California Streambed Alteration Agreement, federal and state Endangered Species Act take authorization, Coastal Development Permit, City of Encinitas Major Use Permit (MUP), San Diego County permits, Wetland Restoration Plan, and a NEPA Environmental Assessment for easement modification under the Natural Resource Conservation Service Agriculture Conservation Easement Program. Additional tasks include GIS spatial analysis for impacts to habitats, site plan design in ESRI ArcMap for engineering plan set, generation of maps, project coordination, data analysis, report writing.

Anza Road 1550 Pressure Zone Pipeline Extension, Rancho California Water District. Professional design engineering services and bid phase support. Provided engineering support for GIS mapping, graphics, and exhibits for Right of Entry.

Vasona Pump Station Upgrade, Valley Water (Santa Clara, CA). Phased Environmental Analysis for project. Provided GIS mapping and graphics for project description.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte. Environmental Specialist for CEQA compliance – Response to Comments, updates to ISMND and MMRP written content, graphics, and GIS mapping. Approximately 4,500 linear feet of existing small diameter sewer to be replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total.

Sunnyvale Storm Pump Station #1 Rehabilitation, City of Sunnyvale. Environmental Specialist for updates to reports, Habitat Mitigation and Monitoring Plan (HMMP), revised revegetation plan, graphics, maps, and Contract Amendment Request.

Regional Water Quality Environmental Compliance, South Orange County Wastewater Authority (SOCWA). Environmental Compliance Research for regional beach quality regulatory assessments. Designed and executed targeted analysis of beach water quality data from 2010-2015 using Microsoft Excel pivot tables and statistical methods. Designed and executed Enterococcus bacteria speciation project: research, writing of SOP, inventory management, membrane filtration and microbiology techniques, biochemical testing, data analysis, weekly reports. Researched environmental water quality regulatory compliance framework and documents: SOC WMA WQIP, Integrated Regional Water Management, Regional and State Water Boards, federal law. Gained knowledge of wastewater treatment plant engineering, design, and management.

State Water Board BMP Efficiency Analysis, Southern California Coastal Water Research Project (SCCWRP). Research Assistant for State Water Board efficiency analysis project for the formation of public database and tool. Compiled and organized over 20 years of California stormwater BMP water quality and flow datasets in Excel. Designed structures of identification and methods of analyses for tens of thousands of data points. Performed data pre-processing of raw data with data inspection, cleansing, editing, validation. Utilized SigmaPlot to create graphs for Bight 18 report. Attended SCCWRP meetings and workshops for current and proposed water quality projects.

Dalia Mulato

Engineer III

Ms. Mulato is an Engineer III with five years of experience in design engineering and AutoCAD drafting on a wide variety of projects including water pipelines, and sewer gravity mains. Ms. Mulato is knowledgeable in the development of details and pipeline plan and profile drawings, development of detailed cost estimates, and preparation of preliminary design reports. Additionally, she has extensive knowledge with AutoCAD, Revit, Google SketchUp, and GIS.

Education
University of California, Davis
B.S. Civil & Environmental Engineering, 2016

Years of Experience: 6

Office Location: Bakersfield, CA

RELEVANT EXPERIENCE

Trunk Sewer Main Replacement, City of Escondido – Design Engineer. The City of Escondido's Trunk Sewer Main is a key piece of the City's sewer infrastructure system. The trunk sewer collects sewage from approximately 30% of the City and conveys it to the Hale Avenue Resource Recovery Facility (HARRF). The trunk sewer was constructed in 1959 and originally served as the outfall from the City's treatment facility to a lift station. However, when the HARRF was constructed, the pipeline was repurposed to serve as a trunk sewer in the City's collection system.

In recent years, sections of the pipeline has been failing, requiring emergency repairs to keep this key piece of infrastructure in-service. The original pipeline was constructed of 24- and 27-inch diameter reinforced concrete pipe (RCP), however as emergency repairs were made, 30- and 36-inch diameter PVC were installed. This project replaces five (5) segments of trunk sewer remaining from the original construction, which totals 6,900 linear feet of trunk sewer.

Canyon Del Rey CMP Sewer Line Replacement Project, Seaside County Sanitation District – Design Engineer for the replacement and upsizing of three sewer segments of corroded sewer main totaling approximately 850 lf of 12" and 15" PVC. Project also consisted of four 48" diameter sewer manholes, and reconnection of three sewer laterals; two of which serve major users, the State Department of Motor Vehicles and the City of Seaside City Hall Complex.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte – Engineer. The City's existing sewer mains and manholes within the area of Nevada Avenue and Bodger Street were constructed in 1938 and are approaching the end of their useful life. In addition, many of the mains and manholes are in easements located in the back yards of private residential properties, making it difficult for the City to access and conduct maintenance. As a result, approximately 4,500 linear feet of existing small diameter (8- and 12-inch) sewer is being replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total. This was particularly challenging because the existing sewer connections are in the back yard, requiring realignment of laterals from the rear of properties to the street.

Ontario Ranch Phase 2 Water Main Improvements, Ontario Municipal Utilities Company/City of Ontario – Design Engineer for approximately 1.5 miles of 30-in diameter cement mortar lined and coated, welded steel pipe (CML&C WSP), PZ 925, along Grove Avenue between Eucalyptus Avenue and Chino Avenue, design of an interim Pressure reducing valve (PRV) station at the intersection of Grove Avenue and Chino Avenue to break pressure from the PZ 1010 to PZ 925, situated on the north side of Chino Avenue approximately 500 feet east of Grove Avenue, 1.6 miles of 18-in diameter CML&C WSP, PZ 1010, along Chino Avenue between Grove Avenue and the Chino Avenue Bridge (Cucamonga Creek).

CIVILTEC
engineering inc.
Civil, Water, Wastewater, Drainage, Transportation and
Electrical/Controls Engineering ● Construction Management ● Surveying
California ● Arizona

Brian C. Lee | General Manager
San Antonio Water Company
139 North Euclid Avenue
Upland, CA 91786

February 24, 2023
Sent Via Email: Blee@sawaterco.com

RE: Proposal for Well 31 Pipeline Replacement

Dear Brian,

Civiltec engineering, inc. (Civiltec) appreciates the opportunity to provide professional, engineering and construction phase services to San Antonio Water Company (Company). We propose to assign Terry Kerger, PE, as project manager/project engineer and W. David Byrum, PE, as principal-in-charge. As President of the firm, David has complete authority to handle all contractual matters, commit ***Civiltec's*** resources as necessary and take all action necessary to meet your requests. Terry will be assisted by an inhouse survey and design team and Leighton Consultants (geotechnical subconsultant) and PSOMAS (environmental subconsultant). This team has completed numerous similar projects during the last 18+ years working together. A proposed team chart is included in Appendix C demonstrating our depth of similar experience as a team working together. ***Civiltec*** will manage this project from our Monrovia office. However, we are excited to announce as of April 3, 2023, ***Civiltec*** will have an Upland office located at 440 N. Mountain Avenue, Suite 210.

PROJECT UNDERSTANDING AND APPROACH

Well 31 suffered a catastrophic failure in October 2022. The Company has been working with General Pump Company on the rehabilitation of this critical facility. Well 31 is the only water source for Reservoir 1 when there is no canyon surface water. Reservoir 1 is the only surface water source for Holiday Rock.

The current steel pipeline was installed in 1976 and has exceeded it useful life. The pipeline has also experienced high maintenance. This project will replace approximately 1,400 linear feet of 14-inch pipeline from Well 31 to Golf Club Drive along the backside of homes within the Upland Hills Country Club waterline easement. The aged pipeline will be abandoned after the new pipeline is installed and in service.

Over the last 5 years, ***Civiltec*** has averaged 200+ projects per year in California with 85% of that work coming from repeat clients. In the last 3 years, we have designed more than 350,000 feet of pipelines. We have experience navigating challenges while being conscious of our client's budget and schedule. This is done by tailoring our approach to the unique understanding of each individual project and our years of effective project results.

Critical Design Issues

This project will replace the existing pipeline that crosses along the boundary of the Upland Hills Country Club Golf Course. It will require identification of a new replacement pipeline alignment within the Golf Course or within the adjacent Golf Club Drive during the preliminary design phase. Construction cost will be evaluated based on the construction methods selected within the Golf Course and will be compared with construction costs to install the pipeline within Upland Hills Country Club Drive. The engineering challenge will be to determine an alignment for the new water main that allows for the required water

line separation from existing utilities for constructability purposes as well as standard traffic control during construction verses the construction challenge to provide access and access the uneven slopped Golf Course landscaping and turf with heavy excavation construction equipment and return the sod and irrigation system to the original condition. All available utility as-builts will be obtained so the proposed pipeline alignment considers both utility and minimum distance separation requirements from existing utilities.

Identifying existing soils conditions and pavement resurfacing requirements will minimize the possibility of change orders to address these construction issues. The Company's field staff has considerable experience excavating in the foothill locations. We will rely on their experience to determine the existing soils condition. The project specifications will specify soil excavation requirements and backfill material requirements. San Bernardino County trench pavement thickness and limits will be determined and incorporated in the specifications and on the plans. Specification language will be revised to clarify any unaccounted trenching and backfill requirement issues.

Scope of Services

Civiltec's experience with the Company dates back to 2006 and includes several pipeline projects. This understanding of your system and expectations will benefit the Company and your community. Based on our understanding and experience, we have identified the following scope of services.

Task 1 – Project Management

Civiltec will schedule a kick-off meeting to discuss project information, goals, schedules, potential conflicts, and construction requirements. Teleconferences and meetings at appropriate intervals will keep the Company updated on progress and address management level decisions, as needed. We will also schedule meetings following every design submittal to discuss your comments and ensure the project is progressing on schedule. Quality assurance/quality control (QA/QC) is the responsibility of the project manager and will be performed on every document before being submitted to the Company.

Task 2 – Preliminary Design Phase

Utility and Records Research. ***Civiltec*** will conduct complete utility research and contact each utility company requesting verification of location, size, and depth of facilities within the project limits. Utility research performed may include, but is not limited to, existing water, sewer, storm drain, gas, telephone, electrical, cable TV, fiber optic and oil. Some field pothole data may be required to accurately locate the existing main in the golf Course.

Field Survey and Investigation. ***Civiltec*** will perform a record and data search consisting of survey information (assessor maps, parcel maps, records of survey, right-of-way maps, easement documents, etc.). A field survey will be performed to locate water valve covers, water meter boxes, drainage features, air/vac cans, blow-offs, trees, telephone poles and other visible aboveground facilities within the Golf Course. Sewer manholes and storm drain catch basins will be dipped and inverts recorded, if applicable. Additionally, we will use set survey points for the construction alignment and depth control.

Base Map and Preliminary Plans. Utilizing information received from the Company, data from record mapping, utility record drawings and field survey, a comprehensive utility base map will be developed for use as a basis for the draft construction plans. Sheets will be prepared on the Company's title block and drawings prepared in accordance with its drafting standards.

One set of preliminary 60% plan sheets showing the pipe alignment and existing utilities will be submitted for review. This submittal will also include final design criteria, outline specifications and a preliminary cost-estimate.

Task 3 – Environmental Phase

Civiltec and PSOMAS will review the project and prepare an initial assessment to determine if environmental documents are required for this project. Pipeline replacement projects are typically categorically exempt from the California Environmental Quality Act (CEQA). We agree with the Company's opinion that this project is categorically exempt from CEQA because it is within disturbed roadway and a golf course and will prepare this document and submit it on the Company's behalf.

Task 4 – Final Design Phase

As an agent of the Company, ***Civiltec*** will obtain permits or approvals from appropriate governmental authorities having jurisdiction to review or approve the final design of the project. Traffic control and pavement restoration is overseen by San Bernardino County. The Company will assist in coordinating plan submittal and approval by Golf Course Management or owners.

90% Submittal. The 90% plans, specifications and cost estimate will be updated to address all comments from the preliminary submittal, including construction notes, dimensions, large-scale details, pipeline connection details, and all other information required for a complete set of plans. ***Civiltec*** will edit the Company's standard contract documents, prepare the bid proposal, edit the special provisions sections, edit the technical specifications, and prepare the cost estimate in accordance with the Company's requirements. The specifications will include all sections necessary for the construction of the project. The cost estimate and specifications will be submitted in PDF format for review with the 90% design plan submittal.

100% Final Submittal. The final plan sets, specifications and cost estimate will incorporate all review comments from the Company. The plans will be signed by a California Registered Civil Engineer and delivered as PDF files copies. Plan drawings, specifications and cost estimate will be submitted as one reproducible copy and appropriate electronic files in PDF, Microsoft, and AutoCAD formats for your files.

Task 5 – Bidding Phase

Civiltec will provide a bidders list, coordinate advertisement, maintain a record of prospective bidders to whom project documents were issued, coordinate pre-bid conferences, respond to contractor's request for information (RFI), evaluate bids, and advise the Company of the lowest responsible bidder. If necessary, ***Civiltec*** will respond to contractor's pre-bid RFIs through appropriate bidding addenda as necessary to correct, clarify or change the bidding documents. ***Civiltec*** will coordinate the bid opening and review bids for acceptability of the prime contractor, subcontractors, supplies, substitute materials, equipment, and other individuals and entities proposed by prospective contractors. A bid evaluation sheet showing each bidder and their respective line-item bids, along with a total proposed bid price for each bidder will be provided to the Company. Following the Company's Board approval of the contract, ***Civiltec*** will coordinate the construction contract execution and assemble construction contract documents.

Task 6 – Construction Phase

During construction appropriate field oversight (observation services) of construction activity will be provided to ensure contractor's compliance with contract and permits. ***Civiltec*** has estimated the observation hours that will be required by estimating the length of the project and proposing observation services for 50% of the time. ***Civiltec*** will also issue necessary clarifications and interpretations of the contract documents, shop drawings and RFIs as appropriate. Leighton will provide appropriate soil

material testing, including soil compaction testing, to ensure contractor's compliance with contract and permits. Progress payments will be reviewed with the contractor and a recommendation forwarded to the Company for processing, along with appropriate contractor invoicing. At completion, ***Civiltec*** will prepare project close-out documents.

Tasks Required by the Company's Staff

- Collaboration on design alternatives.
- Review and comments on submittals.
- Coordinate submittals and approvals with Golf Course owners.
- Pay permit fees.

Proposed Schedule

Civiltec is available to commence this project immediately. Our team is backed by 60+ employees, which includes 12 registered civil engineers, 1 registered electrical engineer, 4 professional land surveyors, 2 certified floodplain managers, 1 certified professional in Erosion and Sediment Control and Qualified Stormwater Pollution Prevention Plan Developer/ Practitioner, 8 engineers-in-training, and support staff of project managers, designers, CADD technicians, surveyors, and administrative personnel from five (soon to be six) office locations. Our staff availability ranges from 30%-40%. Based on the scope of work described previously, we can complete based on the schedule included at Attachment B. Design completion of June 5, 2023, construction October 16, 2023.

PROPOSED TOTAL PROFESSIONAL FEE AND FEE SCHEDULE

Professional fees for the above-described services will be billed on a time and materials, not to exceed basis. A breakdown of our hour rates and fees is included as Attachment A.

Any work not authorized within 3 months of the date of this proposal will be subject to renegotiations based on current rates. Capacity and impact fees associated with application filings shall be the responsibility of the Company. Additional services may be authorized based on ***Civiltec's*** hourly rates included on the detailed fee sheet. ***Civiltec*** will bill monthly for all work and expenses.

Again, thank you for the opportunity to submit this proposal. We look forward to working with you on this project. Please contact the undersigned directly with any comments or questions.

Sincerely,

Civiltec engineering, inc.

W. David Byrum, PE (dbyrum@civiltec.com)
President, Principal Engineer

Terry Kerger, PE (tkerger@civiltec.com)
Project Manager

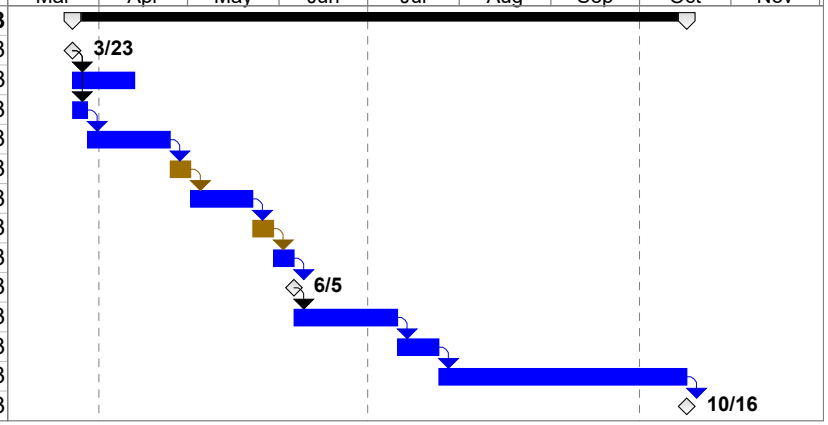
Attachment(s): A – Breakdown of Hours and Fees
B – Proposed Project Schedule
C – ***Civiltec*** Qualifications

Attachment A
Breakdown of Hours and Fees

Attachment B
Proposed Schedule

San Antonio Water Company
Well 31 Pipeline Replacement
Proposed Project Schedule

ID	Task Name	Duration	Start	Finish
1	**Well 31 Pipeline Replacement**	**148 days**	**Thu 3/23/23**	**Mon 10/16/23**
2	Kick-Off Meeting	0 days	Thu 3/23/23	Thu 3/23/23
3	Utility and Records Research	15 days	Thu 3/23/23	Wed 4/12/23
4	Field Survey	3 days	Thu 3/23/23	Mon 3/27/23
5	Preliminary Plans	20 days	Tue 3/28/23	Mon 4/24/23
6	Company's Preliminary Plan Review	5 days	Tue 4/25/23	Mon 5/1/23
7	90% Submittal	15 days	Tue 5/2/23	Mon 5/22/23
8	Company's 90% Submittal Review	5 days	Tue 5/23/23	Mon 5/29/23
9	100% Final Submittal	5 days	Tue 5/30/23	Mon 6/5/23
10	Signed Construction Plans	0 days	Mon 6/5/23	Mon 6/5/23
11	Issue RFP and Advertise	25 days	Tue 6/6/23	Mon 7/10/23
12	Bidding and Award	10 days	Tue 7/11/23	Mon 7/24/23
13	Construction	60 days	Tue 7/25/23	Mon 10/16/23
14	Project Close-Out	0 days	Mon 10/16/23	Mon 10/16/23



Attachment C
Civiltec Qualifications

Civiltec's Pipeline Qualifications

Civiltec is a knowledgeable and dedicated consultant that delivers quality results to the communities we serve. Over the last 5 years, we have averaged 200+ projects per year in California with 85% of that work coming from repeat clients. Providing quality project management and professional engineering is our focus on every project. In the last 3 years alone, ***Civiltec*** has designed more than 350,000 feet of pipelines. We have experience navigating challenges while being conscious of our client's budget and schedule. This is done by tailoring our approach to the unique understanding of each individual project and our years of effective project results.

Company experience dates back to 2006 and includes the Forebay Pump Station study, design and construction administration, study of the Forebay tunnel and surface water, Benson Street pipeline connection, Chino Basin recharge pipeline, Frankish Tunnel pipeline extension to Reservoir 1, Campus Avenue pipeline, Reservoir 9 pipeline replacement, Frankish Tunnel pipeline modifications, and Cliff, Glendale and Linda Primrose pipeline replacements.

Our proposed project team has approximately 267+ combined years of value engineering experience. We are confident that this tailored team has the knowledge to ensure sound and quality deliverables. Key staff proposed will not be reassigned or replaced without your prior written authorization. The table below represents select relevant experience and our proposed team members involved.

Select Team Experience Project | Owner	Size	Length (LF)	Terry Kerger, PE Project Mgr.	David Byrum, PE PIC & QA/QC	Charlie Devine Sr. Staff Engr.	Omner Meza Designer	Jenny Tsan Designer	Chris Duncan, PLS Survey Mgr.	Sara Canche Permitting
		YR w/Civiltec	18	30	24	18	22	10	29
		YR Experience	52	45	49	22	14	40	45
Reservoir 9 Pipeline Replacement | San Antonio Water Company	24", 18", & 16"	5,254	♦	♦	♦	♦	♦	♦	♦
Cliff, Glendale and Linda Primrose Pipeline Replacements | San Antonio Water Company	8"	2,186	♦	♦	♦	♦	♦	♦	♦
Campus Avenue Pipeline | San Antonio Water Company	8" & 4"	3,768	PM	♦	♦		♦	♦	♦
WFA Treatment Plant Surface Pipeline Connection | San Antonio Water Company	16"	500	PM	♦	♦				
Frankish Tunnel Pipeline Extension Reservoir No. 1 | San Antonio Water Company	8"	3,064	PM	♦	♦	♦	♦	♦	♦
Chino Basin Recharge Pipeline | San Antonio Water Company	16"	1,746	PM	♦	♦	♦	♦	♦	♦
Benson Street WFA Pipeline Connection | San Antonio Water Company	12"	66	PM	♦	♦	♦	♦	♦	♦
Amethyst Road Turnout No. 5 Water Pipeline and Metering Facility | City of Victorville	24"	5,400	♦	♦		♦			
Lincoln, Washington, Telephone and Monte Vista Avenues Water Main Replacements | City of Chino	12" & 8"	9,118	♦	♦	♦	♦	♦	♦	♦
District Office Transmission Main Replacement | Orchard Dale Water District	12" & 4"	517	PM	♦	♦				♦
Front Street Water Main Replacement and Zone Change | City of Alhambra	24" to 4"	10,497	♦	♦	♦		♦	♦	♦
San Bernardino Road Pipeline Replacement | Covina Irrigating Company	30"	1,829	♦	PM	♦			♦	♦
2019 Water Main Replacements | Valley County Water District	12"	740	♦	♦		♦	♦	♦	♦
Plateau Forebay Transmission Pipeline Replacement | City of La Verne	16", 8" & 6"	1,734	♦	♦	♦	♦	♦	♦	♦
Stichman Avenue Water Main Replacement | Valley County Water District	10" & 8"	1,440	♦	♦	♦	♦	♦	♦	♦
Valley Boulevard Pipeline Replacement | Rowland Water District	16" to 6"	3,106	PM	♦	♦				♦

TERRY KERGER, PE
PRINCIPAL ENGINEER

PROFESSIONAL REGISTRATION
Professional Civil Engineer
California No. 34896

EDUCATION
B.S. Civil Engineering, California State University, Los Angeles, 1985
A.A., Architecture, El Camino College

PROFESSIONAL AFFILIATIONS
Southern California Water Utilities Association

EXPERTISE
☐Civil Engineering
☒Drainage Engineering
☐Electrical Engineering
☐Transportation Engineering
☒Wastewater Engineering
☒Water Engineering
☐Survey
☒Construction Management

SUMMARY

Mr. Kerger has 51+ years (17+ with ***Civiltec***) of experience in project management, design, and construction of civil engineering projects. His experience includes flow computations for master plans, hydraulic calculations, more than 50 miles of water transmission mains (ranging from 6- to 30-inches), flow control facilities, pump stations, reservoirs, wells, treatment plants, sewerage, water containment, investigations of wellhead water treatment and well water blending, hydraulic modeling, capital improvement planning, telemetry system design, feasibility studies for purchase of adjacent mutual water systems, including system appraisal, financial options, and identifying system upgrades, flood control facilities, bikeway, roadway design, structure design, grading plans, water master plans, and agency plan check programs. He has designed and managed projects ranging from small water main improvements to a $5 million groundwater production and water treatment facility.

Mr. Kerger has designed pipelines for the cities of Arcadia, Alhambra, Ontario, Huntington Park, Manhattan Beach, Cerritos, El Monte, and Industry as well as Kinneloa Irrigation District, Orchard Dale Water District, and Rowland Water District. He has been responsible for the design and project administration of over 100,000 linear feet of distribution and transmission pipelines that included construction traffic control design, pump stations, wells, and reservoirs. He has also been responsible for securing permits for projects with public agencies and cities located in Los Angeles, Orange, and Ventura Counties and with the California Department of Public Health and Caltrans.

Other project contributions include mapping and flow computations for master plans, hydraulic calculations for transmission lines, and metering facilities. Mr. Kerger conducted computerized hydraulic network analysis using Fluid Analysis and Simulation Technique (FAAST) for several clients.

PROJECT EXPERIENCE

Frankish Tunnel Pipeline,
San Antonio Water Company
Project Engineer. Project includes pipeline design and a field investigation of the current operations of the Frankish Tunnel discharge piping configuration, hydraulic grades, and flow metering facilities. The surface water discharge meter needed to measure all the water that discharged to recharge basins. Additional separate metering facilities were required to measure surface water flows from the system forebay source when operations require surface water from the forebay source to be released for spreading at this location. Independent metering of the recharge water releases at this location was required. Plans, specifications, cost estimate, bidding and construction support are being provided.

Green Mountain Water Improvement Pipeline, Santa Clarita Water Division

QA/QC Manager. This project involved potable water distribution design of approximately 2,600 linear feet of 14-inch poly-vinyl chloride pipeline and 1,200 linear feet of 6-inch poly-vinyl chloride pipeline and replacement of fire hydrants, water service lines and meters.

West Garden Grove Supplemental Transmission Main Project, City of Garden Grove

QA/QC Manager. This project included design and full construction management of approximately 24,000 linear feet of 16-inch pipeline within street right-of-way of Garden Grove, Stanton, and Caltrans. The project also included installation of approximately 5,000 feet of 4-inch to 10-inch distribution pipeline replacement, approximately 3,000 feet of 15-inch to 24-inch vitrified clay pipe sewer replacement, jack and bore under existing railroad crossings, span an existing flood channel, service connections, water meters, fire hydrants, street improvements and complete traffic control design.

Lincoln, Washington, Telephone and Monte Vista Avenues Water Main Replacements, City of Chino

Project Engineer. Design of this project included approximately 8,656 linear feet of 8- to 12-inch poly-vinyl chloride pipeline replacement including fire hydrants, domestic services, and abandonments. The project was located on Lincoln Avenue from Monte Vista Avenue to 7th Street and Russell Avenue to Monte Vista Avenue; Washington Avenue from 3rd Street to Telephone Avenue; Telephone Avenue from Riverside Drive to Walnut Avenue; and Monte Vista Avenue from Riverside Drive to Walnut Avenue.

Tract 72216 Candlelight, Suburban Water Systems

Project Manager. This project included approximately 630 linear feet of 12-inch, 2,125 linear feet of 8-inch and 2,260 linear feet of 4-inch poly-vinyl chloride pipes, four 6-inch fire hydrants, ninety-two 1-inch meter assemblies, three 1-inch meter assemblies for irrigation, and eighteen 2-inch blow-off assemblies within La Mirada. Services included records review, weekly progress meetings, observation, managing the contractor's requests for information, change of conditions and preparation of an as-built package.

Southwest District Water Main Replacement, Golden State Water Company

Project Manager. This project involved the potable water main replacement of more than 14,000 linear feet of 4-inch to 12-inch ductile iron pipe including fire hydrants, domestic services, utility inverts and traffic control plans. This project spanned six different streets within the jurisdictions of Inglewood, Gardena, and Los Angeles County.

Phases 1-5 Water Improvement Projects, Valley County Water District

Project Manager & QA/QC Manager. Projects included design and construction administration for numerous capital improvement water main replacement projects. Designed approximately 16,500 linear feet of 8-inch and 12-inch ductile iron pipeline replacement including service connections, fire hydrants and street improvements over 5 phases.

Skyline Ranch Water System Infrastructure, Santa Clarita Water Division

QA/QC Manager. Responsible for the entire water system infrastructure design spanning three pressure zones. This project included pipelines, reservoirs, and pump stations. Phase 1 included the in-tract pipeline design of approximately 23,000 feet of 8-inch, 12-inch and 16-inch poly-vinyl chloride pipe for distribution and transmission. Phases 2 and 3 included an additional 60,000 feet of 8-inch to 16-inch distribution and transmission pipelines, two 2.5-million-gallon steel reservoirs, two 0.6-million-gallon steel reservoirs, and two booster pump stations.

TABLE OF CONTENTS

Prepared for:

San Antonio Water Company
139 North Euclid Avenue
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Prepared by:

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SECTION A | PROJECT UNDERSTANDING AND APPROACH

I. PROJECT DESCRIPTION AND PROPOSED METHODOLOGY

The San Antonio Water Company (Company) is seeking a highly qualified consultant to design a replacement pipeline for Well 31, which will lead to the construction of an approximate 1,400 linear feet of raw water pipeline to reach system facilities along Golf Club Drive. The Company desires that construction management services also be provided, including bidding support and construction inspection, which will involve soil and material testing. TKE Engineering, Inc. (TKE) is prepared to provide the requested services and will achieve successful project delivery by implementing the following methodology:

TASK NO. 1 – PROJECT MANAGEMENT

TASK NO. 1.1 COMPANY COORDINATION

TKE will coordinate with Company staff throughout the project duration regarding information related to the project, to provide project updates, receive comments and direction on work product, and related items. TKE will ensure the Company is kept up to date on project progress and critical issues as they arise.

TASK NO. 1.2 KICKOFF MEETING

Prior to commencement of services, TKE will meet the Company staff to review project obligations and to discuss all project requirements and exact locations for project alignments in detail. In addition, we will discuss the project's scope of services and our design schedules. We also utilize this meeting to acquire the Company's existing utility plans.

TASK NO. 1.3 PROGRESS MEETINGS

TKE will attend monthly progress meetings for review of the design as well as any other stakeholder and Company staff meetings.

TASK NO. 1.4 INVOICING

TKE will provide monthly invoicing showing breakdown for staff and subconsultants that performed work on the project including job title/classification, hourly rates, hours worked, and a brief description of the work performed.

TKE will submit monthly progress reporting with monthly invoicing which will indicate work activities completed to date, outstanding issues, changes in scope, budget status, corrective actions, schedule status, updated logs, and overall project budget.

TKE will prepare monthly invoicing with detailed backup to support the requested amounts.

TASK NO. 2 PRELIMINARY DESIGN PHASE

TASK NO. 2.1 UTILITY RESEARCH/COORDINATION

We will thoroughly research existing utility records and acquire copies of all available records. The purpose of the records research is to assemble survey records to establish locations of street centerlines and rights-of-way and determine locations of all existing utilities and improvements. TKE will research all requirements associated with easements, encroachment permits, parcel acquisitions and required rights-of-way.

The research will consist of assembling copies of assessors' maps, tract maps, parcel maps, monument ties, benchmark data, corner records, street improvement plans, and utility drawings. We will notify Underground Service Alert to acquire a complete list of underground utility purveyors. The utility drawings will include existing drawings from the Company, and drawings and/or atlas maps from all private utility companies, and/or agencies. We will send letters to utility companies and agencies requesting their data. We will maintain copies of the letters for future reference.

TASK NO. 2.2 PROFESSIONAL SURVEYING

TKE will compete a topographic survey of the project area to prepare the base construction drawings. Our field survey crew will locate existing street centerline monuments utilizing survey control data. The crew will measure the horizontal angle, horizontal distance, and vertical elevation difference between each survey monument. We will complete a traverse for each survey to ensure closure. Utilizing GPS survey methods, two first order horizontal monuments will be established, associating the survey to the NAD 83, California State Plane Coordinate System, Zone 6. The monuments will be adjusted to the California High-Precision Geodetic Network and its densification stations. Elevations will be tied to existing Company benchmarks based on the NGVD 88 Datum. The survey will collect all relevant site topographic features, including curb, gutter, sidewalk, piping alignments, valves and manhole locations, fencing location, landscaping, fencing, and all other site related items. In addition, we will measure sewer and storm drain inverts. The survey will collect appropriate detail 25 feet beyond property lines and a minimum of one hundred (100) feet beyond the project site.

TASK NO. 2.3 BASE CONSTRUCTION DRAWINGS

We will prepare the base construction drawings on 24" by 36" sheets with the Company's standard title block using AutoCAD 2020 software at a drawing scale of 1"=40'. The base construction drawings will include a plan view based on the survey data collected. We will add the sheet north arrow, graphic scale, existing improvements and utilities (based on both assembled records and field data), property lines, public and private right-of-way, street centerline, street names, and survey data to the plan view portion of the drawings. Once the base drawings are complete, we will perform a careful field review to ensure all underground facilities are shown correctly.

TASK NO. 2.4 60% DESIGN

The 60% design will consist of completed base construction drawings, proposed pipeline alignment and profile, including utility crossings, proposed connections, trench paving, and all other necessary site details. More specifically:

The title sheet shall include the title of the job, a vicinity map showing the Company in relationship to surrounding communities, a location map showing the project limits, sheet index map, benchmark data, and the Company and Fire Certificates.

Additional sheets will be prepared for general notes, construction notes, construction quantities, a list of abbreviations used, survey information and the Company legend as required by the Company standards.

The construction notes will include requirements for notifications, existing utility protection and relocation, pipeline materials, excavation, improvement restoration, and existing waterline abandonment requirements, if any.

The plan/profile sheets will include the plan view showing digital topographic data, existing improvements and utilities, centerline control, proposed pipeline, and pipeline appurtenances (connections, air valves, main line valves, fire hydrants and blow offs). The profile (at a drawing scale of 1" =40' horizontal and 1" =4' vertical) will show existing ground surface over the proposed pipeline, pipeline flow line, top of pipe, utility crossings, slopes, length of pipe, pipeline appurtenances, joint restraint requirements, and special bedding requirements all in accordance with the Company standards.

The construction detail sheets will include the Company standard details, connections, appurtenance details, and abandonment details, all at appropriate drawing scales.

The specifications shall be prepared in accordance with the Company standards and will be prepared in Microsoft Word format. The specifications will include the bid schedule.

An engineer's estimate will be prepared in Microsoft Excel. The estimate will include bid item descriptions, quantities, units, unit costs and phase and project totals.

After 60% design is complete, we will forward one (1) copies of the drawings (full size and half size) to the Company for review along with the specifications, construction schedule and engineer's estimate.

TASK NO. 3 ENVIRONMENTAL PHASE

TASK NO. 3.1 CATEGORICAL EXEMPTION

Upon completion of the 60% Design, we will begin preparation of environmental compliance documents. All Public Works projects are subject to the analytical and disclosure provisions of the California Environmental Quality Act (CEQA) and its implementing guidelines. TKE has assumed the project will qualify for a categorical exemption and will determine if more stringent analysis are required during the initial phases of the project. Any additional studies determined to be required will be additional work and TKE will present additional costs to the Company prior to beginning the work.

TASK NO. 4 FINAL DESIGN PHASE

TASK NO. 4.1 COORDINATION WITH AGENCIES/UTILITIES

After incorporating the Company comments on the 60% Design, we will submit drawings to all agencies/utilities having underground facilities in the project area that may be affected by construction and request that they verify their facilities are shown correctly and that they furnish any construction requirements they desire. We will request that they respond within 2-weeks and we will follow up with telephone calls to confirm all agency requirements have been incorporated. We will document all conferences with utilities and agencies.

TASK NO. 4.2 PERMIT ACQUISITION

After the 60% design, TKE will begin application preparation for required permits. It is anticipated that a San Bernardino County Road Department encroachment permit will be required.

TASK NO. 4.3 90% DESIGN

We will incorporate the Company's 60% comments and provide the Company revised drawings and specifications. After 90% design is complete, we will forward three (3) copies of the drawings (full size and half size) to the Company for review along with the specifications, construction schedule and engineer's estimate.

TASK NO. 4.4 FINAL DRAWINGS

After receiving final approval on the drawings, we will incorporate the Company's 90% comments and provide the Company with digital (AutoCAD and PDF) copies of the drawings, specifications, construction schedule and engineer's estimate for bidding.

TASK NO. 5 BIDDING PHASE

TASK NO. 5.1 BID ADMINISTRATION

TKE will assist the Company with a number of other activities including advertising, distributing contract documents to perspective bidders, conducting pre-bid job walk, responding to bidder questions, preparing and distributing addenda, and coordinating the bid opening.

After the bids are received, TKE will review all bids to verify that they have been submitted in accordance with demolition project requirements, verify that the lowest responsive bidder's contractor license is in good standing, and verify that the bidder is qualified to complete the work.

After the lowest responsive bidder is identified, TKE will prepare a recommendation for award. Once the Company approves award, TKE will conform the contracts and deliver them for execution by the lowest responsive bidder. After they execute the contract, TKE will assist the Company with execution.

TASK NO. 6 CONSTRUCTION PHASE

TASK NO. 6.1 PRECONSTRUCTION CONFERENCE

The preconstruction conference will be attended by the Company staff, Construction Manager (CM), Project Construction Inspector, TKE's representative, the Contractor, agencies, and road department representatives (if required), and representatives of potentially affected utilities. Prior to the conference, we will review the conference agenda prepared by the Company. At the meeting, we will discuss communication protocol requirements, and procedures for contract submittals, contract administration, job-site access and delivery, and coordination with others as requested.

TASK NO. 6.2 SHOP DRAWING SERVICES

We will review and approve a maximum of thirty (20) project submittals and seven (5) resubmittals for the project. We will maintain a project log for each project and it will include descriptions of submittals, date received, and date returned. We will consult with the Company staff as required to review substitute materials and equipment. Once the submittals have been reviewed and accepted, they will be signed, dated, and sent to the Company staff and project contractor. Submittals will be returned within the time frame specified by the contract documents. The construction schedule will be a critical document. It will be reviewed to verify compliance with the contract documents and will be reviewed monthly to ensure construction is proceeding efficiently.

TASK NO. 6.3 CONSTRUCTION ADMINISTRATION

Prior to beginning construction and throughout the course of construction, we will meet with Company staff. We will prepare agendas and minutes for each meeting and will respond to questions as required. During construction, the Construction Manager will coordinate all construction activities with the construction inspector, the quality assurance professionals, other agencies and utility companies and project surveyors. In addition, the Construction Manager will visit the job site often to observe construction activities. He will document any observed deviations from the plans and he will advise the Contractor, as appropriate, for resolution of observed deficiencies. In addition, our Construction Manager will conduct biweekly meetings with the Contractor to ensure construction is progressing efficiently. We will prepare agendas and minutes for each, and refer to uncompleted business at each meeting. Also, should incidents or issues arise, Contractor will be required to submit reports regarding each.

Throughout the course of construction, our Construction Manager will respond to complaints from the public. In addition, he will review the construction progress and compare it to the approved project schedule and the contractor of deficiencies.

RFI's and RFC's (including written clarification requests and change-in-plan drawings) will be reviewed and responded to regarding the contract documents in order to ensure that the improvements are constructed in compliance with same; we will provide said responses as required to minimize delays in construction. All RFI's and RFC's will be logged, including content of inquiry and date relayed and date of response.

Our contract administration activities will include progress reviews to ensure that the project is proceeding according to requirements and schedule, biweekly progress review meetings with the contractor, review of contract change order requests, and payment requests and related services. Payment requests and record keeping will include all correspondence, transmittals, drawings, technical manuals, reports, etc. (both hard copy and electronic formats) related to pre-construction, construction and post-construction phases of each construction contract. The documents will be kept at our office.

Project progress and any changes during construction will be noted on a set of the project's contract documents maintained in our office. If a problem occurs requiring a Company decision, we will consult with staff. The Construction Manager will attempt to resolve complaints, concerns, and questions from residents and other affected agencies without staff assistance.

Through e-mail, telephone conferences, and regular meetings, the Construction Manager will keep staff informed of project progress, problems that have occurred during construction, and any changes in work. Whenever possible, we will review required changes with staff prior to making same.

Each month, we will review the construction payment requests submitted by the contractor for work completed and the construction schedule. In addition, we will verify that certified payroll has been submitted. We will review the work completed and payment requests to ensure that the quantities and amounts requested reflect the actual work completed. After each request has been reviewed (and revised if necessary), we will approve it for payment. We will also submit a monthly status report with each payment request verifying compliance with the project schedule. If the Contractor begins to fall behind the schedule, we will request corrective action.

If change conditions occur, we will negotiate with the Contractor to establish the impact of change conditions and we will attempt to complete negotiations prior to beginning work. The Company will be included in all negotiation requiring a contract amount increase. If we fail to reach an agreement and the work must continue, we will direct the Contractor to complete the work. The Construction Inspector document the labor, materials and equipment used for the extra work for use in future negotiations.

We will review any change order request received to determine if said request is warranted. If the change order request is not warranted, we will reject it in writing; prior to sending rejection letters to the Contractor, we will review it with Company staff. If the change order request appears justified, we will review it with the Construction Inspector and compare it with field reports for confirmation of materials, equipment and/or labor involved; we will review same with staff and receive staff's approval prior to preparing and processing the contract change order. Change orders will be prepared on standard forms. Change Orders will be summarized in a log for review at our weekly meetings.

We will ensure that telephone numbers for normal working hours, evenings, and weekends for our staff, contractor, utilities, and emergency services are provided to all concerned parties.

In addition, we will maintain documents and records. We will ensure that the contractor is submitting proper labor reports, time and material reports, material invoices and/or tickets, certifications, warranties and all other such documents as necessary for a complete and successful project.

TASK NO. 6.4 CONSTRUCTION STAKING

TKE will provide construction staking services required to complete construction. We will prepare grade sheets and we will provide stakes for construction at required locations as established by the Contractor.

TASK NO. 6.5 CONSTRUCTION INSPECTION

TKE will provide part time construction inspection. Our construction inspector will provide daily construction inspection to verify that the project is progressing in compliance with the contract documents. He will regularly discuss anticipated construction activities to ensure quality compliance and surveying is scheduled as needed to ensure the project is proceeding efficiently. We will require strict compliance with requirements for all construction activities. All materials will be reviewed against approved material submittals as they arrive on-site. Batch tickets or weigh certificates will be collected upon material arrival.

Our Construction Inspector will verify SWPPP and safety provisions have been implemented at the start of each work day, at the construction site. Any deviations will be documented. All system service interruptions, connections and abandonments will be coordinated with staff. In addition, TKE will verify all quality testing for the project.

We will digitally photograph the activities and maintain copies in the project files and our Construction Inspector will prepare daily field reports, which will document all observed project activity, including location of the activity, number of workers present, construction equipment used, inspector present, weather conditions, and construction progress. All project documentation will be completed on standard forms. All documents will be submitted in hard copy and

electronic copy formats. TKE will provide all inspection equipment needed.

TASK NO. 6.6 MATERIALS TESTING

LOR Geotechnical will provide quality testing services for the project including material testing and compaction testing. TKE will review all test reports completed by LOR to verify contract compliance. Materials testing costs are budgeted amounts only and will be billed based on the actual time expended for testing purposes.

TASK NO. 6.7 CONSTRUCTION CLOSE-OUT

TKE will establish punch-lists for project completion, deliver maintenance bonds and/or manufacturer warranties, operations and maintenance manuals are provided, and all other construction requirements have been completed.

Through the course of construction, TKE will document changes on a set of record drawings. Once the project has been completed, TKE will prepare record drawings and provide them. They will be signed and stamped by the construction manager and will reflect the improvements as constructed. Said record drawings will be based on data furnished by the Contractor, and our weekly field reports.

We will forward copies of all records in digital format and we will prepare a summary of construction changes, final cost, and schedule revisions. In addition, TKE will provide a final narrative summary report documenting construction activities.

II. PROJECT RESULT EXPECTATIONS

TASK NO. 1 PROJECT MANAGEMENT

TKE is committed to implementing a project management plan focused on quality control that enables and promotes project completion on schedule. We will ensure all project-related recommendations are presented at best value to the Company.

TASK NO. 2 PRELIMINARY DESIGN PHASE

TKE will ensure preliminary design phase documents are prepared at high quality and reflect accurate cost estimating practices for Company review. Following Company review, TKE will include all comments received and revise accordingly.

TASK 3: ENVIRONMENTAL PHASE

TKE will make appropriate recommendations regarding CEQA requirements for this project and provide all related documentation in an organized manner.

TASK 4: FINAL DESIGN PHASE

TKE will ensure the final design phase documents are prepared at high quality and reflect accurate cost estimating for bidding and construction. We will ensure all comments from the Company, its legal counsel, and other related authorities are incorporated into the final design. TKE will ensure the San Bernardino County permit is in place prior to construction.

TASK 5: BIDDING PHASE

TKE will manage the bidding process in accordance with Company standards and expectations. We will strive to procude competitive bids from three or more contractors. We will maintain accurate records of RFIs/RFCs, pre-bid conference minutes, and track a list of prospective bidders. TKE will prepare bid evaluation sheets to ensure all prospective bidders are properly vetted. Following contract award, TKE will coordinate to ensure contract documents are executed on schedule.

TASK 6: CONSTRUCTION PHASE

TKE will ensure the contractor completes the project in compliance with the contract documents, while adhering to Company and permit requirements. TKE will do so by providing the necessary level of field oversight, appropriate materials testing, and construction administration. We will confirm all quantities are accurate to ensure progress payments are process quickly and without issue. TKE will prepare necessary paperwork to ensure a smooth project close-out process.

III. TKE POINTS OF INPUT

TKE understands the importance of maintaining clear and open lines of communication with our clients, as it contributes to the successful delivery of our projects on schedule and within budget. It is our standard to keep clients informed through the duration of the entire project however, each project is faced with its own set of challenges to which we pay special attention and address carefully. The following is a list of various critical issues that TKE plans to utilize as points of input with Company staff.

PROJECT LOCATION

The majority of the replacement pipeline work is scheduled for areas within an easement area and along an existing golf course with limited points of access. The members of these parts of the community will have raised expectations related to travel in and around the construction areas and particularly how it affects the ingress and egress to their properties as well as the affects to their properties and the private golf course during daily construction activities. For these types of project alignment alternative selection is critical to ensure to minimize the impacts to accessibility and direct impacts to private improvements. Our design includes an added level of scrutiny to ensure the alignments selected will allow for expedited construction, reduced future maintenance and limit residents' accessibility issues during construction.

UTILITIES

For pipeline projects, construction contract change orders are primarily attributable to inaccurate plotting of utility interferences or due to unknown utilities. Comprehensive utility research and coordination with Company and golf course staff will ensure that contract change orders will be significantly reduced or even eliminated. It is anticipated that numerous underground utilities and/or private utilities will be encountered along the project alignment. For project connections, TKE will identify those as critical and request that the Company excavate them to verify both horizontal and vertical alignments. In addition, we will request that at connections existing, pipeline materials and condition be noted to properly design each connection's existing pipeline abandonments. Again, to avoid potential change orders, detailed connection and abandonment designs will be included.

APPURTENANCES

Appurtenances include system control valves, air valves, and blow-offs. During design, it will be important to identify appropriate locations for all appurtenances, in particular, above ground appurtenances. Considering the limited right-of-way and easement area available for some project areas, appurtenances should be carefully located to prevent post construction conflicts. Appurtenances will be designed consistent with Company standards to ensure proper operations. TKE will also field verify all appurtenance locations, in particular, air valves, to ensure adequate public right-of-way exists, they will not conflict with other improvements, and locations will be selected to protect them from vehicular traffic.

In addition to field locations, appropriate sizing must be determined during design. For example, air valves must be sized to ensure adequate air release during filling and emptying of pipelines. Failure to properly size such facilities may cause damage to the water system.

When placing appurtenances, TKE staff routinely provides consideration of other utilities to avoid conflicts with lateral piping of the appurtenances.

PERMITTING

TKE anticipates that permit acquisition will be limited to the County. If additional permits are required, TKE has vast experience obtaining permits from regional agencies which can be challenging and time intensive. TKE has developed a working partnership and extensive knowledge of each agencies requirements that will result in expedited permit issuance. In fact, TKE is currently working with a number of these agencies on other projects and has developed an effective working partnership that will result in expedited permit issuance.

ACCURATE COST ESTIMATING

Unanticipated costs will impact the Company's ability to deliver the project. Therefore, it is vital to keep costs controlled. Our approach to controlling costs is to provide frequent and accurate cost estimates by using TKE's detailed cost estimating database. In addition to using this database, TKE utilizes our considerable experience with Construction Management to assist in providing constructability reviews and cost estimating based on current information from our on-going projects. Finally, with the current economic climate, construction costs are widely varying. We will also discuss the project's elements with local contractors to assure that we have the most current construction information available so that the Company can get the most "bang for their buck".

CONSTRUCTION SEQUENCING

To ensure that construction will not interrupt water service and to ensure extra work claims do not occur, construction sequencing will be provided as part of the project design. Sequencing will include the order in which the new pipelines, together with appurtenances will be constructed. In addition, the construction sequencing will include testing and disinfection procedures and the initial system connection. The existing pipelines that will ultimately be abandoned must remain in service until the proposed pipelines are tested, disinfected, connected to the existing system in at least one location. Typically, for pipelines of this size it is desired that a connection be completed after pipeline testing and prior to disinfection. Direct connections provide flow volumes needed to adequately flush debris from the new system. After disinfection and laboratory testing verification, the new system will then be placed into service and the existing system can be abandoned. The abandonment of the existing pipelines will occur thereafter concurrently with subsequent pipeline connection construction.

IV. TKE PROPOSED PROJECT SCHEDULE

KEY TASKS, EXPECTED DURATION AND MILESTONE DATES

TKE has prepared a preliminary project schedule as shown on XXXXX. Our approach to your project, recognizing that both schedule and budget are of primary concern, dictates that design decisions must be made quickly but carefully. When this is coupled with the various constraints present with the project, it is critical that the Company choose a consultant with a proven track record of delivering. With a familiar team of senior level design and construction professionals and an in-house team, TKE is the right choice for this project. Please see our proposed project schedule on the following page.

V. ADDITIONAL SERVICES OFFERED

TKE is not proposing any additional tasks that proposed above. Notwithstanding, TKE is available to provide any and all services required by the Company and/or the Project to ensure successful project delivery.

This proposal is signed by a principal of the firm who is authorized to bind TKE to the terms of the proposal.

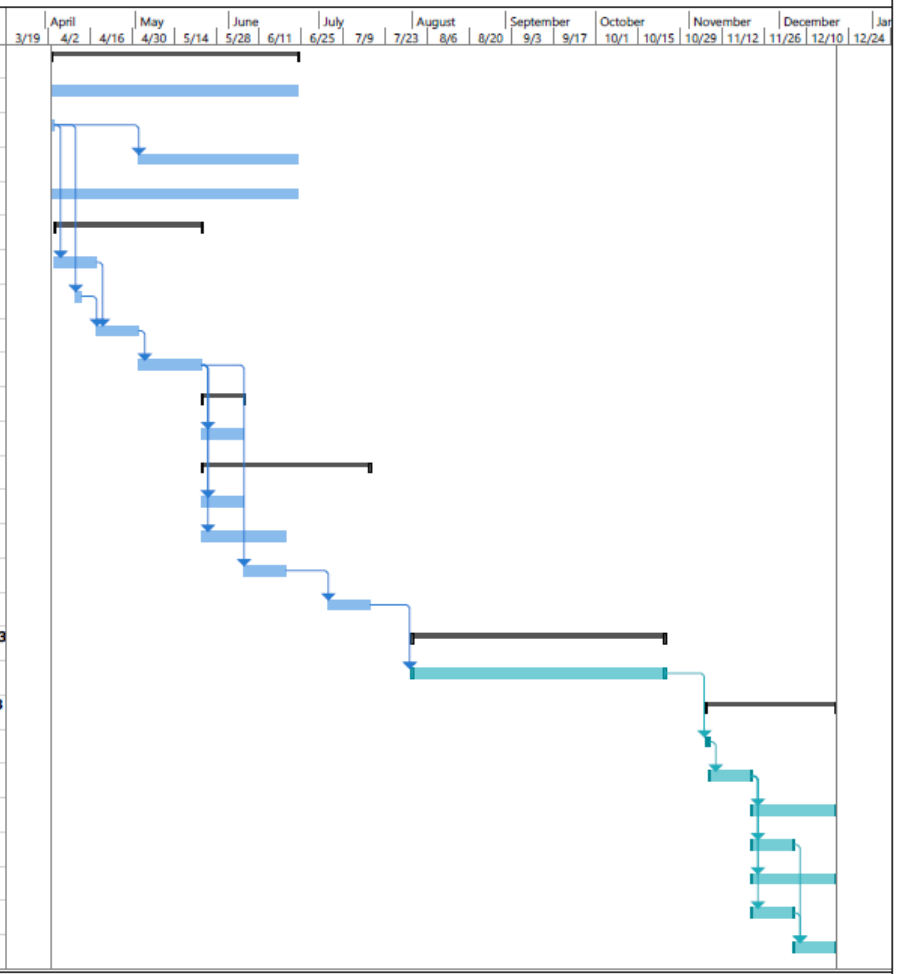
Terry Renner, P.E., Q.S.D., Senior Vice President

San Antonio Water Company

Professional Design and Construction Management Services for Well 31 Pipeline Replacement Project

Design Schedule

ID	Task Name	Duration	Start	Finish
1	**Task 1 - Project Management**	**60 days**	**Mon 4/3/23**	**Fri 6/23/23**
2	1.1 Company Coordination	60 days	Mon 4/3/23	Fri 6/23/23
3	1.2 Kickoff Meeting	1 day	Mon 4/3/23	Mon 4/3/23
4	1.3 Progress Meetings	39 days	Tue 5/2/23	Fri 6/23/23
5	1.4 Invoicing	60 days	Mon 4/3/23	Fri 6/23/23
6	**Task 2 - Preliminary Design Phase**	**35 days**	**Tue 4/4/23**	**Mon 5/22/23**
7	2.1 Utility Research and Coordination	10 days	Tue 4/4/23	Mon 4/17/23
8	2.2 Professional Surveying	2 days	Tue 4/11/23	Wed 4/12/23
9	2.3 Base Construction Drawings	10 days	Tue 4/18/23	Mon 5/1/23
10	2.4 60% Design	15 days	Tue 5/2/23	Mon 5/22/23
11	**Task 3 - Environmental Phase**	**10 days**	**Tue 5/23/23**	**Mon 6/5/23**
12	3.1 Categorical Exemption	10 days	Tue 5/23/23	Mon 6/5/23
13	**Task 4 - Final Design Phase**	**40 days**	**Tue 5/23/23**	**Mon 7/17/23**
14	4.1 Coordination with Agencies/Utilities	10 days	Tue 5/23/23	Mon 6/5/23
15	4.2 Permit Acquisition	20 days	Tue 5/23/23	Mon 6/19/23
16	4.3 90% Design	10 days	Tue 6/6/23	Mon 6/19/23
17	4.4 Final Drawings	10 days	Tue 7/4/23	Mon 7/17/23
18	**Task 5 - Bidding Phase**	**60 days**	**Tue 8/1/23**	**Mon 10/23/23**
19	5.1 Bid Administration	60 days	Tue 8/1/23	Mon 10/23/23
20	**Task 6 - Construction Certification**	**31 days**	**Tue 11/7/23**	**Tue 12/19/23**
21	6.1 Preconstruction Conference	1 day	Tue 11/7/23	Tue 11/7/23
22	6.2 Shop Drawing Services	10 days	Wed 11/8/23	Tue 11/21/23
23	6.3 Construction Administration	20 days	Wed 11/22/23	Tue 12/19/23
24	6.4 Construction Staking	10 days	Wed 11/22/23	Tue 12/5/23
25	6.5 Construction Inspection	20 days	Wed 11/22/23	Tue 12/19/23
26	6.6 Materials Testing	10 days	Wed 11/22/23	Tue 12/5/23
27	6.7 Construction Close-Out	10 days	Wed 12/6/23	Tue 12/19/23



Project: Well 31 Pipeline Design
Date: Fri 2/24/23

Task | Split | Milestone | Summary
Project Summary | Inactive Task | Inactive Milestone | Inactive Summary
Manual Task | Duration-only | Manual Summary Rollup | Manual Summary
Start-only | Finish-only | External Tasks | External Milestone
Deadline | Progress | Manual Progress

Page 1

SECTION B | PROPOSED FEE SCHEDULE

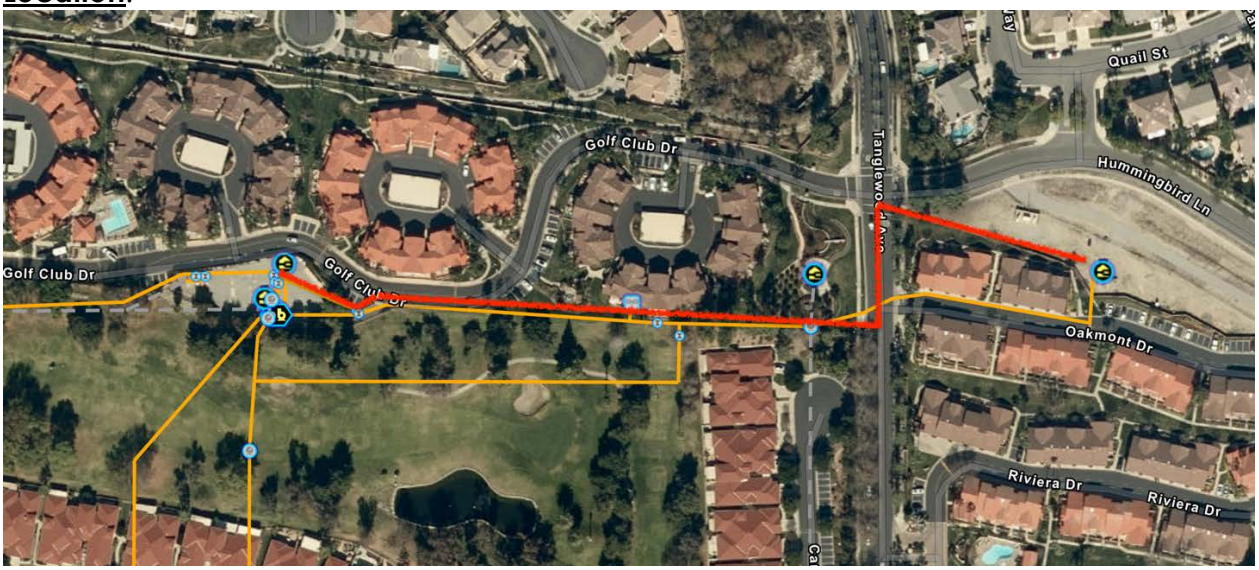
TKE'S PROPOSED FEE SCHEDULE HAS BEEN PROVIDED SEPRATELY PER THE RFP REQUIREMENTS.

Project Title: **Well 31 Pipeline Relocation/Replacement**

Total Budget: **$420,000 (1,400 LF x $300/LF)**
Soft Costs (Engineering, Permitting, Easements, Inspection, Testing): $63,000 (15% of project cost)
Construction: $357,000 (85% of project cost)

Schedule:
Design: Feb 2023 – Apr 2023
Construction: August 2023 – October 2023

Location:



Justification:
Replace approximately 1,400 linear feet of 14" pipeline from Well 31 delivering water to facilities at Golf Club Drive along backside of homes and within Upland Hills Country Club waterline easement. Abandon aged pipeline. The current steel pipeline was installed before 1976 and has exceeded its useful life. Identified by staff as a high maintenance pipeline.

Agenda Date: April 25, 2023

Agenda Item No. 6C

Item Title: Paloma Curve Hydraulic Break

Purpose:
To discuss three proposals for design services

Issues:
Should the PROC forward a recommended proposal to the full Board with a recommendation to approve?

Manager's Recommendation:
Recommend forwarding the most qualified proposal with approval of PROC.

Background:
The Paloma Curve Hydraulic Break project was approved by the Board for inclusion in the 2023 budget. Staff issued the attached RFP to four design firms; Ardurra, CivilTech, TKE and WSC. Three firms submitted attached proposals; Ardurra, CivilTech and WSC. Staff requests that each Committee member review the attached proposals and choose the most qualified firm for submittal to the Board with a recommendation to award. Staff prefers to discuss proposed fee at the PROC meeting, giving individual committee members an chance to review each proposal without dollar cost bias. The company prefers to hire the most qualified firm assuming proposed fees are within reasonable differences from each other.

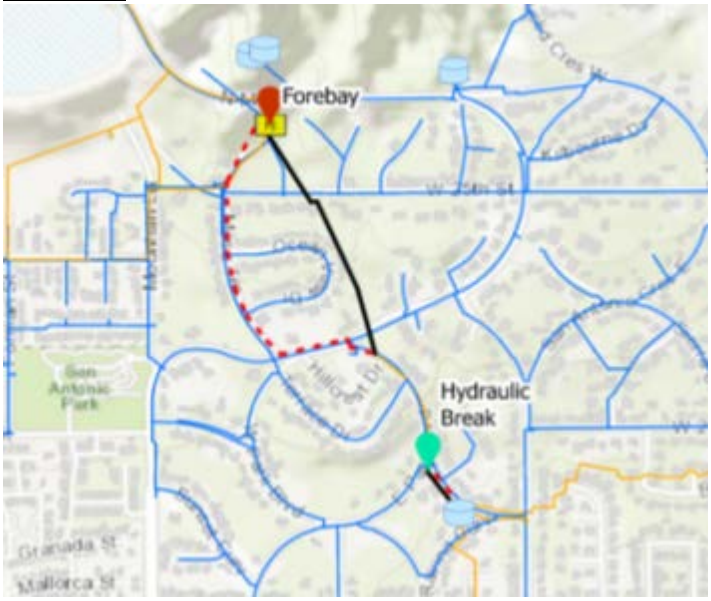
Previous Action:
None

Impact on Budget:
Budget of $120,000 for design services
Full project cost is being developed

Project Title: **Paloma Curve Hydraulic Break**
Total Budget: **$1,080,000**
Engineering: $120,000
Construction: $960,000

Schedule:
Construction: June 2023 - August 2023

Location:



Justification: The Paloma Curve Hydraulic Break consists of an abandoned hydrogenator plant owned by the City of Upland and a concrete Hydraulic Break owned by the Company. The facility was designed to convert hydraulic energy into electrical energy and remove any remaining hydraulic energy prior to discharge at the Company's Reservoir Number Four.

During periods of high-water flow (sustained average-or-higher rainfall events) the amount of water flowing through the facility can create significant low frequency vibrations. These events occur only periodically (once every couple of years). The current property owner has requested that the Company eliminate the noise and/or abandon the facility.

Given that the existing facility and penstock pipeline have exceeded their design life the Company approved replacement of facilities from the Forebay down to Reservoir 4, effectlvly removing the hydraulic break.

February 24, 2023

San Antonio Water Company
Brian C. Lee
139 North Euclid Avenue
Upland, CA 91786

REFERENCE: PROPOSAL FOR FOREBAY OUTFALL MODERNIZATION PROJECT

Dear Mr. Lee:

Thank you for the opportunity to develop a proposal for the Forebay Outfall Modernization Project. Ardurra is excited to partner with San Antonio Water Company (SAWCo) to provide engineering design, bidding support, construction inspection and materials testing, and construction management services for this project.

PROJECT UNDERSTANDING AND APPROACH

This SAWCo project is mostly located in the residential community of San Antonio Heights, California, but will also include consideration of screening facility in the upper canyon, close to San Antonio Creek. The Paloma Curve Hydraulic Break consists of an abandoned hydrogenator plant owned by the City of Upland and a concrete Hydraulic Break owned by the Company. The facility was designed to convert hydraulic energy into electrical energy and remove any remaining hydraulic energy prior to discharge at the Company's Reservoir Number Four. (Figure 1). During periods of high-water flow (sustained average-or-higher rainfall events) the amount of water flowing through the facility can create significant low frequency vibrations. These events occur only periodically (once every couple of years). The current property owner has requested that the Company eliminate the noise and/or abandon the facility.

Figure 1 – Hydrogenerator Plant.

Ardurra will design and provide construction phase services for approximately 3,350 LF of new 24-inch diameter pipeline, mostly within Mesa Terrace, along with a hydraulic break in proximity to the existing hydrogenator plant and a new screening mechanism either at the Forebay, Creek Inlet, or V-Screen Pump Station. Existing pipeline sections to be replaced will be abandoned per industry accepted standard.

Figure 2 – Forebay.

Figure 3 – Creek Inlet.

Figure 4 – V-Screen Pump Station.

Ardurra has extensive experience in providing services, from design and through construction, for conveyance projects. We understand the unique project challenges within neighborhoods such as ensuring continual resident access to driveways, not interrupting trash service and mail/package delivery, and not impeding emergency services. We will provide seamless management and coordination with SAWCo, local jurisdictions, and contractor throughout each phase of the project.

SCOPE OF WORK

The Ardurra design process will include project management, surveying & mapping (by LD King), data collection, utility review, preparation of preliminary design documents, CEQA documentation, and permitting support. Ardurra will execute three submittals for the 24-inch pipe design and related appurtenances including delivery of final signed plans, specifications, and cost estimate. Additionally, Ardurra will manage the bidding phase for the project.

Ardurra construction phase services will include part-time construction inspection & soil compaction testing (by Converse), submittal reviews, RFI responses, coordination of progress payments with contractor, and project close-out.

TASK 1 – PROJECT MANAGEMENT

Ardurra will provide project management, proposed project schedule, recommendations for material selections, quality management, and progress meetings for SAWCo to ensure adherence to project scope, schedule, and budget. We propose three (3) meetings: kickoff meeting/site visit followed by two (2) virtual review meetings.

Deliverables:

- Proposed project schedule
- Meeting agendas and minutes

TASK 2 – PRELIMINARY DESIGN PHASE

Ardurra will team with LD King to provide field survey, topographic, and utility mapping. We will incorporate mapping into the design drawings. Ardurra will prepare preliminary design phase documents consisting of final design criteria, preliminary drawings, outline specifications and preliminary cost estimate. Ardurra will review and revise preliminary design phase documents based on SAWCo comments.

Deliverables:

- One (1) review copy of the preliminary design phase documents which is anticipated to consist of a Technical Memorandum and associated figures.

TASK 3 – ENVIRONMENTAL PHASE

Ardurra will review the project and make a recommendation to SAWCo for the appropriate level of CEQA document. Ardurra anticipates a categorical exemption for this project given the new pipeline and appurtenances lie within disturbed roadway or adjacent to existing SAWCo Facilities.

Deliverables:

- CEQA Notice of Exemption (NOE) documentation
- CEQA NOE filing with the County of San Bernardino

TASK 4 – FINAL DESIGN PHASE

Ardurra shall coordinate encroachment permitting, traffic control, and pavement restoration with the County of San Bernardino. Ardurra will design the project in compliance with permit and other jurisdictional requirements. Ardurra scope includes data collection, utility review, Shut Down and Tie-In Plan, drawings, specifications, three design submittals – 50% (drawings only), 90%, and final.

Ardurra shall prepare and furnish bidding documents (plans, specifications, and estimate) for review by SAWCo and affected agencies. Ardurra will revise in accordance with comments and instructions from SAWCo and provide final documents and signed plan deliverables.

Deliverables:

- 50% plan and profile drawings – PDF Format
- 90% drawings and specifications – PDF Format
- Final signed plans, specifications, fee estimate – One (1) reproducible copy, one (1) electronic copy in native format, and one (1) full document set copy in Adobe Acrobat PDF format

Ardurra scope ***excludes*** Stormwater Pollution Prevention Plan (SWPPP), traffic control plans, shoring plans and calculations, and utility potholing – The contractor shall be responsible for these tasks, which will be required in the technical specifications for the project.

TASK 5 – BIDDING PHASE

- ✓ Ardurra will consult with SAWCo to identify 2-3 reputable construction contractors; and given Ardurra's familiarity with water construction industry in the region, will also recommend 2-3 additional constructors.
- ✓ Ardurra will notify prospective bidders of the project and coordinate and obtain bids for the work. We will provide all necessary construction bid documents to bidders and maintain a record of prospective bidders to whom project documents have been issued.
- ✓ Ardurra will coordinate a Pre-bid Meeting and process and respond to questions regarding the bid documents by of way addendum(s).
- ✓ Ardurra will coordinate a Bid Opening Date and location, and perform Bid Opening activities. We will review bids for acceptability of prime contractor, subcontractors, supplies and other individuals and entities proposed by prospective contractors.
- ✓ Ardurra will review and advise SAWCo on the acceptability of substitute materials and equipment proposed by contractor during the bidding or negotiating phase.
- ✓ Ardurra will prepare a bid evaluation sheet showing each bidder and their respective line-item bids, along with a total proposed bid price for each bidder.
- ✓ Ardurra will evaluate the apparent lowest bidder for responsiveness, accuracy, and confirm that licenses, bond/surety and insurance requirements are in order and advise SAWCo of the "Lowest Responsible Bidder".
- ✓ Ardurra will notify the "Lowest Responsible Bidder" and assemble all contract documents prior to final signature.

Deliverables:

- Record of prospective bidders
- Bid evaluation sheet
- Construction contract documents

TASK 6 – CONSTRUCTION PHASE

Engineering Design Services

Submittals and RFIs – Ardurra will review and organize shop drawings, samples, and other information which contractor is required to submit to ensure conformance with contract documents and compatibility with design, and provide six (6) submittal reviews. We will respond to two (2) Contractor Requests for Information (RFI) through appropriate addenda as necessary to correct, clarify or change the contract documents.

Construction Management Services

Kickoff Meeting – Ardurra will schedule and organize a Kickoff Meeting with contractor, SAWCo, designers, CM team, and other stakeholders. At this meeting the CM will go over all the nuances of the project, such as material submittal, RFI process, and work hours and have the designer available for any pertinent questions. The Contractor shall submit a Baseline Schedule at this meeting for Ardurra to review.

Progress Meetings – Ardurra will conduct construction progress meetings and provide agenda and minutes for such.

Change Orders – The Ardurra CM team is highly experienced in providing services for water pipeline projects; therefore, any change order matters will be effectively evaluated for justification and if justifiable will be addressed by quantity change per the schedule of values or per a negotiated cost and time.

Inspection Services – Part-time inspection will be provided to not only inspect installation activities with conformance to the construction documents but will also be ahead of the production work to identify and resolve any potential construction issues to eliminate delays to the project. Our inspector will be point of contact, on site, from the public's perspective and therefore be available, to them, regarding information about the project. Given that the new pipeline alignment is located on a residential road, Ardurra will inspect that the appropriate traffic control is in place and that access to driveways are addressed as well as postal services and trash services.

Materials Testing – Ardurra will include a materials testing firm, Converse Consultants, to provide eighteen (18) visits to the site for backfill compaction testing, backfill method observation & recommendations. Converse will run a Maximum Compaction Lab Analysis for the material to be used for backfill to ensure the contractor's compliance with contract and permits.

Contractor Payment – Ardurra will process and review contractor payment requests and final payment and file the project with the County Recorder Office, given the contractor meets all substantial completion requirements.

Closeout Activities – Ardurra will perform all Final Closeout activities, which include: Final Punchlist Site-walk and Final Approval, Warranty documentation, Delivery of all project files, close out any potential liens, receive all contractor releases, and make recommendation for Final Payment.

Deliverables:

- Meeting agendas and minutes
- Warranty documentation
- Project Files

DESIGN AND CONSTRUCTION SCHEDULE

The Ardurra Design schedule is built from a Notice to Proceed starting April 3, 2023. SAWCo will have one week for review of each submittal package. Signed Plans, Specifications, and Fee Estimate will be delivered to SAWCo July 19, 2023. The construction phase is expected to be 4 weeks in duration. See Appendix A for itemized design schedule.

FEE ESTIMATE AND HOURLY RATES

See Appendix B for itemized fee estimate and hourly rates.

RESUMES

See Appendix C for resumes.

We appreciate the opportunity to provide this proposal and encourage you to please reach out with any questions. We look forward to working with SAWCo on the Glendale Road Pipeline Replacement Project.

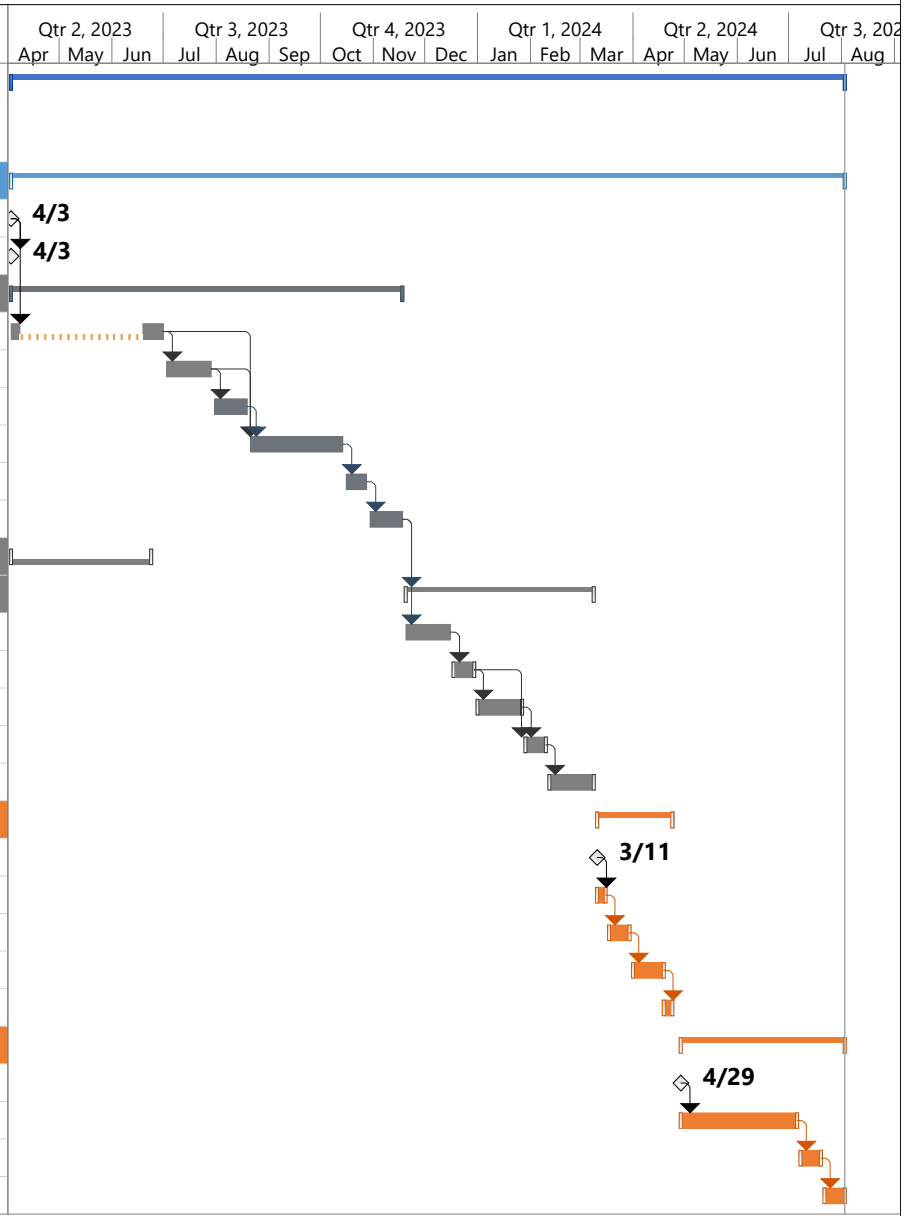
Sincerely,

Robert S. Weber, PE
Southwest Water Practice Director

Oscar Gonzalez, PE
Project Director

PROJECT SCHEDULE
San Antonio Water Company
Forebay Outfall and Modernization Project

ID	Task Name	Duration	Start	Finish
1	**Engineering Design and Construction Services for Forebay Outfall and Modernization Project**	350 days	Mon 4/3/23	Fri 8/2/24
2	**Project Management**	**350 days**	**Mon 4/3/23**	**Fri 8/2/24**
3	NTP	0 days	Mon 4/3/23	Mon 4/3/23
4	Kick-off Meeting/Site Visit	0 days	Mon 4/3/23	Mon 4/3/23
5	**Preliminary Design Phase**	**165 days**	**Mon 4/3/23**	**Fri 11/17/23**
6	Data Compilation Review	3 wks	Mon 4/3/23	Fri 6/30/23
7	Survey and Mapping	4 wks	Mon 7/3/23	Fri 7/28/23
8	Utilities Research	3 wks	Mon 7/31/23	Fri 8/18/23
9	Prepare PDR	8 wks	Mon 8/21/23	Fri 10/13/23
10	SAWCo Review	2 wks	Mon 10/16/23	Fri 10/27/23
11	Final PDR	3 wks	Mon 10/30/23	Fri 11/17/23
12	**Environmental Phase**	**60 days**	**Mon 4/3/23**	**Fri 6/23/23**
13	**Final Design Phase**	**80 days**	**Mon 11/20/23**	**Fri 3/8/24**
14	Prepare 50% Design	4 wks	Mon 11/20/23	Fri 12/15/23
15	SAWCo Review	2 wks	Mon 12/18/23	Fri 12/29/23
16	Prepare 90% Design	4 wks	Mon 1/1/24	Fri 1/26/24
17	SAWCo Review	2 wks	Mon 1/29/24	Fri 2/9/24
18	Final PS&E	4 wks	Mon 2/12/24	Fri 3/8/24
19	**Bidding Phase**	**32 days**	**Mon 3/11/24**	**Tue 4/23/24**
20	Advertisement	0 days	Mon 3/11/24	Mon 3/11/24
21	Questions Due	1 wk	Mon 3/11/24	Fri 3/15/24
22	Addenda	2 wks	Mon 3/18/24	Fri 3/29/24
23	Bids Due	14 days	Mon 4/1/24	Thu 4/18/24
24	Award	3 days	Fri 4/19/24	Tue 4/23/24
25	**Construction Phase**	**14 wks**	**Mon 4/29/24**	**Fri 8/2/24**
26	Preconstruction Conference	0 days	Mon 4/29/24	Mon 4/29/24
27	Construction	10 wks	Mon 4/29/24	Fri 7/5/24
28	Punchlist	2 wks	Mon 7/8/24	Fri 7/19/24
29	Record Drawings	2 wks	Mon 7/22/24	Fri 8/2/24



Oscar Gonzalez, PE

Project Director

Education

MS/1998/Environmental Engineering (Water/Wastewater)/California Polytechnic University, Pomona

BS/1994/Mechanical Engineering/ California State University, Los Angeles

Registrations

2004/PE/Civil/CA # C66241

Years of Experience: 35

Office Location: El Segundo, CA

Oscar Gonzalez, PE, has an extensive background in program and project leadership, construction management, and civil engineering in his more than 30-year career. He has successfully delivered water and wastewater infrastructure for treatment, conveyance, storage, and alternate delivery facilities throughout Southern California. Oscar has managed various phases in the water/wastewater practice, ranging from planning and design to construction management and facility operations start-up. His public works expertise consists of public facilities, wet and dry utilities, street improvements, recreation centers, and landscaping and masonry.

As a project management consultant for water/wastewater clients in the public sector and director of construction in the land development industry, Oscar has delivered successfully on programs for new water and wastewater facilities and for new infrastructure in planned communities. His tasks for such programs have included coordination with city staff; budget and cash flow development; schedule development; management of professional consultants and review of deliverables; permitting with cities and dry/wet utilities; procurement of construction contractors; and construction management. As the first point of contact at construction sites, Oscar was the primary source for public outreach and information for such projects. As the Chair of the Finance Committee at Cucamonga Valley Water District, Oscar oversaw and gave direction for grant application to FEMA/ Cal EMA, California Prop 1, and California Prop 50; Cucamonga received approximately $8 Million from such funding agencies.

RELEVANT EXPERIENCE

Glendale Pipeline Project, San Antonio Water Company, San Antonio Heights, CA. Provided design & bidding activities and overall project oversight for this $438K project that consisted of the installation of approximately 700 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included local public outreach, change order negotiation, and contractor payment request review. (07/2022-05/2023)

30-Inch West Pipeline Project, East Valley Water District, Highland, CA.* Construction manager for this $1.4-million project that consisted of the installation of over 5,000 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included public outreach, change order negotiation, and contractor payment request review. (01/2014-08/2014)

New Model Colonies project in the City of Ontario, CA. Served as Construction Manager for the construction of Phase 1 of the backbone infrastructure for the At build-out this program will consist of a 4,000 acre development project, comprised of 30,000LF sewer, 58,000LF storm drain, 63,000LF domestic water, 72,000LF recycled water, and 80,000LF roads. The Phase 1 construction cost is over $60million. Services include: Change Order negotiation and processing, Schedule Review, Progress Payment review and approval, RFI resolution, Submittal Review, and Construction oversight.

City of Highland: Storm Drain and Water Pipeline Project / Highland CA. Served as Construction Manager for the installation of over 17,000 lineal feet of new pipeline, including: sewer, water line, and stormdrain facilities, which included: traffic control installation, public notification, and testing and disinfection of pipeline. Duties included: constructability review, bid assistance, public outreach, change order negotiation, and contractor payment request review.

Served as Resident Engineer and Construction Manager for the construction of the Ventura Road Utility Improvements and Resurfacing Project in Oxnard, California. Included sewer line, potable water line, recycled water line, and forcemain. Each line consists of approximately 9,000 linear feet. Pipe material is PVC and diameters range from 16" to 21".

Evan's Reservoir and Inlet/Outlet System, City of Riverside Public Utilities Department, Riverside, CA.* Construction manager and resident engineer for this ASCE award-winning project, which involved the replacement of a reinforced concrete reservoir and inlet/outlet system (72-inch and 60-inch-diameter steel cement-mortar lined and coated (CML&C)). The project included demolition and construction of a 16-MG concrete reservoir, yard piping, site concrete work, electrical work, start-up and operation, and maintenance manuals covering all equipment. Construction and construction management fees totaled over $14 million.

968 Reservoir and Pump Station Replacement, City of Glendale Water and Power Department, Glendale, CA.* Project/Construction Manager, and resident engineer for the replacement of the 968 Reservoir and Pump Station, located at Chevy Chase Country Club. The project included demolition, construction of a 14.5-MG concrete reservoir, the construction of a new pump station, yard piping, concrete work, pumps and motors, modifications to the existing irrigation system, and electrical work. The project also involved HVAC, electrical, and instrumentation; electrical and instrumentation wiring and interconnections; all structural, architectural, mechanical, electrical, plumbing, and yard piping, site grading and paving, utilities, drainage, yard structures; permitting; and operation and maintenance manuals covering all equipment. Provided outreach to contentious residents who ultimately championed the project.

The Preserve at Chino Land Development Program, Lewis Management Corporation, Chino, CA.* Director of construction for over $80-million in public improvements. Improvements included the construction of backbone infrastructure and facilities that will serve new residential communities. Tasks included: budget development; coordination with the City of Chino; coordination with other public stakeholders, such as IEUA, SAWPA, County of San Bernardino, and State of California; management and coordination of design and construction management consultants; review of design deliverables; review of the Sewer Master Plan; and managing the program to re-design and re-construct street improvements to revised City ADA-compliant standards. The new construction consisted of wet utilities (including a lift station and force main), dry utilities, street improvements, recreation center, masonry walls, and landscaping. Oscar developed and managed an aggressive schedule. The timeline for completion was aggressive, due to the scheduled opening days of the new communities. (06/2017-12/2020)

North Fontana Land Development Program, Lewis Management Corporation, Fontana, CA.* Director of construction for over $70 million in public improvements. Improvements included the construction of backbone infrastructure and facilities that will serve new residential communities. Tasks included budget and cash flow development and review/updates; schedule development and review/updates; management and coordination of design and construction management consultants; coordination with the City of Fontana; coordination with other public stakeholders, such as West Valley Water District, Metropolitan Water District, and San Gabriel Valley Water District; and permitting with the City and utilities. The new construction included wet utilities, dry utilities, street improvements, masonry walls, and landscaping. The timeline for completion was aggressive, due to the scheduled opening days of the new communities. (06/2017-12/2020)

Malibu Mesa Water Reclamation Plant, Los Angeles County Department of Public Works, Malibu, CA.* Project manager for the 50% design effort of a new wastewater membrane treatment facility. The new plant will have the capacity to treat up to 200,000 gallons per day. The plant designer is Jacobs. The project includes installation of temporary filters, demolition of existing filter equipment, installation of a Parshall flume, pump station with diversion structure, fine screens, anoxic/aerobic bioreactors, membrane tanks, and permeate pumps; membrane thickening tank, new UV system, installation of new structural members in the existing building to support new electrical equipment; installation of a new standby generator, new process equipment and pump replacement; demolition of the existing generator and fuel tank; refurbishment of the existing round activated sludge process structure, refurbishment of the existing building; relocation of Southern California Edison equipment; and a paved parking area.

Replacement of Marina Del Rey Pump Station (MDRPS), Los Angeles County Department of Public Works, Marina Del Rey, CA.* Project manager for the design of the replacement and relocation of the MDRPS and rehabilitation or replacement of the existing forcemain. The facility designer is Stantec. The project includes odor control for MDRPS system, minimization of impacts to stakeholders and the public, pump station equipment, dewatering/managing tidal influence, decommissioning of existing pump station, electric systems, and site security.

Concrete Drying Beds, South San Joaquin Irrigation District, Oakdale, CA.* Construction manager for this $4-million project that

involved the construction of two new concrete drying beds and related earthwork, piping, and appurtenances. The project expands the sludge drying capacity at the Nick C. Degroot Water Treatment Plant. The project required diligent change order negotiation and potential claims avoidance. (12/2020-10/2021)

Belmont Plaza Pool Rebuild/Revitalization Project, City of Long Beach, CA. Project manager for this new, $103.1-million aquatics center that replaces the now-demolished Belmont Olympic Pool. The new facility will host swimming, water polo, and platform diving events at the local, regional, and national levels. Ardurra represents the City and its interests in all negotiations, meetings, community outreach, entitlements, permitting, design management and related activities throughout the project. Oscar is assisting with the construction management RFP/consultant selection process as well as with administering an application from the Los Angeles County Flood Control District (LACFCD) DNAP program. He is also coordinating the design and permitting of the Olympic Plaza Storm Drain upgrade.

Capital Improvement Projects, Golden State Water, Santa Fe Springs, CA.* Served as district engineer (contracted) performing the tasks of construction manager and field engineer for all capital projects under construction. Coordinated all activities for construction services including contractor approvals, bidding, awards, contracts, inspection services, negotiations during construction, liaison with city and other agency inspectors, as-builts, and job closings. Completed field checks during design of capital projects; investigated and recommended solutions to engineering or system operational problems; maintained all capital and maintenance budgets; and supervised contract administrators, inspectors, engineering technicians, and other support staff performing all new business activities within the District—from initial contact with applicants, to preparation of final contracts, and installation of facilities.

Plant 143 Improvements, East Valley Water District, Highland, CA.* Construction manager and resident engineer for the Plant 143 Improvements, which included construction of a new 5,300-gallons-per-minute (gpm) booster pump station and a 1-million-gallon (MG) welded steel storage break tank for air dissipation treatment and distribution of groundwater from the District's existing wells, as well as from future groundwater sources from other pressure zones. Developed a sequence plan with District staff and the contractor for connecting to the existing system. The project included furnishing, installing, start-up and testing of mechanical piping, thermal insulation and appurtenances; flow meters and valves; motor control centers, variable frequency drives and controls; raw water bypass and meter and control valve; emergency generator connection provisions; fire protection systems; building support systems including plumbing, HVAC, electrical, and instrumentation; electrical and instrumentation wiring and interconnections; all structural, architectural, mechanical, electrical, plumbing, and distribution piping – including installation by mining and jacking, site grading and paving, utilities, drainage, yard structures; permitting; and operation and maintenance manuals covering all equipment. Duties included construction inspection; public outreach, change order negotiation, and contractor payment request review.

Anion Exchange Plant Expansion, City of Pomona Public Works Department, Pomona, CA.* Construction manager and resident engineer for the construction of the City of Pomona's Anion Exchange Plant Expansion project, which included demolition, relocation of the sodium hypochlorite system, installation of a new resin storage tank, salt storage/brine generation system, yard piping, concrete work, pumps and motors, modifications to the existing SCADA system to control the new salt storage/brine generation system, electrical work, and the installation and start-up of the new Anion Exchange Plant.

***Work performed prior to joining Ardurra.**

Keith Forbes, QSP

Construction Inspector

Education
Columbia College/Sonora, CA

U.S. Army Corps of Engineers Training

Certifications
Certified Erosion, Sediment and Storm Water Inspector (CESSWI), #4695;
Qualified SWPPP Practitioner (QSP), #25929; NICET Railway/Subway Certification;
Confined Space Entry; Working at Heights; GI Safety Induction (Coal Surface);
Resources and Infrastructure Industry Supervisor's Course;
Communicate Information, #MNCG1009/#RIICOM301;

Certificates II and III in Surface Extraction Operations, #RII20209/#RII30109;
Certificate III/Mining Exploration;
Four-Wheel Drive Vehicle, #RII30509

Years of Experience: 33

Office Location: El Segundo, CA

Keith Forbes, QSP, has more than 30 years of construction inspection experience for public agencies, including local, regional, state, and federal, as well as large commercial and industrial clients. Keith has substantial experience with water utilities including water lines, water mains with laterals, hydrants and individual house connections, and overall water services as well as wastewater and stormwater improvements. His specific project experience includes roadways, bridges, highways, light and heavy rail, concrete structures, liquid natural gas (LNG) storage tanks, mining/tunneling, bulk earth works, LNG plants and field compression stations, coal preparation plants (CPP), petroleum refineries as well as engineer procure and construction management (EPCM) projects. Keith is well-versed at addressing the rigorous administrative and quality assurance requirements of various funding requirements.

Keith's key responsibilities have included observing and inspecting all aspects of construction to identify document and report construction performance, in addition to verifying compliance with plans, specifications and codes. Keith's background expands in many areas including onsite inspection, plans examination, project coordination, working with architects and planners, report preparation, document control, and client relations. He has extensive experience with Caltrans specifications and standards, the Standard Specifications for Public Works Construction (SSPWC, AKA "the Greenbook"), Construction Standards Institute (CSI), American Institute of Architects (AIA), Engineers Joint Contract Documents Committee (EJCDC), documentation and report procedures and systems, as well as experience with coordination and interfacing with multiple agencies and the public simultaneously. Keith is Caltrans highway safety trained, OSHA construction safety certified, and possesses multiple ICC and ACI certifications.

RELEVANT EXPERIENCE

Reclaimed Water Line, City of Ceres, CA.* Senior inspector for construction of 12.5 miles of 24-inch C900 PVC underground reclaimed water line and a pump station from the Ceres wastewater treatment plant to the Turlock water treatment plant. Project included air release valves, blow-off valves, thrust blocks, backfilling and compaction.

Elk Grove Florin Road Water Main Improvements, Elk Grove Water District, Elk Grove, CA.* Inspector for the replacement of a 1,500-linear foot, 16-inch C900 ductile iron pipe water line, including 17 one-inch water services, air relief valves and three hydrant services for residents and local businesses. Monitored bacteriological testing for compliance with specification requirements.

New Tract Division Development Utility Installation, City of Roseville, CA.* Inspector for new 1,100-linear foot, 18-inch C900 pipe water main, including 12 one-inch water services, valves and air relief valves, storm drain and sewer systems, two hydrants and associated structures. Coordinated hydro-testing and bacteriological testing of water main.

Water Line Relocation at Millbrae Avenue, Bay Area Rapid Transit (BART), Millbrae, CA.* Inspector for relocation of an 800-linear foot, 24-inch C900 pipe water main and two 6-inch laterals for future hydrants for a BART station. Monitored hydro-testing and bacteriological testing of main line and services for residential and business properties.

New Subdivision Projects, County of Mesa, AZ.* Inspector for subdivision projects involving all underground utilities. These included water mains, laterals, hydrants and individual house connections, sewer lines and storm drains, including associated structures. Monitored water line services installations, hydro-testing of mains and laterals and coordinated bacteriological testing of services and main lines.

Water and Storm Drain Installation Improvements, City of Elk Grove, CA.* Senior inspector for the inspection and documentation of a new 16-inch water main. Inspections addressed fire hydrants, one-inch water services, air release valves, backflow preventers, gate valves and thrust blocks. Project included a new 48-inch RCP storm drain with manholes and pavement overlay. Performed hydro-testing and bacteriological testing in conformance with AWWA and Florin Resource Water District standards.

Wastewater Treatment Plant No. 3 Expansion, Public Works Department, City of Bakersfield, CA.* Senior construction inspector for $373-million project that included civil works, process piping above and below ground, CMU block and concrete structures, concrete storage tanks and underground conduit duct banks.

Water and Sewer Main Infrastructure Upgrades, Public Utilities Commission, City of San Francisco, CA.* Senior construction inspector for this $8.5-million project that included 24-inch water main and sewer main installation along with concrete structures.

On-Call Inspection Services, City of Lake Forest, CA. Public works inspector for construction of capital improvements citywide. Performs wide range of inspections involving construction of new homes in the Shea Baker Ranch master-planned community. Inspecting mass grading and final precise grading for new homes in Baker Ranch neighborhoods, such as The Landing (Shea Homes), Parkside (Toll Brothers) and Encanto (Meritage). Inspections address variety of elements, such as construction of storm drains, area drains, curbs and gutters, sidewalks, ADA ramps, street lighting and wet and dry utilities. Inspects all projects requiring encroachment permits. Also performed grading inspection for two restaurants and a U-Haul facility.

Torrance Transit Park and Ride Regional Terminal, City of Torrance, CA. Senior public works inspection for a flagship terminal for the City's 11-route agency, Torrance Transit, and other public transportation providers. This LEED v2009 Gold project includes parking for buses and automobiles, covered passenger boarding areas, offices, employee break areas and retail spaces. The project also involves off-site improvements for the installation of required utilities, the widening of Crenshaw Boulevard and construction of an extension of 208th Street as well as related improvements.

Kern and Mono County Bridge Replacements and Repair Project, Caltrans, Bridgeport to Tehachapi, CA. Assistant resident engineer/inspector for this $7.5 million federally funded bridge replacement and repair project, which involved replacement and/or repair of nine bridge locations in Kern and Mono Counties. Improvements ranged from concrete and safety repairs to entire bridge removal and replacement. The project included over 330 lineal feet of guardrail removal and replacement with over 360 lineal feet of Midwest guardrail, double Midwest guardrail, transition rail, and alternative in-line terminal systems.

Sherwin Summit Shoulders Widening and Barrier Rail Project, Caltrans, Mammoth, CA. Assistant resident engineer/inspector for this $17-million project that includes eight retaining walls and a barrier rail.

Cache Creek Bridge Construction, Caltrans, Tehachapi, CA. Assistant resident engineer/inspector for construction of this new $17-million bridge. The project includes pre-cast concrete girders.

2017-22 Street Pavement Maintenance Rehabilitation Project, City of Corona, CA. Interim construction inspection services that involve localized removal and replacement of failing asphalt sections, grinding and overlay, crack sealing, application of ARAM, and slurry sealing approximately 68 lane miles of local and major street. There is also removal and replacement of PCC ADA ramps.

Oso Creek Multi-Use Trail, City of Laguna Niguel, CA. Inspector for $3-million project to construct multi-use trail. The trail is located along Oso Creek Channel between the Laguna Niguel Metrolink Station and Three Flaggs commercial center. The project involved building contiguous bicycle and pedestrian/equestrian trails, stormwater control and treatment best management practices, landscaping, lighting and street improvements. The project was partially on City street right-of-way and partially on Orange County Flood Control District right-of-way for the Oso Creek Flood Control Channel. Ardurra provided grant funding services for two grants, one from the OCTA Tier 2 Environmental Cleanup Program, the other a State Water Resources Control Board (SWRCB) Proposition 84 Stormwater grant.

La Cienega Boulevard and Fairview Boulevard, City of Inglewood, CA. Inspector for federally funded roadway project to improve traffic safety and ease congestion. This project involved widening Fairview Boulevard between La Cienega and La Tijera boulevards and constructing dedicated right- and left-turn pockets at Fairview Boulevard and La Cienega. Upgrades included traffic signal improvements, masonry retaining walls, concrete sidewalks and driveway ramps, cross-gutters, curbs and gutters, pavement resurfacing and striping. The project included rough grading, road excavation and compaction, asphalt paving over a compacted base and subgrade preparation.

Cherry Avenue Widening, City of Signal Hill, CA. Inspector for the first phase of project extending from 230 feet south of Pacific Coast Highway (PCH) to the 19th Street intersection. Services for this federally

funded project were provided in compliance with federal standards and requirements, as detailed in the Caltrans "Local Assistance Procedures Manual."

North End Projects, Alameda Corridor Transportation Authority, CA.* Inspector for a federally funded multi-mile reconstruction of a railroad bridge, widening of an existing bridge, excavation work, demolition and reconstruction of a 300-foot box culvert, landscaping, new track installation, and signal installation.

Jump Start Safety Program, Alameda Corridor East Construction Authority, City of Irwindale, CA.* Resident inspector for the federally funded, $27.8-million heavy civil and heavy rail project. Inspection involved safety improvements for up to 45 surface intersections along a 30-mile route. This project was a portion of the nationally significant, rail improvement project to improve safety and reduce traffic and rail delays in the San Gabriel Valley.

Pavement Overlay and Slurry Seal, City of Chino Hills, CA.* Senior inspector for inspection services and public relations for 91 streets that involved slurry seal, overlay, reconstruction and striping. Coordinated and inspected the installation of drainage facilities designed by CBM on a fast-track schedule after construction started.

Citywide Residential Slurry Seal Program, City of Elk Grove, CA.* Senior inspector for $500,000 citywide residential slurry seal program. Responsibilities included managing and coordinating public notifications, troubleshooting vehicle relocations, providing comprehensive quality assurance and contract administration.

Citywide Residential Slurry Seal Program, City of West Sacramento, CA.* Senior inspector for $500,000 citywide residential slurry seal program. Responsibilities included management and coordination of public notifications, troubleshooting vehicle relocations, and comprehensive quality assurance and contract administration support.

223rd and Abalone Improvements, City of Torrance, CA.* Senior inspector for comprehensive infrastructure and road improvements for $2-million project. Coordinated closely with the City's staff, contractor and public to complete project on time and within budget. The improvements included street reconstruction, overlays, curb and gutter, storm drain, waterlines, sewer and landscaping. The utilities portion of the project included a new deep sewer line and a 16-inch C900 water main with fire hydrants, water services, gate valves, backflow preventers and air release valves, hydro testing and bacteriological testing. Project compliant with Torrance Municipal Water District AWWA standards.

Pedestrian and Parking Lot Enhancements, City of Santa Monica, CA.* Lead inspector for multi-faceted, fast-track public improvements project. Project elements included streetscape improvements, pedestrian crosswalks, curb extensions, street realignments, sidewalk widening, landscaping, parking lot reconstruction, traffic signal improvements, drainage improvements, utility coordination, street reconstruction and overlays, and street and parking lot slurry seal. Construction was coordinated with five other projects scheduled for construction in the same timeframe.

I-405 Freeway Realignment, Caltrans District 7 and City of Carson, CA.* Senior construction inspector for $22-million project involving a freeway interchange realignment. Construction involved concrete bridge and stormwater realignment, new pavement sections, abutment construction and earthwork.

U.S. 101/Millbrae Avenue Interchange, Caltrans District 4, Millbrae, CA.* Senior construction inspector for $16.5-million project that involving concrete bridge work, on-ramp civil and paving work, stormwater improvements, signal conduit duct banks, signal pole work and earth work.

I-215 Freeway Western Segment, Las Vegas Beltway, Section 11A, Clark County Public Works, Clark County, NV.* Inspector for $20-million project with a 390-day schedule. Inspected a three-mile stretch of freeway, including three bridges, a storm drain system, street lighting, traffic signals and paving. The project was part of Clark County's accelerated plan to circle the Las Vegas metropolitan area to improve traffic circulation throughout the Valley. Construction created two diamond interchanges using soffit-fill construction, a twin-bridge grade separation, 12 miles of the initial four lanes of the eight-lane PCC pavement highway and associated drainage, traffic and retaining wall improvements.

New Subdivision Infrastructure, City of Rocklin, CA.* Senior inspector for the construction inspection and documentation of new subdivision infrastructure, including water mains, residential services, hydrants, backflow preventers, air release valves, tees, hydro- and bacteriological testing documentation. Project involved stormwater and sewer line installation, laterals curb and gutter and sidewalks.

Wheatstone Liquid Natural Gas (LNG) Project, Bechtel/Chevron, Western Australia.* Quality control and pipeline inspector for Bechtel/Chevron gathering and trunk lines. Inspected Wheatstone temporary camp water supply installation, including backflow preventers, services. Documented backfilling operation, hydro- and bacteriological testing.

Rail Spur Track Installation Upgrades, Former Concord Naval Weapons Station, City of Concord, CA.* Senior construction inspector for rail spur track installation. Project involved eight spur tracks leading to ammunitions storage facilities at the station's missile facility. Project involved removal of existing spurs. Responsible for inspection, documentation and testing.

Metro Red Line-Hollywood Boulevard Segment, Los Angeles County Metropolitan Transportation Authority (LA Metro), Los Angeles, CA.* Senior construction inspector for track installation for the Red Line system through the Hollywood Boulevard corridor tunnel. Addressed track installation, documentation, and testing.

Red Line Station Construction, LA Metro, Los Angeles, CA.* Inspected all reinforced steel, concrete and HDPE for $300-million station construction. Inspected all architectural finishes, mechanical and electrical installations. Tracked contractor's manpower and progress in relation to critical milestones.

Red Line B-271 Subway Station, LA Metro, Los Angeles, CA.* Senior construction inspector for $600-million project involving station excavation and backfilling, concrete placement of invert and station construction.

Hollywood Boulevard Corridor, LA Metro, Los Angeles, CA.* Senior construction inspector for tunnel invert and wall placement. The $8.6-million project included concrete segment placement, rebar and an HDPE lining.

Various Projects, U.S. Department of Defense (DoD), CA and Overseas.* Construction inspector for 10 years for various projects throughout California and overseas. Worked with three contractors on a major DoD project on the Island of Diego in Garcia. The $800-million project involved runway, control tower and runway lighting construction.

California Department of Transportation (Caltrans), CA.* Work consisted of various bridges on state highways US 395, Highway 58 in Kern and Mono counties. Scope included polyester overlay of bridge decks, new approach and departure slabs, spall repairs, installation of B seals at expansion joints, and new guard rails at approach and departure slabs. Another new bridge construction project was at Cache Creek on SR-58, No. 50-0201R. The project consisted of new abutment walls, placement of bridge deck, barrier railing and western guard railing at approach and departure slabs.

***Work performed prior to joining Ardurra.**

Robert Weber, PE

Senior Project Manager

Education
State University of New York at Buffalo
B.S. Civil Engineering, 1990

Registrations
Registered Professional Engineer
California No. C59312

Professional Affiliations
American Society of Civil Engineers

American Water Works Association

American Consulting Engineers Council – California (Water Resources Committee)

Years of Experience: 32

Office Location: Poway, CA

Mr. Weber has 32 years of civil engineering and project management experience on a variety of municipal and public works water, wastewater, and recycled water projects. Specific project experience includes conveyance pipelines, reservoirs and tanks, water pump stations, and sewer lift stations. He has also successfully managed several as-needed services contracts for municipalities and water/wastewater utilities. Mr. Weber is thoroughly familiar with design standards, techniques, and analytical methods, bid specifications, and cost estimating. His experience extends beyond civil engineering to include securing required project permits, fostering cooperative interagency approvals, and gaining community project acceptance.

Mr. Weber's project success based is on his ability to understand the client's needs and objectives and translate them into actions during execution of the project. He prides himself in involving the client in the project, and ensuring the technical staff understands the critical issues of the project. His engineering decisions and designs are based on careful considerations of project needs and specific site characteristics. His dedication to quality effectively manages project risks and controls construction and operational costs.

Designing and sizing pipelines is a relatively simple task for an experienced professional engineer. Constructing the pipeline under emergency conditions, through sensitive coastal beaches and creeks, in highly developed residential areas, across open rural property, within existing pavement traveled by daily commuters, and requiring multiple agency approvals can be extremely difficult. Mr. Weber has applied his engineering and project management talents in all of these settings to construct water transmission and distribution lines, forcemains, and gravity sewers. Mr. Weber has an ability to anticipate problems, is poised with solutions, and understands that responsiveness is critical to every construction project. He has developed plans to provide continuous uninterrupted service and peak hour uncongested traffic flow during construction.

RELEVANT EXPERIENCE

Pipeline Project CIP19005, Helix Water District. Project Manager for the design of approximately 7,500 linear feet of cast iron pipeline replacement through busy and congested/narrow streets of La Mesa. Project challenges included keeping existing service to customers during construction, tie ins and shutdowns, encroachment permitting, and keeping the project on schedule.

Ontario Ranch Phase 2 Water Main Improvements, Ontario Municipal Utilities Company/City of Ontario. Principal-in-Charge for approximately 1.5 miles of 30-in diameter cement mortar lined and coated, welded steel pipe (CML&C WSP), PZ 925, along Grove Avenue between Eucalyptus Avenue and Chino Avenue, design of an interim Pressure reducing valve (PRV) station at the intersection of Grove Avenue and Chino Avenue to break pressure from the PZ 1010 to PZ 925, situated on the north side of Chino Avenue approximately 500 feet east of Grove Avenue, 1.6 miles of 18-in diameter CML&C WSP, PZ 1010, along Chino Avenue between Grove Avenue and the Chino Avenue Bridge (Cucamonga Creek).

San Antonio Ave 30-inch Diameter Transmission Water Main, Ontario Municipal Utilities Company/City of Ontario. Principal-in-Charge for design for 2,900 linear feet of new 30-inch cement mortar lined and coated welded steel pipe (CML&C WSP); abandonment of approximately 3,700 linear feet of existing 18-inch steel pipe.

Upas Street Pipeline Replacement, City of San Diego. Principal-in-Charge. Upas Street project extend from Lindbergh Field east along Upas Street, crossing I-5 and State Route 163, and bordering Balboa Park and Morley Field through sensitive habitat, residential neighborhoods and utility-congested

streets east to 30th Street, including heavy traffic areas of Park Blvd and 5th Avenue between Upas Street and Robinson Avenue. Design details include; 14,980 lf of 8-inch through 12-inch PVC distribution main, 8,160 lf of 24-inch cement mortar lined and tape coated steel pipe with impressed current cathodic protection, 1,640 lf of 30-inch high density polyethylene (HDPE) transmission main to be installed via horizontal directional drilling, 210 lf of 18-inch HDPE transmission main to be installed via slip-lining, 4 pressure reducing stations (3 replacement and 1 new) with flow metering and SCADA telemetry, and 4.9 miles of trench paving and street resurfacing.

Mountain Avenue Gap Pipeline, Eastern Municipal Water District – Principal-in-Charge for the design of 1,800 linear feet of 18-inch diameter potable water main along Mountain Avenue (also known as Ramona Expressway) in the City of San Jacinto to close a gap between existing 18-inch potable water transmission mains at Oak Knoll Road and Old Mountain Avenue. The project team conducted a high-level review of two alternative alignments. The preferred alignment was Mountain Avenue since it is the shortest alignment, has less potential utility crossings, and will keep the pipeline in established public right of way. The new water main will provide reliability and redundancy by looping the water system in the 1807 Upper Fruitvale Pressure Zone (PZ). The proposed pipeline material is cement mortar lined and coated (CML&C), welded steel pipe (WSP). The project included coordination with the City of San Jacinto to ensure their requirements for pavement repairs were incorporated into the project.

Wolf Store Road 12-inch Waterline Inter-tie, Rancho California Water District – Principal-in-Charge. Approximately 5,000 lf of new 12-inch PVC potable water main along privately owned Wolf Store Road within the City of Temecula. The new waterline provides redundancy and improved water quality to the Vail Ranch Business Park. The waterline is adjacent to the existing Temecula Creek owned by the Riverside County Flood Control and Water Conservation District (RCFC&WCD). Wolf Store Road is a privately owned road within the Vail Ranch Business Park. Plat and legal documents are necessary, as well as coordination with the District's real estate agent for property acquisitions. Project challenges include crossing major storm drain facilities owned by RCFC&WCD, including an existing 7'x12' RCB and a 96" RCP. Multiple agency coordination includes RCFC&WD, Vail Ranch Property Owner's Association, and City of Temecula. Other project challenges include high groundwater and various utility crossings.

Sewer Rehabilitation and Upsizing, City of Lemon Grove. Project Manager for the design of 3,480 lf of 8-inch cured-in-place pipe liner and upsizing of 4,942 lf of 6" and 8" sewer to 8" and 10", respectively.

Sewer Facilities and Access Improvements at The Woods, Irvine Rancho Water District. Project Manager for an evaluation of an existing gravity sewer network located parallel and within Upper San Diego Creek. Assessed repair and relocation alternatives, advantages/disadvantages and planning level costs and environmental constraints.

South Oceanside Water & Sewer Main Replacement, City of Oceanside. Project Manager. Design of 7,400 lf of replacement 8-inch PVC water distribution mains and 6,345 lf of sewer upsizing to 8-inch PVC, with 4 manhole rehabilitations and 8 manhole replacements, within residential areas of south Oceanside. The project encompassed evaluation of replace-in-place versus parallel alignments as well as re-routing of several existing water services in order to eliminate a problematic alley main.

Myers Street Sewer Replacement, City of Oceanside. Project Manager for the replacement and upsizing of existing gravity trunk sewers in the La Salina Service Area of the City of Oceanside. The existing sewers are currently over capacity; consequently the replacement sewer lines must accommodate the existing flows and as well as the future flows generated by new development in downtown Oceanside. New 27 and 30-inch gravity sewers were constructed in narrow residential streets, significant community impacts, and congested utility corridors added to the complexity of the project.

Gibraltar Sewer Replacement, Leucadia Wastewater District. Project Manager. Design of 500 lf of new 12-inch gravity sewer to eliminate a section of hydraulically deficient sewer that was a historical source of maintenance problems for District staff. The existing sewer traversed private property through an easement to the La Costa golf course. Pending development plans for the private property necessitated the sewer to be relocated to a more accessible area in cooperation between the District, property owner, and golf course. The new sewer will coordinate with the site development plans and will also rectify the identified hydraulic deficiencies.

Downtown Sewer Upsizing, City of National City. Project Manager. Designed 10,100 linear feet of 10, 12, and 15-inch gravity sewer main for the downtown area of the City of National City. The project was prompted by the need to upsize and replace existing gravity sewer pipes ahead of planned redevelopment in the downtown area. Included coordination with the U.S. Navy for access to existing City-owned sewers on Navy property, coordination with Caltrans for permitting for

a trenchless crossing of Interstate 5, and phasing of the project to meet the City's redevelopment timeline.

Olivenhain Trunk Sewer, City of Encinitas. Principal-in-Charge. Project to address existing maintenance issues, improve system reliability, and provide better protection for water quality and habitat values in Escondido Creek and San Elijo Lagoon. Specific objectives include; rehabilitating 54 existing sewer manholes to reduce I&I, relocating approximately 2,800 linear feet of the upper OTS out of the Escondido Creek floodplain and increasing its capacity to meet currently projected system needs, and providing environmentally appropriate access for maintenance vehicles along the remainder of the OTS. Provided comprehensive planning, design, and construction phase services for this multi-phase project.

Trunk Sewer Main Replacement, City of Escondido. Principal-in-Charge. The City of Escondido's Trunk Sewer Main is a key piece of the City's sewer infrastructure system. The trunk sewer collects sewage from approximately 30% of the City and conveys it to the Hale Avenue Resource Recovery Facility (HARRF). The trunk sewer was constructed in 1959 and originally served as the outfall from the City's treatment facility to a lift station. However, when the HARRF was constructed, the pipeline was repurposed to serve as a trunk sewer in the City's collection system. In recent years, sections of the pipeline has been failing, requiring emergency repairs to keep this key piece of infrastructure in-service.

The original pipeline was constructed of 24- and 27-inch diameter reinforced concrete pipe (RCP), however as emergency repairs were made, 30- and 36-inch diameter PVC were installed. This project replaces five (5) segments of trunk sewer remaining from the original construction, which totals 6,900 linear feet of trunk sewer.

Lori Trottier, AICP CEP

Environmental Planner

Education
University of California, Irvine, Certificate Land Use and Environmental Planning, 1991

University of California, Davis, B.S. Environmental Policy, Analysis, and Planning, 1985

Registrations
American Institute of Certified Planners, AICP, Member 107286

Certifications
Licensed Sales Agent, CalBRE #10984449

Years of Experience: 32

Office Location: Newport Beach, CA

Ms. Trottier has 32 years of experience as primary author and Environmental Project Manager for compliance with California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Her experience includes a variety of development and infrastructure projects involving master plans for large-scale phased development, roadways and intersections, energy transmission, radio and communication sites, development of residential, commercial, mixed-use, and industrial land uses, regional recreation facilities, General Plans, General Plan Elements, and Specific Plans. She has managed numerous multi-disciplinary teams and been primary author on regionally significant and high-profile CEQA documents involving considerable public input. Ms. Trottier is an expert on CEQA compliance, environmental planning, and analysis. Ms. Trottier can quickly focus on key project issues, understand client needs and develop cooperative agency and stakeholder relationships resulting in win-win outcomes. Her experience extends beyond environmental planning and includes many types of entitlement permits for development, natural resources, and construction.

RELEVANT EXPERIENCE

Darrell Tank Replacement, Town of Hillsborough – Environmental Review Task Leader for the Darrell Tank Initial Study/Mitigated Negative Declaration. Darrell Tank replacement involves demolition of two existing steel tanks with a 2-million-gallon prestressed concrete tank. Potentially significant impacts from the project involve geology, soils and seismicity, tree removals, views, noise, air quality, traffic, biological resources, cultural and tribal resources.

Mountain View Street Condominiums (301 & 305 North Mountain View St.), City of Santa Ana – IEC provided CEQA analysis and documentation for the proposed redevelopment and General Plan Amendment components for the project. IEC completed the City of Santa Ana's Environmental Checklist, a site visit, research, and technical analyses including trip generation comparison, vehicle miles travelled screening analysis, air quality, greenhouse gas, energy, noise, and historical resources. IEC produced a CEQA Initial Study documenting baseline conditions, changes from project implementation, and potentially significant impacts from construction and permanent increase in density requiring mitigation. IEC incorporated staff comments and finalized an IS/MND for the City that provided a clear administrative record for the Planning Division's Notice of Determination and Findings of Fact. IEC provided a Mitigation Monitoring and Reporting Program (MMRP), Notice of Intent to Adopt a Mitigated Negative Declaration, and Notice of Completion.

Lake Skinner Boat Launching Facility #1141, Riverside County Regional Parks & Open Space District – Researched County needs and requirements for improvements. Managed preparation and filing of a Notice of Exemption for rehabilitation of Lake Skinner boat launch and recreation facilities.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte – Environmental Project Manager. The City's existing sewer mains and manholes within the area of Nevada Avenue and Bodger Street were constructed in 1938 and are approaching the end of their useful life. In addition, many of the mains and manholes are in easements located in the back yards of private residential properties, making it difficult for the City to access and conduct maintenance. As a result, approximately 4,500-linear-feet (lf) of existing small diameter (8- and 12-inch) sewer is being replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total. This was particularly challenging because the existing

sewer connections are in the back yard, requiring realignment of laterals from the rear of properties to the street.

Oceanside Boulevard Lift Station IS/MND and Conditional Use Permit, City of Oceanside – The project involves demolition of an existing pump station, development of a new pump station, and associated pipeline upgrades in Oceanside Boulevard. Project issues include mitigation for sensitive habitat, cultural resources, AB 52 compliance, access, noise, and air quality.

La Jolla View Reservoir Replacement, City of San Diego – Coordinated CEQA-plus technical analysis of resources including biological, cultural, historic architectural, air quality, and greenhouse gas emissions, for demolition of Exchange Place Reservoir and demolition/replacement of the outdated and undersized La Jolla View Reservoir, located in La Jolla Natural Park. Project issues are related to proximity with numerous residences and challenges associated with grading, traffic and circulation, noise, air quality, dust control, and significance of biological, and cultural and historic resources. The La Jolla View site vicinity is sensitive for cultural and biological resources, and per the terms of an internal City memorandum, design will be required to include restoration of natural topography and vegetation following demolition at the site.

Lotus Street Improvements Constraints Analysis, City of Oceanside – Coordinated cultural and biological resources constraints analyses and provided alternatives analysis for the City of Oceanside Lotus Street Improvements along Mission Avenue in an unimproved canyon between San Luis Rey Road and the intersection of Lotus and Pahvant Streets. The project involves construction of two new manholes and replacement of approximately 250 lf of 6-inch cast iron sewer with 8-inch PVC sewer, and construction of approximately 340 lf of new 8-inch PVC sewer. All sewer lines will undergo open trench construction.

Golf Course Drive Improvements Constraints Analysis, City of San Diego – Coordinated cultural and biological resources constraints and provided alternatives analysis for widening approximately 2,300 lf of roadway on Golf Course Drive near the Balboa Park Golf Course. The project includes construction of curb and gutter, retaining walls, where necessary to reduce grading and environmental impact, and storm water improvements such as bio-swale and detention basins to accommodate multi-modal transportation including pedestrian, bike, and automobiles.

Olivenhain Trunk Sewer Improvements FEIR/EA, City of Encinitas – Project Manager for final environmental documents and permits. IEC is providing comprehensive design, environmental, and outreach support for relining 50 existing manholes, relocating approximately 2,800 lf of sewer line within existing roadway, and installing 21,000 lf of environmentally appropriate maintenance access way within a floodplain and wetland. The project includes re-vegetation and off-site compensatory mitigation plans for construction of permanent, improved maintenance access way within the floodplain and riparian corridor of Escondido Creek and in wetlands associated with San Elijo Lagoon. Environmental services include joint EIR/EA, Clean Water Act Section 404 permit, California Streambed Alteration Agreement, federal and state Endangered Species Act take authorization, and Coastal Development Permit, City of Encinitas Major Use Permit (MUP), San Diego County permits, Wetland Restoration Plan, and a NEPA Environmental Assessment for easement modification under the Natural Resource Conservation Service Agriculture Conservation Easement Program.

Storm Pump Station No 1. Rehabilitation, City of Sunnyvale – Responsible for a CEQA Categorical Exemption, regulatory permits, construction monitoring, and habitat mitigation monitoring plan for impacts associated with wetland habitat and species, cultural resources, and revegetation for compliance with Sections 404 and 401 of the Clean Water Act and compliance with Section 106 of the Historic Resources Preservation Act.

Leah Russell

Project Coordinator

Leah Russell is a multi-disciplinary resource encompassing water science, engineering, and policy. She is a strong communicator with several years of experience in private consulting firms and public agencies. Skills include GIS spatial analysis, mapping, data analysis, project coordination, CEQA compliance, report writing, environmental permitting, and graphics design. Additionally, Leah provides general support to Ardurra's environmental, engineering, construction management, and marketing teams. Leah strives to cultivate collaboration and build accurate, efficient systems.

Education

California State University, Fullerton
M.S. Environmental Engineering
Student – Class of 2023

University of California, Irvine
B.S. Earth System Science, Hydrology, and Terrestrial Ecosystems, 2019

Professional Affiliations

American Society of Civil Engineers, Environmental & Water Resources Institute

Association Of Environmental Planners

Years of Experience: 4

Office Location: Newport Beach, CA

RELEVANT EXPERIENCE

Glendale Pipeline Project, San Antonio Water Company, San Antonio Heights, CA. Provided design & bidding activities and overall project oversight for this $438K project that consisted of the installation of approximately 700 lineal feet of new potable water pipeline. The project involved traffic control installation, public notification, and testing and disinfection of pipeline. Duties included local public outreach, change order negotiation, and contractor payment request review. (07/2022-05/2023)

Sewer Facilities and Access Improvements at The Woods, Irvine Rancho Water District. Engineering support for an evaluation of an existing gravity sewer network located parallel and within Upper San Diego Creek. Assessed repair and relocation alternatives, advantages/disadvantages and planning level costs and environmental constraints. Updated Maps and Graphics utilizing GIS.

Lester J Berglund Water Treatment Plant Clearwell Bypass, City of Poway. Construction phase support for project submittal reviews and RFIs – in-house and subconsultants. Utilization of Procore for document management with construction management, client, and contractor.

Tomlin Pipeline Replacement, Elsinore Valley Municipal Water District. Engineering support for 60% submittal of specifications and technical appendices. Research for CEQA Initial Study and early coordination with environmental subconsultants.

Olivenhain Trunk Sewer Improvements, City of Encinitas. Environmental Specialist for four-mile sewer construction project in environmentally sensitive habitat. Comprehensive design, environmental, and outreach support for relining 50 existing manholes, relocating approximately 2,800 linear feet of sewer line within existing roadway, and installing 21,000 linear feet of environmentally appropriate maintenance accessway. The project includes re-vegetation and off-site compensatory mitigation plans for construction of permanent, improved maintenance accessway within the floodplain and riparian corridor of Escondido Creek and in wetlands associated with San Elijo Lagoon. Environmental services include joint EIR/EA, Clean Water Act Section 404 permit, California Streambed Alteration Agreement, federal and state Endangered Species Act take authorization, Coastal Development Permit, City of Encinitas Major Use Permit (MUP), San Diego County permits, Wetland Restoration Plan, and a NEPA Environmental Assessment for easement modification under the Natural Resource Conservation Service Agriculture Conservation Easement Program. Additional tasks include GIS spatial analysis for impacts to habitats, site plan design in ESRI ArcMap for engineering plan set, generation of maps, project coordination, data analysis, report writing.

Anza Road 1550 Pressure Zone Pipeline Extension, Rancho California Water District. Professional design engineering services and bid phase support. Provided engineering support for GIS mapping, graphics, and exhibits for Right of Entry.

Vasona Pump Station Upgrade, Valley Water (Santa Clara, CA). Phased Environmental Analysis for project. Provided GIS mapping and graphics for project description.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte. Environmental Specialist for CEQA compliance – Response to Comments, updates to ISMND and MMRP written content, graphics, and GIS mapping. Approximately 4,500 linear feet of existing small diameter sewer to be replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total.

Sunnyvale Storm Pump Station #1 Rehabilitation, City of Sunnyvale. Environmental Specialist for updates to reports, Habitat Mitigation and Monitoring Plan (HMMP), revised revegetation plan, graphics, maps, and Contract Amendment Request.

Regional Water Quality Environmental Compliance, South Orange County Wastewater Authority (SOCWA). Environmental Compliance Research for regional beach quality regulatory assessments. Designed and executed targeted analysis of beach water quality data from 2010-2015 using Microsoft Excel pivot tables and statistical methods. Designed and executed Enterococcus bacteria speciation project: research, writing of SOP, inventory management, membrane filtration and microbiology techniques, biochemical testing, data analysis, weekly reports. Researched environmental water quality regulatory compliance framework and documents: SOC WMA WQIP, Integrated Regional Water Management, Regional and State Water Boards, federal law. Gained knowledge of wastewater treatment plant engineering, design, and management.

State Water Board BMP Efficiency Analysis, Southern California Coastal Water Research Project (SCCWRP). Research Assistant for State Water Board efficiency analysis project for the formation of public database and tool. Compiled and organized over 20 years of California stormwater BMP water quality and flow datasets in Excel. Designed structures of identification and methods of analyses for tens of thousands of data points. Performed data pre-processing of raw data with data inspection, cleansing, editing, validation. Utilized SigmaPlot to create graphs for Bight 18 report. Attended SCCWRP meetings and workshops for current and proposed water quality projects.

Dalia Mulato

Engineer III

Ms. Mulato is an Engineer III with five years of experience in design engineering and AutoCAD drafting on a wide variety of projects including water pipelines, and sewer gravity mains. Ms. Mulato is knowledgeable in the development of details and pipeline plan and profile drawings, development of detailed cost estimates, and preparation of preliminary design reports. Additionally, she has extensive knowledge with AutoCAD, Revit, Google SketchUp, and GIS.

Education
University of California, Davis
B.S. Civil & Environmental Engineering, 2016

Years of Experience: 6

Office Location: Bakersfield, CA

RELEVANT EXPERIENCE

Trunk Sewer Main Replacement, City of Escondido – Design Engineer. The City of Escondido's Trunk Sewer Main is a key piece of the City's sewer infrastructure system. The trunk sewer collects sewage from approximately 30% of the City and conveys it to the Hale Avenue Resource Recovery Facility (HARRF). The trunk sewer was constructed in 1959 and originally served as the outfall from the City's treatment facility to a lift station. However, when the HARRF was constructed, the pipeline was repurposed to serve as a trunk sewer in the City's collection system.

In recent years, sections of the pipeline has been failing, requiring emergency repairs to keep this key piece of infrastructure in-service. The original pipeline was constructed of 24- and 27-inch diameter reinforced concrete pipe (RCP), however as emergency repairs were made, 30- and 36-inch diameter PVC were installed. This project replaces five (5) segments of trunk sewer remaining from the original construction, which totals 6,900 linear feet of trunk sewer.

Canyon Del Rey CMP Sewer Line Replacement Project, Seaside County Sanitation District – Design Engineer for the replacement and upsizing of three sewer segments of corroded sewer main totaling approximately 850 lf of 12" and 15" PVC. Project also consisted of four 48" diameter sewer manholes, and reconnection of three sewer laterals; two of which serve major users, the State Department of Motor Vehicles and the City of Seaside City Hall Complex.

Sewer Replacement Nevada Avenue and Bodger Street Area (CIP No. 005), City of El Monte – Engineer. The City's existing sewer mains and manholes within the area of Nevada Avenue and Bodger Street were constructed in 1938 and are approaching the end of their useful life. In addition, many of the mains and manholes are in easements located in the back yards of private residential properties, making it difficult for the City to access and conduct maintenance. As a result, approximately 4,500 linear feet of existing small diameter (8- and 12-inch) sewer is being replaced and relocated into the public ROW. The project also includes construction of new sewer laterals for each of the affected properties, approximately 140 in total. This was particularly challenging because the existing sewer connections are in the back yard, requiring realignment of laterals from the rear of properties to the street.

Ontario Ranch Phase 2 Water Main Improvements, Ontario Municipal Utilities Company/City of Ontario – Design Engineer for approximately 1.5 miles of 30-in diameter cement mortar lined and coated, welded steel pipe (CML&C WSP), PZ 925, along Grove Avenue between Eucalyptus Avenue and Chino Avenue, design of an interim Pressure reducing valve (PRV) station at the intersection of Grove Avenue and Chino Avenue to break pressure from the PZ 1010 to PZ 925, situated on the north side of Chino Avenue approximately 500 feet east of Grove Avenue, 1.6 miles of 18-in diameter CML&C WSP, PZ 1010, along Chino Avenue between Grove Avenue and the Chino Avenue Bridge (Cucamonga Creek).

CIVILTEC
engineering inc.
Civil, Water, Wastewater, Drainage, Transportation and
Electrical/Controls Engineering ● Construction Management ● Surveying
California ● Arizona

Brian C. Lee | General Manager
San Antonio Water Company
139 North Euclid Avenue
Upland, CA 91786

February 24, 2023
Sent Via Email: Blee@sawaterco.com

RE: Proposal for Forebay Outfall Modernization

Dear Brian,

Civiltec engineering, inc. (Civiltec) appreciates the opportunity to provide professional, engineering and construction phase services to San Antonio Water Company (Company). We propose to assign Terry Kerger, PE, as project manager/project engineer and W. David Byrum, PE, as principal-in-charge. As President of the firm, David has complete authority to handle all contractual matters, commit ***Civiltec's*** resources as necessary and take all action necessary to meet your requests. Terry will be assisted by an inhouse survey and design team and Leighton Consultants (geotechnical subconsultant) and PSOMAS (environmental subconsultant). This team has completed numerous similar projects during the last 18+ years working together. A proposed team chart is included in Appendix C demonstrating our depth of similar experience as a team working together. ***Civiltec*** will manage this project from our Monrovia office. However, we are excited to announce as of April 3, 2023, ***Civiltec*** will have an Upland office located at 440 N. Mountain Avenue, Suite 210.

PROJECT UNDERSTANDING AND APPROACH

The surface water pipeline system has a hydraulic break facility within a perpetual easement on private property. The current adjacent property owner experiences ground vibrations and noise during periods of high water flow and has requested that the Company eliminate the vibrations and noise by abandoning the facility. In an effort to reduce vibrations and noise from the hydraulic break facility and ensure service to shareholders, the Company is seeking design and construction management services for a replacement pipeline within the Mesa Terrace and Paloma Curve. The hydraulic break facility was designed to convert hydraulic head into electrical using turbines. The turbines have been removed. The hydraulic break structure now dissipates this energy prior to discharge at the Company's Reservoir 4. This hydraulic break structure and gravity flow pipeline have exceeded their design life and the Company would like to replace the facilities from the Forebay down to Reservoir 4, removing the hydraulic break structure entirely.

A technical memorandum has been prepared by Water Systems Consulting Engineers to evaluate pipeline replacement alternatives. This project will begin with a preliminary design report to relocate the existing pipeline from the hydraulic break into local right-of-way and construction of a new pipeline from the Forebay structure to Reservoir 4. It is estimated this alternative will move the existing pipeline 30-50 feet away from the existing location and approximately 15 feet from the property line. Space constraints and avoidance of existing utilities will be researched to define the final alignment. A pressure reducing valve may also need to be required to help regulate pressures. To avoid clogging or breaking valves, screening should be considered to filter debris. Once an alignment is approved by the Company, ***Civiltec*** will provide a final construction bid package. The 30-inch pipeline connection to the Forebay irrigation box is complex because the pipeline is located in a difficult location and the system contains an irrigation box bypass. ***Civiltec*** performed similar services on our Plateau Forebay Transmission Pipeline Replacement for the

City of La Verne. The physical location of the pipeline will require some analysis of the construction difficulties to determine feasibility of the replacement pipeline. Some analysis of the operating conditions of the 30-inch pipeline are required to identify the desired control of the pipeline flow and confirm the requirement for a pressure reducing valve.

Critical Design Issues

The existing pipeline alignment leaving the Forebay irrigation box between existing residents' properties is planned to be abandoned and relocated to the Forebay access driveway. The remaining alignment along streets in this portion of the service area are narrow residential streets with existing water lines, sewer lines, and other substructure utilities. The engineering challenge will be to determine an alignment for the new surface water main that allows for the required water line separation from existing utilities for constructability purposes as well as traffic control during construction. All utility as-builts will be obtained so the proposed pipeline alignment considers both utility and minimum distance separation requirements from existing utilities. ***Civiltec*** has performed these services on numerous pipeline projects.

Identifying existing soil conditions and pavement resurfacing requirements will minimize the possibility of change orders to address these construction issues. The Company's field staff has considerable experience excavating in the foothill locations. We will rely on their experience to confirm existing soil conditions and incorporate required excavation and backfill requirements in the project specifications. San Bernardino County trench pavement thickness and pavement replacement or overlay limits will be determined and incorporated in the specifications and on the plans. Specification language will be revised to clarify costs for any unaccounted trenching issues.

Scope of Services

Civiltec's experience with the Company dates back to 2006 and includes several pipeline projects and projects within the Forebay system. This understanding of your system and expectations will benefit the Company and your community. Based on our understanding and experience, we have identified the following scope of services.

Task 1 – Project Management

Civiltec will schedule a kick-off meeting to discuss project information, goals, schedules, potential conflicts, and construction requirements. Teleconferences and meetings at appropriate intervals will keep the Company updated on progress and address management level decisions, as needed. We will also schedule meetings following every design submittal to discuss your comments and ensure the project is progressing on schedule. Quality assurance/quality control (QA/QC) is the responsibility of the project manager and will be performed on every document before being submitted to the Company.

Task 2 – Preliminary Design Phase

Preliminary Design Report. ***Civiltec*** will prepare a preliminary design report to identify the desired flow control for the new pipeline, confirm requirement for pressure reducing valve, determine the most cost-effective pipeline alignment for connection to the Forebay irrigation box, and determine the requirements for connecting to Reservoir 4.

Utility and Records Research. ***Civiltec*** will conduct complete utility research and contact each utility company requesting verification of location, size, and depth of facilities within the project limits. Utility research performed may include, but is not limited to, existing water, sewer, storm drain, gas, telephone, electrical, cable TV, fiber optic and oil.

Field Survey and Investigation. ***Civiltec*** will perform a record and data search consisting of survey information (assessor maps, parcel maps, records of survey, right-of-way maps, easement documents, etc.). A field design survey will be performed to locate manholes, water valve covers, water meter boxes,

fire hydrants, drainage features, air/vac cans, blow-offs, telephone poles and other visible aboveground facilities within the Company's right-of-way and public right-of-way. Sewer manholes and storm drain catch basins will be dipped and inverts recorded, if applicable. Additionally, we will use the design survey to prepare the construction survey cut sheets and control.

Base Map and Preliminary Plans. Utilizing information received from the Company, data from record mapping, utility record drawings and field survey, a comprehensive utility base map will be developed for use as a basis for the draft construction plans. Sheets will be prepared on the Company's title block and drawings prepared in accordance with its drafting standards.

One set of preliminary 60% plan sheets showing the pipe alignment and existing utilities will be submitted for review. This submittal will also include final design criteria, outline specifications and a preliminary cost-estimate.

Task 3 – Environmental Phase

Civiltec and PSOMAS will review the project and prepare an initial assessment to determine if environmental documents are required for this project. Pipeline replacement projects are typically categorically exempt from the California Environmental Quality Act (CEQA). We agree with the Company's opinion that this project is categorically exempt from CEQA because it is within disturbed roadway and a golf course and will prepare this document and submit it on the Company's behalf.

Task 4 – Final Design Phase

As an agent of the Company, ***Civiltec*** will obtain permits or approvals from appropriate governmental authorities having jurisdiction to review or approve the final design of the project. Traffic control and pavement restoration is overseen by San Bernardino County.

90% Submittal. The 90% plans, specifications and cost-estimate will be updated to address all comments from the preliminary submittal, including construction notes, dimensions, large-scale details, pipeline connection details, and all other information required for a complete set of plans. ***Civiltec*** will edit the Company's standard contract documents, prepare the bid proposal, edit the special provisions sections and technical specifications, and prepare the cost estimate in accordance with the Company's requirements. The specifications will include all sections necessary for the construction. The cost estimate and specifications will be submitted in PDF format for review with the 90% design plan submittal.

100% Final Submittal. The final plan sets, specifications and cost-estimate will incorporate all review comments from the Company. The plans will be signed by a California Registered Civil Engineer and delivered as PDF files copies. Plan drawings, specifications and cost-estimate will be submitted as one reproducible copy and appropriate electronic files in PDF, Microsoft, and AutoCAD formats for your files.

Task 5 – Bidding Phase

Civiltec will provide a bidders list, coordinate advertisement, maintain a record of prospective bidders to whom project documents were issued, coordinate pre-bid conferences, respond to contractor's request for information (RFI), evaluate bids, and advise the Company of the lowest responsible bidder. If necessary, ***Civiltec*** will respond to contractor's pre-bid RFIs through appropriate bidding addenda as necessary to correct, clarify or change the bidding documents. ***Civiltec*** will coordinate the bid opening and review bids for acceptability of the prime contractor, subcontractors, supplies, substitute materials, equipment, and other individuals and entities proposed by prospective contractors. A bid evaluation sheet showing each bidder and their respective line-item bids, along with a total proposed bid price for each bidder will be provided to the Company. Following the Company's Board approval of the contract, ***Civiltec*** will coordinate the construction contract execution and assemble construction contract documents.

Task 6 – Construction Phase

During construction appropriate field oversight (observation services) of construction activity will be provided to ensure contractor's compliance with contract and permits. ***Civiltec*** has estimated the observation hours that will be required by estimating the length of the project and proposing observation services for 50% of the time. ***Civiltec*** will also issue necessary clarifications and interpretations of the contract documents, shop drawings and RFIs as appropriate. Leighton will provide appropriate soils testing, including soil compaction testing, to ensure contractor's compliance with contract and permits. Progress payments will be reviewed with the contractor and a recommendation forwarded to the Company for processing, along with appropriate contractor invoicing. At completion, ***Civiltec*** will prepare project close-out documents.

Tasks Required by the Company's Staff

- Collaboration on design alternatives.
- Review and comments on submittals.
- Pay permit fees.

Proposed Schedule

Civiltec is available to commence this project immediately. Our team is backed by 60+ employees, which includes 12 registered civil engineers, 1 registered electrical engineer, 4 professional land surveyors, 2 certified floodplain managers, 1 certified professional in Erosion and Sediment Control and Qualified Stormwater Pollution Prevention Plan Developer/ Practitioner, 8 engineers-in-training, and support staff of project managers, designers, CADD technicians, surveyors, and administrative personnel from five (soon to be six) office locations. Our staff availability ranges from 30%-40%. Based on the scope of work described previously, our proposed schedule is included as Attachment B. Design completion of June 7, 2023, construction December 6, 2023.

PROPOSED TOTAL PROFESSIONAL FEE AND FEE SCHEDULE

Professional fees for the above-described services will be billed on a time and materials, not to exceed basis. A breakdown of our hour rates and fees is included as Attachment A. Any work not authorized within 3 months of the date of this proposal will be subject to renegotiations based on current rates. Capacity and impact fees associated with application filings shall be the responsibility of the Company. Additional services may be authorized based on ***Civiltec's*** hourly rates included on the detailed fee sheet. ***Civiltec*** will bill monthly for all work and expenses.

Again, thank you for the opportunity to submit this proposal. We look forward to working with you on this project. Please contact the undersigned directly with any comments or questions.

Sincerely,

Civiltec engineering, inc.

W. David Byrum, PE (dbyrum@civiltec.com)
President, Principal Engineer

Terry Kerger, PE (tkerger@civiltec.com)
Principal Engineer/Project Manager

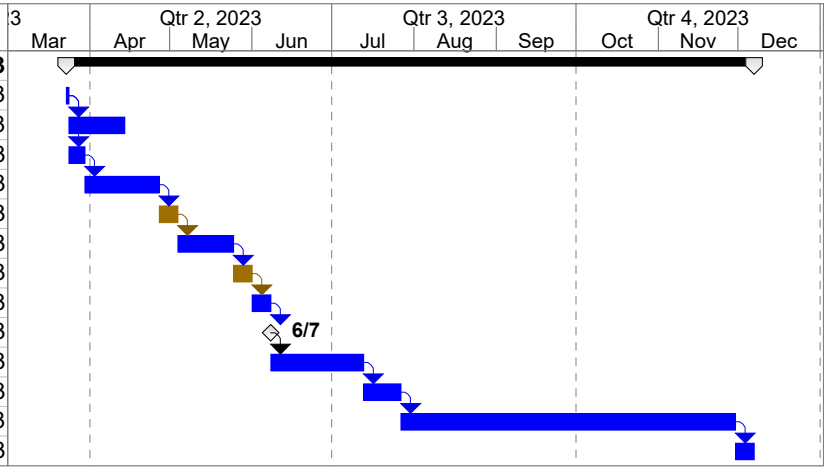
Attachment(s): A – Breakdown of Hours and Fees
B – Proposed Project Schedule
C – ***Civiltec*** Qualifications

Attachment A
Breakdown of Hours and Fees

Attachment B
Proposed Schedule

San Antonio Water Company's
Forebay Outfall Modernization
Proposed Project Schedule

ID	Task Name	Duration	Start	Finish
1	**Forebay Outfall Modernization**	**185 days**	**Thu 3/23/23**	**Wed 12/6/23**
2	Kick-Off Meeting	1 day	Thu 3/23/23	Thu 3/23/23
3	Utility and Records Research	15 days	Fri 3/24/23	Thu 4/13/23
4	Field Survey	4 days	Fri 3/24/23	Wed 3/29/23
5	Preliminary Plans	20 days	Thu 3/30/23	Wed 4/26/23
6	Company's Preliminary Plan Review	5 days	Thu 4/27/23	Wed 5/3/23
7	90% Submittal	15 days	Thu 5/4/23	Wed 5/24/23
8	Company's 90% Submittal Review	5 days	Thu 5/25/23	Wed 5/31/23
9	100% Final Submittal	5 days	Thu 6/1/23	Wed 6/7/23
10	Signed Construction Plans	0 days	Wed 6/7/23	Wed 6/7/23
11	Issue RFP and Advertise	25 days	Thu 6/8/23	Wed 7/12/23
12	Bidding and Award	10 days	Thu 7/13/23	Wed 7/26/23
13	Construction	90 days	Thu 7/27/23	Wed 11/29/23
14	Project Close-out	5 days	Thu 11/30/23	Wed 12/6/23



Attachment C
Civiltec Qualifications

Civiltec's Pipeline Qualifications

Civiltec is a knowledgeable and dedicated consultant that delivers quality results to the communities we serve. Over the last 5 years, we have averaged 200+ projects per year in California with 85% of that work coming from repeat clients. Providing quality project management and professional engineering is our focus on every project. In the last 3 years alone, ***Civiltec*** has designed more than 350,000 feet of pipelines. We have experience navigating challenges while being conscious of our client's budget and schedule. This is done by tailoring our approach to the unique understanding of each individual project and our years of effective project results.

Company experience dates back to 2006 and includes the Forebay Pump Station study, design and construction administration, study of the Forebay tunnel and surface water, Benson Street pipeline connection, Chino Basin recharge pipeline, Frankish Tunnel pipeline extension to Reservoir 1, Campus Avenue pipeline, Reservoir 9 pipeline replacement, Frankish Tunnel pipeline modifications, and Cliff, Glendale and Linda Primrose pipeline replacements.

Our proposed project team has approximately 267+ combined years of value engineering experience. We are confident that this tailored team has the knowledge to ensure sound and quality deliverables. Key staff proposed will not be reassigned or replaced without your prior written authorization. The table below represents select relevant experience and our proposed team members involved.

Select Team Experience Project | Owner	Size	Length (LF)	Terry Kerger, PE Project Mgr.	David Byrum, PE PIC & QA/QC	Charlie Devine Sr. Staff Engr.	Omner Meza Designer	Jenny Tsan Designer	Chris Duncan, PLS Survey Mgr.	Sara Canche Permitting
		YR w/Civiltec	18	30	24	18	22	10	29
		YR Experience	52	45	49	22	14	40	45
Reservoir 9 Pipeline Replacement | San Antonio Water Company	24", 18", & 16"	5,254	♦	♦	♦	♦	♦	♦	♦
Cliff, Glendale and Linda Primrose Pipeline Replacements | San Antonio Water Company	8"	2,186	♦	♦	♦	♦	♦	♦	♦
Campus Avenue Pipeline | San Antonio Water Company	8" & 4"	3,768	PM	♦	♦		♦	♦	♦
WFA Treatment Plant Surface Pipeline Connection | San Antonio Water Company	16"	500	PM	♦	♦				
Frankish Tunnel Pipeline Extension Reservoir No. 1 | San Antonio Water Company	8"	3,064	PM	♦	♦	♦	♦	♦	♦
Chino Basin Recharge Pipeline | San Antonio Water Company	16"	1,746	PM	♦	♦	♦	♦	♦	♦
Benson Street WFA Pipeline Connection | San Antonio Water Company	12"	66	PM	♦	♦	♦	♦	♦	♦
Amethyst Road Turnout No. 5 Water Pipeline and Metering Facility | City of Victorville	24"	5,400	♦	♦		♦			
Lincoln, Washington, Telephone and Monte Vista Avenues Water Main Replacements | City of Chino	12" & 8"	9,118	♦	♦	♦	♦	♦	♦	♦
District Office Transmission Main Replacement | Orchard Dale Water District	12" & 4"	517	PM	♦	♦				♦
Front Street Water Main Replacement and Zone Change | City of Alhambra	24" to 4"	10,497	♦	♦	♦		♦	♦	♦
San Bernardino Road Pipeline Replacement | Covina Irrigating Company	30"	1,829	♦	PM	♦			♦	♦
2019 Water Main Replacements | Valley County Water District	12"	740	♦	♦		♦	♦	♦	♦
Plateau Forebay Transmission Pipeline Replacement | City of La Verne	16", 8" & 6"	1,734	♦	♦	♦	♦	♦	♦	♦
Stichman Avenue Water Main Replacement | Valley County Water District	10" & 8"	1,440	♦	♦	♦	♦	♦	♦	♦
Valley Boulevard Pipeline Replacement | Rowland Water District	16" to 6"	3,106	PM	♦	♦				♦

TERRY KERGER, PE
PRINCIPAL ENGINEER

PROFESSIONAL REGISTRATION
Professional Civil Engineer
California No. 34896

EDUCATION
B.S. Civil Engineering, California State University, Los Angeles, 1985
A.A., Architecture, El Camino College

PROFESSIONAL AFFILIATIONS
Southern California Water Utilities Association

EXPERTISE
☐Civil Engineering
☒Drainage Engineering
☐Electrical Engineering
☐Transportation Engineering
☒Wastewater Engineering
☒Water Engineering
☐Survey
☒Construction Management

SUMMARY

Mr. Kerger has 51+ years (17+ with ***Civiltec***) of experience in project management, design, and construction of civil engineering projects. His experience includes flow computations for master plans, hydraulic calculations, more than 50 miles of water transmission mains (ranging from 6- to 30-inches), flow control facilities, pump stations, reservoirs, wells, treatment plants, sewerage, water containment, investigations of wellhead water treatment and well water blending, hydraulic modeling, capital improvement planning, telemetry system design, feasibility studies for purchase of adjacent mutual water systems, including system appraisal, financial options, and identifying system upgrades, flood control facilities, bikeway, roadway design, structure design, grading plans, water master plans, and agency plan check programs. He has designed and managed projects ranging from small water main improvements to a $5 million groundwater production and water treatment facility.

Mr. Kerger has designed pipelines for the cities of Arcadia, Alhambra, Ontario, Huntington Park, Manhattan Beach, Cerritos, El Monte, and Industry as well as Kinneloa Irrigation District, Orchard Dale Water District, and Rowland Water District. He has been responsible for the design and project administration of over 100,000 linear feet of distribution and transmission pipelines that included construction traffic control design, pump stations, wells, and reservoirs. He has also been responsible for securing permits for projects with public agencies and cities located in Los Angeles, Orange, and Ventura Counties and with the California Department of Public Health and Caltrans.

Other project contributions include mapping and flow computations for master plans, hydraulic calculations for transmission lines, and metering facilities. Mr. Kerger conducted computerized hydraulic network analysis using Fluid Analysis and Simulation Technique (FAAST) for several clients.

PROJECT EXPERIENCE

Frankish Tunnel Pipeline,
San Antonio Water Company
Project Engineer. Project includes pipeline design and a field investigation of the current operations of the Frankish Tunnel discharge piping configuration, hydraulic grades, and flow metering facilities. The surface water discharge meter needed to measure all the water that discharged to recharge basins. Additional separate metering facilities were required to measure surface water flows from the system forebay source when operations require surface water from the forebay source to be released for spreading at this location. Independent metering of the recharge water releases at this location was required. Plans, specifications, cost estimate, bidding and construction support are being provided.

Miramar Transmission Pipeline Repairs, Three Valleys Municipal Water District
QA/QC Manager. The goal of this project was to build upon analysis and closed-circuit television investigations by reviewing documentation for over 6,000 feet of 30-inch reinforced concrete cylinder pipe to identify appropriate repair techniques. Ultimately spot repairs were recommended through hand-placed mechanisms.

Pomona/Walnut/Rowland Joint Water Commission
Project Engineer. Responsible for the relocation of five miles of 54-inch pipeline.

Century Reclaimed Water Pipeline, Central Basin Municipal Water District
Principal. This project involved approximately 26 miles of reclaimed water pipeline from 8- to 24-inches in diameter.

Rio Hondo Reclaimed Water Pipeline, Central Basin Municipal Water District
Principal. This project included approximately 33 miles of reclaimed water pipeline from 8- to 24-inches in diameter.

Pipeline Investigation, City of Glendale
Principal. This project included design and hydraulic investigation for 10 miles of 34- to 36-inch reclaimed water pipeline.

West Garden Grove Supplemental Transmission Main Project, City of Garden Grove
QA/QC Manager. This project included design and full construction management of approximately 24,000 linear feet of 16-inch pipeline within street right-of-way of Garden Grove, Stanton, and Caltrans. The project also included installation of approximately 5,000 feet of 4-inch to 10-inch distribution pipeline replacement, approximately 3,000 feet of 15-inch to 24-inch vitrified clay pipe sewer replacement, jack and bore under existing railroad crossings, span an existing flood channel, service connections, water meters, fire hydrants, street improvements and complete traffic control design.

Skyline Ranch Water System Infrastructure, Santa Clarita Water Division
QA/QC Manager. Responsible for the entire water system infrastructure design spanning three pressure zones. This project included pipelines, reservoirs, and pump stations. Phase 1 included the in-tract pipeline design of approximately 23,000 feet of 8-inch, 12-inch and 16-inch poly-vinyl chloride pipe for distribution and transmission. Phases 2 and 3 included an additional 60,000 feet of 8-inch to 16-inch distribution and transmission pipelines, two 2.5-million-gallon steel reservoirs, two 0.6-million-gallon steel reservoirs, and two booster pump stations.

Recycled Water System, Rowland Water District
Project Manager. This project included approximately 15 miles of reclaimed water system backbone pipeline ranging from 8- to 16-inches in diameter. Recycled well, groundwater clean-up, recycled water booster pump facility and recycled water conversion for Schabarum Regional Park, Pepper Brook Park, Country Wood Park and Queen of Heaven Cemetery. Services also included recycled water services conversions for Alvarado Junior High School, Rowland Elementary School, Rincon Elementary School, and Nogales High School. Recycled water standard details and procedures were developed for converting existing potable water irrigation services to recycled water service. Coordination was also required for customer conversion service applications and monitored field testing for potable water separation and potential cross connection.

February 24, 2023

Brian Lee

San Antonio Water Company
139 N. Euclid Ave.
Upland, CA 91786

WSC Inland Empire

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Ontario, CA 91764

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Kirsten Plonka PE

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Chris Deiter PE

P: (951) 768-7145

E: cdeiter@wsc-inc.com

Dear Brian,

Water Systems Consulting, Inc. (WSC) is pleased to present this proposal to design and construct the pipeline replacement within Mesa Terrace and Paloma Curve. We are excited for the opportunity to work alongside the San Antonio Water Company (SAWCo) as you continue to deliver long-term solutions, value, and leadership to the community that you serve. Our hope is that our proposal demonstrates the commitment to quality that we will bring to your team.

Through close coordination with SAWCo, WSC will provide preliminary design phase services, environmental support, final design phase services, along with bidding and construction phase support. WSC will use a proven quality assurance/quality control program to make sure deliverables meet our high standards and your expectations.

We hope this proposal demonstrates our interest and commitment to SAWCo. If you have any questions on any aspect of this proposal, please feel free to contact WSC's proposed Principal in Charge, Kirsten Plonka. Kirsten is authorized to represent WSC in negotiations, and sign contracts and agreements.

Thank you again for your consideration, and we look forward to your response.

Sincerely,

Water Systems Consulting

Chris Deiter,
Project Manager

Kirsten Plonka
Principal in Charge | Vice President

15 YEARS OF CREATING A BETTER WATER FUTURE®

Scope of Work

Task 1 Project Management

1.1 Project Administration

- Provide project administration and SAWCo coordination throughout the project.
- Prepare monthly progress reports with each invoice.

1.2 Meetings

WSC will plan, organize, and conduct coordination and review meetings, including:

- Kick-Off Meeting
- Draft Design Review Meeting
- Final Design Review Meeting

1.3 Quality Assurance and Quality Control

Provide comprehensive quality control reviews of deliverables by WSC senior technical staff.

Task 2 Preliminary Design Phase

A Reliable Basemap and Investigation Work Reduces Potential Construction Risks

As the basis of our design work, an important first step is to compile a basemap that depicts existing conditions. County parcel records, digital imagery available in the public domain, and visible evidence of utilities provide valuable pieces of the puzzle. As-builts are also key pieces that enable us to depict existing conditions with a reasonable degree of accuracy.

Often times utilities such as natural gas mains are difficult to accurately plot on a basemap. Available natural gas main records are schematic in nature and do not offer the necessary dimensional data to accurately plot locations of existing natural gas mains in relation to our proposed waterlines. As a result, during construction it is often revealed that gas mains are in different locations than anticipated.

Traditionally, design consultants are not permitted to submit Dig Alert utility location requests to support our design efforts. However, Dig Alert utility location requests are permitted and required prior to geotechnical borings. We intentionally phase our design efforts where geotechnical field investigations occur ahead of field survey efforts. This nets us field markings for all utilities within the vicinity. Our field survey efforts will gather locational data for these utility markings during the topographical survey.

This phasing will help add certainty to the project design. Understanding potential conflicts during the design phase and addressing them on the plans will reduce the potential risk for field changes, cost increases, and delays caused by utility conflicts during construction.

2.1 Data Collection and Review

WSC will gather and review relevant project data not already received from SAWCo. Additional data requested may include:

- Existing record drawings for the pipeline, forebay facilities, and reservoir site.
- Historical flow data and other relevant operational data for the system.
- Record maps of existing and proposed SAWCO water and sewer facilities.

2.2 Utility Research

WSC will obtain the Design DigAlert list of agencies and utilities. WSC will prepare and distribute record drawing request letters to each utility. Based on the responses and record drawings received, WSC will plot existing facilities on our base map using surface features as identified on the topographic survey to help refine the location.

2.3 Soils Investigation and Geotechnical Report

WSC's geotechnical subconsultant, LOR Geotechnical Group, Inc. (LOR), will provide Geotechnical Engineering services for the project. LOR will perform the following:

- Review available geotechnical data for the project area.
- Perform four exploratory borings within the street areas of the new pipeline and two exploratory borings to a depth of 30-feet, or refusal, within the area of the pressure reducing station.
- Evaluate samples obtained and conduct laboratory analysis.
- Prepare a project geotechnical report based on the analysis performed.

2.4 Survey and Basemap Preparation

WSC's survey subconsultant, the WestLAND Group (WLG), will provide survey and basemapping services. WLG will perform the following:

- Perform research at relevant agencies to obtain record maps, survey notes, centerline monument notes, corner records, benchmarks, and survey control data.
- Prepare rough boundary calculations for field survey.
- Establish conventional control, aerial control, and tie-out

benchmark(s) using GPS.

- Survey of adequate monuments and ties to establish a "record boundary" for the centerlines and right-of-ways for each roadway.
- Perform aerial photogrammetry along corridor and at the forebay and reservoir.
- Supplement with GPS and conventional survey as-needed; includes the Weir inside of the building at Forebay, and topo sweep of reservoir.
- Perform approximately 4 MH Dips along Park Boulevard.
- Process survey control and data, analyze and establish boundary from record maps, develop TIN surface/DTM, and provide planimetrics and annotation.

2.5 Draft Design Documents

Hydraulic Considerations Are Vital To Providing A High Quality Design

With the nearly 300-ft in elevation difference between the forebay and Reservoir 4, energy dissipation is required. WSC proposes to implement a pressure reducing station at Reservoir 4 site. This would include a pressure reducing valve (PRV) with provisions for bypassing through a normally closed valve for maintenance operations. Additionally, we propose including provisions for a future in-conduit hydroelectric generation facility that could be designed and constructed at a later date (see Optional Task O1.1).

The expected flows and hydraulic conditions will influence decisions made during the design process. WSC will utilize the flow and operational data provided by SAWCo along with survey and elevation data to assess the hydraulic conditions and to preliminarily size the pipeline and PRV.

WSC will prepare draft design documents for SAWCo review and comment. These documents will include the following:

- Sizing calculations based on design criteria, surveyed elevations, and flow data.
- Preliminary drawings of the pipeline, connections, and pressure reducing station.
- Technical specification section outline.
- Preliminary Cost Opinion equivalent to AACE Class 3.

Task 3 Environmental Phase

WSC's environmental subconsultant, Tom Dodson & Associates (TDA), will prepare and file the documents necessary for compliance with the California Environmental Quality Act (CEQA).

TDA will prepare an NOE for the project and will file it with the San Bernardino Clerk of the Board and State Clearinghouse within five days of project approval by SAWCo.

Task 4 Final Design Phase

4.1 County of SB Encroachment Permit

WSC has extensive experience in obtaining County of San Bernardino Department of Public Works Road Excavation Permits. We will leverage this experience to efficiently navigate the permit process and keep the project on schedule.

WSC will prepare and submit the permit application packages for the County including required supporting technical documentation. WSC anticipates receiving one set of comments from the County, which will be incorporated into the final design documents.

4.2 Final Design Documents

WSC will prepare the final design documents based on comments received from SAWCo. These documents will include the following:

- Final drawings including pipeline, connections, and pressure reducing station.
- Technical specifications and bid schedule in CSI format.
- Construction cost opinion equivalent to AACE Class 2.

Once approved by SAWCo, WSC will provide plans and specifications signed and stamped by the Engineer of Record labeled, "Bid Set – Not for Construction" for distribution.

Task 5 Bidding Phase

5.1 Advertisement

- WSC will prepare the Notice Inviting Bids.
- WSC will utilize QuestCDN, an online plan room, to administer the bid process. Contractors will be responsible for printing their own hard copies.

5.2 Pre-Bid Conference

WSC will conduct a pre-bid conference and site visit.

5.3 Bidder Coordination and Addenda Preparation

- WSC will review the acceptability of substitute materials, equipment, subcontractors, and suppliers proposed during the bid processes.
- WSC will review and evaluate any requests for information or clarification received.

- WSC will prepare formal addenda responses to bidder inquiries as appropriate.

5.4 Bid Opening

WSC will conduct the bid opening at SAWCo's office and record the announced bid amounts.

5.5 Award Recommendation

WSC will review and tabulate received bids. WSC will prepare an abstract of bids and make a recommendation for award to the lowest responsive, responsible bidder.

5.6 Notice of Award and Contracting

Once SAWCo's Board has approved the award of the construction contract, WSC will prepare the Notice of Award and the contract for contractor and SAWCo execution.

Task 6 Construction Phase

WSC's Project Manager, Chris Deiter, has successfully provided construction management services for over $15 million of pipeline improvements over the past five years. Many of the projects were supported by WSC's proposed subconsultants (WLG, LOR, and H2Ou). Our team has a proven track record of delivering and managing projects, resulting in low rates of change order, often under 2% of construction cost.

6.1 Pre-Construction Meeting

Once all contract documents are executed and required permits issued, WSC will host the pre-construction meeting. The Notice to Proceed will issued at this meeting.

6.2 Submittal Management

- Review submittals and provide responses to the contractor. Maintain and update a record of submittals and a record of all actions taken on submittals.
- Review contractor's baseline construction schedule and verify that it meets the requirements of the contract documents. Evaluate logic between construction activities, key activity durations, and critical path activities.

6.3 RFI's/RFC's

Respond to RFCs and RFIs and coordinate with the potential change order process.

6.4 Construction Observation

WSC's inspection partner, H2O Urban Solutions (H2Ou), will provide daily inspection services. Inspection services will include:

- Full time general construction inspection and oversight of contractor activities during construction. Assumes 60 total working days of on-site inspection work.
- Conduct field observations and prepare documentation of construction tasks.
- Prepare a photographic and written log of construction activities.
- Monitor quality of materials, construction, and safety. If something is found to be lacking or out of compliance with the contract documents, H20u will issue a Non-Conformance Report notifying the Contractor and request a proposed corrective action.
- Obtain delivery slips and tickets for materials delivered to the job site.
- Provide daily written reports (DRF's) that describe the work performed, staffing, construction equipment used, major deliveries, weather, delays, and other events.
- Coordinate with SAWCo and WSC regarding Contractor RFI's and CO requests.

6.5 Compaction and Materials Testing

WSC's geotechnical subconsultant, LOR, will provide compaction testing services. The geotechnical services that are anticipated during construction of the project will include:

- Obtaining representative soil samples during the waterline trench excavation operations.
- Periodic geotechnical observation and compaction testing following the contractors backfill and compaction operations of the waterline trench backfill.
- Periodic geotechnical observation and compaction testing of the waterline trench street repair subgrade and aggregate base grade prior to paving.
- Periodic compaction testing of asphalt concrete materials placed and compacted within the street repair areas.
- Sampling and laboratory quality compliance testing of aggregate base and hot-mix asphalt construction materials delivered to the project to verify compliance with project specs.
- Preparation of written daily reports to the project inspector documenting geotechnical observations, compaction testing results, and results of our laboratory materials tests.
- Preparation and submittal of a compaction and materials testing report at the completion of the project following the notice of completion.

6.6 Change Order Management

- WSC will manage, evaluate, and respond to change order requests (CORs).
- WSC will have no authority to issue changes or modifications to the contract documents. All proposed change orders will be submitted to SAWCo for review and final approval.

6.7 Progress Payment Administration

Review pay requests submitted by the contractor and determine completeness. Forward approved pay requests to SAWCo for payment.

6.8 Project Closeout

- WSC will review contractor's request for substantial completion and conduct an inspection with SAWCo and the contractor. Record inspection results, compile punch-list of incomplete work, and issue certificate of Substantial Completion, if appropriate.
- Once punch-list items are addressed, WSC will conduct a final inspection with SAWCo and the contractor. Once work is 100% complete, provide written recommendation that SAWCo file the Notice of Completion. WSC will prepare the Notice of Completion form.

Optional Task 1

O1.1 In-Conduit Hydroelectric Generation PDR

Due to the nature of the year-round flow and the substantial elevation difference between the Forebay and Reservoir 4, WSC believes there is a great opportunity for an in-conduit hydroelectric generation station to be located adjacent to the pressure reducing station. This station could be instrumental in offsetting a large portion of SAWCo's annual pumping energy costs, with a return on investment (ROI) period being as little as five to seven years. WSC proposes preparing a preliminary design report (PDR) that would explore this possibility in detail and calculate the expected ROI. This PDR could be prepared in conjunction with the base project or at a later date if SAWCo desires. WSC's proposed PDR would be broken down into the following sections:

Introduction and Background. Provides summary of the proposed outfall system, legacy facilities, water rights, historical flows, etc.

Hydraulic and Statistical Analysis. Documents available hydraulic conditions over the range of expected flows based on historical records and the designed outfall system.

FERC Hydro Licensing and Edison Interconnection Process. Evaluate and document the Federal Energy Recovery Commission process requirements for the proposed in-conduit hydro facility. Coordinate with Edison on the terms of the power generation interconnection pursuant to CUPC Rule 21 and documents the requirements to operate.

Equipment Selection and Business Case Evaluation. Size and select the equipment necessary for the in-conduit hydroelectric facility. Calculates expected energy recovery. Prepare construction cost estimate and expected ROI.

Preliminary Layouts. Provide preliminary designs and layouts for the proposed system.

Grant Funding. Provide an overview of the available State and Federal grants that can be utilized to help pay for the construction of the facilities and thus decrease the ROI time period.

Assumptions:

- Meetings are assumed to be 1-hr in duration. Design review meetings will be held two weeks after deliverable submittal.
- Comments from SAWCo will be consolidated into one complete set from all reviewers.
- Construction staking will be provided by the contractor. If SAWCo prefers, WSC can provide a proposal to provide these services through the WLG once the design is complete.
- Proposal excludes Waterboard Divisions of Drinking Water (DDW) Waiver preparation. WSC will prepare its design with the intention of providing adequate separation from potable water mains and thus the need for DDW Waivers. If DDW waivers cannot be avoided, WSC will apprise SAWCo of the number and locations of waivers required as early in the design process as feasible. Based on the number of waiver locations WSC can provide SAWCo a scope and fee estimate for processing of said waivers through DDW.
- SAWCo will provide their front-end boiler plate and contract documents to be combined with the WSC prepared Technical Specifications.
- WSC assumes SAWCo will pay any fees, if any, related to permits.
- WSC assumes one compiled set of comments for the final design documents from SAWCo.
- The budget is based on processing three change order requests.
- The budget is based on reviewing a total of four pay requests.

Kirsten Plonka PE

PRINCIPAL IN CHARGE

Kirsten Plonka brings 20 years of experience in the planning, design, and management of water, wastewater, and recycled water systems. She specializes in project management, hydraulic modeling, feasibility studies, infrastructure and water resource planning studies, and master planning, including Capital Improvement Plans and budgeting. She is well versed in funding alternatives, regulatory compliance, and public policy development. Kirsten's experience includes database development and integration of geographic information systems (GIS) with hydraulic models, recycled water customer databases, and asset databases. She also has experience managing public engineering departments, as well as headed up wastewater collections. Her extensive experience in the public sector allows her to approach projects from an owner's perspective and plan and design projects that are implementable and user-friendly.

REPRESENTATIVE PROJECTS

Paloma Curve Hydraulic Break, San Antonio Water Company, Upland, CA. *Project Manager.* Evaluating alternatives to reduce deep vibrations and sound generated at the Paloma Curve Hydraulic Break facility, developing planning level cost estimates, and documenting the existing conditions and analyses performed in this project.

Comprehensive System Master Plan and Asset Management Program, San Antonio Water Company, Upland, CA. *Project Manager.* Lead and client partner for master plan and asset management program that will guide SAWCo's annual planning and rate structure for the next five to 10 years. Key focus areas for the plan include: assessing the current supply portfolio under multiple risk and resilience scenarios; developing recommendations to reinforce current supplies or develop alternative emergency supply sources; delivering a new, calibrated, hydraulic model of the system in conjunction with GIS datasets to improve system operations and CIP development.

System Mapping and GIS Database, San Antonio Water Company, Upland, CA. *Project Manager.* Led the creation of a GIS system mapping project. Analyzed and summarized information in the form of CAD drawings, system index maps, meter data, and billing information. Researched requirements and potential applications to use for implementing a mobile mapping system and compiled information in a technical memorandum.

AWIA Risk and Resilience Assessment and Emergency Response Plan, San Antonio Water Company, Upland, CA. *Project Manager.* Performing a detailed RRA and preparing an ERP using existing documentation and knowledge of the system to minimize cost and improve flexibility. Developed a schedule that meets deadlines and optimizes District staff time.

2020 UMWPs, Various Clients, CA. *Project Manager and QA/QC.* Management of the preparation of 2020 UWMPs for San Antonio Water Company, City of Escondido, Valley and Center Municipal Water District. Quality control for 2020 UWMPs for Big Bear Community Services District and Scotts Valley Water District & San Lorenzo (a combined plan). Oversight of plan deliver and quality to meet California DWR's requirement and demonstrate supplies and demands through 2045 for each agency.

Water Recycling Facility Upgrade Preliminary Design, Carlsbad Municipal Water District, CA. *District Project Manager.* Reviewed plans, attended multi-agency meetings, updated General Manager, Public Works Director, and presented to City Council for preliminary design of the Carlsbad Water Recycling Facility Upgrade project.

WSC

EDUCATION

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

MS, Management, Colorado State University, Global Campus (in-process)

MS, Organizational Leadership, Colorado State University, Global Campus (in-process)

PROFESSIONAL REGISTRATIONS

Professional Engineer – Civil, California, No. C70746

"I'm driven to help agencies foster meaningful relationships and uncover regional solutions that ultimately serve water customers in the best way possible."

Kirsten Plonka

Kirsten Plonka PE continued...

Lift Station No. 2, *Rainbow Municipal Water District, Fallbrook, CA.* Project Manager. Responsible for project management for design and construction management including inspection for the District's largest sewage lift station. The design included land and easement acquisition, environmental mediation, overflow storage due to its proximity to a river, and complex drainage onsite. Construction included close coordination with the Wastewater Collections team, the County of San Diego, and SDG&E, as well as nighttime bypass pumping and station start-up. The project also required regular updates to executive management and the Board of Directors.

Morro Tank Seismic Retrofit Study, Rainbow Municipal Water District, Fallbrook, CA. *Project Manager.* Global Water Due Diligence Facilities Report, Water Utility of Greater Buckeye, Buckeye, AZ, Project Engineer. Responsible for site layout evaluations, inventories, and condition assessments of water source infrastructure. Creating hydraulic models and performing hydraulic analysis for four distinct distribution systems.

Pala Mesa Tank, Rainbow Municipal Water District, Fallbrook, CA. *Project Manager.* Responsible for project management and environmental compliance for a 6MG concrete tank and associated piping and valves, private road rehabilitation, coordination with neighbors, Board of Directors presentations and coordination with the District Engineering Committee. The project included demolition of an existing dam, the creation of two pads for twin water tanks, and construction of one, with one planned for the future. By breaking up the project into two phases and two bid packages, one for earthwork and once for tank construction, the District was able to save significant money on the project. This project won an Outstanding Water Project of the Year from Region 9 ASCE and an Award of Merit from the San Diego Section of ASCE.

Twin Oaks Valley Water Treatment Plant, San Diego County Water Authority San Diego County, CA. *Field Engineer.* Worked onsite as part of the engineering team during construction of the Twin Oaks Valley Water Treatment Plant owned by SDCWA. Coordinated subcontractors and vendors, put together O&M manuals, coordinated completion of punch list items.

On Call As-Needed Services, San Lorenzo Valley Municipal Water District, Boulder Creek, CA. *Extension-of-Staff Project Manager.* Providing as-needed engineering services to the District. Work in the District office weekly to lead multiple projects. As the Owner's Project Manager, writes RFP's, helps with consultant selections, reviews plans and specs, facilitates environmental compliance, provides construction management services, administers contracts, develops schedules and budgets, coordinates with operations, facilitates public meetings such as community workshops and gives regular updates to the General Manager as well as presentations to the Board of Directors. In this role, Ms. Plonka has managed: Bear Creek Estates Wastewater Treatment Facility Rehabilitation, Bear Creek Road Water Pipeline, Highway 9 Viaduct Water Pipeline, Glen Arbor Bridge Hanging Water Pipeline, Trout Farm Inn Fire Service Upgrade, Lompico Pressure Reducing Valves Replacement, Lyon Tank Road Landslide Repair Project, and Fall Creek Fish Ladder Restoration Project

Wastewater Outfall Pipeline, Rainbow Municipal Water District, Fallbrook, CA. *Engineering Manager.* Project Manager in charge of replacement of approximately 3 miles of 21" wastewater pipeline in a congested roadway that connected to the City of Oceanside's collection system. Required extensive coordination with Caltrans and the City of Oceanside.

Water System Improvement Projects and On-Call, Big Bear Lake Department of Water and Power, Big Bear, CA. *Staff Engineer.* Assisted on a variety of projects as part of WSC's on-call services and water system improvements for the District.

Carlsbad Municipal Water District, Valve Assessment Plan, Carlsbad, CA. *Project Engineer.* Develop a multi-year plan to systematically evaluate water system valves and budget replacement funds. Works closely with the District Construction Manager to set realistic objectives and achievable plan.

Toro Creek Bridge Wastewater Pipeline, Cayucos Sanitary District, Cayucos, CA. *Project Engineer.* Designed 500 LF of HDPE crossing Toro Creek and hanging from the Toro Creek Bridge. It also includes 500 LF of temporary bypass piping and a temporary bridge to support the pipeline during construction and connection details for transitioning from temporary to permanent solutions.

2020 Water Master Plan Update and RRA and Emergency Response Plan for AWIA, City of Paso Robles, CA. *Technical Advisor.* Performed a detailed RRA and preparing an ERP using existing documentation and knowledge of the system to minimize cost and improve flexibility. Developed a schedule that meets deadlines and optimizes District staff time.

AWIA Risk and Resilience Assessment and Emergency Response Plan, Montecito Water District, Montecito, CA. *Technical Advisor.* Performed a detailed RRA and preparing an ERP using existing documentation and knowledge of the system to minimize cost and improve flexibility. Developed a schedule that meets deadlines and optimizes District staff time.

AWIA Risk and Resilience Assessment and Emergency Response Plan, City of Pismo Beach, CA. *Technical Advisor.* Performed a detailed RRA and preparing an ERP using existing documentation and knowledge of the system to minimize cost and improve flexibility. Developed a schedule that meets deadlines and optimizes District staff time.

AWIA Risk and Resilience Assessment, Camrosa Water District. *AWIA Advisor.* Leading the preparation of a detailed RRA for the District's water systems using the Compliance+ approach to produce a defensible AWIA compliant document. Work elements on this project include: gap analysis; asset and threat characterization; consequence analysis; and a presentation to the Board of Directors.

Christopher Deiter PE

PROJECT MANAGER

Chris Deiter has 13 years of experience in civil engineering specializing in water, recycled water, and wastewater systems and has 5 years of construction experience for various municipal water projects throughout the Southern California area. His engineering experience includes pipeline design and replacement, water storage reservoir design, water treatment system design, pump station analysis and design, hydraulic analysis, and water master planning. Mr. Deiter's experience allows him to proficiently identify and analyze initial project concepts, analyze solutions, prepare construction documents, and provide construction support activities to clients.

REPRESENTATIVE PROJECTS

Multi-year USDA Pipeline Replacement Project, Big Bear Lake Department of Water and Power, CA. *Project Manager.* Providing design and project management services for more than 12 miles of pipelines funded through a U.S. Department of Agriculture Rural Development Loan/Grant Program. WSC recommended packaging the pipeline segments into three phases to deliver the program within BBLDWP's annual budget and expedite getting projects out to bid to meet tight construction windows. Design of the first two phases are complete and design is nearing completion on the third phase.

Sawmill Well Pumping Plant, Big Bear Lake Department of Water and Power, Big Bear, CA. *Project Manager.* Responsible for all construction management services including contract management, progress payments, scheduling, submittal review and approval, and coordination with BBLDWP Inspectors. Project includes well equipment and all related appurtenances for a 350 gpm well, including construction of a CMU building with a metal roof, all related site improvements, and installation of a 635 LF 6-inch water pipeline and electrical service connection.

Downtown and Terramar Small Diameter Water Main Replacement, City of Carlsbad, CA. *Project Manager.* Providing design and construction management services for the Downtown and Terramar water mains. The project includes replacing approximately 4,500 linear feet of existing 4-inch and 6-inch water mains with new 8-inch PVC pipeline in the City's downtown Village and beachfront Terramar neighborhoods. Considerations include urban construction impacts, limited access and siting allowances, and minimizing shutdowns in commercial and residential areas.

Wilson Avenue Pipeline Replacement, Mesa Water District, Costa Mesa, CA. *Project Manager.* Designed the replacement of approximately 4,580 linear feet of existing 12-inch CMLC pipeline with a new pipeline along with replacement of existing 1-inch and 2-inch service lines, meter boxes, and old "dry barrel" fire hydrants in Wilson Avenue within the City of Costa Mesa. Was responsible for the permit plan and environmental document approvals, and developing a PDR that includes a hydraulic analysis, site survey, geotechnical borings, potholing, pipeline alignment. He also developed the final design package and provided bid phase services.

Box Springs Mutual Water Company, Waterline Replacement Program – Phase I & Phase II, City of Moreno Valley, CA. *Designer.* Prepared design plans for 2,500 feet of 10-inch pipeline and 1,300 feet of 8-inch pipeline. The new pipeline was located within the street right-of-way and replaced existing aging water mains.

Watson Road/Juniper Flats Road Waterline, Eastern Municipal Water District, Menifee, CA. *Research/Design.* Utility research, alignment design, connection detail design, piping thickness calculations and drawing production utilizing three-dimensional design capabilities and AutoCAD Civil 3D. Project consisted of approximately 6,500 linear feet of 24" and 4,500 linear feet of 18" CML&C steel waterline.

EDUCATION

BS, Civil Engineering, California State Polytechnic University, Pomona, CA

PROFESSIONAL REGISTRATIONS

Professional Engineer - Civil, California, No. 80618

"I am always ready to deliver value-added solutions to my client's engineering challenges while building relationships with their staff."

Chris Deiter

Christopher Deiter PE continued...

Jurupa Community Services District, Waterline Replacement Project Kenneth Street, Hastings Boulevard, Foxtail Lane and Water Services Replacement within portions of Indian Hills Area, City of Jurupa Valley, CA. *Designer.* Responsible for the waterline design and plan production utilizing 3-D design capabilities and AutoCAD Civil 3D. Additionally, during construction was responsible for submittal review and approval, and coordination with inspectors. Project involved 5,900 linear feet of 8" CML&C steel waterline replacement along with 150 water service replacements.

March Life Care Campus PRV Station, Eastern Municipal Water District, City of Moreno Valley, CA. *Staff Engineer.* Assisted in the plan preparation and CAD drafting for this project. This included appurtenance layout and design, site piping, and mechanical drawings

Andreas Pipeline Review and Analysis, Agua Caliente Band of Cahuilla Indians, Palm Springs, CA. *Project Engineer.* Responsible for the investigation and analysis work which ultimately determined the cause of the system deficiencies. Recommended solutions and co-authored the technical memorandum summarizing the investigation, analysis, and recommendation efforts. This project was an investigation of the Andreas Pipeline System, which is diverts runoff flows from Andreas Creek to nearby agricultural users. The system was experiencing overflow and capacity restrictions below design criteria.

Wolf Reservoir, Booster, and Pipeline Replacement Project, Big Bear Lake Department of Water and Power, CA. *Project Manager.*

Chino Basin Program, Inland Empire Utilities Agency, Chino, CA. *Project Engineer.* Providing engineering services for the conveyance system portion of the preliminary design report for the Chino Basin Program which will create a new, drought-resistant supply to the region. Through effective partnerships with State Water Project Contractors, the California Department of Water Resources (DWR) and the California Department of Fish and Wildlife, the project will develop new water supplies that will be stored in the Chino Basin Water Bank for ecological benefit in the Bay-Delta watershed. The conveyance portion of the PDR includes evaluating the optimal way to connect new and existing facilities.

RP-1 Waste Wash Water Basin Pump Replacement, Inland Empire Utilities Agency, Chino, CA. *Project Manager.* Led the design for the Waste Wash Water Basin Pump Replacement project. The project included the removal and replacement of the existing centrifugal pumps and motors with dry pit submersible style pumps.

East Valley Surface Water Treatment Preliminary Design, East Valley Water District, Highland, CA. *Project Engineer.* Preparing a preliminary design report phase for the East Surface Water Treatment Plant (ESWTP). This new facility will use surface water to provide an additional 4 MGD of treated drinking water to meet increased local demand. EVWD aims to maximize the use of its water rights to Santa Ana River water for the ESWTP. Key challenges for this preliminary design include seasonal water quality issues (e.g., turbidity, total organic carbon, metals, algae), presence of DBP precursors, fluctuations in source water availability, and sludge management.

San Bernardino Lift Station Facility Improvements, Inland Empire Utilities Agency, Chino, CA. *Project Engineer.* Worked on the development of specifications for the lift station improvement projects. Improvements included recommendations on valve selection and options with an energy analysis of valve alternatives; recommendations on drain size considering drain time and resistance to clogging; options to use the existing 4-inch ARV drain system and concept detail for managing the connection and venting; clearance considerations for the magnetic flow meter; conceptual drain connections and valve tie-in details; and project procurement methods.

Greenspot Reservoir Rehabilitation Project, Big Bear City Community Services District, Big Bear City, CA. *Project Manager.* Led bid process and construction management of a tank rehabilitation project. Drafted bid and conformed documents, notice of award, and other construction phase support.

City of Adelanto, On-Call Engineering Services, Adelanto, CA. *Project Engineer.* Assisted City Engineer with plan checking duties, conditional assessment of water system facilities and assets, planning of CIP projects, and preparation of RFP documents.

Maywood Mutual Water Company No 1, Manganese Treatment Facility and New 0.5 MG Welded Steel Reservoir with Well Pump Redesign, City of Huntington Park, CA. *Project Manager/Construction Manager.* Coordinated the final design, including preparation of plans, specifications, and estimates, and coordinated the design review to facilitate State approval of the project. Created and maintained the Project Budget and Expenditure Summaries. Obtained and managed all permitting with the City of Huntington Park and Southern California Edison. Managed all construction management services including all contract management, progress payments, scheduling, submittal review and approval, and inspector coordination. The project included the redesign of the on-site well pump assembly and motor to account for the additional head requirements of the proposed treatment equipment, Installation of two horizontal 1,500 gpm filtration vessels, backwash tank, full SCADA system control, sand separator, backup generator and transformer upgrade. Additionally, there was 70-foot welded steel reservoir replacement which included the removal of a structurally deficient steel reservoir and construction of the proposed welded steel reservoir. The proposed reservoirs included a ring wall footing with 45-foot deep 3-foot diameter caissons to combat liquefaction issues. The reservoir removal and replacement is located within fifteen feet of an existing 70-foot tall 2 million gallon steel reservoir that was to be protected during construction.

Beacon Tank Site Improvements, Crestline Village Water District, Crestline, CA. *Design Assistance and Construction Manager.* Responsible for seismic and structural calculations, all civil design and CAD drawings, and specification preparation. Construction management duties included all contract management, progress payments, scheduling, submittal review and approval, and coordination with inspectors. Project involved the seismic retrofit and related site improvements to the existing Beacon Tank Site including the design and construction management for the project.

Jeff W. Lawrence PE

QA/QC

Jeff Lawrence has over 30 years of engineering experience centered on a balance of planning studies and detailed design, as well as construction management and operations optimizations. He has served as project manager/engineer for preparation of dozens of water system capital improvement plans for water and sewer systems throughout the Central Valley and Bay Area. Jeff's experience embodies virtually all aspects of water resources engineering and all the infrastructure and equipment associated with planning and designing facilities to produce, pump, store and convey water and wastewater. His experience includes project/program management of water treatment, storage, transmission and power generation systems; water resources planning and recycled water planning; design, construction and operation; water system network modeling; infrastructure rehabilitation; industrial facilities process engineering and optimization; design-build project management; stormwater design; and quality control.

REPRESENTATIVE PROJECTS

Potable Water Storage Tank, Pumping Station, and Pipeline, Pittsburg, CA. *Project Manager.* Project manager for the design of a 750,000-gallon underground concrete storage tank and 500 gpm pumping station for a City development The tank was buried in a hillside with a steep and narrow road, so construction access limitations were addressed in the design. The project also included several thousand feet of 10- and 12-inch-diameter distribution piping from the tank to the existing water transmission system.

Gridley Water Pipeline and Well, and Sewer Rehabilitation, CA. *QA/QC.* Provided QA/QC for design of a new water system and rehabilitated sanitary sewer system for a housing community comprised of approximately 150 single family and duplex housing units. The new water system includes approximately 5,500 linear feet (LF) of new water main ranging in size from 6- to 12-inch-diameter pipe. Additionally, the Butte Housing Authority community system design included a new water supply well design to meet regulatory requirement for 1,500 gallons per minute fire flow supply. The overall project included the development of system design drawings and specifications for construction and cost estimates for the project construction.

Duarte Road Water Main Relocation, Los Angeles, CA. *QA/QC.* Provided technical oversight and QA/QC for the relocation of approximately 3,700 linear feet (LF) of 12-inch-diameter water line in Duarte Road for CA American Water. The alignment traverses four railroad crossings and requires coordination and project permitting with three local government agencies and the Foothill Transit Authority for work within the railroad right-of-way. The project includes a bore and jack section of 36-inch steel casing within cobble/boulder material beneath an existing Los Angeles County storm drain facility. The section of bore and jack is approximately 18 feet below grade.

Rose Parade Way Treatment Plant, Pipeline, Pumping Station, and Storage Tank, Sacramento, CA. *Design Lead.* Led the design of the manganese treatment process and provided technical oversight for completing the design and construction services for a groundwater treatment plant, including well completion, treatment, water mains booster station and a 2 million-gallon (MG) reservoir. This project received a "Design of the Year" award from the American Public Works Association. Highlights of the system include approximately 1,000 linear feet (LF) of 12-inch-diameter distribution pipeline; new off-site well equipped for 1,800

WSC

EDUCATION

Bachelor of Science, Civil Engineering, California State University, Sacramento, 1990

PROFESSIONAL REGISTRATIONS

Professional Civil Engineer, California, No. 54303, 1993

Project Management Professional, 1458731, 2011

"I dive into every project with a vision for what is possible and embrace a collaborative approach with my clients to make that vision a reality."

Jeff Lawrence

gpm including site design; new manganese treatment system including backwash tank, chlorination facility, and control system; innovative methane removal system eliminating the need for a stripper; 2-mg steel reservoir with associated piping; and a 3,000 gpm pumping station with chlorination and fluoridation facility.

Long Ravine Pipeline, Auburn, CA. *Project Manager.* Detailed design for the replacement of a 24-inch-diameter riveted steel pipe that has been in service for more than 100 years. The 30- to 36-inch-diameter replacement pipeline was constructed in extremely steep terrain with limited access, including a portion through Union Pacific Railroad property for Placer County Water Agency. Coordination with affected land owners was critical to avoid the need for condemnation, therefore meetings and materials showing alternatives were provided to facilitate the process. The project team understood that the ultimate client was the agency's operators, and all project alternatives including flow control to minimize air entrainment and surging, screening of debris, and selection/location of equipment required careful consideration and consultation with operators to ensure maintainability, access, security, reliability, and safety. Future capacity needs and the potential of adding hydroelectric generation capabilities during the design were also considered, so that the new pipeline will provide reliable service for another 100 years or more. The preliminary selection of hydroelectric turbines and system layout was completed to ensure the design will accommodate the addition of a hydro facility with minimal modifications.

Freeport Pipeline, Segments 2 and 4, Sacramento, CA. *QA/QC.* Provided /quality control (QA/QC) and technical oversight for the design of approximately seven miles of 84-inch-diameter welded steel pipe for conveyance of 185 mgd of raw water, and one mile of 66-inch-diameter welded steel pipe or conveyance of 100 mgd to the Vineyard Surface Water Treatment Plant, for Sacramento County Water Agency. Design aspects included a hydraulic surge tank, raw water sampling instrumentation, a flow control structure including magnetic flow meters and flow controlling sleeve valves, and various isolation valves, drains, and air release valves.

Zone 40 Water Transmission Main, Sacramento, CA. *Project Engineer.* Project engineer during the design and installation of water transmission facilities in Sacramento County Water Agency Zone 40. The project included the installation of pipelines up to 36 inches in diameter, jack and bore under a large creek, and crawling for inspection of the completed pipeline.

Treated Water Transmission Main and Pumping Station Design-Build,Travis Air Force Base (AFB), CA. *Project Manager.* Project manager for the design-build project of more than two miles of double containment pipeline and a transfer pumping station. The project included installation of the pipeline through airfield areas, jack and bore under roadways, and the installation of leakage monitoring sumps.

Regional Surface Water Supply Pipeline and Treatment Plant, Turlock, CA. *Project Engineer.* Aided in predesign for a new 42 mgd surface water supply source to replace failing groundwater supplies for four communities in the Turlock Irrigation District (TID) service area. The project included preliminary design and development of a detailed preliminary design report for approximately 17 miles of 20- to 36-inch-diameter treated water transmission pipelines and 42 mgd surface water treatment plant. The treatment methods evaluated included microfiltration and conventional treatment. The project also included evaluation of pipeline routing alternatives, pipe material selection and coordination with the member communities to plan the piping and connection details.

Beamer Street Pipeline, Woodland, CA. *Project Manager.* Project manager for the design of 1,500 linear feet (LF) of potable water pipelines. The 12- and 16-inch-diameter water mains provide distribution for the elevated storage tank and connection from a nearby well to the tank. The distribution main was designed parallel to an existing 10-inch-diameter pipeline that supplied water to residences along Beamer Street. The parallel design with tie-ins to the existing pipeline was suggested in order to maintain water service to the residents during construction. The project included electronic detection methods and potholing for utility locating, potable water pipeline design, storm drain design, and electrical/controls upgrades to connected facilities.

Parkside Water Transmission Main, Woodland, CA. *QA/QC.* Provided technical oversight and QA/QC for the preliminary design criteria development for the alignment and pipe material options for a 36-inch-diameter potable water transmission main that will convey surface water from a new water treatment plant into the existing city distribution system. The project also included other design considerations such as air release valve and blow-off spacing, future maintenance access port locations and Caltrans highway crossing alternatives.

San Diego Main Replacements, San Diego, CA. *Project Manager.* Project manager for two separate CA American Water pipeline projects. Approximately 9,700 linear feet (LF) of 20-inch-diameter water main and 6- to 10-inch-diameter distribution mains were replaced. The project included extensive coordination with the City of San Diego to permit the project and to minimize impacts to residents and business owners served by the pipeline. Planning of the construction sequencing and traffic control were also included in the design to minimize construction impacts. The project included both open cut and bore and jack construction techniques.

Owner's Representative for $35.5 Million Water Pipelines, Wells, Metering System, and Storage Tank Program, Davis, CA. *Owner's representative and program manager for the City of Davis' implementation of $35.5 million in capital improvement program (CIP) projects.* Worked with city staff and provided overall management for the planning, design and construction of water system capital improvements, acting as the City's project manager. Directed the project team and city staff to support the implementation of the state revolving fund (SRF) funded projects. Implemented program administration including scheduling controls, document management system, budget baseline and tracking, project progress tracking, risk management, and consultant management procedures. Capital improvements include 46,000 linear feet (LF) of large diameter pipelines, well upgrades, automated metering systems, SCA,DA upgrades, park conversions to non-potable supply, and storage facility upgrades. Worked directly with the city management staff and the city attorney to ensure all contracting meets public and SRF requirements.

Phillip Medlock

PROJECT ENGINEER

Phillip Medlock has four years of civil engineering experienced focused on water and wastewater infrastructure. His experience includes the evaluation, planning, and design of pipelines, pump stations, reservoirs, and wastewater pretreatment programs. He has hands-on experience conducting facility inspections and surveys as well as experience with master planning and hydraulic modeling. This breadth of experience enables him to approach design projects with effective implementation and operation in mind.

REPRESENTATIVE PROJECTS

Improvements for Nitrate Blending, Devore Water Company, San Bernardino, CA. *Project Engineer.* Prepared the design of pipeline, booster station, reservoir, blending, and monitoring facilities. His booster station duties included design of a three-pump booster station. Phillip was responsible for determining design flow, number of pumping units, pump selection, and pump can, suction header and discharger header sizing. Reservoir design duties included verifying reservoir capacity for the District's customers, blending, inlet/outlet piping sizes, and a site hydrology study. He performed reservoir and site grading, inlet/outlet pipeline design, altitude valve sizing, and vent sizing. He prepared construction drawings and specifications. The project included installing 3,150 linear feet of 8-inch pipeline. Two materials were used for the project, ductile iron pipe (DIP), and PVC C-900 (PVC) due to the rural and urban nature of the construction. Pipeline design was focused on limiting erosion concerns. The project also included blending/monitoring facilities, static mixer, instrumentation, and instrumentation panel design on an existing site.

Plant 101 Hydro-Pneumatic Booster Station Rehabilitation, East Valley Water District, Highland, CA. *Engineering Support.* Designed a three-pump booster station with a hydro-pneumatic booster tank on an existing reservoir site. Performed a system demand study and performed a hydraulic analysis with InfoWater modeling software. The booster station was optimized based on site availability, operator flexibility, and peak hour demand. Pump types included horizontal mounted, axial pumps

Well Pumping Plant 35, Indian Wells Valley Water District, Ridgecrest, CA. *Engineering Support.* Performed construction management, reviewing RFIs and submittals, of a well pumping plant. The well pumping plant included a masonry/steel building, and a chemical dosing system. The building was equipped with a movable steel building section to be moved out of the way for pump access.

Grulla and Shawnee Sewer Lift Station Replacement, Norco, CA. *Engineering Support.* Prepared site layout, system hydraulics, pump selection, and odor control for two pump system configurations into an existing force main. Performed hydraulic analysis of an existing sewage lift station which included determination of peak demand and pumping unit performance with the existing force main. Provided multiple site layouts of facilities including wet well, force main piping (below grade in a vault and above grade), main control center, and site access.

Small Sewage Lift Station Plan Check Services, Eastern Municipal Water District, Perris, CA. *Project Engineer.* Conducted plan checking services that included: verifying hydraulics, pump selection, wet well sizing, generator sizing, site layout, grading, site drainage, electrical service plans, legal and plats, site water services in adequate clearance between emergency bypass wet well and nearest customer, and the developer's site layout of facilities in accordance with District standards. Phillip was responsible for submittal and RFI responses to multiple contractors and made decisions using engineering judgment to address requests for information. Projects included Soboba, Wickerd Road, Lazy Hawk, Green Valley, Canterwood small sewage lift stations.

EDUCATION

BS, Civil Engineering, California State Polytechnic University, Pomona

PROFESSIONAL REGISTRATIONS

Engineer-in-Training No. 167039

Phillip Medlock EIT continued...

Existing Lift Station 2, 4, and 6 Capacity Analysis and Pump Selection, Yucaipa Valley Water District, Yucaipa, CA. *Project Engineer.* Determined and analyzed the capacity of an existing lift station based on additional future wastewater flows. The lift station was examined for a projected peak hour demand, max day demands, and average day demands. The facilities analysis include force main, emergency storage, wet well capacity, and electrical panels. Prepared a PDR with recommended improvements.

Small Sewage Lift Station Standards Update, Eastern Municipal Water District, Perris, CA. *Engineering Support.* Updated EMWD's small sewage lift station design guidelines, specifications, and standard construction drawings. Plan checked multiple small sewage lift station projects. Plan checks included review of construction drawings, specifications, and hydraulic calculations. Performed construction management of three small sewage lift station projects which included reviewing RFIs and submittals. Assisted construction management of a surface water filtration plant, which included reviewing RFIs and submittals.

Water, Sewer, and Recycled Pipeline Plan Checking Services, Western Municipal Water District, Riverside, CA. *Engineering Support.* Provided plan check services include review of pipeline plan and profile, and water and sewer studies.

Water Reclamation Plant 10, T-1 Pump Station Replacement and T-2 Pump Station Modifications, Coachella Valley Water District, Palm Desert, CA. *Engineering Support.* Designed an Equalization Basin (grading, cover, and liner), inlet/outlet piping, and inlet/outlet structures to add additional storage capacity to a wastewater treatment plant. Material (Hypalon/CSPE) and material thickness were selected based on chemical resistance, life cycle costs, and demonstrated reliability in the industry. Cover appurtenances were design for safe and efficient operation and maintenance, and water removal of a 100-year storm. The inlet and outlet structures were constructed of concrete with a footprint of 10 feet by 18 feet. Structures were sloped at a 2 to 1 ratio and had an aluminum grate on top for operators to walk on. Phillip was responsible for submittal, RFI, and clarification responses to the contractors and made decisions using his engineering judgment to address requests for information and submittal. During construction, design changes included modifications to a 60-inch DIP overflow pipeline, retaining wall, and wet well. All design changes were coordinated and check with the project manager. Performed review of basic construction materials.

Water Reclamation Plant 4, 7, and 10 Chemical System Safety Upgrade Project, Coachella Valley Water District, Palm Desert, CA. *Engineering Support.* Project included chemical scrubbers, fire suppression, chlorine gas tank actuators, HVAC, associated piping, grading, electrical, and structural anchorage. Performed construction management services which included submittal review of exhaust fans, fire suppression system, and chemical scrubbers. Reviews included hydraulic verifications (minimum pressure and velocity), sprinkler location, riser location, and appropriate equipment supplied. Reviewed anchorage of chemical scrubbers and pipe supports.

Snow Creek Surface Water Filtration Plant, Desert Water Agency, Palm Desert, CA. *Engineering Support.* Preformed construction management services for the Snow Creek Surface Water Filtration Plant. Services include submittal review, submittal, clarifications, and design modifications.

Thompson Plant Iron and Manganese Filter Valve Investigation, Rubidoux Community Service District, Jurupa Valley, CA. *Engineering Support.* Determined if the iron and manganese treatment plant is operating as designed. The operation investigation included pneumatic valve sequencing, pneumatic valve operation, and pressure analysis throughout the plant. Provided recommendations included: correcting valve sequencing, reducing speed of pneumatic valves, and adding additional controls to the existing hydraulically operated valves. All conclusions were prepared in a technical memo. Investigated and documented high-pressure surges during the iron and manganese treatment plant during rinse, filtration, and backwash mode of three filter vessels. Provided recommendation to mitigate high-pressure surges during all phases of plants operation.

Fire Flow On-Call Hydraulic Modeling Services, Western Municipal Water District, Riverside, CA. *Engineering Support.* Preformed system hydraulic analysis of fire flow demands based on the fire department requests. Performed 43 hydraulic modeling scenarios to assess potential system improvements.

Water and Sewer Pipeline Plan Checking Services, Rubidoux Community Service District, Jurupa Valley, CA. *Engineering Support.* Provided plan check services for the review of pipeline plan and profile, water, and sewer studies for the following projects.

- Rubidoux Commerce Park, Sewer Improvement Plan
- Agua Mansa Commerce Park, Water and Sewer Phase I and Phase II
  - 24-inch CML&C, WTR, 2,150 linear feet
  - 16-inch PVC-C900 DR 14, WTR, 5,260 linear feet
  - 8-inch PVC-C900 DR 14, WTR, 2,900 linear feet
  - 10-inch VCP,SS, 800 linear feet
  - 10-inch PVC SDR-26, SS, 1,600 linear feet
  - 8-inch PVC SDR-26, SS, 1,500 linear feet
  - 6-inch PVC SDR-26, SS, 110 linear feet
- Wheeler Trucking, Sewer and Water Plans
  - Lateral Design
- Tract No. 36649 , Sewer and Water Plans
  - 8-inch PVC-C900 DR 14, WTR, 600 linear feet
  - 8-inch PVC-SDR-35, WTR, 600 linear feet
- Tract Map No. 37640, Water Plans
  - 24-inch WTR 1,000 linear feet CML&C

Storm Drain Pipeline Plan Checking Services, Riverside County Flood Control and Water Conservation District, Riverside, CA. *Project Engineer.* Reviewed the hydrology study, storm drain hydraulics, storm drain material selection, alignment, profiles, and CAD work in accordance with RCFC Design Standards. Projects included Palm Springs Line 20 and Norco MDP Line N-4 Extension.

Christopher J. Durbin

CIVIL DESIGNER

Mr. Durbin is a CADD operator with over 10 years of experience as a civil drafter. With the use of Autodesk Civil 3D software, he has assisted in the plan preparation of numerous water, sewer, reclaimed water, and treatment plant projects. Included in these projects are pipeline plans and profiles, pump stations, and associated civil and mechanical details.

REPRESENTATIVE PROJECTS

Pipelines – Water, Sewer, and Recycled Water

Thousand Oaks Interconnection, California American Water, Thousand Oaks, CA

Gainsborough Pressure Zone, California American Water, Thousand Oaks, CA

Main West Tank And Airport Area Utilities Extension Projects, City of Paso Robles, Paso Robles, CA

Water Systems Improvement Projects, Big Bear Lake Department of Water and Power, Big Bear Lake, CA

Water Line Replacements, Liberty Utilities - Park Water

Downtown Terramar Water Main Replacements, Carlsbad Municipal Water District, Carlsbad, CA

Conejo Creek Waterline Replacement, City of Thousand Oaks, CA

Dana Point Town Center Infrastructure Improvements, South Coast Water District, Dana Point, California

Coastal Treatment Plant Export Sludge Forcemain, South Orange County Water District, Dana Point, California

Fiscal Year 2012–2013 Sewer Lining and Repair, City of South Pasadena, California

Recycled Water Conversion Projects, City of San Juan Capistrano, California

6-19 Southwest Costa Mesa Trunk Sewer, Orange County Sanitation District, Costa Mesa, California

Spring Valley Outfall Sewer, County of San Diego, California

La Serranos and La Hermosa Sewer Rehabilitation, Moulton Niguel Water District, Laguna Niguel, California

Trunk D Sewer Replacement, County of San Diego, California

Oak Knoll Sewer Siphon Structure Project, City of Poway, California

Inland Empire Brineline Reach V Rehabilitation and Improvement Project, Santa Ana Watershed Project Authority, City of Corona to City of Lake Elsinore, California

Water Valve Replacement Project, San Dieguito Water District, Encinitas, California

Oro Grande Pipeline, Victor Valley Wastewater Reclamation Authority, Victor Valley, California

Ossum Wash Interceptor, Victor Valley Wastewater Reclamation Authority, Victor Valley, California

84-inch Plant No. 2 Primary Influent Line, Orange County Sanitation District, Huntington Beach, California

WSC

EDUCATION

Palomar Community College, San Marcos, CA

"I'm committed to helping our clients develop sustainable water solutions by providing them with efficiently designed plans of the highest quality."

Chris Durbin

YEARS

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