ENGINEERING SERVICES AGREEMENT

This Engineering Services Agreement ("Agreement") is dated _____ ("Effective Date") and is between County Sanitation District No. 2 of Los Angeles County, a county sanitation district organized and existing under the County Sanitation District Act, Health and Safety Code Section 4700 *et seq.*, (the "District") and HDR Engineering, Inc. ("Engineer"). The District and the Engineer are collectively referred to in this Agreement as the "Parties."

The District requested proposals for consulting firms to provide engineering services on an on-call basis for various existing and future projects (the "Project"). Engineer's proposal to provide such services under this Agreement is set forth in Exhibit "A" to this Agreement (the "Proposal"). The services to be provided by Engineer pursuant to the Proposal are set forth in the District's Request for Proposals ("RFP") for the Project (Exhibit "B" to this Agreement) and constitute the "Work."

The Parties therefore agree as follows:

1. Agreement

The RFP and the Proposal are incorporated into this Agreement. In the event that there is any conflict or inconsistency between the provisions of the RFP, the Proposal and/or this Agreement, the provisions of this Agreement will prevail.

This Agreement may be executed in any number of counterparts and all such counterparts shall constitute a single instrument. Delivery of an executed counterpart by facsimile or electronic transmission (in .pdf format or other electronic imaging) shall have the same force and effect as delivery of an original counterpart.

2. Engineer's Services

2.1 Scope of Services by Engineer. The Engineer shall provide engineering services as described in this Agreement. In performance of the Work, Engineer shall comply with all applicable Federal, State and local laws, rules, regulations, ordinances, and industry practices.

2.2 Engineer's Standard of Care. The standard of care applicable to Engineer's Work under the Agreement will be the degree of skill and diligence ordinarily employed by engineers performing the same or similar services, under the same or similar circumstances, in the State of California. The Engineer shall re-perform any Work not meeting this standard without additional compensation.

2.3 Engineer's Estimates and Projections. Engineer's opinions regarding the potential cost, financial analyses, economic feasibility projections, and schedules for potential future construction of the project are projections only and do not reflect: the ultimate cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Engineer does not warrant that the District's actual project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates, but Engineer shall provide such projections in accordance with the standard of care set forth in Section 2.2 of this Agreement.

3. District's Obligations

3.1 District-Provided Information and Services. The District shall furnish the Engineer available drawings, studies, reports and other data pertinent to Engineer's services and obtain or authorize Engineer to obtain additional reports and data as required. The Engineer is entitled to use and rely upon all such information and services provided by the District or others in performing Engineer's services under

the Agreement except as otherwise stated by the District in connection with the information and services provided.

3.2 Access. The District shall arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services hereunder. Engineer shall comply with all applicable laws and with the District's requirements for persons on the District's premises.

4. Compensation and Payment for Engineering Services

4.1 Engineer's Compensation: The Task Authorization Form (TAF) system shall be used to issue the Work under this Agreement. When engineering services are required, Engineer will be presented with the project scope and will be asked to prepare a detailed Project Plan indicating the Project Manager, key personnel, and the time and expenses required to complete the Work. Once the Project Plan is approved by the District, the Engineer will be issued a TAF that details the agreed-upon scope, budget, schedule, deliverables and associated progress payments. The compensation payable by the District for the engineering services performed by the Engineer shall be per the final signed TAF for the Work. The total not-to-exceed budget for all Work performed by the Engineer is $1,000,000. The breakdown of expenses for each TAF shall be as follows.

a. **Direct Costs.** Direct Costs will be the hourly rates paid by the Engineer to its employees for time directly chargeable to the Project, exclusive of the costs for fringe benefits for those employees and other payroll costs. Engineer shall ensure that its employees maintain accurate records of the time chargeable to the Project.

b. **Overhead Costs.** Overhead Costs will be all business expenses allocated by the Engineer for rendering engineering services for the Project, including the fringe benefits for the employees who will be utilized on the Project. The Engineer's overhead cost will be charged to the District as a fixed percentage of the Direct Costs.

c. **Indirect Costs.** Indirect Costs will be all other identifiable costs of the Engineer directly chargeable to the Project, including, but not limited to, reproduction of reports, plans, specifications and other documents; preparation for meetings; travel costs; computer services; supplies used in the work; and communication expenses, that are necessary for the Engineer to fulfill its responsibilities for the Project.

d. **Subconsultant Costs.** Subconsultant Costs will be the costs paid by the Engineer to Subconsultants for providing services as required to assist the Engineer in the design and preparation of the deliverables for this Project.

e. **Fixed Fee.** The Fixed Fee shall be the profit of the Consultant and shall be a fixed percentage of the direct and overhead cost for each component of the Project.

4.2 Payment to Engineer. Engineer shall be compensated in accordance with Section 9 (D) of the RFP.

5. Duration, Schedule and Delay

5.1 Duration. Engineer's performance of the Work shall commence on the date identified in the District's Notice to Proceed. Engineer shall complete the Work in accordance with the agreed-upon schedule defined in each TAF (TAF Project Schedule).

5.2 Delay. The Engineer shall perform its services with due diligence and agrees to use its best efforts to complete the work involved in the Project in accordance with the TAF Project Schedule. The Engineer shall immediately advise the District of any delay in the TAF Project Schedule resulting from causes within or beyond its control. In the event of any such delay by causes within the Engineer's control,

the Engineer shall promptly outline and implement appropriate actions required to overcome such delay, including, but not limited to, one or more of the following:

- Assignment of additional personnel to the Project;
- Utilization of overtime at no increase in compensation by the District; and
- Change in management structure or approach.

The foregoing is not intended to relieve the Engineer of responsibility for delay for which it would be responsible under this Agreement.

In the event of delay by causes beyond its control, the Engineer shall promptly provide the District with written notice of the delay and take all reasonable action to mitigate the effect of such delay. If the delay is beyond Engineer's control and without its fault or negligence, the time for the performance of its services may be equitably adjusted by written amendment subject to the District's approval of the extent of such delay. If the District determines that the Engineer has suffered additional costs that could not reasonably have been avoided, the District will compensate the Engineer for those additional costs.

Neither of the Parties will be responsible for delays in the performance of their obligations hereunder caused by strikes, action of the elements, acts and/or decisions of any governmental agency or by third parties, other than either Parties' consultants or subconsultants, which could not reasonably have been foreseen, or by civil disturbances, or any other cause beyond its reasonable control. Engineer will not be responsible for any delay by the District in supplying information and reviewing submittals by the Engineer.

6. Changes and Extra Work

The District may make changes within the general scope of this Agreement and may request the Engineer to perform additional services not covered by the original scope of work defined in a TAF. If the Engineer believes that any proposed change or direction given by the District causes an increase or decrease in the cost and/or the time required for the performance of the Work defined in a TAF or this Agreement, the Engineer shall so notify the District no later than five days after the date of receiving notification of a proposed change or the changed direction. The Engineer shall perform such services and will be paid for such services pursuant to a negotiated and mutually agreed change order signed by the Parties to this Agreement. If the Engineer determines that any work beyond the Work is necessary for completion of the Project, the Engineer shall notify the District and receive written approval prior to starting that work. If the Parties do not agree whether the Engineer is entitled to additional compensation or the extent of such compensation for work the Engineer determines is extra or changed work, the Engineer shall proceed with the work and the issue of the compensation shall be reserved for later determination as provided in Section 9 of this Agreement.

7. Personnel Assignment

Engineer agrees to utilize the key personnel as submitted to the District in its Project Plan, including its Project Manager. The Project Manager will be the primary contact for the District and should have a thorough knowledge of all aspects of the Project and its status. During the term of this Agreement, no replacement of the Project Manager or any of the key personnel of Engineer's Project team or its sub-consultants may be made without the written approval of the District, which approval will not be unreasonably withheld. Nothing in this Section is intended to or may be construed to prevent Engineer from employing or hiring as many employees as Engineer deems necessary for the proper and efficient performance of its services.

The District may request a change in the assignment of the key personnel. Engineer shall change key personnel to the satisfaction of the District within 30 days following written direction to change by the District.

8. Notices

All notices or other communications regarding this Agreement to either party by the other shall be deemed given when made in writing and delivered or mailed (not e-mailed) to such party at their respective addresses as follows:

Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, California 90601
ATTN: Samuel Espinoza

HDR Engineering, Inc.
350 S. Grand Ave., Suite 2900
Los Angeles, CA 90071
ATTN: Anna Lantin

Either party may change its address or representative for such purpose by giving notice thereof to the other in the same manner.

9. Governing Law, Dispute Resolution and Litigation

Engineer's performance of this Agreement shall be governed and construed in accordance with the laws of the State of California. Except as provided with respect to termination in Section 9 (O) of the RFP, if any dispute arises between the Parties with respect to the Work, compensation for the Work, or any other matter with respect to this Agreement, the Parties shall, if both agree, submit the matter to non-binding mediation. If the mediation does not resolve the dispute, the dispute shall be resolved through litigation. Venue for any action relating to this Agreement will be in the County of Los Angeles, State of California.

10. Third Parties

The services to be performed by Engineer are intended solely for the benefit of the District. No person or entity not a signatory to the Agreement may rely on Engineer's performance of its Work under this Agreement, and no third party will obtain any right to assert a claim against the Engineer by assignment of indemnity rights or otherwise accrue to that party as a result of this Agreement or Engineer's performance of the Work.

11. Entire Agreement

This Agreement represents the entire understanding between District and Engineer as to those matters contained herein. No prior oral or written understanding is of any force or effect with respect to those matters covered in this Agreement.

12. Action by Chief Engineer

Except as otherwise provided in this Agreement, the Chief Engineer and General Manager of the District ("Chief Engineer") may take all actions on behalf of the District in connection with any approvals or actions required of or by the District under this Agreement, and Engineer may rely on any such actions by the Chief Engineer as having been approved or required by the District under all applicable laws.

HDR Engineering Inc.

_____ _____

Signature Dated

_____

Name

_____

Title

County Sanitation District No. 2
of Los Angeles County

By: _____ _____

Chairperson Dated

Attest:

_____

Secretary

Approved as to Form:

Lewis Brisbois Bisgaard & Smith LLP

By: _____

District Counsel

EXHIBIT A - PROPOSAL

June 10,
2021

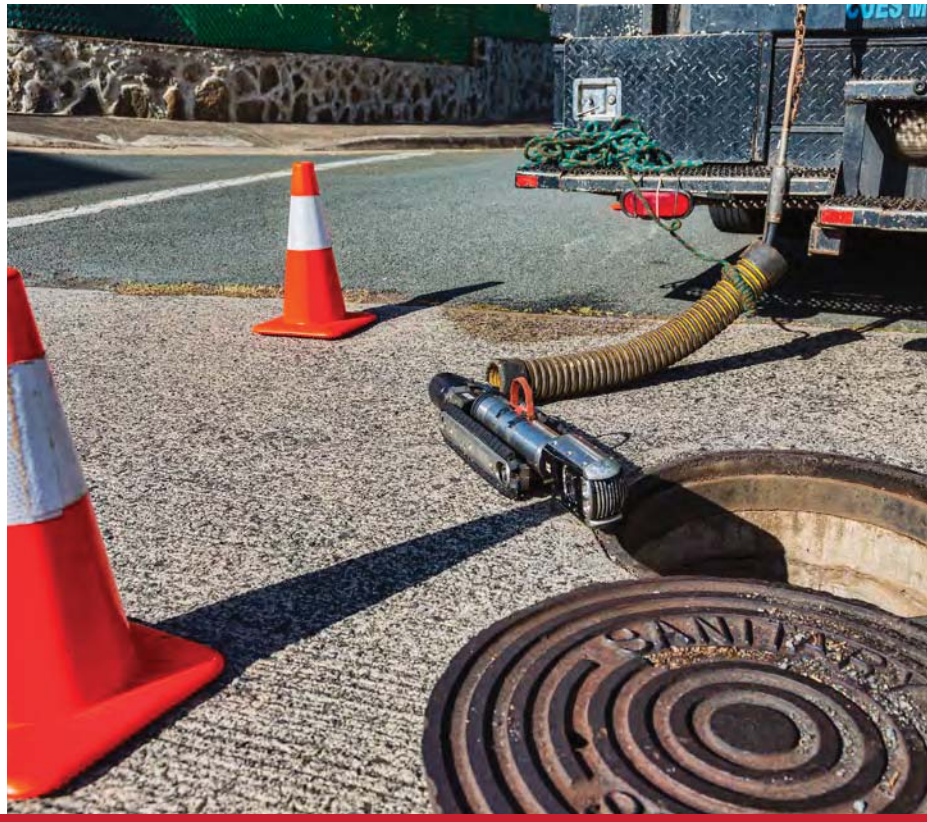
LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

PROPOSAL

On-Call Engineering Services

Bid No. 03956

QuestCDN No. 7825153



5.4. Solicitation Form

FAILURE TO SIGN AND SUBMIT THIS PAGE WITH PROPOSAL WILL DISQUALIFY YOUR RESPONSE

The Consultant shall identify which general scope(s) of work the firm is agreeing to provide engineering services for by checking the appropriate box(es) below. Failure to identify which scopes(s) are being proposed will disqualify your response.

- [X] Sewer Rehabilitation and new sewer construction projects
- [X] Miscellaneous design support tasks, including but not limited to hydraulic modeling and specialized studies/reports

If awarded, the undersigned offers and agrees to furnish the services listed in this RFP at the prices and terms stated, subject to mutually agreed upon terms and conditions. Additionally, the undersigned warrants and represents their authority to bind the firminto an agreement subject to the terms and conditions of this Request for Proposal.

Company Name: HDR Engineering, Inc.

Street Address: 350 S Grand Ave., Suite 2900

City, State Zip: Los Angeles, CA 90071

Email: Anna.Lantin@hdrinc.com

Telephone: 714.368.5691

By (Authorized Signature):	Date Signed:
x 	x 06/10/2021
Print name and title of Authorized Signatory Anna Lantin, PE *Vice President*	

ALL SPECIFICATIONS, TERMS, AND CONDITIONS OF THIS PROPOSAL WILL BE INCORPORATED INTO ANY RESULTING AGREEMENT.

This table of contents is interactive. Click on the section to take you there. The Bookmarks are also enabled for easy access to direct content.

Table of Contents

EVALUATION CRITERIA	
COMPANY QUALIFICATIONS AND RECORD OF PAST PERFORMANCE	✓
KEY PERSONNEL AND STAFF	✓
PROJECT MANAGEMENT METHOD	✓
FINANCIAL CONDITION OF COMPANY	✓
ABILITY TO SELF-PERFORM ALL SERVICES LISTED IN SECTION 3	✓
RBE PER SECTION 6.3.4.1	✓

SECTION 6.1

Cover Letter

June 10, 2021

Ms. Maribeth Tan, Senior Buyer
Purchasing Section
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90601

RE: Statement of Qualifications (SOQ) for On-Call Engineering Services, RFP No. 03956, QuestCDN No. 7825153

Dear Ms. Tan and Members of the Selection Committee,

The Los Angeles County Sanitation Districts (Districts) has several upcoming projects as part of your wastewater program. We are excited about the opportunity to respond to your Request for Proposals for On-Call Engineering Services. As a complex and dynamic organization, the Districts needs an engineering firm that adapts to your needs with comprehensive services. HDR Engineering, Inc. (HDR) offers the management, experience, and technical knowledge with a creative team that excels in a wide array of engineering and architectural services.

We have a history working with the Districts bringing knowledge of your system, policies, and relationships with your staff. HDR is currently working with your staff on wastewater treatment and solid waste management projects and we want to continue providing high-quality service to your Sewer Design Division. We have also been an active, involved member of the Los Angeles County community for more than the 30 years.

Under this contract, the Districts will have seamless access to a full range of services within HDR.
Our team presents unique differentiators:

- ✓ Our proposed project manager, Luis León, has 36 years of wastewater collection system experience delivering wastewater infrastructure projects for large utilities in California, the U.S. and internationally. Luis is recognized by WEF and NASSCO as an industry leader in collection systems design, condition assessment, and trenchless rehabilitation.
- ✓ Most of the staff proposed for the contract work within Southern California, allowing HDR staff to be present at the Districts' facilities if needed.
- ✓ HDR has Advanced the Practice of Pipeline Condition Assessment and Rehabilitation, more than any other consultant. HDR is a leader in the industry, participating in many committees such as WEF Collection Systems Committee, ASCE Pipelines, AWWA Pipe Rehabilitation Committee and many others. We have also collaborated in many Water Research Foundation Studies and on the development of pipeline condition assessment and rehabilitation manuals.

Our project approach is streamlined and based on true collaboration with the Districts to meet your needs by providing engineering services with the following key overarching principles:

YOU CAN TRUST THIS TEAM TO DELIVER SUCCESSFUL PROJECTS ON TIME AND ON BUDGET.
Leading our team and serving as your primary point-of-contact, Luis understands the important service the Districts provide to the community and is committed to providing the right staff to make every task

order successful. He also brings solid management skills to this assignment and will be joined by a team of local project managers and engineers with proven track records. Our staff understands the importance of clear communication, a proactive approach to project delivery, and creating a positive experience for our clients through responsiveness, highly technical skills, and true understanding of our client needs.

WE KNOW HOW TO DELIVER ON-CALL SERVICES QUICKLY AND RESPONSIVELY.
We have a history serving in similar as-needed contracts throughout Southern California. We are providing skilled staff through your current Construction Management As-Needed contract and we were selected for your On-Call Engineering Services No. 03916. Other clients include Los Angeles Sanitation and Environment (LASAN), Los Angeles Bureau of Engineering (LABOE), Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, and Los Angeles Department of Public Works. We will leverage our knowledge of the geography and deep bench of wastewater collections experts to provide quality deliverables for the Districts.

LOCAL TEAM WILL PROVIDE EFFICIENCY AND BE READY TO MEET YOUR NEEDS.
HDR is ready to mobilize and deliver quickly, whether we are tasked to assist the Districts' as staff augmentation or provide full project services. Our local engineering team can be ready for assignments very quickly. We have over 450 employees in the Los Angeles area, including all the technical disciplines to accommodate your projects. Many of our employees are long-term residents of the area—this is our community. HDR also offers many remote communication solutions that utilize several software packages, including GoToWebinar, Microsoft Teams, ProjectWise, SharePoint, Cisco Webex, and OneDrive, among others for effective communication any time.

INNOVATION. HDR's resources include a deep bench of technical experts with proven experience in all the projects' needs the Districts will have under this contract. Each of our technical and discipline leads were selected based on their experience and understanding of your needs. Luis has participated in sewer design and rehabilitation projects throughout the U.S. and internationally, including implementing condition assessment and trenchless rehabilitation projects of large sewers in Los Angeles, Omaha, Honolulu and even Medellin, Colombia, among others.

MEETING SCOPES, SCHEDULES, AND BUDGETS. We will monitor budget and schedule, assess deviations, and develop corrective actions as needed, and regular communication with the Districts' project managers.

HIGH QUALITY DELIVERABLES. The Districts demands high quality work and products, and we share this commitment through implementation of our in-house quality control (QC) program.

We look forward to discussing this opportunity with Districts staff and working with you to provide excellent service for the benefit of our community. If you have any questions or need additional information, please contact **Luis León** at **909.377.8314** or **Luis.Leon@hdrinc.com**.

Sincerely,
HDR Engineering, Inc.

Anna Lantin, PE
Vice President, Authorized Signatory
350 S. Grand Ave., Suite 2900
Los Angeles, CA 90071
714.368.5691
Anna.Lantin@hdrinc.com

Luis R. León, PE, BCEE, ENV SP
Project Manager, Associate Vice President

6.2

SECTION 6.2

General Company/ Team Information

6.2 General Company/Team Information

Introduction to HDR

Founded in 1917, HDR is headquartered in Omaha, Nebraska, and maintains more than 225 offices throughout the U.S. and abroad. We are an **employee-owned corporation** and have grown to more than 10,000 employees, making HDR one of the nation's leading consulting firms. In the state of California, we have over 900+ professional staff —250 of whom specialize in water and wastewater services.

HDR has been part of the Southern California business landscape since 1960 and over time has expanded to eight Southern California offices: Los Angeles, Claremont, Irvine, Long Beach, Riverside, San Diego (2 locations), and Ventura. HDR's Los Angeles office is located within 17 miles of the Districts' Joint Administrative Office.

As an integrated firm, HDR provides a total spectrum of services for our clients and allows us to self-perform all the services listed in Section 3 of the RFQ. HDR's operating philosophy is to apply our national expertise to deliver tailored solutions through a strong local presence. HDR's ability to draw upon company-wide resources is the basis of our ability to meet and exceed our clients' expectations. HDR provides California clients comprehensive professional engineering services in water quality improvement, water resources management, water and wastewater, transportation, architecture and construction management.

Location of Offices Servicing California Clients:

In 2020, Engineering News-Record Ranked HDR

No. 2 CALIFORNIA TOP DESIGN FIRMS

No. 6 TOP 500 DESIGN FIRMS

No. 5 TOP 20 IN SEWER & WASTE

OFFICERS		
Eric Keen *(CEO)*		
Southern California Officers		
Ronald Bacsikin	Fernando Garcia	Luis Leon
Donna Bloom-Crook	Dean Gipson	Moshik Mah
Ryan Boley	Tim Gnibus	Patrick O'Neill
Gene Bougdanos	Michael Grubstein	Lara Paulino
Vartan Chilingaryan	Mark Hager	Lisa Reece
Art Conti	James Hecht	Robert Richardson
Bill Dehn	Erik Johnson	Gheorghe Rosca
James Douglas	Try Khou	Mark Seits
Gregorio Estrada	Tom Kim	Pam Steinhart
Kip Field	Robert Klovsky	Thomas Todd
Steve Friedman	Anna Lantin	Alex Yescas

HDR has not conducted business under any other names during the last 5 years.

Key Personnel & Staffing

The key to efficient project delivery is assigning qualified professional staff who can deliver results. We have established good working relationships with many municipalities and will bring those resources to the Districts to support tasks under this contract. As specific tasks are defined, we will be responsive and find the right technical staff, either from within our team, or by engaging the appropriate specialized staff.

HDR is proposing an experienced team of fully committed staff that will work in partnership with the Districts' staff. HDR's team exceeds the RFP requirements and is organized by areas of expertise. Our team has the resources, tools, experience, and commitment to be an effective partner for the Districts.

We offer the Districts with the right resources to tackle and complete any assignment. Our team was built to meet the anticipated needs of this design contract and is well-suited to staff your projects with local talent and a reach back for additional support staff. The organization of our team, with key personnel listed, is shown on the following page. Resumes for all key team members are provided as requested in the Qualifications section. Resumes for additional technical support staff are available upon request.

Gregorio places an emphasis on technical excellence, collaboration, and communication to produce high-quality work and get projects completed on time and on budget.

Gregorio Estrada, PE, LEED AP
PROJECT MANAGER

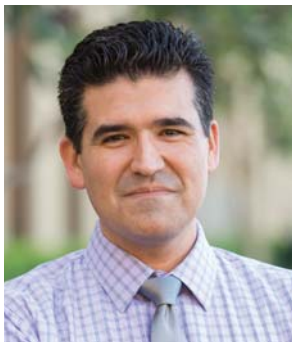
Gregorio will serve as the Project Manager and will serve as the Districts' primary contact. Gregorio will be responsible for managing requests for proposals and overseeing the preparation of responses. He will also work with the task order manager we assign, based on the specific requirements of the work, to verify that the resources required for the proper execution of the work are made available to the Districts.

Gregorio is dedicated to delivering a quality product that accomplishes the project's goals and meets or exceeds client expectations. As Project Manager, Gregorio will maintain open communication with the Districts and HDR team and engage the right people that offer effective solutions. Through a collaborative and transparent environment, he will listen to stakeholder input to understand project drivers and reinforce that messaging with the HDR team. Gregorio will oversee all service categories in order to deliver the best experience for the Districts.

CA Professional Civil Engineer – No. 67066

Years of Experience – 20 years

P: *714.292.5494*
E: *Gregorio.Estrada@hdrinc.com*



Gregorio Estrada, PE, LEED AP

Project Manager

Gregorio is a leader in wastewater treatment with experience in the facilities site planning, design, construction, and management of wastewater treatment plants. Specialization in wastewater treatment processes, with particular interest in advanced treatment including nutrient removal filtration membranes and disinfection. Project experience includes responsible charge of investigations, planning, design, construction, contract preparation and administration. Specifically, projects have involved the design of utility and infrastructure facilities and systems, economic evaluations, regulatory compliance, negotiations with regulatory agencies, investigation and design of wastewater collection and distribution facilities, wastewater treatment plant design, wastewater pumping stations, and collection and conveyance infrastructure.

EDUCATION
Bachelor of Science, Civil Engineering, Stanford University, 2001

REGISTRATIONS
Professional Engineer, Civil, California, No. 67066

LEED Accredited Professional, US

INDUSTRY TENURE
20 years

HDR TENURE
14 years

OFFICE LOCATION
Irvine, CA

CLASSIFICATION
Project / Contract Manager

RELEVANT EXPERIENCE

City of San Mateo, Secondary Treatment Facilities Conceptual Planning and Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion, San Mateo, CA
Design Manager & Secondary Treatment Facilities Lead. The Program is focused on improving, replacing, and rehabilitating the existing wastewater collection system and installing a new wastewater treatment plant (WWTP) to meet regulatory requirements, replace aging infrastructure, and align with the City's sustainability and water reuse goals. HDR provided schematic design and final design services for improvements to the WWTP, which included a complete plant renovation for headworks, primary clarification, MBR, and disinfection. The new plant will replace the existing liquid treatment process and be constructed on the same site.

Irvine Ranch Water District, Michelson Water Recycling Plant Phase 2 Expansion, Irvine, CA
Gregorio had an active leadership role throughout the project; he served as Task Manager during conceptual design and preliminary design phases, and Project Manager during final design phase and construction phase services. Gregorio also served as Resident Engineer during construction and managed the commissioning of all major processes.This award-winning $114 million project expanded capacity of the Michelson Water Recycling Plant to 33 mgd. Improvements included influent sewers, new headworks, expansion of the primary sedimentation tanks, new primary effluent pumping station and flow control, modified flow equalization basins, secondary treatment expansion with new membrane bioreactor (MBR) facility, new high-rate clarifier to treat filter backwash, new ultraviolet (UV) disinfection system, reclaimed water pumping, modifications to chlorine contact basins, chemical feed systems, new pumping and other ancillary facilities, and electrical modifications.

South Orange County Wastewater Authority, JB Latham Treatment Plant, Aeration and Cogeneration Upgrades, Dana Point, CA
Led the project team responsible for the evaluation and design of aeration and cogeneration systems upgrades for the JB Latham Treatment Plant. The HDR team completed the final design and bid-phase services, and were selected to provide Engineering Services During Construction of the JBLTP Aeration and Cogeneration Project. Services included preliminary and final design, development of performance specifications, development of start-up and commissioning plans, bid phase services, construction phase services, preparation of conformed drawings, review and response to Submittals and Requests for Information, preparation of Change Order documentation, field visits, start-up services, and preparation of record drawings.

Orange County Sanitation District, Activated Sludge Rehabilitation for Plant No. 1 (Project P1-82), Fountain Valley, CA
Project Engineer. Responsible for the completion of record drawings for the completed facilities. This project included the upgrade of plant water and backup pump stations with units rated 350 hp and 200 hp, respectively, together with various pipeline designs for municipal sewage Treatment Plants No. 1 and No. 2.

GREGORIO ESTRADA (CONTINUED)

Irvine Ranch Water District, Los Alisos Water Reclamation Plant Upgrades Lake Forest
Project Engineer responsible for the design of the influent screening facilities and sodium hypochlorite feed system in addition to the completion of overall final design documents. HDR prepared contract documents for treatment plant upgrades to increase capacity from 6 to 7.5 MGD. Improvements include a new screening facility, new chlorine contact tank, conversion from chlorine gas to sodium hypochlorite facilities, two new reclaimed water pumping stations, new screening facilities and associated odor control, complete telemetry upgrade, and miscellaneous piping and appurtenances. Total design fees of about $900,000 with estimated construction costs of about $10 million.

Goleta Sanitary District, Goleta Wastewater Treatment Plant Upgrade, Goleta, CA
After preparing the preliminary design report and validation study, HDR modified the headworks, upgraded the treatment plant to full secondary standards using a trickling filter/activated sludge system, designed a new blower building, expanded secondary sedimentation capacity, designed for new flow equalization, and designed a new thickening and dewatering building. In the thickening and dewatering building waste activated sludge is thickened with screw thickeners and dewatering utilizes two new screw presses. Design also included site/civil work, paving and grading, and a new shower and locker facility. The improvements expand the capacity of full treatment to approximately 9 mgd.

Irvine Ranch Water District, Filter Pump Station No. 2 Discharge Header Replacement, Irvine, CA
Project Engineer. HDR was selected to develop the design to replace the corroded discharge header for the Michelson Water Recycling Plant (MWRP) Filter Pump Station No. 2 (FPS-2) FPS-2 is a critical part of the MWRP conventional treatment train to convey up to 22 mgd of secondary effluent. HDR developed a detailed construction sequencing and bypass pumping plan to execute the work while keeping the plant in operation. The resulting transition occurred smoothly and without incident.

Orange County Sanitation District, P1-128 Headquarters Complex, Fountain Valley, CA
Project Engineer. The Orange County Sanitation District Headquarters Complex at Plant 1 is a 138,000 SF facility designed to illustrate OCSD's core values of "honesty, integrity and respect for interactions between employees, the greater public and community." Working closely with OCSD, our HDR team developed a design solution that engages the public through educational experiences, prioritizes employee well-being, and returns value for public investment, all while focusing on precedent-setting, but cost-conscious, sustainability goals. With nearly every design feature contributing to improved green building performance, the overall design is practical, timeless, and thoughtful.

Key Personnel & Staffing

The key to efficient project delivery is assigning qualified professional staff who can deliver results. We have established good working relationships with many municipalities and will bring those resources to the Districts to support tasks under this contract. As specific tasks are defined, we will be responsive and find the right technical staff, either from within our team, or by engaging the appropriate specialized staff.

HDR is proposing an experienced team of fully committed staff that will work in partnership with the Districts' staff. HDR's team exceeds the RFP requirements and is organized by areas of expertise. Our team has the resources, tools, experience, and commitment to be an effective partner for the Districts.

We offer the Districts with the right resources to tackle and complete any assignment. Our team was built to meet the anticipated needs of this design contract and is well-suited to staff your projects with local talent and a reach back for additional support staff. The organization of our team, with key personnel listed, is shown on the following page. Resumes for all key team members are provided as requested in the Qualifications section. Resumes for additional technical support staff are available upon request.

> *"Luis is a very well respected and recognized water industry leader with expressional technical knowledge, high level of Integrity, and outstanding communication skills...Through his dedication and commitment to the water industry, he has made communities a better place to live while protecting the public health and the environment..."*
>
> **- Adel H. Hagekhalil, Executive Director and General Manager, Bureau of Street Services (City of Los Angeles, Streets of LA)**

Luis León, PE, BCEE, ENV SP
PROJECT MANAGER

Luis will serve as the Project Manager and will serve as the Districts' primary contact. Luis will be responsible for managing requests for proposals and overseeing the preparation of responses. He will also work with the task order manager we assign, based on the specific requirements of the work, to verify that the resources required for the proper execution of the work are made available to the Districts.

Luis is dedicated to delivering a quality product that accomplishes the project's goals and meets or exceeds client expectations. As Project Manager, Luis will maintain open communication with the Districts and HDR team and engage the right people that offer effective solutions. Through a collaborative and transparent environment, he will listen to stakeholder input to understand project drivers and reinforce that messaging with the HDR team. Luis will oversee all service categories in order to deliver the best experience for the Districts.

CA Professional Civil Engineer – No. 49330
ISI Envision Sustainability Professional – No. 24070
Board Certified Environmental Engineer – No. 10-20005

Years of Experience – 36 years

***P**: 909.377.8314*
***E**: Luis.Leon@hdrinc.com*

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

PRINCIPAL-IN-CHARGE
Joseph Nye, PE, PMP

PROJECT MANAGER
Luis R. León, PE, BCEE, ENV SP

QA/QC, TECHNICAL ADVISORS

CONVEYANCE DESIGN
Albert Rodriguez, PE
Neill Hampton, PE

HYDRAULIC MODELING
Anthony Henry

CONDITION ASSESSMENT & REHABILITATION
Dan Ellison, PE, SE

SEWER REHABILITATION AND SEWER DESIGN PROJECTS

SEWER REHABILIATION TECHNICAL LEAD
Luis R. León, PE, BCEE, ENV SP

SEWER DESIGN TECHNICAL LEAD
John Coffman, PE, CCM

TASK ORDER MANAGERS

Todd Engstrand, PE
Gail Masutani, Phd, PE
Brian Watanabe, PE

Alex Yescas, PE, CFM, ENV SP
Steve Friedman, PE, BCEE, PMP
Tom Hoffman, PE
Lock Kwan, PE

Mandira Sudame, PE
Kevin Calderwood, PE
Steve Pool, PE

SUPPORT

HYDRAULIC MODELING AND COLLECTION SYSTEM PLANNING
Leanne Hammond, PE, ENV SP
Joel Engleson, EIT

COSTRUCTABILITY AND CONSTRUCTION MANAGEMENT
Oscar Gonzalez, PE
Ron Perkins, PE, CCM

STRUCTURAL
Tom Hamlin, PE, SE

COST ESTIMATING
Pete Bredehoeft, CEP

ODOR CONTROL
Chris Easter, PE
Badri Badriyha, PhD, PE

FIELD SERVICES
Sean Hoss, PE
Lucy Jaramillo, NACE CP-2

DESIGN GUIDELINES
Dean Gipson, PE, JD
Chaandrika Balendhran, PE, BCEE

CADD/BIM
Daniel Celaya
Glenn Espanto
Norma Bacani
Paul Paramo

CIVIL DESIGN
Janelle Moyer, PE, CFM, ENV SP

FORCE MAINS
Charlie Allaben, PE
Curtis Gauthier, PE

CONDITION ASSESSMENT
Andi Corrao, PE
Brien Clark, PE, NACE CP-4

ENVIRONMENTAL
Tim Gnibus
Clint Meyer, AICP
Stephanie Shamblin-Gray, PE

Key Staff

From:	Lantin, Anna
To:	Paracuelles, Rosann
Cc:	Estrada, Gregorio; Friedman, Steve; Nye, Joseph
Subject:	RE: HDR Proposal for LACSD RFP No. 03956 - On Call Engineering Services for Sewer Design Section
Date:	Wednesday, July 28, 2021 11:39:03 AM
Attachments:	image001.png

CAUTION: EXTERNAL EMAIL.

Good morning Rosann,

We appreciate your consideration of HDR. Our commitment to LACSD does not change with Luis' departure and we are confident on our management and technical abilities of our team to deliver services for sewer design under this On-call Engineering Services contract. Our re-assignment (and contact information) will be as follows:

Project Manager: Gregorio Estrada, PE Gregorio.Estrada@hdrinc.com Phone: (714) 292-5494
Sewer Design Lead: Steve Freidman, PE steve.friedman@hdrinc.com Phone: (949) 533-6239

Both are highly qualified with extensive experience in the industry. Gregorio will be reaching out to you and will address any questions and follow-up on the changes to our proposal.

Thank you.

Anna Lantin, PE
Vice President | Southern California Area Operations Manager

HDR
3230 El Camino Real, Suite 200
Irvine, CA 92602
D 714.368.5691 **M** 657.436.3051
Anna.Lantin@hdrinc.com

hdrinc.com/follow-us

From: Paracuelles, Rosann <RParacuelles@lacsd.org>
Sent: Tuesday, July 27, 2021 9:18 AM
To: Lantin, Anna <Anna.Lantin@hdrinc.com>
Subject: HDR Proposal for LACSD RFP No. 03956 - On Call Engineering Services for Sewer Design Section

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Morning Anna

I am reaching out to you regarding HDR Inc.'s proposal for the subject Request for Proposal (RFP). I was informed recently that Leon Luis will no longer be with HDR, Inc. and he was the assigned

Project Manager for the On-Call Engr Services. So I wanted to check with you to see if you have re-assigned a new Project Manager for this work if awarded. Please call me if you would like to discuss further.

Thanks in advance for your prompt attention to this matter.

Sincerely,

Rosann Paracuelles, P.E.
Supervising Engineer | Sewer Design Section
562-908-4288 ext. 1614
rparacuelles@lacsd.org

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

Website | Facebook | Twitter | Instagram | YouTube

6.3

SECTION 6.3

Qualifications

6.3 Qualifications

Planning/Preliminary Engineering

HDR team members are leaders in planning, study projects, and preliminary engineering with emphasis on areas such as utility research, condition assessment, hydraulic modeling, alternatives analysis, permitting, preliminary cost estimates, master planning and development of technical studies, and preliminary design reports (PDRs) and drawings. Our approach is to start planning with the end in mind, so all aspects of the project are considered during planning, preliminary, and final engineering to deliver quality projects that are biddable and constructible.

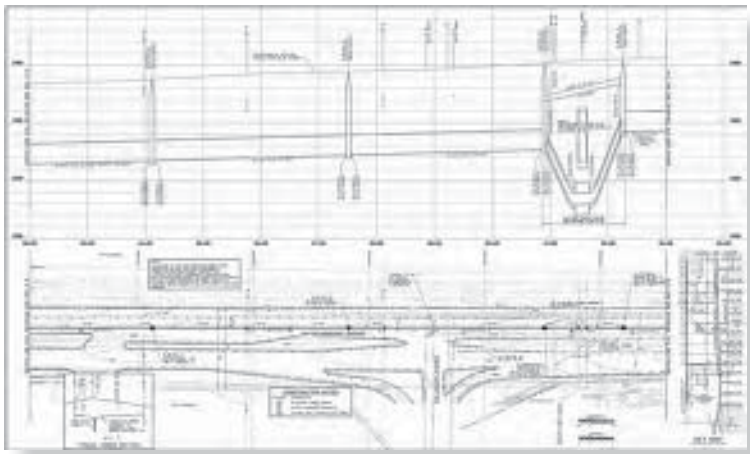
HDR will provide a seamless transitions from the planning and preliminary engineering phase through construction by:

- Coordinating closely with Districts staff and affected local, county, state and federal agencies.
- Employing a sound design philosophy.
- Utilizing qualified and experienced team members for planning and design of all key design skills, including civil, process/mechanical, electrical, architectural, HVAC, and structural designs.
- Using trusted sub-consultants to supplement the above skills and for providing survey, geotechnical and utility potholing services, as required.

Sewer pipelines are probably parts of the infrastructure assets most taken for granted. Yet, if they fail to perform, resulting problems can threaten health and life, as well as cause significant property damage. Communities are learning more about risk and the consequence of asset failure due to aging infrastructure, including prioritizing based on criticality and probability of failure. HDR has invested extensively in staffing, training, quality control, and execution of infrastructure condition assessment and rehabilitation (CA&R). We are well positioned to keep the Districts informed on the constantly evolving technologies and techniques, as well as emerging regulations, and to assist you in performing condition assessment and rehabilitation studies and design.

Conveyance Pipelines

As industry leaders, HDR has been involved in planning and design of major pipelines throughout the country from the 4.5-mile, 42-inch diameter First Creek Interceptor for Aurora Water, to preliminary and final managemnt of the 7.5-mile South Platte Interceptor, with diameters from 30-84 inches, several tunnels and crossings of E470 and the South Platte River. HDR also designed a portion of Orange County Sanitation District's new 54-inch gravity sewer parallel to the Santa Ana River (SAR) and State Route 91. The project also consisted of a 1,300-foot-long, 10-foot diameter, 3-barrel siphon beneath the SAR, and 3,000 feet of additional tunneling of an 84-inch casing along deep portions of the alignment and across Gypsum Canyon Road. HDR's southern California staff has several decades of cumulative experience providing a wide range of support for clients' water quality, storage, and conveyance projects. HDR has designed individual



San Bernardino Avenue Trunk Sewer

Our Project Manager, Luis León, also managed design and construction of projects such as the Valley Boulevard and San Bernardino Avenue Trunk Sewers for the City of Fontana, the Rehabilitation of the Avenue 62 and ID53 Trunk Sewers for Coachella Valley Water District and Pierce County Chambers Creek Sewer Tunnel Rehabilitation.

facilities and entire water systems for municipal and industrial clients. Our local staff, supplemented with our regional pipeline experts, will provide the depth of resources necessary to serve the Districts' needs from our local offices.

Our engineers strive to optimize life cycle cost with functional requirements. They consider the technical design criteria required to properly size facilities, including production capacity, delivery pressure, and the physical environment it is passing through. We consider the following elements when analyzing pipeline capacity: operating pressure and allowable pressure drop; compression requirements and costs; valve spacing; pipe material and wall thickness; metering and interconnection; and pipeline safety.

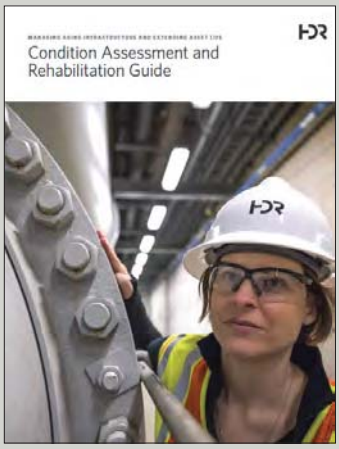
Our engineering team also understands the importance of material selection when it comes to pipeline and facility design. This task has become more diverse, since today modern engineering materials offer a wide spectrum of attractive properties and viable benefits. Selecting materials not only considers cost-effectiveness, but also the technical integrity, health, safety, environmental aspects, and sustainable development of the asset. We ask the necessary questions to help make sure the right materials are supplied and installed as designed.

Sewer Improvements & Rehabilitation Projects

Among the important information about a sewer system is the condition of the sewer pipes from a structural, maintenance and physical dimension perspectives. Several of our team members, including Luis León, are certified Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP) Users and Trainers, and will bring their expertise to this contract. The PACP method has become the standard in the industry, which will allow cracks, voids, debris, grease, ovality, roots, sags, offsets, and laterals to be described in a standard format across the country by PACP codes and provides standardization and consistency in evaluating pipe conditions and analyzing CCTV results.HDR has successfully used the PACP system to conduct the assessment of entire sewer systems like San Antonio, Honolulu, Winston Salem and others.

Where applicable, HDR will apply our recent experience to consider the use of trenchless technologies for new construction (e.g., microtunneling, bore and jack) and for rehabilitation (e.g., cured-in-place liner, pipe-bursting, fold-and-form, slip-lining) to reduce community impacts and save cost where applicable. HDR brings considerable

HDR offers a team with unparalleled and extensive experience in supporting large sewer programs and design and rehabilitation of sewer lines. Luis León has managed and participated in the design and construction of hundreds of miles of important trunk sewers in Fontana, Los Angeles, Pomona, Sacramento, Camp Pendleton, Orange County, and Riverside County to name a few.



In the last half of 2019, HDR published our latest Condition Assessment and Rehabilitation Guide, to provide our clients and others with readily available summarized information on topics such as:

- **General process for condition assessment of pressure and gravity pipelines**
- **Assessing corrosion risk by conducting corrosivity surveys**
- **Various technologies available and that can be used for performing condition assessment of pressure and gravity pipelines, treatment facilities, tank and reservoirs; including advantages, limitations, size applications and expected information of these technologies**
- **Available technologies for pipeline rehabilitation for both pressure and gravity pipelines; also including advantages, limitations, size applications, maximum installation lengths and potential construction and consumer disruption times**
- **Condition assessment if treatment facilities and pump stations**
- **Condition assessment of tanks and reservoirs**
- **Asset management and how the condition assessment data integrates into your overall asset management program for water and wastewater facilities**

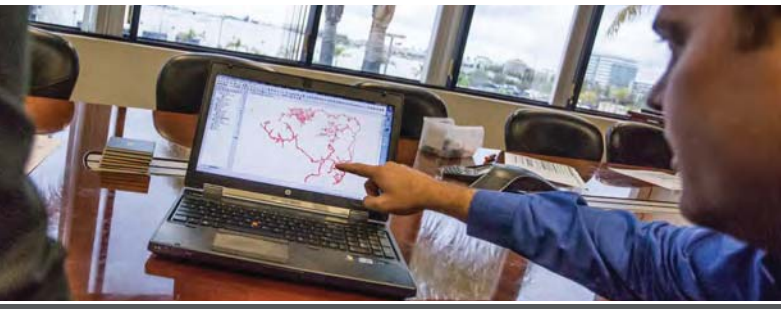
We will leverage this expertise and collaborate with you to select and implement the most appropriate and most cost effective technology or combination of technologies. For your reference, HDR's Guidebook can be found at the link below.
HDR's Condition Assessment and Rehabilitation Guide

bid tabulation information on a variety of pipeline new construction and rehabilitation projects that can be used to provide a thorough evaluation of the trade-offs in considering these technologies. Luis León bring extensive experience and lessons learned from sewer rehabilitation projects such as the City of Fontana Spot Repairs project, Camp Pendleton Sewer Line and Manhole Rehabilitation and Replacement Program, and rehabilitation projects for the cities of Roseville, CA, and Newark, New Jersey.

Our approach to sewer pipeline rehabilitation will maintain or improve the hydraulic capacity while extending the service life of the sewer system. HDR will work with the Districts staff to develop a selection matrix and weighting criteria to evaluate competing rehabilitation technologies. Our approach to sewer rehabilitation includes an evaluation of rehabilitation options that includes criteria such as bypass requirements, flow capacity, durability and properties of the rehabilitation material, safety during construction, special QA/QC requirements, track record, constructability, access requirements, cost, and impact to the community. HDR will develop a cost analysis for several sewer system repair and rehabilitation methods to determine the most cost-effective method for sewer rehabilitation.

Hydraulic Modeling

HDR has extensive experience in all types of numerical modeling of water structures, varying in scope and techniques to cover open-channel, pressurized flow, one-dimensional, two-dimensional, and three-dimensional models, steady state and dynamic, as well as hydrologic models from the simple to the sophisticated. Our distribution system modeling experience covers a combination of surface water, groundwater, and recycled water sourced systems, many including water quality components. Our clients have engaged our services for a variety of reasons, ranging from strategic planning to operational assessments, and our expertise is drawn from years of hands-on implementation and real-world knowledge of how facilities are built and how they operate.



HDR has successfully delivered hydraulic analysis and recommendations under HDR's City of Carlsbad Utility Modeling Master Agreement and the City of Vista On-Call Hydraulic Model Maintenance Contract.

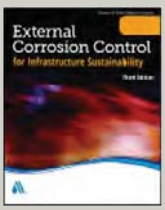
HDR's hydraulic modeling resources include a local team with expertise in all aspects of water, recycled water, and sewer system modeling. Our experts can help you with model construction/calibration/validation, training, master planning or sub-area master planning evaluations, and design of pipelines and associated facilities. Recently, our HDR modeling team uncovered a discrepancy in the InfoSWMM model that impacted how depth to diameter (d/D) ratios were reported and mapped. Based on our request, this discrepancy was resolved in the next InfoSWMM release. Nationally, HDR's work providing third party field validation of proposed capital improvement program (CIP) projects that were recommended based on conservative approaches to capacity modeling has enabled many agencies to better prioritize the proposed projects.

HDR has completed complex water and wastewater facilities planning modeling, design, and construction projects around the U.S. Many of these projects have addressed issues such as how to increase long-term capacity, regulatory complaints and sewer system operational optimization. We have developed hydraulic models for entire water system facilities including pumping, flow regulation, distribution, storage, and treatment. HDR models developed for sewer collection and water distribution systems have focused not only on master planning and design applications, but also extensively on understanding operations through development of extended period models with individual facility controls and extensive demand pattern development. HDR has used and is very familiar with all the industry's hydraulic models, many of which also directly interface with GIS such as ArcGIS.

Develop Construction Cost Estimates

When estimating costs of construction, HDR uses the expertise of our construction estimators, a team of professional construction cost estimators with diverse backgrounds. Our senior cost estimators have over 80 years of in estimating public works projects. HDR has invested over $300,000 in estimating hardware and software and developed a database containing over 70,000 cost items. This investment has dramatically improved estimating accuracy and productivity. In line with Districts practices, HDR will develop estimates at the 50% project design level; this estimate will then be updated to at the 90% and final project design levels.

Design Guidelines



HDR has leadership associates in positions within industry associations, including Water Environment Federation (WEF), WEF Collection Systems Committee, American Society of Civil Engineers (ASCE), American Water Works Association (AWWA) Pipeline Rehabilitation Committee, North American Society For Trenchless Technology (NASTT) and National Association of Sewer Service Companies (NASSCO). Our contributions have been driving standard practices, guidelines and new standards for the pipeline design and rehabilitation industry.

6.3.1 Company Experience and Past Performance

HDR has been providing as-needed services to municipal agencies in Southern California for nearly 25 years, including, Los Angeles Department of Water and Power, Los Angeles Department of Public Works Bureau of Sanitation, Los Angeles County Department of Public Works, Metropolitan Water District of Southern California, and the City of San Diego.

Because of our extensive experience in providing as-needed services to large public agencies, HDR has proven tools in place to quickly mobilize project teams and respond to the varying needs of this contract. Our experience also means that we thoroughly understand Los Angeles County Sanitation Districts, and the unique challenges facing public agencies. This experience has resulted in a refined approach that will provide extensive resources, rapid response, flexibility, and quality a work product for the Districts.

Relevant Project | Owner	Condition Assessment	Sewer Design	Sewer Rehabilitation	Large Size	Trenchless Technologies	Sewer Force Mains Design	Sewer Force Mains Rehabilitation	Hydraulic Modeling	Environmental/ Planning	Construction Support
Collection System Maintenance for Sewer Rehabilitation | Honolulu, HI	•		•	•	•	•	•		•	•
San Antonio Sewer Overflow Reduction Program Management | San Antonio, TX	•		•	•	•			•	•	
Collection System Improvements Program | City/County Utility Commission, Winston-Salem, NC	•	•	•	•	•	•		•	•	•
Collection System Asset Management Program | Johnson County Wastewater	•	•	•	•	•	•	•		•	•
Santa Ana River Interceptor Relocation | Orange County Sanitation District, CA		•		•	•					
Inspection and Assessment of Large Wastewater Pipelines & Pump Stations | City of San Diego	•		•	•	•				•	
Old Town Sewer Rehabilitation | Eastern Municipal Water District		•			•			•	•	•
Browning Trunk Sewer Improvements Project | East Orange County Water District		•	•		•			•	•	•
Southeast Interceptor Rehabilitation | Portland, OR	•		•	•	•					
Vista Sewer Mitigation Project | City of Vista			•						•	
North Outfall Sewer Condition Assessment and Rehab | LA Sanitation & Environment	•	•	•	•	•			•		
Assessment and Rehabilitation Relief Interceptor | Trinity Water Authority, TX	•		•	•	•				•	
Sewer Pipeline Rehabilitation Program | Clark County Water Reclamation District	•	•	•	•	•	•	•		•	•
Requa Interceptor Design | Valley Sanitary District		•		•	•				•	•
P-1046 & P-1045 Design-Build of Wastewater & New Water Conveyance | NAVFAC Southwest		•			•	•		•	•	•

PROJECT DETAILS

CLIENT
City & County of Honolulu,
Dept. of Environmental Services
A: 1000 Uluohia Street, Ste 308
Kapolei, Hawaii 96707
P: 808.768.3486

REFERENCE:
Ross Tanimoto, Deputy Director, City & County of Honolulu, Dept. of Enviromental Services,
P: 808.768.3482
E: rtanimoto@honolulu.gov

PROJECT STATUS
Completed 2020

CHANGE ORDER % RATE OF PROJECT
Less than 2%

KEY PERSONNEL
Luis León (Technical Lead);
Dan Ellison (Technical Support);
Dean Gipson (Technical Advisor);
Steve Friedman (Technical Support)

Wastewater Program Management for Consent Decree and Collection System Maintenance (CSM) and Staff Augmentation for Sewer Rehabilitation

City & County of Honolulu, Dept. of Environmental Services

Honolulu, HI

As the prime consultant for the City and County of Honolulu's Wastewater Program Management for Compliance for the FACD, we were tasked with implementing a program that was in compliance with the State of Hawaii Department of Health (DOH) and the EPA requirements under their 2010 FACD.

We assisted the City with identifying needed capital improvements for consent decree compliance, developing capital improvement projects in the collection system, wastewater system standards, project controls and schedules, design of rehabilitation projects, monitoring of on-going contract schedule performance, construction management activities related to sewer rehabilitation, recommendations for operational and maintenance process improvements, providing training, and administrative and professional support staff. Our team consisted of a blend of responsive, local professionals through our deep bench of resources in Honolulu, supported by national technical experts and professionals with experience in EPA Consent Decree compliance. The estimated value of the improvements is estimated to be $5 billion over its 25-year span.

Our team also supported the City's Wastewater Collection System Maintenance with construction managers, resident engineers, senior inspectors, inspectors and engineering through the initial phase of the FACD that required 300 miles of TV inspection and evaluation; 63 miles of sewer collection system repairs, rehabilitation and replacement projects.

We continue to assist with the development of task orders for point repairs, sewer system rehabilitation, manhole repairs and relocation projects during the subsequent phases of the sewer rehabilitation program. We also assist the City's DDC with the identification of projects for major sewer collection system repairs.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Design of sewer rehabilitation projects
- ✓ Cost estimating
- ✓ Update of guidelines and procedures
- ✓ Special studies

Sanitary Sewer Overflow (SSO) Reduction Program Management

San Antonio Water System (SAWS)

San Antonio, TX

PROJECT DETAILS

CLIENT
San Antonio Water System
A: 2800 US Hwy 281 N
San Antonio, TX 78212
P: 210.704.7297

REFERENCE:
Jeff Haby, PE
VP Production & Treatment
P: 210.233.3747
E: jeff.haby@ saws.org

PROJECT STATUS
Completed 2015

CHANGE ORDER % RATE OF PROJECT
N/A

KEY PERSONNEL
Luis León (Technical Advisor);
Albert Rodriguez (Task Manager);
Dean Gipson (Technical Support);
Anthony Henry (Hydraulic Modeling)

In July 2013, the U.S. Environmental Protection Agency (EPA) issued a Consent Decree requiring the San Antonio Water System (SAWS) to reduce overflows from its sanitary sewer system. SAWS retained HDR as the Program Manager on the $1 billion SSO Reduction Program. As Program Manager, HDR is working with SAWS to meet all compliance requirements, including extensive condition and capacity assessment of the existing system. This work includes developing program-wide strategies for condition and capacity assessment, performance measurement, risk management, and CIP project definition. SAWS and HDR have established an integrated team of SAWS staff, HDR staff, and subconsultant staff in every area of the program in order to bring in needed expertise while expanding SAWS staff skills and retaining SAWS staff institutional knowledge. Under the Capacity Assessment task, HDR developed Standard Operating Procedures for model development and calibration, which are being used by SAWS Master Planning Department staff as they rebuild and calibrate the four wastewater collection system models using InfoWorks ICM software by Innovyze. SAWS has contracts with Hach and ADS to install and maintain a total of nearly 250 flow meters and 50 rain gauges in the SAWS collection system. HDR assisted SAWS in selecting meter locations and reviews vendor monthly reports to help identify potential data problems so that they can be resolved by the vendors. HDR's meteorology group also provided radar rainfall data for select storms for model calibration. HDR developed a detailed schedule of capacity assessment activities needed to address the requirements and deadlines of the Consent Decree, including a unique field verification process that will utilize metering data collected near model-predicted capacity constraints. This process was negotiated with EPA in order to allow SAWS to confirm a capacity constraint exists prior to recommending a capital improvement projects. Additionally, HDR is developing the alternatives analysis process that will be used to evaluate and select capacity improvements projects and provide critical coordination between the Condition Assessment and Capacity Assessment tasks.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Hydraulic modeling
- ✓ Update of guidelines and procedures
- ✓ Special studies
- ✓ Sewer rehabilitation

PROJECT DETAILS

CLIENT
Winston-Salem/Forsyth County Utilities (WSFCU)
A: 100 East First Street
Winston-Salem, NC 27101
P: 336.747.7307

REFERENCE:
Michael Stover, PE
Assistant Director - Operations
P: 336.747.6840
E: MichaelS@cityofws.org

PROJECT STATUS
Completed 2021

CHANGE ORDER % RATE OF PROJECT
Less than 2%

KEY PERSONNEL
Luis León (Technical Lead);
Dan Ellison (Technical Support);
Dean Gipson (Technical Support);
Anthony Henry (Hydraulic Modeling Support)

Winston-Salem Collection System Improvement Program

Winston-Salem/Forsyth County Utilties (WSFCU)

Winston-Salem, NC

WSFCU operates a complex wastewater collection and treatment system consisting of 1,800 miles of gravity sewer, two wastewater treatment plants, and over 50 wastewater pump stations. In 2014, EPA issued a 308 letter, requesting additional information about the performance of the collection system. HDR provided some assistance to WSFCU and WSFCU was ultimately issued a notice that EPA was not taking any immediate enforcement or compliance action, but that they would monitor the system's progress towards reduction of SSOs and Management Operations and Maintenance program implementation over the next two years.

Since 2016, HDR has been providing operational optimization and overall program management, as well as condition and capacity assessment, capital project development and prioritization, and design and construction phase services for WSFCU. Combining capital improvements and optimization of operations and maintenance activities, HDR works with WSFCU to control the cost of ownership, while improving system reliability. To continually assess program effectiveness, HDR annually coordinates to update the original system risk assessment completed in 2016. This uses newly-collected condition assessment data so that WSFCU has up-to-date and comprehensive understanding of the risk associated with their portfolio of collection system pipe assets.

As part of the CSIP, a long-term condition and capacity assessment program identifies and prioritizes repair, rehabilitation, and replacement of lines to improve collection system performance and reduce overall system risk. The program team provides condition assessment through a comprehensive approach, including a CCTV inspection program and stand-alone SSES projects. Capacity assessment uses flow monitoring, hydraulic modeling, and capacity verification. These results identify and prioritize system repairs and improvements, while assisting with making long-term capital planning and rate decisions. As construction projects are identified, the CSIP team prioritize decisions and uses a range of delivery options including on-call IDIQ services for emergency repairs, PDB for urgent needs, and traditional DBB for planned rehabilitation work.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Design of sewer rehabilitation projects
- ✓ Cost estimating
- ✓ Update of guidelines and procedures
- ✓ Special studies

PROJECT DETAILS

CLIENT
Johnson County Wastewater
A: 11811 S. Sunset Drive, Suite 2500, Olathe, KS, 66061
P: 913.715.8500

REFERENCE:
Aaron Witt, PE
Chief Engineer
P: 913.715.8546
E: Aaron.Witt@jcw.org

PROJECT STATUS
Completed 2016

CHANGE ORDER % RATE OF PROJECT
Less than 1%

KEY PERSONNEL
Luis León (Technical Advisor)

Collection System Asset Management Program (CSAMP)

Johnson County Wastewater (JCW)

Johnson County, Kansas

As the Johnson County Wastewater (JCW) collection system and workforce continue to age, investments in maintenance, repair, rehabilitation, and knowledge transfer to sustain desired service levels and risk tolerances will continue to grow. Increasing investment needs, coupled with limited resources, has driven JCW to continuously improve the efficiency and effectiveness of service delivery while continuing to execute day-to-day work functions. To meet this challenge, JCW and HDR staff collaborated in the development and execution of JCW's Collection System Asset Management Program (CSAMP) Implementation Plan which establishes a clear, practical, and strategic path forward. This plan identifies, prioritizes, coordinates, and schedules continuous improvement initiatives at a manageable pace that strives to balance staff availability and continuous improvement objectives. The asset management principles this program is built upon are applicable to utilities of all sizes and types. The efforts completed through this program have enabled JCW to forecast maintenance, condition assessment, and renewal investment needs with a high level of confidence, justify appropriate investment levels, focus limited resources, increase operational efficiency, and facilitate knowledge transfer. Key program accomplishments to date include:

- Development and execution of a multi-year Implementation Plan for the CSAMP to strategically plan, coordinate, and implement continuous improvement initiatives.
- Development and implementation of automated prioritization tools that apply JCW's business decision making logic to live inspection, maintenance, and asset data stored with JCW's Computerized Maintenance Management System (CMMS) to make decisions and prioritize rehab/repair, inspection, and maintenance investments. These tools were initially developed for pipe renewal and maintenance. Similar automated tools have been developed to execute the structural rehabilitation and I/I reduction program for manholes.
- A data driven update to JCW's preventive maintenance cleaning strategy focusing cleaning resources on cleaning pipes at the right time, allowing JCW to clean "dirty" pipes more often, extend the life of pipes by cleaning "clean" pipe less often.
- Implementation of a Key Performance Indicator (KPI) Plan to measure and document collection.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Update of guidelines and procedures
- ✓ Special studies

PROJECT DETAILS

CLIENT
Orange County Sanitation District
A: 10844 Ellis Ave
Fountain Valley, CA 92708
P: 714.962.2411

REFERENCE
Greg Yi
Project Manager
P: 714.834.7537
E: gregyi@ocpw.ocgov.com

PROJECT STATUS
Completed 2014

CHANGE ORDER % RATE OF PROJECT
Less than 2%

KEY PERSONNEL
Steve Friedman (Project Manager);
Dan Ellison (Engineer);
Curtis Gauthier (Engineer);
Sean Hoss (Investigations);
Mandira Sudame (Engineer);
Badri Badriyha (Odor Control);
Stephanie Shamblin Gray (Project Engineer)

Santa Ana River Interceptor Relocation

Orange County Sanitation District (OC San)

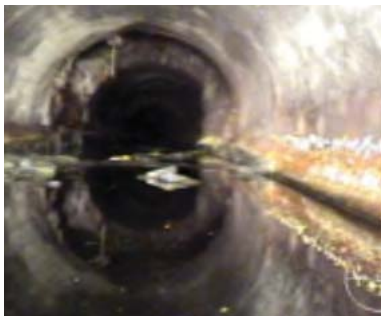
Fountain Valley, CA

HDR designed a portion of the project which included: a new 54-inch gravity sewer parallel to the Santa Ana River (SAR) and State Route 91, a 1,300-foot-long, 10-foot diameter, 3-barrel siphon beneath the SAR, 3,000 feet of additional tunneling of an 84-inch casing along deep portions of the alignment and across Gypsum Canyon Road, and a metering station all in line with OCSD standards. We prepared conceptual designs, including hydraulics, to confirm the horizontal and vertical alignments. Particular attention was necessary to locate the facility within a very narrow construction corridor with environmental constraints of the SAR on one side and the Caltrans right-of-way on the other.

Multiple alternative alignments were necessary to design a constructible alignment across the SAR to provide the required capacity within the minimal footprint. We worked closely with the District to identify alternatives and potential impacts to the design, OCSD siphon guidelines, construction, and operation of the siphon. Trenchless construction was required for a 1,300-foot-long tunnel and siphon under the Santa Ana River and to construct several thousand feet of 60 feet deep tunnels in the area between a freeway and protected state lands where there was no room to construct an open trench and with high groundwater. In addition to working with OCSD and SAWPA, the project also had to coordinate with other stakeholders like OCPW, Caltrans, and various land owners, including: the State of California, recreational vehicle park, Orange County Parks and Recreation, and Cities of both Yorba Linda and Tustin.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Design of new sewers
- ✓ Cost estimating
- ✓ Update of standards



PROJECT DETAILS

CLIENT
City of San Diego
A: 9192 Topaz Way
San Diego, CA 92123
P: 858.654.4100

REFERENCE:
Stephanie Pang
Associate Civil Engineer
P: 858.292.6428
E: Spang@sandiego.gov

PROJECT STATUS
Completed 2018

CHANGE ORDER % RATE OF PROJECT
N/A

KEY PERSONNEL
Dean Gipson (Project/ Contract Manager)
Mandira Sudame (Task Lead)
Brien Clark (Condition Assessment)
Badri Badriyha (Technical Support)
Dan Ellison (Technical Advisor)
Tom Hamlin (Structural Engineer)

Inspection and Assessment of Large Wastewater Pipelines and Pump Stations

City of San Diego

San Diego, CA

HDR recently completed a five-year contract to inspect and assess large pipeline and pump stations for the Public Utilities Department. For each task, HDR meets with the City's stakeholders to understand the issues and objectives to be solved, prepares a scope and fee and executes the work in a timely and efficient matter. Because of the field aspects of these tasks, extensive coordination with operations and the community was required to assure that the work went smoothly. We routinely executed dry run inspections of the facilities to identify and resolve potential issues before the actual work starts. Below are relevant examples of each task.

North & South Metro Interceptor Inspection and Assessment
Inspect about 10 miles of reinforced concrete wastewater pipelines, ranging in diameter from 42-in to 108-in. Portions of the pipe are lined with epoxy or vinyl sheets. Performed a criticality assessment and soil Corrosivity analysis to determine the 10 most critical miles. Required extensive safety coordination for the physical entry inspections as well as the CCTV inspections. Prepared CIP recommendations for repair and rehabilitation.

South Effluent Outfall Connection Inspection and Assessment
Using manned entry, HDR inspected approximately 600 feet of 108-in diameter reinforced concrete pipe and three 54-in diameter epoxy lined steel header at the main wastewater treatment plant. Inspectors repaired minor defects in the epoxy lining and recommended repairs for the remaining defects. Required close coordination with plant and confined space staff.

Midway Village 90-in NMI Assessment and Rehabilitation
HDR responded to an emergency call from the City to assist with the design and repair of a 9-in dia hole that had been drilled into its 96-in diameter reinforced concrete sewer pipe. HDR engineers collaborated with City crews to design a rehabilitation method that occurred in groundwater contaminated with hydrocarbons. Within one month the repair was successfully completed.

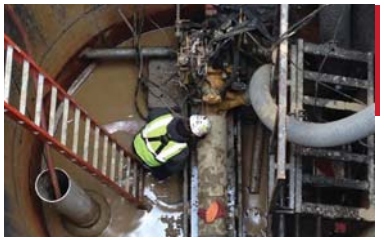
Inspection of an 8" diameter Blended Sludge Line
HDR inspected more than 800 feet of the blended sludge line (BSL) inside the City's South Bay Water Reclamation Facility using CCTV technology. HDR designed and installed an access port and vault to insert the camera. The BSL is a critical facility with no redundancy so the team provided extensive planning and phasing to complete the field work and provide results for the City.

Pump Station 77 Force Main Inspection
Pump Station 77A/B (PS77A/B), located in the Rancho Bernardo community of San Diego, discharges wastewater via a 20-inch diameter ductile iron forcemain. HDR assessed the condition of twelve (12) above ground pipe crossings segments using ultrasonic C-scan techniques. Using the results of this inspection and the results from two other studies, HDR performed an extreme value statistical analysis to estimate probable corrosion rates of the pipeline.

Inspection and Assessment of the Kettner Boulevard Trunk Sewer
HDR inspected approximately 1,700 feet of the Kettner Boulevard Trunk Sewer in downtown San Diego ranging in diameter from 24-inches to 45-inches. The work included an at grade inspection of the sewer manholes, an internal inspection of the sewer segments by closed circuit television (CCTV), and a thorough engineering evaluation of the field data. The inspection identified about $200,000 of rehabilitation to be completed in the next 5 years.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Condition assessment
- ✓ Sewer rehabilitation projects
- ✓ Cost estimating
- ✓ Update of guidelines and procedures
- ✓ Special studies



Old Town Sewer Final Design

Eastern Municipal Water District | *Temecula, CA*

Old Town Temecula is a congested public and historic area that hosts many visitors and events. The City of Temecula (City) anticipates further developments that will increase the density of Old Town and projected sewer flows. Eastern Municipal Water District's existing 8-inch sewer in Front Street has insufficient capacity for these projected sewer flows. HDR provided preliminary and final design of a new sewer parallel to the existing 8-in. sewer main to increase sewer capacity. The project includes 3000 ft. of 15-inch diameter sewer to be installed by pilot tube guided bore; a trenchless construction method. It involves the installation of 10 shafts within the cross-streets of Old Town Front St. in Temecula. HDR worked closely with the Contractor to resolve unforeseen ground conditions that prevented successful use of PTGB. Half of the project was changed to traditional jack-and-bore construction using 36-inch casing at three launching locations with drives of up to 750 feet. Other project challenges include establishing the final horizontal and vertical alignment determining subsurface conditions with sufficient certainty deciding on the best construction technology executing the necessary connections to existing sewer coordinating with and relocating existing utilities and minimizing construction and operational impacts to the community.

PROJECT DETAILS

CLIENT
Eastern Municipal Water District
A: 2270 Trumble Rd.
Perris, CA 92570
P: 951.928.3777

REFERENCE
Joe Mouawad
General Manager
P: 951.287.4094
E: mouawadj@emwd.org

PROJECT STATUS
Completed 2013

CHANGE ORDER %
RATE OF PROJECT
Less than 1%

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Trenchless technologies used including pilot tube guided bore and jack and bore
- ✓ Construction in dense utility area
- ✓ Construction/Pubic outreach for work within highly popular commercial area

KEY PERSONNEL: Steve Friedman (Project Manager); Albert Rodriguez (Technical Advisor); Curtis Gauthier (Staff Engineer); Stephanie Shamblin Gray (Staff Engineer); Chandrikaa Balendhran (Engineer)

Browning Trunk Sewer Improvements Project

East Orange County Water District | *Temecula, CA*

As EOCWD's Design-Build Partner, HDR is currently working on the ID1 Capacity, Reliability, and Augmentation for Browning Gravity Sewer Improvements Project. As a result of the SMP showing the lack of capacity of the existing sewer main lines listed below, HDR is currently providing design and engineering for:

1. Browning Avenue, from Bent Twig Avenue to Mitchell Avenue: to replace and upsize of 5,510 feet of existing sewers.
2. B Street, from 6th Street to El Camino Way: to replace and upsize of 1,780 feet of existing sewers.
3. Fallen Leaf Place Sewer, a continuation of the Browning Avenue Sewer, crossing near Fallen Leaf Place to Edinger Avenue – Design of a new parallel 320-ft, 21-inch sewer crossing under an existing flood control channel and the SPRRA tracks
4. Clarissa Lane Sewer: to replace and upsize of an existing 500-ft siphon crossing under an existing flood control channel.
5. Crawford Canyon Sewer: to replace and upsize of approximately 600 feet of existing sewer.

PROJECT DETAILS

CLIENT
East Orange County Water District
A: 185 N. McPherson Road
Orange, CA 92869
P: 714.538.5815

REFERENCE
Jeff Smyth, PE
Engineering Manager
P: 714.538.5815
E: jsmyth@eocwd.com

PROJECT STATUS
Project is currently being executed.

CHANGE ORDER %
RATE OF PROJECT
N/A - Not yet constructed.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Design of new sewers and sewer rehabilitation projects
- ✓ Cost estimating
- ✓ Update of standards

KEY PERSONNEL: Luis León (Project Manager); Steve Friedman (Design Manager); Todd Engstrand (Task Manager); Joel Engleson (Hydraulic Modeling); Kevin Calderwood (Technical Support); Daniel Celaya (CADD/BIM); Tim Gnibus (Environmental)

Southeast Interceptor Rehabilitation

City of Portland | *Portland, OR*

The City of Portland's Bureau of Environmental Services contracted with HDR to perform design services to rehabilitate portions of the Southeast Interceptor (SEI) sewer system: a cast-in-place concrete horseshoe tunnel, ranging in width from 66- to 72 inches, 15-50 feet deep, constructed in in the 1950s and located in busy urban streets.

HDR's scope of services included evaluation of the condition assessment performed by others, performing alternatives analysis for numerous rehabilitation methods, performing conveyance calculations the rehabilitation scenarios, and rehabilitation design for three selected segments, (totaling 6500 LF) of the SEI. The HDR team also performed structural analysis that determined that the tunnel was not in poor structural condition. The final design documents required the contractor to clean and remove accumulated sediments, pressure inject grout outside the structure walls, repair internal cracks and failed joints, and stabilize soils around several manhole structures. Due to the structural analysis results, the City eventually stopped the grouting program and de-prioritized the project, allowing the shifting of funds to other infrastructure that was at higher risk of failure.

PROJECT DETAILS

CLIENT
City of Portland
A: 1120 SW 5th Ave
Portland, OR 97204
P: 503.823.7300

REFERENCE
Kurt Robinson
City of Portland
P: 503.823.7133
E: Kurt.Robinson@portlandoregon.gov

PROJECT STATUS
Completed 2020

CHANGE ORDER % RATE OF PROJECT
Less than 2%

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Condition assessment
- ✓ Rehabilitation alternatives
- ✓ Special studies

KEY PERSONNEL: Kevin Calderwood (QA/QC)

Sewer Mitigation Program

City of Vista | *Vista, CA*

HDR was selected by Vista in 2019 to environmentally clear, permit, and design two projects covered under the Comprehensive Sewer Master Plan Update (CSMP, developed by HDR in 2017,) including the Vista-Carlsbad (VC1 - CIP 8258) and Oceanside-Vista (OV1 - CIP 8288) Sewer Trunk Access Improvements Projects.

Both projects are located in challenging environmentally sensitive areas, including Carlsbad's Buena Vista Creek Eco-Reserve, and outside Vista's jurisdictional limits. HDR successfully leveraged Vista's prior SPEIR and mitigation monitoring and reporting program (MMRP) to streamline the CEQA clearance process through the preparation of an Addendum. Both projects were cleared under CEQA in late 2019. HDR is currently assisting Vista with the acquisition of remaining federal and state regulatory permit approvals for each project based on our final engineering design, including Section 106 and 7 consultation in accordance with Section 404 of the Clean Water Act with USACE. The final design integrates with each of the sensitive stream corridors traversed by each access alignment to minimize mitigation requirements.

PROJECT DETAILS

CLIENT
City of Vista
A: 200 Civic Center Drive
Vista, CA 92084
P: 760.639.6174

REFERENCE
Jon Nottage, CPSWQ
Stormwater Program Manager
P: 760.643.5425
E: jnottage@ci.vista.ca.us

PROJECT STATUS
Project is currently being executed.

CHANGE ORDER % RATE OF PROJECT
N/A - Not yet constructed.

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Design of new sewers
- ✓ Cost estimating
- ✓ Environmental permits

KEY PERSONNEL: Clint Meyer (Project Manager); Janelle Moyer (Lead Designer); Gail Masutani (Civil / Pipeline); Daniel Celaya (CADD Manager); Tom Hamlin (Structural); Stephanie Shamblin Gray (Compliance)

North Outfall Sewer Condition Assessment and Rehabilitation

LA Sanitation & Environment | *Los Angeles, CA*

The City of Los Angeles Sanitation and Environment (formerly known as the Bureau of Sanitation) owns and operates an extensive and complex sewer system of more than 6,500 miles of pipes. The North Outfall Sewer (NOS) is one of the oldest and most critical trunk sewers that extends 55 miles in length, starting at 45-inches in diameter and ending in a semi-elliptical cross section measuring 12-ft wide by 10-ft high and 12-inches thick. HDR is providing condition assessment of of 8.77 miles of the NOS sewer (units 9, 10, 11, 14, 15, 16, 23, 24, 25 and 26) composed of clay tile lined concrete pipe, and brick pipes ranging in sizes from 30-in to 84-in and shapes varying from circular to arch. Following the inspections, HDR provides structural condition assessment of the NOS to determine the section or sections of pipe that may need to be replaced with entirely new pipe and others that may be able to be repaired/ rehabilitated using trenchless installation methods. The project team will then develop renewal plans that contain information that LASAN could provide to a contractor to execute rehabilitation of the segments of the NOS.

PROJECT DETAILS

CLIENT
LA Sanitation & Environment
A: 1149 South Broadway, 9th Floor
Los Angeles, CA 90015
P: 213.485.2210

REFERENCE
Ali Poosti
Division Manager
P: 323.342.6228
E: ali.poosti@lacity.org

PROJECT STATUS
Project is currently being executed.

CHANGE ORDER % RATE OF PROJECT
N/A

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Condition assessment
- ✓ Special studies for rehabilitation alternatives
- ✓ Cost estimating

KEY PERSONNEL: Luis León (Project Manager)

Assessment and Rehabilitation of West Fork Relief Interceptor (10WF-1)

Trinity River Authority | *Texas*

HDR performed an evaluation of structural condition and analysis of rehabilitation alternatives for badly corroded RCP wastewater pipeline 72 inches to 84 inches. Rehabilitation alternatives include: CIPP spiral wound spray-applied epoxy spray-applied polyurea and spray-applied geopolymer mortar.

HDR also investigated several structural and non-structural rehabilitation options and comparing these costs to sliplining WFRI-1 pipeline and WFRI-2 pipeline in development of two Preliminary Design Reports. As part of this project, HDR also reviewed the condition assessment for approximately 1,100 LF of the EF-G pipeline segment to determine if the 48" Ameron Flowtite fiberglass reinforced polymer mortar pipe that was installed in 2004 was functioning as intended and identify any structural or operational defects. The segment of EF-G that was assessed was found to be functioning properly with no degradation issues.

PROJECT DETAILS

CLIENT
Trinity River Authority
A: 5300 S. Collins
Arlington, TX 76018
P: 817.467.4343

REFERENCE
James McDonald PE
Technical Services Engineer
P: 817.493.5100
E: mcdonaldj@trinityra.org

PROJECT STATUS
Completed 2018

CHANGE ORDER % RATE OF PROJECT
Less than 1%

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Condition assessment
- ✓ Special studies
- ✓ Rehabilitation analysis

KEY PERSONNEL: Dan Ellison (Technical Lead)

P-1046A North Area Wastewater Conveyance

NAVFAC Southwest | *Marine Corps Base Camp Pendleton, CA*

HDR served as Designer- of-Record for Project P-1046A, a design-build project that included installation of new wastewater conveyance and pumping facilities at the Marine Core Base Camp Pendleton (MCBCP). The project included the following features:

- 7,000 feet of gravity new sewer pipelines & manholes and pipe capacity increase; approximately 2,500 feet of 8-inch pipe was upsized to 10-inch using pipe bursting.
- 28,500 ft. of 6-in through 20-in HDPE wastewater forcemain
- 4x new lift stations and 1x lift station upgrade with capacities ranging from 500,000 gallons per day up to nearly 2 mgd
- Emergency overflow storage for four lift stations
- Demolition of existing lift stations and a 1.5 mgd WWTP.

PROJECT DETAILS

CLIENT
NAVFAC Southwest
A: 1220 Pacific Hwy
San Diego, CA 92132
P: 619.532.2317

REFERENCE
Steve Rosenstein, PM
NAVFAC Southwest
P: 619.532.1500
E: Steve.Rosentein@navy.mil

PROJECT STATUS
Completed 2017

CHANGE ORDER % RATE OF PROJECT
0%

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Trenchless technologies including pipe bursting, HDD and jack-and-bore (beneath Caltrans and RR rights of way)
- ✓ Long forecemains
- ✓ Hydraulic modeling including evaluation of down gradient forcemains

KEY PERSONNEL: Steve Friedman (Project Manager); Charlie Allaben (Hydraulics); Curtis Gauthier (Project Engineer); Daniel Celaya (BIM); Norma Bacani (BIM); Tim Gnibus (Environmental)

Requa Interceptor Design

Valley Sanitary District | *Indio, CA*

HDR prepared construction documents for a parallel sewer interceptor to increase the Highway 111 sewer capacity to allow for construction of a new county jail facility. The design included 23,000 feet of 10 through 30-inch VCP gravity sewer inter-connections to existing manholes and existing manhole rehabilitation.

Project challenges included establishing an alignment that allowed for deep installation avoiding existing utilities crossing beneath railroad tracks and a Bureau of Reclamation irrigation channel developing a construction sequence that accommodated large community festivals and sensitive facilities like schools and a fire station and developing traffic plans that allow for two-way traffic along most of the alignment.

PROJECT DETAILS

CLIENT
Valley Sanitary District
A: 45500 Van Buren Street
Indio, CA 92201
P: 760.238.5400

REFERENCE
Ronald Buchwald
District Engineer
P: 760.238.5408
E: rbuchwald@valley-sanitary.org

PROJECT STATUS
Completed 2018

CHANGE ORDER % RATE OF PROJECT
Less than 1%

RELEVANCE & APPLICABILITY TO PROJECT

- ✓ Jack and bore beneath RR right of way
- ✓ Large diameter sewer
- ✓ Construction /public outreach within highly popular commercial area

KEY PERSONNEL: Steve Friedman (Project Manager); Sean Hoss (Project Engineer); Daniel Celaya (BIM); Badri Badriyha (Air Flow Modeling); Norma Bacani (BIM); Joel Engleson (Hydraulic Analysis and Modeling); Curtis Gauthier (Staff Engineer); Tim Gnibus (CEQA Addendum)

Luis León, PE, BCEE, ENV SP

Project Manager, Sewer Rehabilitation Technical Lead

Luis León has 36 years of U.S. and international engineering and management experience in the areas of master planning, feasibility studies, asset management, design (plans, specifications and estimates), permitting, and construction management of public and private infrastructure projects. These projects have included wastewater collection systems, water distribution facilities, storm drainage, transportation systems, and land development. Mr. León has also managed projects for the assessment, rehabilitation, expansion, and reconstruction of numerous utility systems for diverse and complex commercial, residential, and governmental projects. He has expertise in pipeline condition assessment, design and rehabilitation using innovative applications of trenchless technologies, and is recognized as a national leader in sewer collection systems by WEF.

EDUCATION

Bachelor of Science, Civil Engineering, Northrop University, 1985

REGISTRATIONS

Professional Engineer - Civil, Washington, No. 45744

Professional Engineer - Civil, Oregon, No. 93553

Professional Engineer - Civil, California, No. 49330

Professional Engineer - Civil, Arizona, No. 66287

Professional Engineer - Civil, Texas, No. 130263

Professional Engineer - Civil, Nevada, No. 013624

Professional Engineer - Civil, Minnesota, No. 56334

Board Certified Environmental Engineer, No. 10-20005

ISI Envision Sustainability Professional, No. 24070

CERTIFICATIONS

Trainer and User - National Association of Sewer Service Companies (NASSCO)

Pipeline Assessment Certification Program (PACP®)

Manhole Assessment Certification Program (MACP®)

RELEVANT EXPERIENCE

Structural Condition Assessment of the North Outfall Sewer Pipes, Los Angeles Bureau of Sanitation, *Los Angeles, CA*
Project Manager. Luis was the project manager for the inspection and assessment of 8.77 miles of the NOS sewer (units 9, 10, 11, 14, 15, 16, 23, 24, 25 and 26) composed of clay tile lined concrete pipe, and brick pipes ranging in sizes from 30-in to 84-in and shapes varying from circular to arch. Inspection technologies employed were robotic closed circuit television (CCTV), sonar on a floating platform and laser profiling. Following the inspections, Mr. León reviewed the data obtained to provide structural condition assessment of the NOS to determine the section or sections of pipe that may need to be replaced with entirely new pipe and others that may be able to be repaired/ rehabilitated using trenchless installation methods. The project will then develop renewal plans that contain information that LASAN could provide to a contractor to execute emergency rehabilitation of the segments of the NOS.

SSO Reduction Program including Condition Assessment and Capacity Assessment and Condition Remedial Measure Planning, San Antonio Water System, *San Antonio, TX*
Technical Lead. During this project, HDR has performed risk analysis to identify gravity sewers with elevated risk of SSOs and structural deterioration; developed a multi-year prioritized sewer inspection program including the use of CCTV, pole cameras, sonar and laser imaging systems; managed CCTV inspection contractors and led the assessment of over 2,000 miles of sewer inspection data in an integrated team with SAWS staff; and identified high priority structural remediation projects. Mr. León has been providing technical input and quality control of condition assessment and rehabilitation technologies applied to projects.

Collection System Improvements Program Management including Condition and Capacity Assessment, City/County Utility Commission, *Winston Salem, NC*
Technical Lead. Under this program, HDR has performed a comprehensive collection system optimization program for 1,800 mile collection system including operations review and 5-year optimization roadmap, condition and capacity assessments, and delivery of capital projects via both traditional and alternative methods. The project accomplished prioritization of SSES evaluations to address highest risk assets first and has completed immediate delivery of high priority projects via alternate delivery approaches. Mr. León has been providing technical input and quality control of several projects.

City of Thousand Oaks, Unit Y2 Interceptor Sewer Rehabilitation, *Thousand Oaks, CA*
Project Manager. The Unit Y Wastewater Interceptor (Unit Y) conveys a large volume of wastewater through a rugged, environmentally sensitive canyon in Wildwood Park, where road access is challenging. Most of Unit Y had been addressed except the final reach, Unit Y2, approximately 2,200 feet (ft) in length, and composed of two (2) partially pressurized 18-inch reinforced plastic mortar (RPM) "Techite" pipes that start at the inlet structure (Facility ID R10-NS101) located in the Sycamore Flats Camp Grounds. Luis successfully managed the team that developed field investigations (surveying and geotechnical), analysis of alternatives for rehabilitation and replacement, recommendation of most applicable alternative, preliminary design report, final design and bidding support services for the rehabilitation of the Unit Y2 interceptor using cured-in-place pipe (CIPP) to rehabilitate the pipes. The design also included three pressure manholes and modifications to the existing inlet structure and meter vault.

LUIS LEÓN (CONTINUED)

Lateral Assessment Certification Program (LACP®)

Inspector Training and Certification Program for Cured-In-Place Pipe Installation (ITCP® - CIPP)

Qualified SWPPP Developer, California SWRCB

HONORS / AWARDS
WEF Collection Systems Award, Sep. 2019

WEF Volunteer Service Recognition Program Award, Oct. 2017

WEF Collection Systems Committee National Golden Manhole Award, Oct. 2016

INDUSTRY TENURE
36 years

HDR TENURE
3 years

OFFICE LOCATION
Claremont, CA

CLASSIFICATION
Project / Contract Manager

Lift Station 40 Barrel 1 Force Main Condition Assessment and Rehabilitation, City of Phoenix
Technical Lead. Lift Station 40 (LS 40) Force Main, which conveys wastewater from LS 40 at Ray Road and I-10 approximately 3.1 miles north to a discharge structure located at Guadalupe Road and I-10. After completing an internal inspection using electromagnetic inspection technology with select external inspections, HDR recommended structural renewal of Barrel 1 of the 24-inch LS40 force main. The 3.1-mile ductile iron pipe was reported to have widespread external corrosion with through-wall pitting in multiple locations. After completing alternatives analysis, including CIPP, the recommended renewal method was loose-fit HDPE sliplining, which was determined to be the lowest cost option but also reduced diameter by 4 inches; however, due to an improved C factor, HDPE sliplining was able to maintain sufficient hydraulic capacity. The design project required selecting and locating access pits along the alignment. To plan for and reduce public impacts, HDR facilitated coordination with stakeholders, especially ADOT and the Arizona Grand Resort, which owns a golf course along 2,000 feet of the alignment. Mr. León provided technical input in the analysis of rehabilitation options, including CIPP, and in the design for rehabilitation of the existing 3.1 miles of existing 24-inch ductile iron force main via sliplining using a 20-in DIPS, DR17 PE4710 HDPE pipe structural liner.

Design-Build for the Rehabilitation and Construction of the Improvement District No 53 Trunk Sewer and the Avenue 62 Trunk Sewer, Coachella Valley Water District
Project Manager. Mr. León headed the design-build team for the repair, rehabilitation and construction of approximately 3.5 miles of the ID53 Trunk Sewer. The Construction of the ID53 trunk sewer was completed in late 2007, with vitrified clay pipe (VCP) with diameters of 33-inch and 36-inch pipe. In September of 2013, a segment of the sewer in Cook Street collapsed, creating a large sinkhole and prompting CVWD to promptly execute emergency bypass plans. Coachella Valley Water District (CVWD) contracted a consultant to perform an investigation of the potential pipe failure, status of the rest of the trunk sewer, and preliminary recommendations for the repair and/or rehabilitation of the collapsed segment and adjacent segments. As part of the investigations, Mr. León headed the cleaning and CCTV inspection of the pipeline, pipe penetrating radar, and petrographic analysis of segments of the VCP, which was observed to have efflorescence-type issues and pieces of pipe spalling from the interior surface of the pipe. CVWD then executed a design-build agreement to develop the design for the emergency repair/replacement of 1,400 feet of 33-inch VCP with 33-inch fiberglass reinforced pipe, rehabilitate a 400 feet of the existing pipe with cured-in-place pipe (CIPP), and rehabilitation of the remaining 3 miles of the ID53 trunk sewer. Mr. León also led the design-build team for the repair, construction and rehabilitation of approximately 3.5 miles of the Avenue 62 Trunk Sewer, designed and constructed by others in 2010-2011, under challenging soil and high groundwater conditions, with vitrified clay pipe (VCP) with diameters ranging from 33 to 48 inches. Construction included one mile of new 42-inch fiberglass reinforced pipe (FRP). Rehabilitation included grout injection to stop infiltration, installation of cured-in-place pipe, repair and/or replacement of existing PVC-lined manholes and existing pipe. The project also included replacement of 1-mile of an existing 80+ year old 20-inch diameter unreinforced concrete irrigation line.

Condition Assessment and Rehabilitation for Chambers Creek Wastewater Tunnel, Pierce County, WA, *Pierce County, WA*
Mr. León was the ***Lead Project Engineer*** for condition assessment and design of rehabilitation for 15,000 linear feet of the 72-inch Chambers Creek Interceptor Tunnel. The condition assessment used an advanced remote robotic inspection platform with laser and sonar profiling technology to develop a 3D profile of the tunnel, in addition to CCTV and hydrogen sulfide gas monitoring. The technology helped to clearly identify tunnel lining defects with minimum man entry and provided detailed dimensioning of the tunnel, which was crucial to selection of the most suitable rehabilitation method. Rehabilitation was complicated by the presence of a poured concrete low flow channel (cunette) installed on the bottom of the 72-inch diameter pre-cast concrete pipe; in addition, the tunnel is 60 to 90 feet underground and existing access portals are 5,000 feet apart. The project included an in-depth analysis of multiple rehabilitation methods including cured in place pipe (CIPP), glass-reinforced plastic pipe (GRP) sliplining, Ribline™ lining, and PVC sliplining. Following the study, Mr. León led the development of final plans, specifications and estimates for the rehabilitation of a portion of the tunnel using segmental sliplining with an arched-shape GRP. Bid alternates were added to the contract documents in order to allow the county to select based on the total of the base bid for 2,500-feet of rehabilitation and additive bid(s) that would add up to three sections of 1,000-feet each; this would allow for the county to provide as much rehabilitation within their overall budget and also provide for additional modifications to the existing drop structure. After bids were received, it was decided that a total of 3,500-feet would be rehabilitated.

LUIS LEÓN (CONTINUED)

2021 Large Diameter Sewer Rehabilitation, Pittsburgh Water and Sewer Authority, *Pittsburgh, PA*

Technical Lead. Mr. León is the technical lead for this large diameter sewer rehabilitation. Pittsburgh Water and Sewer Authority (PWSA) has selected to rehabilitate approximately 1,245 linear feet of 72-inch brick and stone combined sewer within S. 21st St and the South Side Park. This project was initiated due to its proximity to the South Side Park Improvements Project, which will begin construction in 2021 and will reduce cover over the existing sewer in several locations and will have heavy construction vehicle loads overtop of the sewer during construction. The 72-inch brick and stone combined sewer was constructed circa 1898 with three rings of brick and a Ligonier stone invert. The sewer has a minimum cover of 1.3′ and a maximum cover of 12.5′ in the pipe sections to be rehabilitated. When the South Side Park Improvements project has been completed, the existing sewer will have a minimum cover of 1.6′ and a maximum cover of 17′. Due to this sewer's large service area and current condition, it is important to rehabilitate this section of the sewer before access is reduced by new park facilities. The Preliminary Design Report recommended structural rehabilitation of the existing brick and stone sewer pipe using centrifugally cast-in-place pipe liner (CCCPL).

Doan Valley Regulator/ Relief Sewers (DVRRS), North East Ohio Regional Sewer District, *Cleveland, OH*

Technical Advisor. HDR provided design and construction-related professional engineering services for the DVRRS project in order to meet specific CSO control requirements for the Doan Valley combined sewer system, as part of their long-term control plan. System component improvements reduce overflow events to 2 or less at priority outfalls and 3 or less at other outfalls in a typical year by 2021. Alternative evaluations eliminated the greatest construction risks on the project and decreased capital cost, by eliminating sewer alignments and re-using and/or re-rerouting to existing sewers that have excess capacity, as well as evaluating the hydraulic acceptable level of service performance. Mr. León provided technical assistance for sewer rehabilitation, which included the rehabilitation of approximately 2,045 LF of existing 12", 15", 18", 20", 21", and 30", sewers and 460 feet of No. 5 egg (3.74′H x 2.95′W) brick sewer using cured-in-place pipe (CIPP) lining.

Centro Parrilla Water and Wastewater Systems Rehabilitation, Consorcio Integral Aquaterra, Empresas Publicas de Medellin (EPM), *Medellin, Colombia*

Project Manager / Technical Specialist. Mr. León was the project manager and technical specialist providing technical support to the Integral-Aquaterra joint venture. The joint venture's client was Empresas Públicas de Medellín (EPM), a public works agency that provides utility services to a population of over 3.3 million. The project involved hydraulic modeling for 112 km of water and 93 km of sewer lines, condition assessment and planning and design of rehabilitation and replacement of sewer collection lines and water distribution lines in downtown Medellín, which contains the oldest portions of the water and wastewater collection pipelines with challenges such as old age, varying materials (including brick sewer pipes), unknown utility crossings, below ground channeled creeks, more than 200 bus routes and environmentally sensitive areas, among others. Mr. León provided training to local engineers in Colombia in the planning and design of various trenchless rehabilitation technologies for a total of 33 Km of sewer collection lines and 40 Km of water distribution lines. He also provided support in the development of technical specifications and performing quality control of the rehabilitation design. The design included application of technologies such as cured-in-place pipe, pipe bursting, sliplining with fold-and-formed pipe, horizontal directional drilling, micro-tunneling, and open trench construction.

> "Luis is our go-to person to provide design and technical expertise to the City. His high ethics, professionalism and outstanding technical knowledge have been a great asset to the City's sewer collection system and our NPDES program. He always strives for delivering high quality products on or ahead of budget and schedule."
>
> - Curtis Aaron, Former Director of Public Works, City of Fontana

Albert Rodriguez, PE

QA/QC, Technical Advisors - Conveyance Design

Albet has over 30 years of experience in the water and wastewater industry. He has served as a project manager engineering manager design engineer and resident project representative. In these roles he has authored O&M manuals designed expansions to wastewater treatment plants designed large diameter water transmission mains designed pump stations and reservoirs assisted in the design of odor control systems and prepared both sanitary sewer and water distribution studies. Mr. Rodriguez has also worked as an equipment manufacturers representative and as one of the lead operators for College Station's wastewater treatment plant. His unique experience provides a very practical operation and maintenance understanding that enhances the design on our projects.

EDUCATION

Bachelor of Science, Economics, Texas A&M University, College Station, 1991

Bachelor of Science, Civil Engineering, Texas A&M University, College Station, 1994

REGISTRATIONS

Professional Engineer - Florida, No. 66273

Professional Engineer, Nebraska, No. E-11044

Professional Engineer, Texas, No. 84800

Professional Engineer, Louisiana, No. 38686

Professional Engineer, Virginia, No. 0402042693

Professional Engineer, Nevada, No. 028528

PROFESSIONAL MEMBERSHIPS

Water Environment Federation,

American Water Works Association

American Society of Civil Engineers (ASCE)

PUBLICATIONS

Albert Rodriguez, Heather R. Lindner, Alberto Rodriguez, Cale J. Underberg, Donald Burger, "Between a Rock and a Preservation Place: Design and Construction of the City of Boerne,

RELEVANT EXPERIENCE

San Antonio Water System, Sanitary Sewer Overflow (SSO) Reduction Program Management Services
Task Manager. During this project, HDR has performed risk analysis to identify gravity sewers with elevated risk of SSOs and structural deterioration; developed a multi-year prioritized sewer inspection program including the use of CCTV, pole cameras, sonar and laser imaging systems; managed CCTV inspection contractors and led the assessment of over 2,000 miles of sewer inspection data in an integrated team with SAWS staff; and identified high priority structural remediation projects.

San Antonio Water System, HemisFair Park Water and Sewer Line Replacement
Project Manager. The HemisFair Park Project for SAWS involves the replacement of potable water sanitary sewer and steam lines. This project is located in the south-central portion of downtown San Antonio and is located in one of the most heavily traveled business and tourist districts in the city. The water lines to be replaced range from 8-inch to 20-inch the sanitary sewer lines range from 8-inch to 33-inch and the steam lines range from 6-inch to 12-inch. The alignments of these various utilities must miss other utilities in the right of way and stay out from under new light rail lines and landscaped tree medians.

New Braunfels Utilities, Lakeview Wastewater Line Replacement Study, *New Braunfels, TX*
QA/QC Reviewer. HDR performed a study to determine wastewater line replacement alternatives for approximately 3000 LF of existing sewer in New Braunfels Texas. The small diameter sewer is located on a steep rock slope over the environmentally sensitive Edwards Aquifer Recharge Zone above the Comal Springs. The existing sewer is aging and above-ground at some locations leading to issues with erosion of the surrounding soils and instability of the pipe. Replacement alternatives are influenced by the environmental sensitivity of the aquifer and springs difficulties in reconstruction of the line due to the terrain and geology the existence of private structures and desire to protect mature trees.

City of Austin, Onion Creek Tunnel Emergency Repair Project, *Austin, TX*
Project Manager. Albert served a Project Manager for the City's emergency liner removal project. The lower portion of the Onion Creek Tunnel, 5.6 miles, was constructed with a mechanically fastened HDPE liner. The tunnel liner had become detached, due to damage, from the tunnel walls with portions of the liner being washed down to the South Austin Regional Treatment Plant creating blockages in the influent wetwell and pumps. Also, the tunnel had become occluded due the liner rolling up into balls. To prevent any potential for a sanitary sewer overflow, the City declared the project an emergency executed contract for the removal of the liner. The project was completed ahead of schedule with no overflows and with no injuries.

Metro Wastewater Reclamation District, Second Creek Interceptor and Sand Creek Interceptor System Improvements, *Brighton, CO*
QA/QC Reviewer. HDR was selected for Metro Wastewater Reclamation District's (MWRD) Second Creek Interceptor (SDI) and Sand Creek Interceptor System (SCIS) Improvements project. The SDI is a new interceptor that conveys wastewater from newly developed areas to MWRD's new Northern Treatment Plant (NTP). This new interceptor is approximately 18 miles long with diameters ranging from 30-inch to 66-inch. The improvements to the existing SCIS address capacity and condition deficiencies in the

ALBERT RODRIGUEZ (CONTINUED)

Texas Wastewater Interceptors, Effluent and Re-use Lines", ASCE, American Society of Civil Engineering (ASCE) Pipelines Conference 2013, Presentation. Fort Worth, Texas, US. 2013

Albert Rodriguez, Alberto Rodriguez, Randy Pohren, City of Austin, Jim Clark, JF White Contracting, "Emergency in the Onion Creek Tunnel", WEF, WEFTEC 2005, Presentation. Washington, District of Columbia, US. 2005

Albert Rodriguez, Cale Underberg; Alberto Rodriguez, Mike Mann, "Finding the Right Fit: Reuse Planning for Residential, Park and School Irrigation", AWWA, AWWA ACE16, Presentation/Conference. Chicago, Illinois, US. 2016

Stan Williams; Katie Walker; Albert Rodriguez, Ron McCullough, "Bubbling Away the DBP Blues: Optimizing Plant Performance with a Multi-Barrier Approach", AWWA/WEAT 2017 Texas Water Conferance, Texas Water 2017, Presentation/Conference. Austin, Texas, US. 2017

INDUSTRY TENURE
30 years

HDR TENURE
19 years

OFFICE LOCATION
Austin, TX

CLASSIFICATION
QA/QC Reviewer and Technical Advisor

collection system that conveys wastewater to MWRD's Robert W. Hite Treatment Facility (RWHTF). The sections of the SCIS system identified for improvement total approximately 1 mile in length and range from 66-inch to 48-inch in diameter.

City of Omaha, Sanitary Sewer Design Manual, *Omaha, NE*
QA/QC Reviewer. The City had been experiencing maintenance issues with the wastewater collection system, and determined that the expectations for system design, construction documents, and as-built submittals needed to be better communicated with the public. In December 2017, the City entered into an agreement with HDR to develop a new Technical Criteria Manual to replace the previous 6-page "Design Criteria for Sanitary Sewers" developed in 1960. The new manual contains 7 chapters and 8 appendices and was distributed to the engineering community for review and comment prior to implementation.

King County Washington, King County Lake Hills and Lake Sammamish Sewer Upgrades, *Seattle, WA*
Technical Advisor. HDR will upgrade the existing Lake Hills Trunk and Northwest Lake Sammamish Interceptor in order to convey 20-year peak wastewater flows projected through the year 2060 from a portion of the North Lake Sammamish wastewater planning basin. This will be accomplished by using available data on asset (pipeline) condition of the Lake Hills Trunk and NW Lake Sammamish Interceptor to determine which portions of the wastewater conveyance lines require replacement repair or paralleling.

City of Richardson, Lookout Lift Station, *Richardson, TX*
QA/QC Reviewer. The project includes design and construction of a 1,100 gpm duplex lift station located in a developed neighborhood in the City of Richardson. Major components of the project include wet well, valve vault, generator, odor control, and screening wall. The project also included manholes and gravity and pressure piping to connect to the new lift station. The project design is schedule to last 8 months and construction is scheduled to begin in October 2018.

City of Rowlett, Rowlett Road Lift Station Replacement, *Rowlett, TX*
QA/QC Reviewer. The Rowlett Road Lift Station serves as a major component in the consolidation and transportation of wastewater from ten contributing lift stations. The project consists of designing a new replacement lift station in close proximity to the existing Rowlett Road Lift Station. Upon completion of construction of the new lift station the existing Rowlett Road Lift Station will be decommissioned and demolished.

City of Boerne, Wastewater Treatment and Recycling Center Interceptors Effluent and Reuse Line, *Boerne, TX*
Project Manager. Design of a new Wastewater Treatment Recycling Center (WTRC) with an initial Phase 1 capacity of 1.4 mgd with planning for three phased expansions up to 5.2 mgd. Led process evaluation of treatment process alternatives for WTRC. Completed process and mass balance models to evaluate several activated sludge alternatives including anaerobic/aerobic (A/O) process anaerobic/anoxic/oxic (A2/O) process membrane bioreactors (MBR) sequencing batch reactors (SBRs) and activated sludge system with chemical phosphorus removal. Developed influent basis of design and process sizing for alternatives and provided process support to design team for design of selected A2/O process. The selected alternative includes influent pump station headworks (with screens and grit removal) primary clarifiers secondary treatment facilities tertiary treatment facilities disinfection solids handling facilities and reuse facilities.

Neill Hampton, PE

QA/QC, Technical Advisors - Conveyance Design

Neill has more than 32 years of experience in the design of water infrastructure projects in the United States and overseas. His expertise covers the design of pipelines, pumping stations, and water control facilities. He has a detailed understanding and valuable experience in closed-conduit hydraulics, pumping machinery, and mechanical piping; fluid power systems for civil engineering application; and process valves, water control gates, and their controls. A broader understanding of protective coatings, welding, metalworking, materials science, and corrosion engineering for civil engineering applications complement his technical expertise in infrastructure for water control, conveyance, and storage.

EDUCATION
Master of Science, Environmental Engineering, University of New Haven

Bachelor of Science, Civil Engineering Technology, Wentworth Institute of Technology

REGISTRATIONS
Professional Engineer, Texas, No. 111170

INDUSTRY TENURE
32 years

HDR TENURE
1 year

OFFICE LOCATION
Dallas, TX

CLASSIFICATION
QA/QC Reviewer and Technical Advisor

RELEVANT EXPERIENCE

Metropolitan Water District, Sepulveda Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation, *Los Angeles, CA*
Technical Specialist. Neill is serving as technical specialist for the design of new and rehabilitation of existing valve structures on the 96-inch-diameter Sepulveda Feeder finished water transmission pipeline. Design includes installation of a steel slip-liner within the 96-inch-diameter PCCP transmission pipeline and four valve structures containing 48- through 60-inch-diameter ball valves and conical plug valves used for isolation along the alignment.

Tarrant Regional Water District (TRWD), Integrated Pipeline (IPL), *TX*
Design Manager. Neill served as Design Manager for a 180 mgd energy dissipating facility at KBR. The new delivery system conveys raw water pumped along the IPL system from Lake Palestine, Cedar Creek, and Richland Chambers Reservoirs to KBR. The project included a metal building and concrete substructure containing four electrically operated 66-inch, multiple-orifice energy dissipating valves, 84-inch butterfly valves, mechanical piping, and instrumentation.

City of Cambridge, Massachusetts, Walter Sullivan Water Purifi cation Facility Pumping System Improvements
Design Manager. Neill served as design manager for the replacement of four existing 150-horsepower (hp) raw water pumps, motors, and drives; replacement of four existing 450 hp motors and drives on the existing finished water pumps; a new custom-designed, centralized high-pressure hydraulic power unit for operation of hydraulically actuated pump control butterfly valves on the finished water system; two new electrically operated plunger type energy dissipating valves; and piping, instrumentation, and electrical improvements. Design was completed in 2016 and construction was completed in 2020.

City of Pearland, Texas, Alice Water Treatment Plant Hydraulic Turbine Generator and Energy Dissipation Valve Station
Technical Specialist. Neill served as the mechanical task manager for the hydraulic turbine generator system for energy recovery/ dissipation station at the Alice Water Treatment Plant. The design included a horizontal micro turbine generator system with a rated generating capacity of 100-kW at 125-ft of head, and in-line horizontal energy dissipating multi-jet sleeve valve to regulate flow from the City of Houston's finished water transmission system to ground storage at the Alice Water Treatment Plant.

Great Lakes Water Authority, Detroit, MI, Springwells Water Treatment Plant High/Low Pumping Stations
Technical Director. Neill served as Technical Director for the design of the upgrade to the 450 mgd High/Low Pumping Station at Springwells Water Treatment Plant. The design included the replacement of eight vertical and sixteen horizontal split-case pumping units, a new vacuum priming system, major electrical system upgrades; water-operated pump control conical plug valves and ball valves, 84-inch gate valve replacements and isolation 7-foot x 7-foot Broome style tractor gate upgrades; and mechanical piping and instrumentation upgrades.

NEILL HAMPTON (CONTINUED)

Kingdom of Jordan, West Zarqa Energy Dissipating Valve Stations, USAID-Water Authority of Jordan (WAJ)
Technical Specialist. Neill was Technical Specialist for the design of energy dissipating stations at washout facilities along the a DN1200 ductile iron wastewater force main. The project included preparation of tender documents for the pipeline and two EDV structures having two DN800 hydraulically actuated PN45 gate valves, and two DN800 hydraulically actuated PN45 plunger valves operating under 800 feet of head. The design included a custom designed portable engine-driven hydraulic power unit and controls for operation of the valves at locations in the Arabian Dessert.

New York City Department of Environmental Protection (NYCDEP), New York, Rondout-West Branch Raw Water Bypass Tunnel Construction and Warwarsing Delaware Aqueduct Repairs (RWBT)
Technical Specialist. Neill was Technical Specialist for the design of mechanical systems for the RWBT project. The design includes a 1200-foot-deep bypass tunnel and shaft facilities including mechanical piping for a shafts and tunnels, dewatering pumping system, steel tunnel liner design and welding specifications; and a custom designed high-pressure, oil-operated hydraulic system for four 600 pound stainless steel 18 inch diameter fabricated bonneted knife gate valves. The valves serve as an emergency tunnel isolation system to protect workers in the tunnel and have a nitrogen-operated pilot control system allowing operation under submerged conditions.

Springfield Water and Sewer Commission, Massachusetts, Cobble Mountain Reservoir Dam Diversion Tunnel Outlet Works Energy Dissipation System
Design Manager. Neill managed the design and served as resident engineer during construction of improvements to the Cobble Mountain Reservoir Dam outlet works facility. The project increased the discharge capacity of the existing outlet works, which is now capable of releasing up to 600 mgd, by free discharge under 200 feet of head, into a 12-foot-diameter tunnel to the Little River Gorge.

Springfield Water and Sewer Commission, Westfield, Massachusetts, Interconnecting Pipeline and Energy Dissipating Station
Design Manager. Neill designed a new raw water transmission pipeline and energy–dissipation station for the West Parish Filters slow-sand and rapid-sand water treatment plants. The project involved the design of a 42-inch-diameter ductile iron transmission pipeline; a cast-in-place below-grade energy dissipation valve chamber, containing a hydraulically controlled 42-inch x 36-inch x 42-inch inline multi-jet sleeve valve that dissipates 330 to 450 feet of head at fl ows from 20 to 100 mgd; and other miscellaneous mechanical and yard piping improvements at the West Parish Filters Water Treatment Facility.

Dan Ellison, PE, SE

QA/QC, Technical Advisors - Condition Assessment & Rehabilitation

Dan has gained national and international recognition as an expert on pipe assessment, rehabilitation, and trenchless construction, having authored several books on the subject. He is the former Chair of the Water Main Rehabilitation Committee of AWWA. Dan has managed groups with more than 40 employees and programs with annual budgets up to $40 million. Projects have ranged from record-setting trenchless river crossings, to published research, to power plant retrofits, even a fish ladder. This diversity of projects, along with superior management skills of people and programs, make Dan tremendously flexible and creative. With more than 35 years of civil and structural engineering experience, Dan has design and construction experience in both the energy and water supply fields on projects ranging to the multi-billion dollar range.

EDUCATION

Master of Business Admin, Finance, University of Southern California (USC), 1994

Bachelor of Science, Civil Engineering, University of Utah, 1981

Bachelor of Arts, English Language & Literature, University of Utah, 1978

REGISTRATIONS

Professional Engineer - Civil, California, No. C38094

Structural Engineer, California, No. S3020

PROFESSIONAL MEMBERSHIPS

American Public Works Association (APWA)

American Society of Civil Engineers (ASCE)

American Water Works Association, California Nevada, Pipeline Rehabilitation Committee, Former Chair

American Water Works Association, National AWWA, Water Main Rehabilitation Committee, Former Chair

INDUSTRY TENURE

40 years

HDR TENURE

9 years

OFFICE LOCATION

Ventura, CA

CLASSIFICATION

QA/QC Reviewer and Technical Advisor

RELEVANT EXPERIENCE

City of Thousand Oaks, Sanitary Sewer Improvements Projects, *Thousand Oaks, CA*
Project Manager for several independent projects, ranging from $2 to $5 million, involving the replacement, realignment, or rehabilitation of major wastewater interceptor pipelines at various locations in the city. Design included a bore-and-jack crossing of the 101 Freeway, cured-in-place pipe rehabilitation, manhole rehabilitation, open-trench construction, difficult soil conditions, dewatering, private easement acquisition, and permit acquisition. Pipeline sizes ranged from 15 inches to 30 inches.

Trinity River Authority, Assessment and Rehabilitation of West Fork Relief Interceptor 10WF-1, *Dallas, TX*
Project Engineer for evaluation of structural condition and analysis of rehabilitation alternatives for badly corroded RCP wastewater pipeline, 72 inches to 84 inches. Rehabilitation alternatives include: CIPP, spiral wound, spray-applied epoxy, spray-applied polyurea, and spray-applied geopolymer mortar. Estimated project cost: $14 million.

Western Municipal Water District, Mills Gravity Line Condition Assessment, *Riverside, CA*
Project Manager for condition assessment of 14-miles of 48-inch to 60-inch water transmission pipe, using corrosion survey and in-line leak detection methods. This AWWA C303, bar-wrapped concrete cylinder pipe is the primary water source for several utilities, with pressures ranging to over 250 psi. This 2015-2016 determined that the pipeline was in relatively good condition, although areas of concern were identified for further evaluation, including two small leaks at blow-offs.

Metropolitan Water District California, Sepulveda Feeder PCCP Rehabilitation Project
Project Manager for preliminary design and design for the rehabilitation of 35 miles of large-diameter (84" to 150") prestressed concrete cylinder pipe (PCCP) in urban Los Angeles, replacement of existing valves, and construction of new valve facilities.

Orange County Sanitation District, Santa Ana River Interceptor Line Realignment and Protection, *Orange County, CA*
Structural Engineer. HDR provided design and construction-phase engineering services for 2.3 miles of large-diameter sewer replacement, including a new 54-inch gravity sewer. Project components included a 1,300 foot long, 10-in diameter, three-barrel siphon, about 3,000 feet of additional tunneling of an 84-inch casing along deep portions of the alignment, and a metering station.

Anchorage Water and Wastewater Utility, Transmission Mains Improvements Project, *Anchorage, AK*
Project Manager/Technical Expert.
Assessments and improvements to the transmission system throughout the city; includes remote-controlled valve facilities, cathodic protection, instrumentation, communications, and other improvements. Due to harsh weather, deep frost, corrosive soils, high seismicity, and groundwater, AWWU faces unique challenges requiring engineering expertise.

DAN ELLISON (CONTINUED)

Storm Sewer Rehabilitation, Andrews AFB
Technical Leader for construction phase of project to rehabilitate several miles of storm water pipes at Andrews AFB. Pipes ranged in size from 36" to 108". Sink holes at the air field were causing serious safety concerns for both vehicles and aircraft. High-groundwater levels produced heavy infiltration and inflow, making conventional rehabilitation difficult to impossible. Working with the contractor, developed techniques involving joint packing with hydrophilic and hydrophobic grouts and hand-applied water stop mortars.

Los Angeles Department of Water and Power, Pipeline Rehabilitation Program, *Los Angeles, CA*
Program Manager for large pipeline rehabilitation program accomplishing up to 1 million feet (190 miles) per year. Managed over 40 employees engaged in design, inspection and contract management. During Dan's tenure, the program set new production and efficiency records, while making numerous improvements in customer service. Slip lining and pipe bursting methods were introduced. Completed over 20 projects annually, averaging 40,000 feet each on pipes ranging to 72-inches.

Sewage Force Main and Recycled Water Main NDE Condition Assessment
Project Manager. Pepperdine University was concerned about the condition of two pipelines, each running for 4.5 miles in Malibu Canyon Road, next two Malibu Creek. Several failures on the 6-inch ductile iron force main had raised alarms, particularly because the pipelines were only about 20 years old. As Project Manager, Dan evaluated various options, ultimately selecting remote field technology for a continuous non-destructive evaluation of the pipelines' integrity, from lift station to treatment plant. The testing revealed areas of pipeline which needed immediate attention, other areas where replacement was required within the year, and other areas where several more years of service could be expected, without problems. By performing such testing, rather than replacing the seemingly failing pipelines, the university saved millions of dollars.

Fresno Department of Public Utilities, Fresno Street and College Avenues Sewer Rehabilitation Projects
Project Manager. The Fresno Street alignment consisted of 6,836 linear feet of 12" to 21" diameter sewer lines and the College Avenue alignment consisted of 2,817 linear feet of 12" diameter sewer lines. During the field review, discovered moderate structural deterioration of manholes. MH rehab was subsequently added to the scope of the project. Drawings provided bypass system, including where shallow trenching would be required.

Metropolitan Water District, Preliminary Inspection Plans, Concrete and Metallic Pipe Assessment Program, *Los Angeles, CA*
Task Manager. Examined record drawings, conducted workshops, and developed budget for a tiered assessment for four high-priority pipelines in the MWDSC system. Recommended a multi-year, $10M program for the 100+ miles of large-diameter concrete, steel and cast-iron pipelines.

Los Angeles Department of Water and Power, Trunk Line Condition Assessment, *Los Angeles, CA*
Project Manager for project in which acoustic velocity and noise correlation methods were used to assess the condition of two trunk lines in the LADWP system: (1) the Eagle Rock – Hollywood Outlet and (2) the Stone Canyon (Sunset Boulevard) trunk line. Both trunk lines were in dense urban areas on very heavily travelled streets. The results of the testing showed that active leaks were not occurring and that gross general deterioration had not occurred, although the potential existed for localized problems that might not be detected using the chosen assessment method, which utilizes hydrants, blowoffs, and other readily available points of connection.

Anthony Henry

QA/QC, Technical Advisors - Hydraulic Modeling

Anthony has more than 23 years of diverse experience in hydraulic modeling, with an emphasis on modeling urban hydrology and hydraulics. Skills include helping clients to solve hydraulic modeling problems ranging from not running or instabilities to model specific hydraulic problems and resolving disparities or unexpected results, providing him with a wide exposure to many scenarios and methods of modeling. Prior to joining HDR, Anthony was the Product Sector Leader for Urban Drainage and Water Resources for MWH-Soft (Innovyze), with a focus on applying the InfoWorks suite of software for Urban Drainage. This role included conducting training courses on the software and seminars on hydraulic modeling. He developed and taught training courses (IACET-certified in the USA) and provided technical assistance on hydrology and hydraulic modeling worldwide with the majority of these being in the North American market since 2000. While providing support for the InfoWorks software suite, he often assisted assist clients with problem solving for projects ranging from stormwater drainage to flood warning systems and collection system master plans.

Anthony's career started in 1997 as a graduate engineer with the City of Brisbane, Australia, performing water resources studies and helping maintain their flood warning system. He joined Wallingford Software, Ltd in 1998 as a wastewater support engineer, mainly using HydroWorks and InfoWorks CS for urban drainage. He became a key part of the Wallingford Software urban drainage team in North America, leading it for several years.

EDUCATION
Bachelor of Engineering, Civil, Queensland University of Technology (QUT), 1997

PROFESSIONAL MEMBERSHIPS
TFMA

PUBLICATIONS / PRESENTATIONS
Anthony J. Henry, Sunit R. Deo, Tschirhart, Wayne, "How to Review a 2D Model", TFMA 2014 Fall Technical Seminar, San Antonio, TX, 9/3/2014

Anthony J. Henry, George A. Hunt, "2D modeling helps City of Omaha coordinate response to flood of 2011", 2012 annual conference, San Antonio, TX, 5/20/2012

INDUSTRY TENURE
23 years

HDR TENURE
10 years

OFFICE LOCATION
Austin, TX

CLASSIFICATION
QA/QC Reviewer and Technical Advisor

RELEVANT EXPERIENCE

San Antonio Water System (SAWS), Sanitary Sewer Overflow (SSO) Reduction Program, *TX* ***Senior Hydraulic Modeler and Technical Advisor.*** SAWS is under a consent decree from the US EPA to reduce SSOs and as part of this HDR team provides training and guidance for SAWS modeling staff to create and calibrate models in InfoWorks CS and then assisted in the migration to InfoWorks ICM for their SSORP. HDR team developed a series of Standard Operating Procedures (SOP) in relation to modeling, evaluated SAWS flow metering data, processed radar rainfall for model calibration and provided continued guidance on the hydraulic models.

City of Taylor, On-Call Services, TX
Senior Hydraulic Modeler and Technical Adviser. Creation, calibration, analysis and CIP proposals of the City of Taylor's sanitary sewer system. These have mostly been in response to developer requests.

City of Round Rock, On-call Modeling Services, Round Rock, TX
Senior Hydraulic Modeler and Technical Adviser. Analysis of the City of Round Rocks Sanitary Sewer Model on an as needed basis.

San Antonio River Authority (SARA), Salatrillo Collection System (CS) Modeling and Inflow and Infiltration (II) Study, *San Antonio, TX* ***Senior Hydraulic Modeler.*** Created and calibrated a fully dynamic long term simulation capable model of the SARA Salatrillo CS. This model along with flow monitoring data was used to assess the system of capacity deficiencies and target areas for II remedial measures.

City of Austin, TX, Brentwood Neighborhood SDI
Senior Hydraulic Modeler. Technical Advisor. The Brentwood neighborhood of the City of Austin is historically prone to flooding and suffering creek erosion. This project used InfoWorks ICM to determine storm water and creek improvements to reduce flooding from local and creek flooding and control erosion.

City of Waco, TX, Wastewater Master Plan
Senior Hydraulic Modeler. Creation, calibration, analysis and CIP proposals of the City of Waco's Separate Sanitary Sewer System model as part of the City's Wastewater Master Plan. The City of Waco is the largest partner in the Waco Metropolitan Region Sanitary Sewer (WMARSS) area. The Waco sewer system

ANTHONY HENRY (CONTINUED)

connects to the WMARSS system in multiple locations so the WMARSS system model was also created in conjunction with the Cities model requiring co-ordination between all agencies.

San Antonio River Authority (SARA). FloodWorks Implementation. *San Antonio, TX*
Senior Hydraulic Modeler. Configured and set up the real-time flood forecasting and inundation mapping system for SARA. Tasks included creation of InfoWorks river models with hydrology based on NEXRAD radar, calibration of hydrologic and hydraulic models, system configuration, operation and alarm setting, text based reporting, GIS maps and Web based reporting later updated to InfoWorks ICMLive.

City of San Jose, Storm Water Modeling Training, *San Jose, CA*
Senior Hydraulic Modeler. Intensive training of city staff using InfoWorks ICM for storm water modeling. This consists of four hands on training sessions on aspects of storm water modeling with follow up technical memos covering general modeling philosophy, hydrology methods, hydraulics for 1D flow in pipes and creeks with 2D overland flow, results analysis and model management.

City of Omaha, 2011 Flood Fight, *Omaha, NE*
Senior Hydraulic Modeler. Created a coupled 1D-2D model to show overland flooding for the Cities existing 1D combined sewer model. The focus was to provide the city staff with forecast storm water flooding and ponding behind the levee due to the Missouri river being at extended high levels from heavy winter snows and continued rain. The modeling effort was completed using InfoWorks CS with 2D overland flow utilizing design storms and observed radar adjust gauge data for predicting flooding extents and volumes along with sizing and locating of temporary pumps to alleviate the flooding in the city.

Austin Water Utility (AWU), Walnut Creek (WC) SSES, *Austin TX*
Senior Hydraulic Modeler and Technical Adviser. As part of the SSES program, AWU requested an all pipe model for a section of their WC system with an update of the calibration for the entire system. Work was conducted in conjunction with AWU Staff to update and calibrate the model with an on-call style technical adviser role being adopted assisting AWU staff complete the modeling update.

City of Austin. Williamson Creek Richmond Tributary. Austin, TX
Senior Hydraulic Modeler. Technical Advisor. Richmond tributary was analyzed with InfoWorks ICM for erosion control and bank stabilization as well as to address local flooding issues. Proposed solutions ranged from traditional gray to low impact development (LID) incorporating stormwater best management practices (BMP) into the deign alternatives.

West Broadway Reconstruction, Council Bluffs, IA
Senior Hydraulic Modeler. Used InfoWorks ICM model to analysis system for low impact development (LID) and best practice management (BMP) elements for impact on addressing local flooding issues on West Broadway Ave.

San Antonio Water System (SAWS), Hydraulic Model Recalibration Assistance, *San Antonio, TX*
Hydraulic Modeling and InfoWorks Expert. HDR team provided training and guidance for SAWS modeling staff to recalibrate InfoWorks CS models and reduce model result conservativeness. Using a series of workshops, HDR team evaluated SAWS hydraulic models, identified avenues for model improvements, provided guidance to SAWS modeling team to implement the proposed changes, and reviewed updated models.

City of Dallas, Able Pump Station Storm Water Drainage Basin, *Dallas, TX*
Senior Hydraulic Modeler. Evaluation of the existing and proposed site of the storm water pump station for the behind levee storm water pond drainage system for the Able Pump Station using XP-SWMM with 2D. The model was created to size a new pumping station and demonstrate proposed improvements to the system. The model demonstrated the dynamic response of the system with the pros and cons for each of the proposed options.

City of Concord, Irish Buffalo Watershed, Concord, NC
Senior Hydraulic Modeler. Created a complex InfoWorks SD 1D-2D existing conditions model of a problem tributary to Irish Buffalo creek in Concord, NC. The area is an older part of town with many undersized pipes and culverts with a lot of overland flow. The aim was to identify specific problem areas and the causes of the problem. A set of capital improvement projects were identified for the City to review.

John Coffman, PE, CCM

Sewer Design Technical Lead

John Coffman is a Professional Engineer and Certified Construction Manager with over 24 years of civil engineering design, project management and construction management experience serving municipal, special purpose districts, and private sector water and wastewater clients. His projects have encompassed design and construction management services for small and large-diameter potable water pipelines, reservoirs and pump station construction, site civil for new water and wastewater treatment plants, harbor expansion, storm drain, channel, detention basin and road construction. John has extensive experience with permit coordination, bid document preparation, and engineering services during construction. With a strong background in construction, he brings a unique perspective in preparing construction documents that incorporate CM experience resulting in plans that are concise and constructible.

EDUCATION
Bachelor of Civil Engineering, Civil Engineering, California Polytechnic State University, San Luis Obispo (Cal Poly)

REGISTRATIONS
Professional Engineer - Civil, CA, No. 60754

Certified Construction Manager, CCM, No. 7219

PROFESSIONAL MEMBERSHIPS
American Council of Engineering and Companies (ACEC), Channel Coast Chapter;

Construction Management Association of America (CMAA)

INDUSTRY TENURE
26 years

HDR TENURE
1 year

OFFICE LOCATION
Ventura, CA

CLASSIFICATION
Sewer Design Technical Lead

RELEVANT EXPERIENCE

East Valley Water District, 24-inch Sewer Design, *Highland, CA*
Served as ***Project Engineer*** for 2,400 feet of a 24-inch diameter sewer trunk main installation. Performed all plan preparation, utility studies, cost estimates and managed the sewer bypass modeling and sewer design studies. Prepared final plans to approval.

Eastern Municipal Water District, Sky Canyon 36- Sewer Alignment Study, *Murrieta, CA*
Served as ***Project Manager*** for this alignment study that investigated numerous sewer alignments for this overflow capacity sewer project located in Murrieta, CA. The project considered costs, utilities, impacts to traffic, constructability and other pertinent features. John was able to guide the District in this $14M challenging project that had numerous issues to consider in the District making the final alignment selection. John managed to bring this project in on budget and schedule. The project is now in final design.

Padre Dam Municipal Water District, Alignment Study for 30-in Sewer Force Main, *Santee, CA*
Project Manager. John prepared an alignment study for 3 miles of 30-inch sewer force main. John also prepared CEQA documents for construction crew and trip forecast for the 30-inch force main.

Central Coast Water Authority, 36-Inch Welded Steel Riser Repairs, *Buellton, CA*
Project Engineer working on an existing 19 mile section of welded steel pipeline where the outlet risers (constructed in 1992) are corroded. Worked with our NAACE inspector to perform measurements of pipe wall coatings and pipe wall thickness to make a determination of which outlets and risers could be rehabilitated and which ones required replacement. Managed trial repair effort with local Contractor that consisted of restoring existing manways and removal of a riser. Incorporated lessons learned from field repairs into final design plans. Currently preparing 100% plans and specifications.

Las Virgenes Municipal Water District, 36-Inch Steel Pipeline / 5 MG Reservoir, *Calabasas, CA*
Project Engineer for the design of 2,400 feet of 36-inch welded steel pipe and 1,100 feet of 42-inch steel casing across Las Virgenes Dam at Westlake Reservoir. Other aspects of the project included performing site grading, specifications for 15,000 yards of blasting, and site civil / yard piping plans for the 5 MG pre-stressed concrete reservoir. Project included extensive public outreach efforts and working with Kat and Associates, in a community that had extensive opposition to the project.

Santa Clarita Valley Water District, 42-Inch Steel Pipeline, *Santa Clarita, CA*
Performed as Owners Representative to Santa Clarita Valley Water Agency where two special inspectors for pipeline construction and one special inspector for welding reported to me. Purpose of Contract was to perform 3rd party inspections on the 6,000 feet of 42-inch welded steel potable water pipeline, utility vaults and appurtenances. Provided detailed change order review support, response to RFI's and review of field inspection daily's, special inspection reports and reporting to the agency.

JOHN COFFMAN (CONTINUED)

City of Santa Paula, Citywide Project, *Santa Paula, CA*
Project Manager. Prepared Plans, specifications and estimate for the City of Santa Paula's Citywide Project that included 16,000 feet of water, 2,000 feet of 8-inch and 10-inch sewer design and one million square feet of street and alley reconstruction. Project included a jack and bore across Ventura County Transportation Commission Right of Way.

Cachuma Operations and Maintenance Board, 30-Inch Line Valve Installation on Steel Cylinder Bar Wrapped Pipe, *Santa Barbara, CA*
Project Engineer on a 30-inch line valve installation into an existing 30-inch cement mortar lined and coated bar wrapped steel cylinder pipe in Montecito, CA. Work involved removal of a segment of the existing pipeline to install the valve, bypass piping and air and vacuum valve installation.

Pier B On Dock Rail Expansion Project, Port of Long Beach, *Long Beach, CA*
Project Engineer. Managing water relocations, new water construction and relocation of a storm water pump station for this $1B project. Currently the project is in preliminary design. Project includes extensive utility relocations and working around existing utilities to remain. Project is due to be complete in 2028.

City of Santa Paula, Construction Manager Pump Station and Generato, *Santa Paula, CA*
Served as the ***Construction Manager*** on this $3.4M construction project called the 600 Zone BPS project that included a new pump station, backup generator, new building and new SCE Transformer. The project included all aspects of a new pump station and its building. Worked with Contractor on permitting and startup of the generator and oversaw generator construction and installation along with coordinating new SCE service.

Tesoro Viejo Master Mutual Water Company, Various Projects including Reservoir, Pipeline, and Pump Stations, *Fresno, CA*
Construction Manager for the Raw Water Pump Station (Phase I, 2015). John prepared civil plans and specifications for a 6,000 GPM booster pump station located in a flood plain on the San Juaquin River in Fresno, Ca. John also has prepared civil plans and specifications for a 2 MG potable water reservoir for Tesoro Viego MMWC.

Todd Engstrand, PE

Task Order Manager

Todd has a multifaceted background in water/wastewater engineering. He specializes in leading teams in the planning, design, quality control program reviews and construction support services of water and wastewater facilities for numerous agencies throughout the Southwest. Prior to joining HDR, Todd served as the Director of Operations, Maintenance, and Engineering for the Yuima Municipal Water District, running the day to day operations of the water system, scheduling and supervising the facilities maintenance, and planning, design, quality control, environmental document review, bidding and construction management of the Capital Improvement Program as the District's Engineer. Through this unique experience, Todd brings a practicality to his design work of actually building and then operating those facilities he lead the planning and design efforts.

EDUCATION
Bachelor of Civil Engineering, Civil/ Structural, San Diego State University, 1994

REGISTRATIONS
Professional Engineer - Civil, CA, No. C62867

PROFESSIONAL MEMBERSHIPS
Chief Financial Officer – JBdA Charter School Board of Directors – August 2008 to Present

INDUSTRY TENURE
26 years

HDR TENURE
5 years

OFFICE LOCATION
San Diego, CA

CLASSIFICATION
Senior Project Manager

RELEVANT EXPERIENCE

North Area Wastewater Conveyance Systems P-1045 & P-1046, *Camp Pendleton, CA*
Senior Project Manager. Assisted two General Contractors, Filanc and Reyes Construction, with the design build plans for three segments of 16-inch diameter horizontal directional drill HDPE sewer main totaling 2,500 linear feet, Project P1045. Also provided facilities commissioning support for five sewer lift stations located on the Camp Pendleton Base, Project 1046A.

City of San Jacinto and City of Hemet, Preliminary and Detailed Design of the San Jacinto Valley Raw Water Conveyance Facilities, *San Jacinto and Hemet, CA*
Design Manager. Todd managed the consultant team to prepare the hydraulics study, the facility siting and alignment evaluation and the preliminary that finalized the pipeline and pump sizing based on hydraulic analysis, selected a preferred alignment route and facility locations and defined the basis of design for the Eastern Municipal Water District's San Jacinto Valley Raw Water Conveyance Facilities. For water demand and funding purposes, the facilities will be designed and built in two phases and will ultimately include approximately 6.5 miles of 60-inch and 54-inch of raw water transmission main, a Metropolitan Water District (MWD) EM-25 Service Connection, a 100 cfs capacity Booster Station, and chlorine treatment system to supply the Enhanced Recharge and Recovery Program groundwater basins. In support of the preliminary design, the project also included condition assessment of the existing 33-inch welded steel San Jacinto Valley Feeder Pipeline, utility research, topographic surveying, a geotechnical investigation and report, environmental desktop review, underground utility survey (potholing), pressure transient analysis and report, permitting coordination with the Cities of Hemet and San Jacinto, MWD, and Riverside County Transportation Commission, property and easement acquisition support, and preparation of thirty percent design level pipeline plan and profile, service connection, and pump station drawings. Design Manager leading the team currently in the preparation of the detailed design and construction contract documents.

City of San Diego, North City Conveyance System, Pure Water Pipeline and Dechlorination Facility, *San Diego, CA*
Senior Project Manager. Performed quality control reviews and led a portion of the design team for the for the preliminary and detailed design of the eight-mile-long 48-inch North City Pure Water Pipeline to convey advanced treated water from the North City Pure Water Facility to Miramar Reservoir including the Pure Water Dechlorination Treatment facility as part of the City of San Diego's Pure Water Program. The North City Pure Water Pipeline is located in Miramar Road which is heavily traveled and congested with existing underground utilities. The Pure Water Dechlorination Facility is a CMU block building and includes two 4,000 gallon FRP storage tanks, duty and standby chemical injection pumps and redundant analyzers for measuring upstream and downstream chlorine residuals. An underground injection vault contains a 48-inch static mixer and redundant water sampling and chemical injection lines.

TODD ENGSTRAND (CONTINUED)

North Texas Municipal Water District, North McKinney Pipeline Phase III – Alignment Study, Preliminary Design, and Final Design Services, *McKinney, TX*
Senior Project Manager. Todd assisted with providing an alignment study and preliminary design to select a preferred route and define the basis of the design for approximately 4.6 miles of 72-inch and 84-inch (WSP or PCCP) pipeline to serve areas of Collin County in north Texas. Because of the need for this pipeline, the North Texas Municipal Water District's schedule required that the alignment study and preliminary design report be completed in 8 weeks including a District review period. With the preferred route selected, the preliminary design report was used to advance the detailed design to final contract bid documents. The project also involved right of entry and easement acquisition support for 36 private parcels and preparation of permit applications for three tunneled sections including two Texas Department of Transportation Highway crossings and one Dallas Area Rapid Transit railway utility crossing. Final contract documents including a 30-inch NTMWD flow control and meter vault for the City of McKinney Redbud Facility were completed in 10 months.

City of San Diego Metropolitan Wastewater Department, Carmel Valley Trunk Sewer Replacement, *San Diego, CA*
Project Manager for planning, design, and construction support for the replacement and upgrades to the Carmel Valley Trunk Sewer. The replacement and upgrades were needed to remove the current failing pipe material and increase the size for the expanding local community. This project was coordinated with the Metropolitan Wastewater Department (MWWD) and included replacing 14,500 feet of failing 18-inch reinforced plastic mortar "Techite" pipe with improved 24- and 30-inch PVC pipe. Todd managed a team that prepared hydraulic calculations, detailed design plans, specifications, and easement documents and that worked closely with the MWWD staff to process and permit the contract documents for this critical replacement.

Padre Dam Municipal Water District, Sky Ranch Water and Sewer Facilities, *Santee, CA*
Project Manager for the design and engineering support during construction of water and sewer facilities to support the Sky Ranch development. The facilities, owned and operated by the Padre Dam Municipal Water District, included the design and construction of a 2,500 gpm capacity 900-hp booster pump station, 1-million gallon capacity dual basin prestressed concrete reservoir, pressure reducing station, and a small package sewer lift station.

21st Street Sewer Pump Station Upgrade, *Del Mar, CA*
Project Manager. Led the team to prepare the plans and specifications for the $4.8 million upgrade to the City of Del Mar's 21st Street Sewer Pump Station which included designing around several challenges including large variations in inflow due to effluent from the 22nd Agricultural District, proximity to the BNSF railroad tracks, operation of the existing lift station, and need to maintain access to the City's recreational tennis courts. Jack and bore trenchless technology was utilized under Coast Highway to connect the existing gravity sewer main to the new wet well. The three level (26 feet deep) station included three below grade 150 hp vertical shaft non clog pumps, with above grade motors, wet well and emergency storage, suction and discharge valving to maintain two pumps in operation, bioxide injection and activated carbon scrubber odor control, landscaping and hardscaping site improvements including a new basketball half court.

Gail Masutani, PHD, PE

Task Order Manager

Dr. Gail Masutani is a Senior Water and Wastewater Project Manager based in HDR's San Diego office. She offers over 41 years of experience in delivering high-quality design and engineering services for Southern California clients such as: San Diego County Water Authority, City of Oceanside, Yuima Municipal Water District, Otay Water District, and City of San Diego. Her varied experience includes the design and engineering of: pressure reducing stations, pipelines, water pump stations, water distribution and transmission mains, water tanks, and sewer interceptors.

She is also the co-author of "Fine Bubble Diffuser Fouling: The Los Angeles Studies, a Final Report to ASCE and the U.S. EPA," and "Dynamic Surface Tension Effects On Oxygen.

EDUCATION

Doctor of Philosophy, Civil Engineering, University of California, Los Angeles (UCLA), 1988

Master of Science, Sanitary Engineering, University of California, Los Angeles (UCLA), 1981

Bachelor of Science, Civil Engineering, University of Hawaii, Manoa, 1978

REGISTRATIONS

Professional Civil Engineer, CA, No. 46733

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers (ASCE)

SD ASCE, Pipeline/ Environmental Group Board Member, 2014-2019

INDUSTRY TENURE

42 years

HDR TENURE

1 year

OFFICE LOCATION

San Diego, CA

CLASSIFICATION

Senior Project Manager

RELEVANT EXPERIENCE

Eastern Municipal Water District, San Jacinto Valley Recycled Water Conveyance Facility
Project Engineer performing QC for approximately 14,900 LF of 60-inch CML&C pipeline. In addition the cathodic protection design on the 60-inch pipeline, there was approximately 22,800 LF of existing 33-inch CML&C steel pipe which was also cathodically protected in this project.

US Coast Guard, Water Main Replacement Project, *Petaluma, CA*
QC Reviewer for the design of approximately 7.5 miles of 10-inch HDPE water main between the City of Petaluma and USCG Petaluma. The pipeline will constructed with HDD off-site of the USCG property and open-trench on the USCG property. There are no water services on the main except a connection for the local fire department and one for a church.

City of San Diego, Catalina 12-inch Cast Iron Main and Catalina Sewer Main, *San Diego, CA*
Project Manager for the design of replacement water and sewer in Catalina Boulevard. The sewer portion of the project consists of replacing of 18,000 linear feet of sewer main with 8- and 10-inch PVC pipe, relocating of approximately 500 LF of sewer main from easement to right-of-way with 8-inch PVC pipe, relining approximately 900 LF with CIPP, and installing over 60 sewer re-plumbs. This project was part of the City of San Diego's Multiple Award Construction Contract (MACC) and was design/build.

Hi-Desert Water District, Wastewater Collection System Lift Stations, *Yucca Valley, CA*
Senior Engineer for the design of three lift stations in support for a sanitary sewer collection system. The collection system will service the center portion of the Town of Yucca Valley. Atkins' current scope of work for the system includes designing 77 miles of sanitary sewer servicing over 5,000 properties. Two of the lift stations were package, and the last as custom-built.

City of El Cajon, Johnson Avenue Trunk Sewer, *El Cajon, CA*
Project Manager responsible for the design of approximately 9,000 linear feet of 30-inch to 48-inch trunk sewer. Project challenges included deep sewer, narrow corridor in streets, crossing under the I-8, high groundwater, and contaminated soils. Prepared the design calculations, and oversaw the production of the PS&E.

City of San Diego, Group Job 743, *San Diego, CA*
Project Manager for the design sewer rehabilitation project involving 15 sites within the City of San Diego. Of the 15 sites, 4 were new sewer replacements and 11 were sewer relining work. This project was part of the City of San Diego's Multiple Award Construction Contract (MACC) and was design/build.

GAIL MASUTANI (CONTINUED)

Design of Otay Mesa Trunk Sewer Phase 2A1, 2A2, 2B1, and Airway Road, Pardee Homes, *San Diego, CA*
Project Engineer responsible for the design of the 42-and 48-inch trunk sewer. Atkins designed approximately 14,800 feet of gravity sewer in Old Otay Mesa Road, Center Street, San Ysidro Boulevard, and Calle Primavera, as well as approximately 1,500 feet of 18-inch-diameter sewer in Airway Road. Design challenges included utility-filled and narrow roadways, custom manhole shelves, utility relocation coordination with City of San Diego and SDG&E, greater than 20-feet-deep manholes, landslide area, and contaminated soils and groundwater. Because of the different construction issues along the alignment, a variety of pipe materials including VCP, HDPE, HOBAS, and PVC were used. Construction methods included conventional cut-and-cover, jack-and-bore with steel casing, and microtunneling. Assisted with the design of the trunk sewer including alignment, hydraulic loading calculations, coordinated Caltrans and MTS encroachment permits, and prepared PS&E.

City of San Diego, AC Water and Sewer Group Job 1024, *San Diego, CA*
Sr. Project Engineer for the design of replacing approximately 20,000 LF of 4-12-inch AC water mains with 8-12-inch PVC pipe and approximately 3450 LF of 8-inch vitrified clay pipe with 8-inch PVC pipe. This project was part of the City of San Diego's Multiple Award Construction Contract (MACC) and was design/build. Included in this project are water appurtenances, pavement improvements, and ADA ramp replacement and upgrades.

City of San Diego, Group Job 1010 and Group Job 1005, *San Diego, CA*
Project Manager for the design replacing approximately 7,900 LF 8-inch of AC water mains (1005), and approximately 8.300 LF of 8-inch AC water mains (1010). This project was part of the City of San Diego's Multiple Award Construction Contract (MACC) and was design/build. Included in this project are water appurtenances, pavement improvements, and ADA ramp replacement and upgrades.

City of San Diego, Meadow Lark/Health Center Drive Water Main Project, *CA*
Design QC and the Technical Lead during construction for this project which was replacement and partial realignment of approximately 9,300 LF of existing 18" and 24" cast iron pipe with new 12" and 16" polyvinyl chloride water main. Project will abandon approximately 3,400 LF of pipeline. Project consisted of 325 LF of jack-and-bore of water main under SR-163. Responsibilities included responding to RFIs, shop drawing reviews, and redesign during the construction phase. This project is the 2020 ASCE Honorable Mention Winner.

Landwell 2200 Sewer Interceptor, The Landwell Company, *Henderson, NV*
Technical Project Manager who led the design team for the interceptor trunk sewer. Project included developing contract documents for 13,300 linear feet of new gravity sewer pipe for the City of Henderson. Approximately 9,900 linear feet is 36-inch-diameter pipe or larger. The project posed significant design challenges, which included developing a complex horizontal alignment due to small radii of curvatures to keep the alignment within the street right-of-way, designing to a depth of 19 feet below grade in Lake Mead Parkway to allow future storm drain improvements, designing an 11-foot by 11.5-foot concrete sewer junction vault for three 42-inch pipes, and coordinating with the Nevada Department of Transportation for the crossing of Lake Mead Parkway. The design included cut-and-cover construction in a remediation area. Products included PS&E.

Otay Mesa Trunk Sewer Alignment Study, Pardee Homes and City of San Diego, *San Diego, CA*
Senior Engineer assisted in the completion of the Otay Mesa Trunk Sewer Alignment Study. Provided technical assistance with siting tributary sewer facilities, preliminary cost analysis, life cycle cost analysis, and technical writing for the final report.

Alex Yescas, PE, CFM, ENV SP

Task Order Manager

Alex has 20 years of experience specializing in H&H, channel design, stormwater quality improvements, and wastewater projects. Alex is currently leading the design efforts to support Southern California agencies on implementing stormwater facilities that adhere to the California Regional Water Quality Control Board stormwater permits. Alex is the current Chair of the Floodplain Management Association which provides floodplain management support to agencies in California, Nevada, and Hawaii. Alex is on the San Diego APWA Water Resources Committee and San Diego Region IRWM Regional Advisory Committee.

EDUCATION
Bachelor of Science, Civil Engineering, San Diego State University, 2003

REGISTRATIONS
Professional Engineer, California, No. 71481

ISI Envision Sustainability Professional (ENV SP)

Certified Floodplain Manager (CFM)

INDUSTRY TENURE
20 years

HDR TENURE
3 years

OFFICE LOCATION
San Diego, CA

CLASSIFICATION
Senior Project Manager

RELEVANT EXPERIENCE

City of Vista, Sewer Mitigation Program
Engineering Task Lead. HDR prepared and successfully delivered the City of Vista's Comprehensive Sewer Master Plan (CSMP) Update and a supporting Supplemental Program Environmental Impact Report (SPEIR) in 2017. HDR was selected by Vista in 2019 to environmentally clear, permit, and design two projects covered under the CSMP, including the Vista-Carlsbad (VC1 - CIP 8258) and Oceanside-Vista (OV1 - CIP 8288) Sewer Trunk Access Improvements Projects. Both projects are located in challenging environmentally sensitive areas, including Carlsbad's Buena Vista Creek Eco-Reserve, and outside Vista's jurisdictional limits. HDR successfully leveraged Vista's prior SPEIR and mitigation monitoring and reporting program (MMRP) to streamline the CEQA clearance process for each project through the preparation of an Addendum.

City of National City Citywide Sewer Collection System, *National City, CA*
Alex is providing program management and design services to rehabilitate the City's aging sewer infrastructure. Our team developed a five-year sewer rehabilitation program that will repair and/or replace more than 50 miles of existing sewer main lines and sewer laterals for sewer lines that are more than 50 years old. The work is prioritized to upsize trunk sewers, realign sewers onto public ROW, and developing O&M manuals.

City of Del Mar Citywide Sewer Collection System Program, *Del Mar, CA*
Project Manager. Alex provided CCTV inspection, assessments, and design of the City's entire 27-mile sewer system, including all manholes. Many of the sewer lines run along the backyard of residential properties. Utilized trenchless technology when accessibility was a challenge. Conducted street and sewer improvements simultaneously to prevent trenching newly paved streets.

City of San Diego D/B Catalina Blvd Sewer Main Replacement, *San Diego, CA*
QA/QC Manager. $20.8 million design-build project involves replacing 14,000 LF of sewer main with eight- and ten-inch PVC pipe, relocating 5,000 LF of sewer main from easement to right-of-way with eight-inch PVC pipe, installing over 60 sewer re-plumbs, and upsizing 18,000 LF of 12-inch cast-iron and asbestos cement water main.

City of San Diego D/B Sewer Group 743, *San Diego, CA*
Project Manager. Alex led planning and the 30% design package to provide 100-year flood protection to areas along Hilltop Park and 3rd Avenue. The design consisted of preparing several alternatives that included a trap. channel, triple box stormdrain system, and a modified rectangular channel. The recommended alternative is a $14M articulated concrete block lined trapezoidal channel. The alternative removes over 20 properties from the FEMA SFHA. Alex is currently working with the City to secure grant funding for final design and implementation.

City of San Diego, Design-Build Citywide 16-inch and Larger CI Water Main and Sewer Replacement, *San Diego, CA*
Principal-in-Charge. Design and construction activities of the 16-inch and larger cast iron water main and sewer replacement Project consist of the installation, replace-in-place, and abandonment of water and sewer mains at locations throughout the City of San Diego. The Work also includes the following improvements: curb ramps, fire hydrants, valves, air vacuum/air release, blow-offs, water boxes, laterals, manholes, cleanouts, and paving restoration.

ALEX YESCAS (CONTINUED)

City of San Diego, Design-Build Catalina Cast Iron Water Mains & Catalina Sewer Mains, *San Diego, CA*
Principal-in-Charge. The $18M project encompassed the upsizing of cast-iron and asbestos cement water main between Point Loma Reservoir and Catalina Standpipe in the Point Loma area. Overflow from Catalina Standpipe will be directed to a new 18-inch reinforced concrete pipe main that will connect to the existing storm drain system.

City of San Diego, Design-Build Meadow Lark/Health Center Drive Water Main, *San Diego, CA*
Project Manager. $4.6 million replacement and partial realignment of approximately 9,300 LF of existing 18-inch and 24-inch cast iron pipe with new 12-inch and 16-inch polyvinyl chloride water main. Project will abandon approximately 3,400 LF of pipeline. Project consisted of 325 LF of jack-and-bore of water main under SR-163.

City of San Diego, Design-Build Emergency Kearny Mesa Transmission Pipeline Manway Replacement, *San Diego, CA*
Project Director. This an emergency design-build project involving replacing a series of transmission water main pipeline manways for the City's Public Utilities Department. The replacement project came about by the rupturing of the transmission water main, ultimately closing the Interstate 5 freeway in the heart of the City. The series of manways were discovered to have excessive corrosion and were leaking fairly extensive. Harris is managing the design team that is made of up corrosion and structural experts from the region. This project is one of the highest priority projects for the City.

Eastern Municipal Water District, Calle Medusa Pipeline Erosion Protection, *Perris, CA*
QA/QC. HDR has provided professional engineering services for the sewer line scour protection at five critical locations along Main Wash. The project scope was to evaluate existing hydrology and hydraulics of the adjacent drainage system, assess its natural geomorphic conditions in terms of streambed scour, bank erosion potential, and lateral channel migration as well as to provide conceptual scour and erosion countermeasures with planning level cost estimates. The pipeline scour protection consisted of a 40" concrete casing around the pipe, braced by a multi-layer riprap revetment on both sides.

Eastern Municipal Water District, Warm Springs Creek Sewer Erosion, *Murrieta, CA*
QA/QC. HDR is providing professional engineering services to perform comprehensive geomorphic evaluations and erosion protection for the Eastern Municipal Water District (EMWD) sewer line crossing Warm Springs Creek. The existing sewer is a 12"-diameter PVC pipe that is currently protected by articulated concrete blocks (ACBs) installed as a hard armor scour protection.

Various Grant Management, *San Diego, CA*
Project Manager. Developed strategies in writing grants that have helped many agencies across the state win grants. His approach is to ensure that we are covering multiple benefit solutions that will enhance the community. Specifically, he focuses on the specific metrics that each grant program requires and tailor the applications as such. He has secured over $30M in grant funding and providing grant support to the cities of: National City, Chula Vista, El Cajon, Vista, and Port of San Diego.

Steve Friedman, PE, BCEE, PMP

Task Order Manager

Steve has more than 26 years of experience in engineering planning and design of water, recycled water, industrial waste, and wastewater facilities, including design-build projects. He has management and design experience in projects concerning transmission and distribution system piping wastewater treatment plant upgrades, pumping stations, pressure-control stations, and water treatment. Steve has also been instrumental in conducting several hydraulic network modeling assignments including integrating results with ongoing planning and/or design efforts. He provided a wide range of services during construction, including office engineering, construction observation, and construction management.

EDUCATION

Master of Science, Civil Engineering, University of California at Berkeley

Bachelor of Science, Civil Engineering, University of California at Berkeley

REGISTRATIONS

Professional Engineer, Civil, CA, License No. 055566

American Academy of Environmental Engineers, California, BCEE No. 7337470

Project Management Professional, California, No. 293170

Risk Assessment Methodology for Water, California

PROFESSIONAL MEMBERSHIPS

American Water Works Association

American Academy of Environmental Engineers

Association of California Water Agencies

WateReuse

Project Management Institute

INDUSTRY TENURE

28 years

HDR TENURE

26 years

OFFICE LOCATION

Irvine, CA

CLASSIFICATION

Senior Project Manager

RELEVANT EXPERIENCE

Eastern Municipal Water District, Old Town Sewer Final Design, *CA*
Project Manager. Provided predesign and final design of 3,000 linear feet of 15-inch-diameter relief sewer pipeline along Front Street in Old Town Temecula to increase capacity for projected sewer flows. The $12 million sewer was installed using a pilot tube guided bore (PTGB) method to minimize commercial and traffic disruption to the surrounding community. Interconnections to the existing sewer were included at three locations, which were also installed by PTGB method without requiring construction within the heavily-occupied Front Street. Air-flow and hydraulic modeling was also conducted to determine odor control features as necessary and ensure adequate velocities for self-cleaning, respectively. Air flow modeling was conducted on both the existing and proposed sewer system.

Orange County Sanitation District, Santa Ana River Interceptor (SARI) Line Realignment and Protection and Siphons, *Orange County, CA*
Project Manager. HDR provided design and construction-phase engineering services for 2.3 miles of large-diameter sewer replacement including a new 54-inch gravity sewer. Project components included a 1300 foot long 10-in diameter three-barrel siphon about 3000 feet of additional tunneling of an 84-inch casing along deep portions of the alignment and a metering station. Particular attention was necessary to locate the facility within a very narrow construction corridor with environmental constraints of the SAR on one side and the Caltrans right-of-way on the other. Multiple alternative alignments were necessary to design a constructible alignment across the SAR to provide the required capacity within the minimal footprint. Various construction technologies were considered to handle the high groundwater and difficult geology of the sewer location. Connection to the existing sewer was purposely designed so that bypass pumping was not necessary to make the connection. This design reduced construction cost and minimized project risk or potential wastewater spills.

NAVFAC Southwest, P-1045 & P-1046 Conveyances, *Marine Corps Base Camp Pendleton, CA*
Project Manager. For P-1045, HDR was selected as part of a design-build team to provide engineering design services for 120000 LF of 14-24-inch diameter new potable water conveyance pumping and storage facilities. HDR's pipeline design work included: alignment design, pipeline sizing calculations, hydraulic analyses, valve location determinations, trench design, alignment design, multiple horizontal directional drilling designs, and permit application support. P-1046A provided a new wastewater collection system to support growth of the base population that was hydraulically sized to convey increased flows and improved functionality for the North and South Treatment Plants. The north section improvements required the design of a 550,000 gpd lift station, 3,300 linear feet of 6" force main,10,000 linear feet of gravity sewer and 24 manholes. The southern wastewater collection system improvementsrequired the design of a new 1,1 mgd tributary area pump station, emergencyoverflow structure with retaining walls, 21,100 linear feet of new force main and two lift stations.

STEVE FRIEDMAN (CONTINUED)

Eastern Municipal Water District, San Jacinto Valley Water Conveyance Facilities, Preliminary and Final Design, *Perris, CA*
Project Manager. Steve oversaw the diverse team to perform hydraulic analysis, pipeline alignment and facility siting evaluations, and preliminary design preparation for the District's SJVRWCF. As part of Phase 1, for the HDR team along with District staff developed a plan that would allow the existing Commonwealth Booster Pump Station to remain in service to provide full Phase 1 flows and allow deferral of EM-25 pumping equipment construction until Phase 2.

Metropolitan Water District, Water Treatment and Pipeline On-Call Services, *Los Angeles, CA*
Project Manager. Steve has managed this on-call contract for Metropolitan since the end of 2013. Since that time, he has selected the appropriate project team and managed the contract for four different task orders. He is currently the project manager for one task order; providing UPS replacement at all five Colorado River Aqueduct Pumping Stations.

Irvine Ranch Water District, IRWD-Shady Canyon Offsite Pipelines, *CA*
Project Manager for design, bidding, and construction engineering services for four miles of 24-inch-diameter and one mile of 36-inch-diameter recycled water transmission mains, two miles of 16-inch-diameter domestic water transmission main, and a half mile of 15-inch-diameter sewer line. The design required close coordination with The Irvine Company, City of Newport Beach, City of Irvine, and several other consulting firms. Developer driven schedules required three separate bid packages that further complicated the project. Closing the road allowed the three pipelines to be combined and completed in just seven months, savings the district millions, rather than stretching the work out over two years and keeping the road partially open during construction.

Metropolitan Water District, Rehabilitation of the Sepulveda Feeder, *Los Angeles, CA*
Task Manager responsible for large diameter isolation valve and flow meter facilities. HDR has been providing preliminary engineering for MWD's Sepulveda Feeder, a Prestressed Concrete Cylinder Pipe (PCCP) water transmission main ranging in diameters from 84-inch to 120-inch, which is the largest of four main feeders of water to the Los Angeles area. An alternatives analysis is being performed for various hydraulic, construction and rehabilitation alternatives to look for opportunities to maintain hydraulic grade, reduce costs, plan for proper equipment access, minimize utility conflicts and minimize service outages. Rehabilitation is planned to be performed using a combination of collapsed can (coiled) steel pipe and solid can steel pipe ranging in diameters from 81-inches to 147-inches outside diameter.

Poseidon, Carlsbad Desalination Plant Intake Facilities Preliminary Design, *Carlsbad, CA*
Design Project Manager. Steve oversaw a diverse design team to prepare preliminary design and contract documents for design build procurement of the Carlsbad Desalination Plant's new intake facility. It consists of a new 198 mgd (368 cfs) water pumping station, modifications to the existing 127 mgd (235 cfs) process water pumping station, a new fish screening structure with a 1,000-ft-long, 24-inch diameter fish return pipeline, and two large diameter pipeline designs: 500 feet of 72-inch pipeline and 100 feet of 84- inch pipe. Special features include a shoring design for deep excavation and high groundwater, an electrical building for the 1,000 horsepower pumping system, ingress/egress modifications to the existing plant, and environmental. The team also prepared twenty conceptual alternatives under client direction for permitting approval in accordance with the Ocean Plan Amendment.

Mandira Sudame, PE

Task Order Manager

Mandira has 20 years of engineering experience focused on water and wastewater infrastructure including pump stations, pipelines, and treatment facilities. Project experience includes membrane technology, solids handling, large diameter pipeline design, and construction support services. Mandira commands a robust understanding of water engineering principles and technologies allowing her to deliver innovative and cost-effective projects. Her breadth of experience results in designs that are easy to operate and maintain. Mandira is a hands-on engineer who understands the technical details, communicates effectively with her team and offers a strong work ethic to every project she works on.

EDUCATION

Master of Engineering, Civil Engineering, Pennsylvania College of Technology, Penn State

Bachelor of Engineering, Civil Engineering, Birla Vishvakarma Mahavidyalaya Engineering College (BVM)

REGISTRATIONS

Professional Engineer, California, No. 70397-C

PROFESSIONAL MEMBERSHIPS

California Water Environment Association (CWEA)

Society of Women Engineers

Society of Women Engineers, San Diego Section, Past President

WateReuse Association

INDUSTRY TENURE

20 years

HDR TENURE

20 years

OFFICE LOCATION

San Diego, CA

CLASSIFICATION

Senior Project Manager

RELEVANT EXPERIENCE

City of San Diego, As-Needed Engineering Wastewater Facilities Condition Assessment, *San Diego, CA*
Task Manager. Mandira led 14 tasks ranging from field inspections to emergency design and repair efforts. Facilities included pipelines ranging from 8 to 120 inches in diameter pump stations, and outfalls. Task orders have included a rigorous evaluation of the consequence of failure and a thorough analysis of the likelihood of failure combining both field condition data and statistical analysis. Other tasks performed included field data collection, data analysis and preparation of a renewal and replacement action plans that included a comprehensive financial analysis projected timeline and cost estimate for each pipeline implementation.

Orange County Sanitation District, Santa Ana River Interceptor (SARI) Line Realignment and Protection and Siphons, *Orange County, CA*
Project Engineer. Mandira was involved in the design to relocate and protect 2.3 miles of the SARI line from structural damage. The design team delivered innovations like (1) a lift station to minimize pipe size, deep tunnels and a difficult river crossing; (2) alternative siphon alignments that adhered to your standards and the restricted easements; (3) allowances within the specifications for the Contractor to identify value engineering ideas that result in reducing project cost; and (4) the first curved tunnel in the United States that eliminated the need for manholes greater than 60 feet in depth. This project also included your "pump station without pumps." SARI won the 2014 Outstanding Project Award from ASCE, ACEC, CalGeo, and the Orange County Engineers Council.

Orange County Sanitation District (OC San), On Call Planning Studies, *Fountain Valley, CA*
Project Manager. As part of the On-Call Planning Studies contract, OCSD hired HDR to establish and document the status of the air jumpers at 87 inverted siphon locations in the collection system. The main objectives of Project SP-138 were to determine:
1. Corrosion, as it affects the physical condition and strucutral integrity of air jumpers;
2. Air jumper effectiveness, as established by air pressure increase upstream, pressure drop across, and air flow rate through the air jumpers, as well as the severity of odor issues;
3. Air jumper retrofit needs, in terms of upsizing, repair, relining, and/or modifications;
4. Priority and cost of air jumper retrofits, as determined by air jumper effectiveness and retrofit needs. Project 2-68 established the status of air jumpers at 17 high-priority inverted siphon locations and determined retrofit requirements at each location. The District has since completed the retrofit work on a number of these locations.

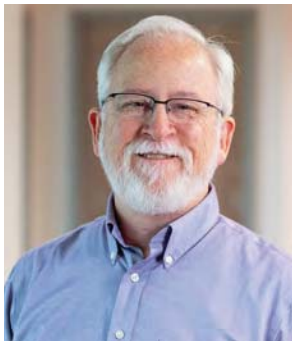
Irvine Ranch Water District, Michelson Water Recycling Plant Phase 2 Expansion, *Irvine, CA*
Mandira was the ***lead design engineer*** for 10 mgd membrane bioreactor process (MBR) including fine screening, aeration system, mixed liquor pumping system, and membrane system. She provided coordination and review of submittals and RFIs. HDR provided conceptual design, preliminary design, final design, and construction services for this award-winning $114 million project that expanded capacity of the Michelson Water Recycling Plant to 33 mgd. Improvements included: influent sewers, new headworks, expansion of the primary sedimentation

MANDIRA SUDAME (CONTINUED)

tanks, new primary effluent pumping station and flow control, modified flow equalization basins, secondary treatment expansion with new membrane bioreactor (MBR) facility, new high-rate clarifier to treat filter backwash, new ultraviolet (UV) disinfection system, reclaimed water pumping, modifications to chlorine contact basins, chemical feed systems, new pumping and other ancillary facilities, and electrical modifications.

Orange County Sanitation District, Sludge Dewatering and Odor Control at Plant 1, *Fountain Valley, CA*
Served as the ***Project Manager*** of the $105 million solids handling facility that encompass up to nine of the largest high solids centrifuges in the world. Ms. Sudame is responsible for design of the thickening and dewatering centrifuge systems including feed pumping, thickened sludge pumping, dewatered cake conveyance, polymer systems and ancillary equipment. She also served as project lead for interdisciplinary coordination and BIM production management. She played a major role in developing the Engineering Study Report and Preliminary Design Report for the project, including the development and coordination of operating philosophies and control strategies.

City of San Mateo, Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion, *San Mateo, CA*
MBR Lead. HDR provided schematic design and final design services for $400 million in improvements to the San Mateo/Estero Municipal Improvement District (EMID) Wastewater Treatment Plant, which included: a complete plant renovation for headworks, primary clarification, membrane bioreactor (MBR), and disinfection. The new plant replaced the existing liquid treatment process and was constructed on the same site. The process is designed to accommodate peak flows by re-purposing the treatment units into a biological and chemical enhanced treatment (BioCET) process.



Kevin Calderwood, PE

Task Order Manager

Kevin has more than 25 years of specialized experience providing project management and design services for public works projects, and water and wastewater pipeline design, including trenchless pipeline construction. His experience includes more than 50 pipeline projects ranging from 4 to 120 inches in diameter and up to 16 miles in length, with more than 10 miles of pipelines constructed by trenchless methods.

EDUCATION
Bachelor of Science, Civil Engineering (Bachelor of Science, Civil Engineering), University of California, Berkeley (UC Berkeley), 1995

REGISTRATIONS
Professional Engineer, California, No. C 57882

PROFESSIONAL MEMBERSHIPS
American Society of Civil Engineers (ASCE), Capital Branch

California Water Environment Association (CWEA)

Water Environment Federation

INDUSTRY TENURE
26 years

HDR TENURE
10 years

OFFICE LOCATION
Folsom, CA

CLASSIFICATION
Senior Project Manager

RELEVANT EXPERIENCE

City of Portland Southeast Interceptor Rehabilitation, *Portland, OR*
QA/QC. Provided quality assurance/quality control (QA/QC) for condition assessment of rehabilitation improvements for 2,038 linear feet (LF) of 72-inch by 74-inch horseshoe monolithic concrete sewer constructed in 1954, located at a depth of 41 to 53 feet, and 1,330 LF of 66 x 54 inches at a depth of approximately 30 feet. The project included evaluation of rehabilitation measures and alternatives. Considerations that were addressed included public and business impacts, access points, and life-cycle-costs.

City of Berkeley, California, Sanitary Sewer Rehabilitations at Contra Costa Avenue, Capistrano Avenue, Solano Avenue, The Alameda, and Los Angeles Avenue, *Berkeley, CA*
QA/QC. Provided quality assurance/quality control (QA/QC) for closed-circuit television inspection, predesign, and final design of the the rehabilitation of approximately 4,850 linear feet (LF) of 6- to 10-inch-diameter sanitary sewer (trenchless replacement/pipe splitting, cured-in-place pipe [CIPP], traditional open-cut) in a portion of north Berkeley, primarily along Contra Costa Avenue between Yosemite Road and Los Angeles Avenue. Sanitary sewers in this area are commonly located in narrow, winding streets with traffic considerations and backyard easements with difficult access. The project also included new manholes and rehabilitation of existing manholes, and replacement of 4- to 6-inch-diameter sewer laterals.

City of Folsom, Collection System Odor Control Study, *Folsom, CA*
Project Manager. Conducted a study for resolving odor issues in the city's wastewater collection system. Odor complaints were made by residents relating to the trunk sewer that parallels the pedestrian/bicycle trail along open-space corridors through the Brentwood neighborhood. Study included smoke testing to determine the effectiveness of the existing filtered venting system, and evaluation of potential odor control measures and/or system improvements to mitigate the odor issue. Odor control measures that were evaluated included revisions to the existing chemical dosing program, additional or modified filter systems, and modifications to the collection system to reduce turbulence.

City of Berkeley, California, Sanitary Sewer Rehabilitation for Portland Avenue, Santa Fe Avenue, Kains Avenue, Garfield Avenue, San Pablo Avenue, Clay Street, Visalia Avenue, Curtis Avenue, Curtis Street Sideline and Backline, Neilson Street Backline, Thousand Oaks Boulevard, San Luis Road, and Arlington Avenue Backline, *Berkeley, CA*
Technical Advisor and QA/QC. Provided closed-circuit television (CCTV) inspection of the existing sewer mains, and final design of rehabilitation improvements for approximately 8,511 linear feet (LF) of sanitary sewer mains (trenchless replacement and traditional open-cut), manhole replacement and rehabilitation, excavation, and replacement of 4- and 6-inch-diameter sewer laterals in the City of Berkeley and City of Albany's right-of-way).

KEVIN CALDERWOOD (CONTINUED)

Sacramento Area Sewer District, Force Main Condition Assessment, *Sacramento, CA*
Project Manager. Kevin was the project manager for a condition assessment for 75 miles of force mains, which involved ranking 114 individual force mains for condition assessment priority based on criteria such as age, material, location, diameter, maintenance cost, etc.; evaluating available condition assessment techniques and determining the most suitable technique for each force main material type; implementing the most suitable condition assessment technique identified for three or four of the highest priority force mains; and developing a summary of the condition assessment results and recommendations for each force main that was evaluated.

Douglas County Lake Tahoe Sewer Authority (DCLTSA), Emergency Export Force Main Replacement, *Zephyr Cove, NV*
Technical Project Manager/Lead. Provided preliminary design, permitting, final design, and construction services for emergency repair and replacement of the leaking export force main, from STA 34+50 to approximately STA 51+50 (under residential roads). This 16-inch-diameter pipeline was built using spiral welded steel pipe (WSP) with cement lining and asphalt wrapping. The leaks created great disturbance to plant operations. Electrical continuity, corrosion monitoring test stations, electrical isolation of each buried steel pipeline, buried fittings in appurtenances, and post-installation testing were recommended. Assisted with the submittal of Nevada Division of Environmental Protection (NDEP) permits, including stormwater construction permit, temporary groundwater discharge permit, and temporary permit for working in waters. Also coordinated with Tahoe Regional Planning Agency (TRPA), Douglas County, NDEP Bureau of Safe Drinking Water (BSDW) and Water Pollution Control (WPC), and Kingsbury General Improvement District (KGID).

DC Water, Piney Branch Sewer Rehabilitation, *Washington, District of Columbia*
Design Support. Assisted with preparation of a design memorandum and provided design support for rehabilitation of 50 pipe segments totaling 15,610 linear feet (LF) of 36- to 90-inch-diameter combined sewers and 117 manholes. Pipelines were rehabilitated using trenchless technologies.

Santa Cruz County Sanitation District, Valencia Creek Sewer Repair, *Santa Cruz, CA*
Project Manager for predesign of the rehabilitation/replacement of up to 1,000 linear feet of 10-inch-diameter sewer. This pipeline was damaged by hillside movement and storm drains discharging onto the pipe. Rehabilitation/replacement of the Valencia Creek Sewer was necessary to avoid a pipe failure and possible environmental damage. Predesign services included hydraulic analyses necessary to determine appropriate pipe sizing for new sewers, alignment identification, material selection, evaluation of construction methodologies, and preparation of a preliminary construction cost estimate of the recommended alternative. Predesign also included identification of environmental documentation necessary to meet the requirements of the CEQA, surveying, geotechnical investigation, utilities coordination, permit acquisition, easement acquisition, and coordination with governmental agencies with jurisdiction over construction activities within the project area, including other departments within Santa Cruz County and other public agencies.

Santa Cruz County Sanitation District, Park Avenue and Wesley Street Sewer Replacement, *Santa Cruz, CA*
QA/QC. Provided quality assurance/quality control (QA/QC) for predesign and final design of the replacement of 738 linear feet (LF) of parallel 10-inch-diameter vitrified clay pipe (VCP) sewers running through a townhouse community. These parallel pipelines were located beneath retaining walls, between mature trees and structures, and at insufficient depth of cover, which complicated maintenance and restricted access. The two pipelines were combined and rerouted.

Leanne Hammond, PE, ENV SP

Hydraulic Modeling and Collection System Planning

Leanne Hammond is a Project Manager and Senior Engineer with 20 years of experience in San Diego and the Southern California market working on water and wastewater projects for clients in both the public and private sectors.

Leanne is well versed in engineering and project management duties, including resource allocation, team performance, coordination with clients and subconsultants, and technical oversight so that quality goals are met, and budgets and schedule are maintained and achieved. Technical project work includes potable, recycled water, and wastewater master plans and hydraulic model development, urban water management plans (UWMPs), water and sewer technical studies for public and private clients, and task order support on as-needed engineering contracts.

EDUCATION
Bachelor of Science, Environmental Engineering, California Polytechnic State University, San Luis Obispo (Cal Poly)

REGISTRATIONS
Professional Engineer, California No. 68344

Envision Sustainability Professional Credential (ENV SP), Institute for Sustainable Infrastructure

PROFESSIONAL MEMBERSHIPS
American Society of Civil Engineers (ASCE), San Diego Younger Member Forum (YMF)

Engineers Without Borders, San Diego Professional Chapter

WateReuse, San Diego Chapter

INDUSTRY TENURE
20 years

HDR TENURE
1 year

OFFICE LOCATION
San Diego, CA

CLASSIFICATION
Hydraulic Modeling and Collection System Planning Lead

RELEVANT EXPERIENCE

City of Escondido, California, Water and Recycled Water Master Plan and Wastewater Master Plan, *Escondido, CA*
Senior Engineer for development of a water and recycled water master plan to update the City's current planning documents to incorporate new and emerging conditions that affect water demands, supply, and delivery within the city, and meet regulatory deadlines. Demands were entered into the hydraulic model from water billing records using GIS applications. For the sewer master plan, a new InfoSWMM hydraulic model of the sewer interceptor system consisting of gravity pipelines, siphons, and pump stations, was developed from GIS data collected as part of the project. She is also the principal-in-charge for the concurrent wastewater master plan. Both plans will take into account the City's downtown redevelopment plans and the impact on the existing infrastructure systems. As part of the master plans, Atkins prepared modeling software technical memorandums recommending water and wastewater modeling platforms based on the client's needs, future use, and budgets.

Eastern Municipal Water District, As-Needed Sewer and Water Modeling Support Services, *Perris, CA*
Leanne provided as-needed sewer and water modeling support services to assist Eastern Municipal Water District staff resources with expediting tasks to meet their Capital Plan schedule. Services included coordination and development of future demand/flow projections for the potable water and wastewater systems, developing a streamlined process for importing demands/flows into the District's InfoWater and InfoSewer hydraulic models, updating the potable water, recycled water, and wastewater hydraulic models for use in the master plan updates, and developing various supply analyses for the District's service areas. As part of the hydraulic model updates, Leanne reviewed CIP projects from previous District master plans for digitization into the hydraulic model and updated model components based on District GIS databases, as well as incorporated special study areas into hydraulic model scenarios.

City of San Diego, As-Needed Comprehensive Groundwater Consultant Services, *San Diego, CA*
Through the 3-year As-Needed contract, which executed over 20 separate task orders, ***Leanne provided comprehensive services to complete various monitoring plans and the development of strategic groundwater projects***, while meeting the challenge of cost-efficiently managing schedule and budget compliance and regulatory coordination. As Deputy Program Manager, Ms. Hammond assisted with overseeing schedule and budget of the various authorized task orders, reviewed monthly invoice packages and progress reports, prepared for and attended weekly status meetings with City staff, and coordinated with task managers to successfully deliver project submittals.

Recycled Water Master Plan Update, West Basin Municipal Water District, *Carson, CA*
Deputy Project Manager/Project Engineer.
Deputy project manager supporting the District's long range planning effort and condition assessment of the existing recycled water treatment and distribution system, evaluating new opportunities to expand recycled water service, and developing a prioritized capital improvement plan that

LEANNE HAMMOND (CONTINUED)

outlines improvement projects over the next 20 years. Coordinated task leads and reviewed deliverables which included the calibration plan and report technical memorandums.

2019 Recycled Water Master Plan Update, City of San Diego, *San Diego, CA*
Project Manager and Hydraulic Modeler. As part of the master plan team, Leanne was responsible for developing a master plan for implementing recycled water projects while optimizing flows from the City's treatment plan and evaluating existing demands and the potential for future infill demand development. The City's existing SYNERGEE recycled water model was converted to InfoWater to analyze hydraulic scenarios for both existing and future demand conditions. A hydraulic model user manual was developed and incorporated into the master plan report documents.

2018 Water and Recycled Water Master Plan Update, City of Carlsbad, *Carlsbad, CA*
Project Manager and Hydraulic Modeler. The City of Carlsbad (Carlsbad) last updated its Water, Recycled Water, and Sewer Master Plans in 2012 based on data through 2010. As part of the master plan updates, Leanne provided an evaluation for significantly reduced potable and recycled water demands from the economic recession, combined with a multi-year drought. H2OMap hydraulic models were converted to InfoWater models, with current and forecasted demands being refined and loaded into the models for existing and future modeling scenarios. The models will be used to revise and update the resulting capital improvement programs (CIPs) to guide Carlsbad in spending precious funds in the most cost-effective manner.

City of Oceanside and Vista Irrigation District, Melrose Drive Recycled Water Extension Study, *Oceanside, CA*
Project Manager and Hydraulic Modeler.
Responsible for the preparation of a joint feasibility study evaluating the potential to maximize the recycled water market for the City of Oceanside and Vista Irrigation District along Melrose Drive. As part of the study, irrigation meter records were reviewed and summarized, preliminary phased recycled water pipeline extensions were sized and developed, and preliminary cost estimate including potential retrofit costs was prepared. A hydraulic analysis was conducted using the Carlsbad Municipal Water District recycled water H2OMap computer model to evaluate and size the proposed distribution system.

Otay Water District, 2008 Water Resources Master Plan (updated in 2010 and revised in 2013), *Spring Valley, CA*
Project Engineer and Hydraulic Modeler.
Responsible for developing an InfoWater recycled water hydraulic model. Responsible for demand calculations for the District's recycled water customers based on existing meter data and future land use for future customers, new hydraulic model development using GIS data, recycled water system calibration, system evaluation under specified conditions, CIP development and verification, and assistance with the development of a comprehensive Master Plan document and dynamic land use model. Atkins and Ms. Hammond were retained by the District for follow-on, on-call hydraulic modeling to assist engineering staff with fire flow analyses.

Pete Bredehoeft

Cost Estimating

Pete has completed more than 3,300 cost estimates on all levels, including program management, conceptual bonding type estimates, order of magnitude project estimates, design development estimates, construction document estimates, final design estimates, operations/maintenance estimates, and change order-type definitive level estimates. He is an expert in the cost estimating process and procedures for programs. Pete is a specialist in estimating location or area adjustment factors and in escalation development and commodity trends.

He has extensive program management experience on large capital improvement programs. Pete is a specialist in the implementation, integration, and automation of program management tools. He has implemented and is the administrator of the Estimating Benchmarking Tool that tracks historical estimates, actuals, unit prices, ratios and metrics and professional services. The tool runs on Project Cortex software by Eos Group. This includes mapping to the International Construction Measurement Standard 2.0.

Pete is proficient in a variety of leading construction industry software programs including Sage (Timberline), Revit, Assemble, Eos Navigator, Eos Cortex, Success by U.S. Cost, MC2, MCACES, MFW, MII, PACES, Composer Gold, CES, Primavera, Microsoft Project and SureTrak.

EDUCATION

Bachelor of Science, Construction Management, Ferris State University,

Associate of Science, Civil Engineering Technician, Ferris State University

Associate of Science, Survey, Ferris State University

REGISTRATIONS

Certified Estimating Professional International (CEP)

AACE International, #4

Bituminous Plant Technician: MI, #450

PROFESSIONAL MEMBERSHIPS

Association for the Advancement of Cost Engineering International, Director of Recommended Practices, Former Co-Chair of BIM Committee

INDUSTRY TENURE

30 years

HDR TENURE

1 year

OFFICE LOCATION

Atlanta, GA

CLASSIFICATION

Cost Estimating Lead

RELEVANT EXPERIENCE

City of Baton Rouge, Remedial Action Plan. Sewer System Program Baseline Concept Estimates, *Baton Rouge, LA*
Lead Cost Estimator. Responsible for the concept program baseline estimate. The program addressed the existing 2002 Consent Decree improvements associated with the Sewer System Overflow (SSO) challenges while planning for the future. The program was scheduled to be accomplished by 2014 and had several components including Supplementary Environmental Projects (SEP), Remedial Measures Action Plan 1 (RMAP1), Remedial Measures Action Plan 2 (RMAP2), Preventive Maintenance (PM) and Sewer Rehabilitation and Inspection. The concept baseline program capital improvement budget in February 2007 was estimated to be $2 billion. Used cost estimating parametric models to develop detailed cost estimates for the entire baseline of the program. This included improvements to existing wet weather treatment plants, new pump station, rehabilitation of existing pump stations, force mains, capacity sewer improvements for gravity sewers and rehabilitation of existing sewers using. All of this was performed with the confines cost estimating software packages. This was refined to be a $1.7 billion capital improvement budget.

Miami-Dade Water and Sewer Department, South Dade 54-Inch PCCP Force Main Rehabilitation, Project No. S-049057, 90% Engineers Estimate, *Miami, FL*
Lead Cost Estimator. The project is for rehabilitation of an existing sewer force main, using 54-inch CIPP (13,297' LF) and 48-inch CIPP (106' LF). The project including access points, 54-inch plug valves (4 EA), 48-inch plug valve (1 EA) and 24-inch plug valve (1 EA), removal of 2-inch and replace with 4" air release valves (15 EA), by-pass pumping and surface restoration. The opinion of probable construction cost was $25,132,000.

Miami-Dade Water and Sewer Department, 20-inch Force Main Connection and Canal Crossing, Project Number SL-2A-1, Concept Estimate, *Miami, FL*
Lead Cost Estimator. The project includes open cut of 20-inch force main sewer (3,250' LF), valve vault structure 168" long x 96" wide x 84" deep (3 EA), 20-inch plug valves (4 EA). The project included a 36-inch x 20-inch canal crossing using micro-tunneling trenchless technology. The opinion of probable construction cost was $3,892,000.

PETE BREDEHOEFT (CONTINUED)

Miami-Dade Water and Sewer Department, 54-inch Force Main Connection Pipeline, SL-3B.1, Concept Estimate, *Miami, FL*
Lead Cost Estimator. The project includes three main elements: 54-inch force main collection to SP-1 Pump Station (1,800' LF), 36-inch Connection to SL-3B-2 Tie-in (5,700' LF), and a Roadway and Railway Crossing 54-inch x 36-inch micro-tunneling trenchless technology. The opinion of probable construction costs was $19,030,000.

City of Phoenix, Water and Wastewater System, Unit Price Development, *Phoenix, AZ*
Lead Cost Estimator. The project was an update to an existing cost estimating manual used by consultants for the development of capital cost estimates including unit price development across various water and wastewater improvements. The improvements included lift stations, chlorine generation systems, water pipelines from 8" to 84" with trench repair, pressure relief vales at water tanks, on-site sodium hypochlorite generation system, water booster pump stations from 5 MGD to 60 MGD, water above ground storage reservoir tanks from 2 mg to 60 mg buried structures, gravity sewer pipes from 8" to 60" in various material types, duel force main pipes in 6" to 30" sizes, submersible lift stations from 1 MGD to 12 MGD, plus various site improvement items and pipeline crossing configurations.

Confidential Client, Frac Water Supply Pipelines and Pump Stations, *TX*
Lead Cost Estimator. Responsible for all capital estimating of 750 miles of pipeline infrastructure for a frac operation in the Permian basin. The pipelines ranged in size from 30" to 12" HDPE pipe. The mainline pipelines totaled 120 miles and the subsystem totaled 630 miles. The project included 10 booster pump stations with frac ponds. The program included upgrades to 10 existing frac ponds and the planning of 20 new frac ponds. The planned capital investment was $1.2 billion.

Florida Keys Aqueduct Authority, Naval Air Station Key West, Wastewater Improvements, Pump Station and Force Main, Concept Estimate, *Key West, FL*
Lead Cost Estimator. The project includes improvements to the existing wastewater treatment plant by add a new influent screen, new equalization tank (300,000) and Acid chemical piping. The project included a new submersible pump station (400,000 gpd) at Boca Chica. The project included a new 6" force main from Boca Chica to Big Coppitt (5,280' LF). The opinion of probable construction costs was $5,813,000.

Chris Easter, PE

Odor Control

Chris is a Senior Odor Control Technologist and Project Manager for HDR. Chris has over 30 years engineering experience and has completed over 100 odor control projects and published or presented over 75 conference and peer reviewed journal papers. He is a contributing author in several air and odor related text and studies including the WEF MOP 8, the EPA Biosolids Manual, the WERF Collection Systems Odor and Corrosion Study and the 2020 Update to the WEF Manual of Practice 25: Odor Emissions and Control for Collection Systems and Water Resource Facilities 2nd ed.

EDUCATION

Master of Science, Environmental Engineering, Virginia Polytechnic Institute and State University (Virginia Tech), 1992

Bachelor of Science, Agricultural Engineering, Virginia Polytechnic Institute and State University (Virginia Tech) United States, 1989

Bachelor of Arts, Biology, University of Richmond, 1975

REGISTRATIONS

Professional Engineer - Civil/Structural/ Mechanical, California, No. C54929

Professional Engineer - Civil/Structural/ Mechanical, Pennsylvania, No. PE053935E

Professional Engineer - Civil/Structural/ Mechanical, Virginia, No. 0402036227

INDUSTRY TENURE

32 years

HDR TENURE

4 years

OFFICE LOCATION

Richmond, VA

CLASSIFICATION

Odor Control Lead

RELEVANT EXPERIENCE

Akron Ohio, Ohio Canal Interceptor Tunnel
Senior Odor Technology and QC Reviewer.
Provided Senior Odor Technology guidance and QC review with regard to wet weather fl ow sewer tunnel ventilation and odor impact potential. Work included AERMOD dispersion modeling to determine the risk of nuisance level odor impacts and to optimize the height of odor emission exhaust stacks.

Back River Wastewater Treatment Plant, Headworks Improvements and Wet Weather Flow Equalization, Design
Quality Control Reviewer for design and bid of biotowers to treat odorous air from the plants expanded headworks and grit collection systems including fine and coarse screens, sewer inlet channels and wet wells. In total this included 10 biotowers treating up to 97,000 cfm odorous air.

Loudoun Water, Collection System Odor Study, *Ashburn, VA*
Evaluation of existing liquid phase odor control program for a large force main and gravity sewer system. Identification of odor emission hot spots and recommendations for operational modifications to control odors and save on annual chemical cost from the existing 18 chemical dosing stations.

Arlington County Water Pollution Control Plant
Senior Odor Control Technologist Support.
Assisted with forensic evaluations on problems with existing odorous air ventilation and treatment. Helped identify and prioritize required near and long term actions to improve odor containment and treatment.

Ketchum Sun Valley Wastewater Treatment Plant, *Idaho*
Quality Control. QC review and technology selection guidance for the Basis of Design for a headworks upgrade at the Ketchum/Sun Valley WWTP. Resulted in a new 1500 cfm carbon adsorption system.

City of Lynchburg, Combined Sewer Overfl ow Reduction Improvements, *Lynchburg, VA*
Assistant Project Manager and Design Manager.
This work covered the Preliminary Engineering Report (PER) phase and included plant-wide system evaluations with recommendations for Lynchburg to meet the future CSO flow needs up to 76 MGD. Design included two new 4 mgal equalization basins with disinfection and upgrades to the existing headworks, including new screens and bypass channel systems.

Collection System Modeling Evaluation, *Billings, MT*
This work included ***modeling of the wastewater collection system using the Wastewater Aerobic/Anaerobic Transformations in Sewers (WATs) model*** in order to determine odor and corrosion hot spots and their cause and in order to identify mitigation steps for the problematic areas in the collection system. Work resulted in chemical dosing recommendations to achieve headspace H2S levels below 10 ppm. Calcium Nitrate was determined to be the most cost effective option.

CHRIS EASTER (CONTINUED)

Johnson County Kansas Tomahawk Creek Wastewater Treatment Facility
Quality Control. Reviewer for design and expansion of the Tomahawk Creek WWTF odor control systems. Designs are based on carbon adsorption systems with a total capacity of 97,700 cfm.

City of Richmond, Headworks Preliminary Engineering and Final Design, *Richmond, VA*
Project Manager/Design Manager. Managed design of the preliminary engineering followed by fi nal design for a new $22M headworks for the City of Richmond Wastewater Plant. This included a new headworks with chain and rake screens, vortex grit removal and grit processing systems, along with drive through truck unloading bays. Biotower based odor control is provided to treat the more odorous air, which will be vented directly from the main sources such as the covered wastewater channels, vortex grit tanks and process equipment, including enclosed screens and grit classifi ers. The new facility is rated for 140 MGD.

City of Folsom Lake Natoma Odor Control, *Folsom, CA*
Quality Control. QC evaluation and technology selection guidance for the American River Bridge Lift Station Odor Control Project. Project resulted in a new 2200 cfm carbon adsorption odor control system.

Hampton Roads Sanitation District THP and FOG Design
Quality Control. Reviewer for the final design of odor control system connections and ductwork for the addition of Fat Oil and Grease (FOG) receiving stations and addition of a Thermal Hydrolysis Process to the Digester systems for the Atlantic Waste Water Plant at HRSD.

Howard County, Maryland, Little Patuxent Water Reclamation Plant Biosolids Processing Facilities Improvements
Basis of Design development for a new dewatering and drier facility. Work included first stage acid scrubber treatment of ammonia and amine laden airstreams and polishing of residual organic reduced sulfur and fatty acid odors using long life media biofilters. Two 4000 cfm package biofilters are being designed.

Washington Suburban Sanitary Commission, Piscataway Wastewater Treatment Plant (WWTP) Bio-Energy Program Management
Design Development and Schematic design for odor control systems to address a major plant Bioenergy upgrade for the Piscataway Wastewater Treatment Plant. Evaluated odor control impacts and options. Designed 80,000 cfm centralized packed tower chemical scrubber systems. Systems included acid water scrubber for ammonia laden air from digestion and caustic/hypo packed tower scrubbers for truck unloading facilities.

Allegheny County Sanitary Authority, North End Facilities - New Outfall, Disinfection Facility, and New Secondary Clarifiers
Project Manager. As the overall Project Manager and Lead Design Manager, Chris will confirm an integrated design effort with regular communication with ALCOSAN on design progress.

Dean Gipson, PE, JD

Design Guidelines

Dean Gipson has built his career finding cost effective solutions for renewing aging infrastructure. His experience in utility inspection and management, planning, design, capital improvement, and project prioritization has allowed him to help agencies to save millions of dollars by selecting appropriate capital and operational solutions. He assisted the City of San Diego and other utilities with the evaluation and optimization of staff and resources to effectively respond to Environmental Protection Agency (EPA) orders to improve operations and reduce sewer overflows. He interprets environmental and regulatory requirements and has developed plans responding to consent decrees and administrative orders issued by the EPA. He understands the need to meet tight schedules and has the proven experience to identify and resolve issues to make projects successful.

EDUCATION
Bachelor of Science, Civil, Colorado School of Mines, 1988

Juris Doctor, Law, Thomas Jefferson School of Law, 2001

REGISTRATIONS
Juris Doctor (Attorney), California, No. 220057

Professional Engineer, California, No. C 49097

PROFESSIONAL MEMBERSHIPS
American Public Works Association (APWA)

American Society of Civil Engineers (ASCE)

American Society of Civil Engineers (ASCE), San Diego, Past President, 2011—2013

American Society of Civil Engineers (ASCE), San Diego, President Elect, 2010—2011

Construction Management Association of America, San Diego, Member, 2012—2017

INDUSTRY TENURE
33 years

HDR TENURE
10 years

OFFICE LOCATION
San Diego, CA

CLASSIFICATION
Design Guidelines Lead

RELEVANT EXPERIENCE

City & County of Honolulu Department of Environmental Svc., Wastewater Program Management, *Honolulu, HI*
Technical Support. As part of a United States Environmental Protection Agency Consent Decree, the City and County of Honolulu must develop a program to systematically identify deficient collection system pipelines and rehabilitate and replace 144 miles by June 2020. Mr. Gipson provides technical support and direction that developed an automated system to consistently identify the most deficient segments and then prepare preliminary reports that recommend repair, rehabilitation and replacement. These procedures aide staff to focus limited resources on the segments that will have the greatest impact in reducing sewer spills.

City of Corpus Christi TX, Corpus Christi Sanitary Sewer Overflow (SSO) Regulatory Support, *Corpus Christi, TX*
Technical Support. Performed a high-level analysis of the collection system and historical sanitary sewer overflow (SSO) data conducted interviews with city staff to clarify existing data and identify data gaps supported city staff during preparation of responses to the U.S. Environmental Protection Agency (EPA) requests and questionnaire reviewed and assessed the current status of the city's collection system programs conducted a management debrief with preliminary findings prepared a summary of findings report and prepared a detailed management presentation of the findings. The city's SSO database and geographical information system (GIS) databases and computerized maintenance management system (CMMS) were evaluated. Collection programs that were evaluated included: (1) sewer system cleaning strategies and information systems used to support sewer cleaning activities; closed-circuit television (CCTV) inspection strategies and information systems including sewer inspection data collection and data management; (3) sewer condition assessment procedures including the process to identify and prioritize sewer repair rehabilitation and replacement projects; (4) sewer cleaning and CCTV equipment and standard operating procedures (SOPs); (5) SSO database; (6) SSO response plan and spill response SOPs; (7) SSO response equipment and materials; (8) fats oils and grease (FOG) control and mitigation programs including enforcement public outreach and coordination between the FOG enforcement program and the sewer cleaning program; (9) pump station and force main maintenance and repair program; (10) sewer hydraulic modeling and flow metering programs including infiltration/inflow (I/I) and capacity studies; and (1) current collection system capital improvement program (CIP) projects.

City of Sacramento Utilities Department, Sewer System Regulatory Support, *Sacramento, CA*
Regulatory Assistance. Provided the city with sewer system regulatory assistance needed to comply with the California Sportfishing Protection Alliance consent decree filed on January 9, 2012 (Civil Case No.: CV 11-00601-KJM-EFB) and with the State Water Resources Control Board Order No. 2006-0003. Services provided included staff augmentation, consent decree support, and as-needed technical support.

DEAN GIPSON (CONTINUED)

City of San Diego, As-Needed Engineering Wastewater Facilities Condition Assessment, *San Diego, CA*
Contract/Project Manager. Provided as-needed corrosion engineering and condition assessment services for city's sewer pipeline system, which included pipelines ranging from 8 to 120 inches in diameter force mains and trunk sewers. Task orders have included a rigorous evaluation of the consequence of failure and a thorough analysis of the likelihood of failure combining both field condition data and statistical analysis. Work included the use of closed circuit television (CCTV) to gather review and validate all available data and update the existing CCTV Tool Box. Other tasks performed included preparation of a condition assessment work plan field data collections and preparation of a repair/rehabilitation and replacement (R&R) action plan that included a comprehensive financial analysis projected timeline and cost estimate for each pipeline implementation.

City of Winston-Salem, NC, Collection System Improvement Program Management Year 1, *Winston-Salem, NC*
Technical Support. Winston-Salem currently uses the Collection System Improvement Project that at its core is a proprietary algorithm to produce pipe cleaning schedules that reflect Sanitary Sewer Overflow (SSO) risk and operational efficiencies. This project is augmenting the current algorithm by modeling past SSO data and providing risk projects to further improve management of pipes in the system.

Clark County Water Reclamation District, Collection System Program Management Services, *Las Vegas, NV*
Technical Support. Mr. Gipson provided technical support to update the Collection System Services Group Five Year Plan that documents current processes and provides a roadmap to improve business practices. Already three years into its five year plan, several organizational changes and the downturn in the economy has initiated this update. Mr. Gipson participated in staff interviews to collect data on the achievements and to identify and recommend improvements moving forward. Recommendations include re-allocating staff resources to better focus on necessary tasks and a roadmap for management to implement additional changes. The updated Five Year Plan provides staff and management a realistic plan to improve services while staying within its limited budget.

San Antonio Water System, SSO Reduction Program Asset Management, *San Antonio, TX*
Deputy Program Manager: Senior technical lead on the business process re-engineering for collection system enterprise asset management including: operations and maintenance optimization and sewer repair, rehabilitation, and replacement asset management decision-making and optimization. Projected near-term and long term sewer repair, rehabilitation, and replacement needs and associated costs. Developed and implemented sewer system asset-based risk assessment framework. Developed sewer repair, rehabilitation, and replacement decision-making guidelines and implemented into decision support and tracking tools.

County of San Diego, As-Needed Engineering Services, *San Diego, CA*
Project Manager for this three-year $3M multidiscipline contract that provides GIS mapping sewer master planning sewer rate development regulatory support water well planning and design and staff augmentation. Mr. Gipson was responsible for the conversion of sewer data to GIS and the creation of map books for operations evaluating the benefits to consolidate all sanitation districts into one district managing the sewer master plan for the Alpine/Lakeside districts and developing the countyÆs Sewer System Management Plan. The county maintains approximately 450 miles of sewer pipelines and associated pump stations from nine sanitation districts that have been consolidated into one district.

Charlie Allaben, PE

Force Mains

Charlie has more than 29 years of engineering experience that includes pumping station design, pumping system performance testing, troubleshooting, hydraulic engineering, project management, and design of hydraulic structures. He has served as a representative on several Hydraulic Institute committees for development of pumping industry standards, including the Pump Intake, Pump Piping, and Pump Vibration committees. Mr. Allaben is a certified instructor for the Pumping System Optimization – Energy Efficiency and Bottom Line Savings Course that has been developed by Pump Systems Matter (subsidiary of the Hydraulic Institute). His practical experience working in a physical hydraulic modeling laboratory provides him an exceptional understanding pumping system hydraulics.

EDUCATION
Bachelor of Science Civil Engineering, Michigan State University (MSU), 1992

REGISTRATIONS
Professional Engineer - Civil, WA, No. 40146

INDUSTRY TENURE
31 years

HDR TENURE
5 years

OFFICE LOCATION
Bellevue, WA

CLASSIFICATION
Forcemain Design Lead

RELEVANT EXPERIENCE

City of Mount Vernon, WA, WWTP/Sewer Collection System Engineering On-Call, *Mount Vernon, WA*
Technical Advisor. Charlie was technical advisor during design of improvements to the influent pumping station located at the wastewater treatment plant. The project included analysis of influent flow design and preparation of recommendations to restructure influent piping.

North Texas Municipal Water District, McKinney Lift Station, Improvements, *McKinney, TX*
Hydraulics. HDR is providing design and bid/construction services for the McKinney Lift Station Improvements project for the North Texas Municipal Water District. The project includes a new 82-mgd wetwell/drywell style lift station to replace the existing lift station, 1,300 linear feet of 42-inch diameter force main, and improvements to existing interceptors to simplify connection to the new lift station. Facility startup is expected in Summer 2020.

Steele Creek Wastewater Pump Station, *York County, SC*
Technical Advisor for Pumping and Hydraulics Design Lead. Steele Creek Wastewater Pump Station serves as the County's largest regional pump station. It conveys all flow generated in their eastern collection system to the City of Rock Hill's Manchester Creek WWTP. HDR was hired to develop a Preliminary Engineering Report, perform final design, obtain permits and required property, and provide construction administration services. Final design of the pump station sized the facility to ultimately convey up to 27 MGD. The station features two self-cleaning wet wells, six submersible pumps, an influent mechanical screen with automatic bypass, valve and flow meter vaults, generator, and a control building to house electrical and instrumentation equipment and includes a storage room and restroom. Influent gravity sewers up to 48-inch in diameter were constructed to convey wastewater to the facility and a 30-inch force main was installed leaving the facility.

City of San Mateo, Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion - Design Phase, *San Mateo, CA*
Pumping Station QA/QC. Provided schematic design, final design, and bid phase services for improvements to create a state-of-the-art, reliable wastewater treatment plant that will be known as the "Gem of the Bay". Improvements included: (1) realignment and extensions of on-site influent sewer forcemains with flow metering; (2) new headworks facility including an influent junction box/channel, preliminary screens with sluiceway, screenings washing and compacting equipment, aerated grit removal tanks with grit pumps, blowers, and grit washing and dewatering equipment, fine screens with sluiceway, and screenings washing and compacting equipment, screening and grit handling building; and headworks electrical building; (3) four new covered rectangular primary clarifiers, with primary sludge pumps, scum pumps, and a primary effluent pumping station; (4) influent flow equalization basin (convert existing aeration basins) and equalization pumping station; (5) bioactiflo® for wet weather treatment, consisting of a biological contact tank and high rate clarification process, along with associated mixers, aeration, blowers and pumps; (6) chemical storage and feed facilities; (7) biological nutrient removal (BNR) and membrane bioreactor (MBR) treatment facilities, mechanical/electrical building

CHARLIE ALLABEN (CONTINUED)

(pumps and blowers), with associated piping; (8) improvements to the existing chlorination and dechlorination facility; (9) Title 22 recycled water treatment facilities; (10) below-grade tunnel system where some process equipment are located and where process piping between facilities are located; (11) new 15,300 square-foot administration and treatment plant control building, which include a control room, laboratory, conference room, offices, locker rooms, and restrooms; (12) new 5,000 SF maintenance warehouse building including vehicle drive-in access, maintenance area workspace and storage, clean and lubrication storage rooms, and mezzanine storage; (13) odor control for new headworks and primary clarifiers; (14) new electrical service entrance metering station and electrical and standby power; (15) information technology (IT)/ telecommunications technology for the site; (16) deep precast concrete piles driven through Bay Mud supporting all structures and major piping; (17) site paving and grading modifications; (18) site improvements to meet City stormwater improvement and flood protection requirements; (19) security system for the site and new buildings; (20) site utilities (potable water, non-potable water, stormwater, and fire protection); and (21) landscaping and public information features. The project was delivered using construction management at risk (CMAR).

City of Fontana/Inland Empire Utility Agency, San Bernardino Avenue Raw Wastewater Pump Station Design, *Fontana, CA*
Lead Design Engineer. Charlie was the lead design engineer for the joint venture project between the City of Fontana, California, and the Inland Empire Utility Agency. The project is on a site with extreme space limitations and Charlie was able to develop a compact design the meet the site constraints, while providing all of the design requirements and redundancy requested by the clients. The pump station is a single self-cleaning wet well configuration with four vertical turbine solids handling pumps. The station has a firm pumping capacity of 15 mgd that is expandable to an ultimate design capacity of 50 mgd, which can be achieved through pump replacement.

Roza Irrigation District Wasteway 5 Re-regulation Reservoir
Senior Technical Engineer. Charlie provided senior technical oversight of the project, which included an evaluation of the pumps, quality review, and risk assessment. The project includes a 2,600 hp, 125 cfs pump station and approximately 2,500 LF of 48-inch conveyance pipeline. The pump station included vertical-turbine pumps and control system, with two 750 hp, two 500 hp, and one 250 hp vertical-turbine pumps. The two 500 hp pumps are controlled by VFDs and the discharge from the 250 hp pump is modified by an automated throttling valve. The project required close coordination with state and federal agencies, including Reclamation and the Washington State Dam Safety Office to verify required design standards and successfully implement those standards into the design of the pump station.

Collection System Design, Los Osos, CA
Pump Station Task Lead. Mr. Allaben was the lead pump station designer for the project that included a complete wastewater collection system for the community of Los Osos, California. In addition to the many miles of gravity sewer, the collection system consists of 7 duplex, 2 triplex, and 12 grinder pump stations and associated force mains for conveyance of wastewater to the wastewater treatment plant. The pump station capacities range from less than 100 gpm to over 2,300 gpm.

6.3.3 Project Management Method

The Districts will have task orders ready to go, and HDR is prepared to start immediately upon your Notice to Proceed. HDR has a proven record of providing custom solutions to complex projects. We have assigned one of HDR's most capable Project Managers, Luis León, who many of you know and who knows the Districts.

Luis is based locally in HDR's Claremont office, which is only 20 miles and no more than 30 minutes from the Districts' offices. As your single point of contact, he will oversee a dedicated team, to effectively manage the utility modeling services required. Luis has managed dozens of modeling projects throughout his career and is well-versed in the project management and quality assurance procedures needed for successful delivery.

Based on our experience with other as-needed contracts, we understand that projects can vary widely in both size and complexity. Our approach, effort, and fee will reflect the need for flexibility.

Our understanding and responsiveness to your needs, accuracy in our work performance, and timely completion of projects will provide the necessary foundation of trust in our ability to perform as-needed services.

Our typical task order approach will follow the work plan shown below. Immediate needs will be fast-tracked through HDR's process.

As-Needed Services Approach

We have extensive experience with contracts that require performance of multiple, simultaneous task orders including the City of Los Angeles Sanitation and Environment, City of San Diego, Padre Dam MWD, City of Carlsbad, City of Vista, and Port of Long Beach. The first step is to understand the needs, drivers, schedules, and issues related to the task order. For small projects, this may be a phone call, or a few emails. For more complex tasks, face-to-face meetings are generally best.

We recognize that the successful delivery of multi-disciplinary projects demand close coordination and communication between you and the task order team. Luis is accustomed to preparing a detailed task order scope and fee that is understandable, achievable, and yields beneficial results. HDR believes that the project team is incomplete without the involvement from ALL people who will ultimately own and operate the facilities which is why collaboration with your staff is a key component of our process. **Our typical task order approach will follow the work plan shown below.**

OUR 5-STEP APPROACH TO MANAGING TASK ORDERS RESULTS IN A TAILORED SCOPE AND SCHEDULE THAT IS UNDERSTANDABLE AND ACHIEVABLE.

We will prepare a tailored scope and schedule that is understandable and achievable for project delivery. HDR follows a proven 5-step process to develop and execute task orders.

1. **CLEARLY UNDERSTANDING OBJECTIVES.** Upon receipt of a project task order, our Project Manager, Luis León, will meet with the Districts and key stakeholders to quickly understand the issues and needs associated with the request. We will prepare a tailored understandable scope of work and an achievable schedule. Our team will function as an extension of the Districts' staff with seamless cooperation.

2. **THE RIGHT TEAM YIELDS THE RIGHT SOLUTION.** For each Task Order, we will custom build our team to optimize successful completion of the project and strive to exceed your expectations. The HDR team's extensive water and wastewater experience in Los Angeles and our familiarity with the area and the Districts' modeling requirements will allow for faster implementation of each Task Order.

3. **DELIVERING RESULTS.** During the execution phase, alternatives will be developed and vetted with the Districts. Task order execution will be a team effort with collaboration from all. Our team will identify alternatives and develop them sufficiently to have meaningful discussions with the Districts' staff before developing detailed concepts and proceeding to the final product.

4. **SCHEDULE IS OFTEN CRITICAL TO FAST-TRACKED PROJECTS.** HDR's approach delivers quality work on-time and within budget. From having worked on projects for the Districts, our understanding of your procedures, staff, and concerns will provide you with results that stay within budget and meet schedules. HDR will prepare schedule updates using Microsoft Project or a format acceptable to the Districts. To monitor schedule versus budget, we employ an Earned Value Tracking application on a weekly basis to identify whether we are completing the necessary tasks efficiently and with the right staff, and we gage whether we are ahead or behind schedule, based on expenditures. This allows us to identify issues and develop solutions before the project is jeopardized. These and other management tools will be used on a regular basis to monitor each Task.

5. **CONTINUOUS IMPROVEMENT.** Each project is unique but each project has lessons to apply to the next task. Our reputation for superior service that clients have come to rely upon is based on providing you with the highest quality product - on time and on budget. But sometimes factors hinder us. Prior to closing out a task order, we would like to conduct a "lessons learned" review. This vital debrief is conducted with Districts' staff so that together we can learn where we can be more responsive to your needs in the future. We identify where we did things right, where we could have done better and what, if any, items we missed the target on, so that we all grow as professionals. The end result is that we improve our quality and provide better value to you and the community.

Luis has successfully delivered multiple sewer design and sewer rehabilitation projects in the U.S. and internationally. He has been recognized by WEF as a leader in Collection Systems Management, Design, Rehabilitation and Operations.

Project Management Plan

HDR's objective in project management is to meet and exceed the City and CMWD's expectations while making sure the scope, budget and schedule set for the project are adhered to.

Our history of working with the Districts and other municipalities is evidence that we have the ability to deliver technically superior projects in an economical and timely fashion, exhibiting our ability to control costs, provide quality work, and comply with performance schedules.

A Project Management Plan (PMP) will be developed specifically for each task order and will be customized based on the duration and complexity of the project. Small tasks to be completed in a short timeframe may not need a PMP. Together with the Districts' Project Manager, we will evaluate on a case-by-case basis when a PMP is warranted.

The PMP will be a written plan with each of the elements of the task order integrated into a detailed Work Breakdown Structure. The PMP is a living document and available to everyone involved in the project. An important part of the PMP is Integration Management, which facilitates a Our history of working with the Districts and other municipalities is evidence that we have the ability to deliver technically superior projects in an economical and timely fashion, exhibiting our ability to control costs, provide quality work, and comply with performance schedules.

Communication Mitigates Project Issues

Everyone strives to avoid problems but sometimes the unexpected happens. HDR's approach to every project is to be ready to address the unforeseen; for all other matters we plan to identify them early and resolve them immediately.

HDR will regularly and frequently inform the Districts of issues and milestones to avoid surprises and find the best solutions. In those rare occasions when something goes awry, HDR will hold ourselves accountable. "Taking responsibility" is an HDR core value. Our team members will take responsibility to see things through, develop a recovery plan if appropriate, and work with the Districts' staff to do the right things for the right reasons. We grow from these experiences, incorporate the improvements in our work plan and ultimately provide better service to you.

Project Approach and Resource Review

HDR also employs PARR, Project Approach and Resource Review, a specialized independent technical review held during the early stages of a project. It is conducted by individuals independent of the project and who possess technical qualifications and expertise necessary to review a project's approach, technical concepts and criteria. The PARR is intended to independently verify that appropriate solutions are being considered to meet project goals, an appropriate technical approach is being implemented and appropriate staff with the necessary technical skills is being used. Our PARR process puts a fresh set of eyes on the project to identify possible risks and develop solutions so that the Districts get the best possible product.

The PMP serves as a formal process for reviewing, evaluating, prioritizing, documenting, approving, implementing, and maintaining all aspects of a project. Together with the Districts' Project Manager, Luis will evaluate on a case-by-case basis when a PMP is warranted.

Quality Management Plan

HDR believes quality assurance and quality control (QA/QC) is paramount to the success of any project; we use a process that starts at the kickoff meeting and runs throughout the project.

HDR has a history of providing quality services, while being sensitive to our client's needs. This goal is achieved with HDR's in-house (QA/QC) program that is designed to accomplish three major objectives:

- Provide senior-level guidance throughout the project;
- Eliminate redundant work and miscommunicated efforts; and
- Confirm consistency in all deliverables.

QA/QC begins with the receipt of each Task Order. **Luis León, our Project Manager**, will assign experienced staff from each major discipline to independently review all draft materials prior to production. We strive to improve cross-discipline coordination and reduce ambiguity. In addition, we will constantly be open to and search for ways to benefit each Task by employing economical thinking and ideas without sacrificing quality.

HDR will provide a QA/QC program that adheres to the District's design standards, regulations, policies, and procedures for all work performed for the duration of this contract.

> **"As a firm, HDR provides quality work in a timely fashion. Two of our task orders related to urgent conditions for which HDR and its team members quickly mobilized the right expertise to identify issues and recommend sound solutions."**
>
> Monika Smoczynski, PE, Associate Engineer, City of San Diego Public Utilities Department (regarding the As-Needed Wastewater Condition Assessment of Wastewater Facilities)

Management Responsibility

Our responsibilities for quality include all levels of HDR personnel—from our Chief Executive Officer to senior management to the project team. **Responsibilities are documented in our procedures, defining how HDR delivers products and services to you.** While HDR has not included subconsultants on our project team, our focus on and attention to quality also extend to them.

Professional Service Delivery

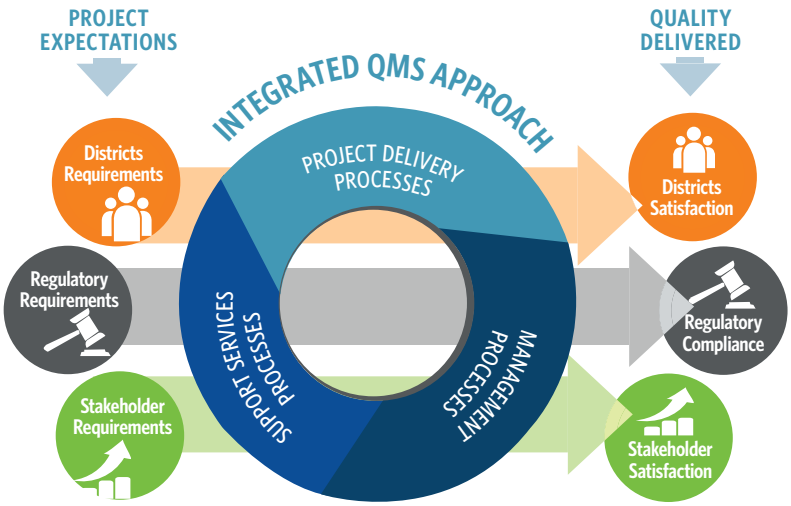
Our process promotes prevention rather than detection; being proactive rather than reactive. We promote professional service delivery though quality assurance, quality control, technical procedures, and best practices that span the four phases of project delivery:

- development and initiation;
- planning;
- execution, and
- close-out.

Our QA/QC procedures define actions that provide a means to control and measure the characteristics of a service, activity, or product regarding established requirements, including QA/QC reviews and quality checking.

Measurement, Analysis, & Improvement

With internal audits and meetings to discuss lessons learned on completed projects, HDR regularly updates its QA/QC procedures. Our culture of continual improvement provides our clients with confidence that products and services are delivered efficiently and effectively.



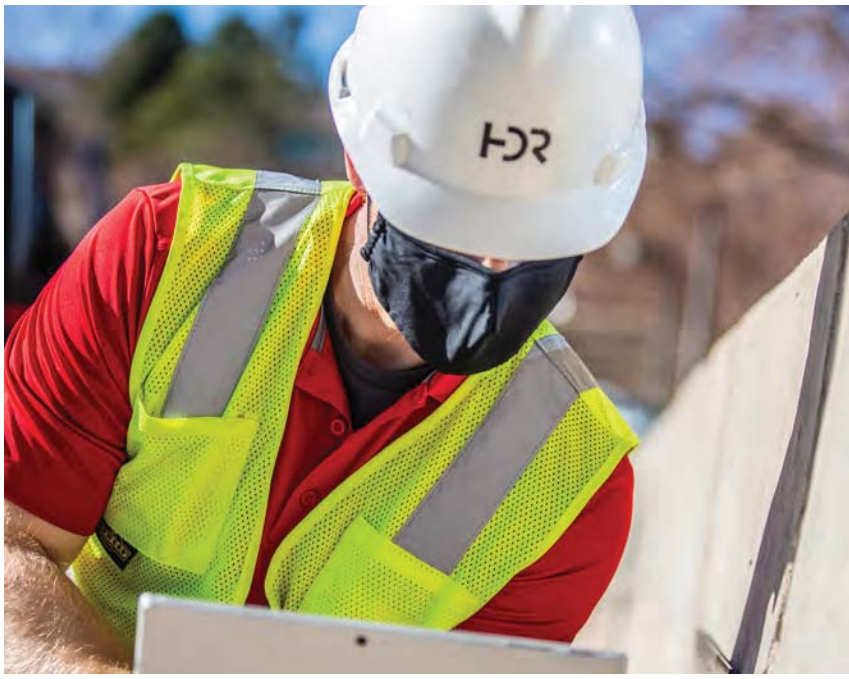
Safety is integrated into the culture of HDR.

As an employee-owned company, nothing is more important to us than health and safety of our employees and partners. This is reflected in how we live and work. Our goal is always that everyone goes home safe.

We support and grow our safety culture through a comprehensive health and safety program that has received national recognition for excellence. Our program includes extensive mandatory safety training for all employees and is supported by a team of certified safety professionals. Safety professionals help project teams navigate the sometimes complex web of local and national health and safety regulations.

We understand that no project is the same and develop custom-fit safety plans to address each project's unique needs. Our safety approach is to meet client requirements, avoid accidents that could result in unplanned delays, and reduce a client's overall project risk.

Our people-centered safety culture sets us apart from our competitors and has enabled us to maintain one of the best safety records in the industry. Our OSHA recordable incident and lost time injury rates are consistently lower than the industry average for our NAICS code (5413—Architectural, Engineering, and Related Services).



COVID-19 Update

HDR is closely monitoring official regulatory information and guidance regarding COVID-19 and the impact across all geographies where we operate. We continue to be grounded in our core values, with a focus on the safety of our employees and the clients we serve.

We recognize that your Continuity of Operations is critical and that you have existing Emergency Response Plans. If there are needs resulting from the current situation, or other unanticipated impacts where we can be helpful, please let us know. We have been discussing previous events that have impacted utility operations and visiting with utilities about lessons learned with the intent of sharing information that is helpful. One aspect has been recovery phase planning following near-term impacts on operations, supplies, equipment procurement, construction projects, contract issues resulting from delays, etc. Anticipating those impacts and preparing in advance may ease the long term impact and speed the recovery as the current disruption subsides.

6.3.4 Location of Project Staff

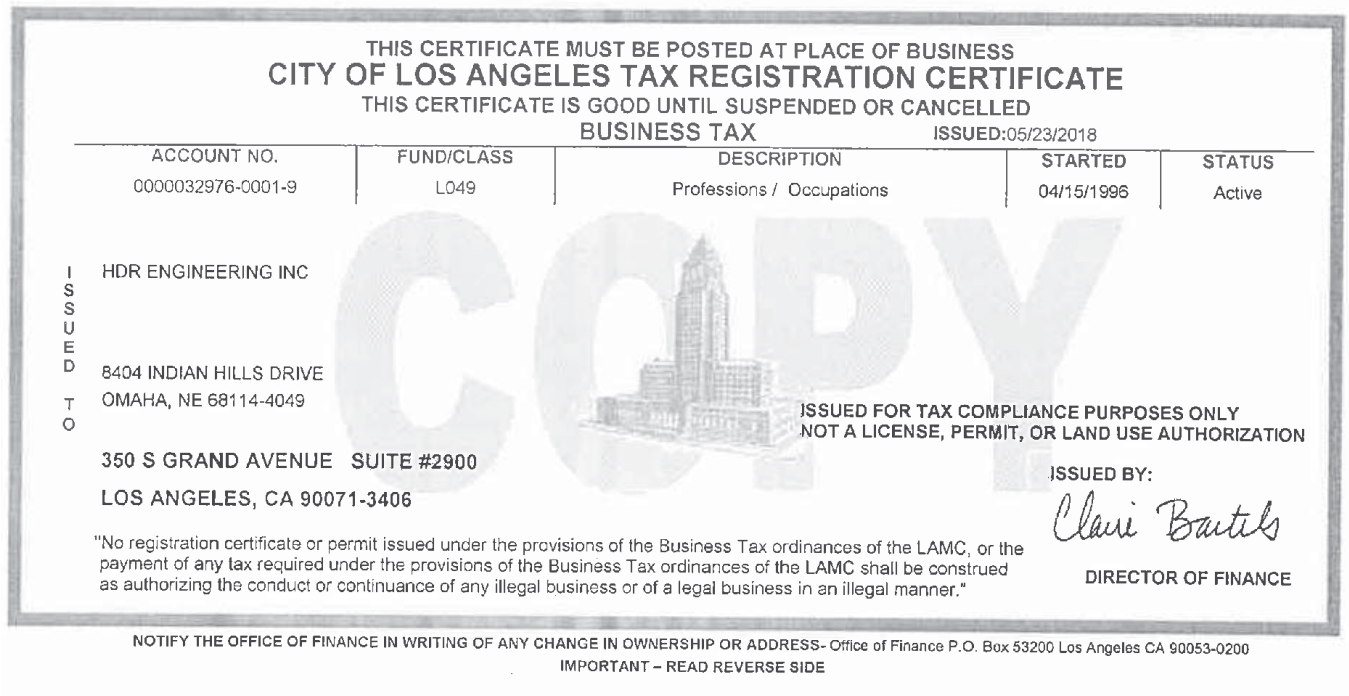
For as-needed task orders, flexibility and adaptability is critical for successful execution. Our team includes professionals based in Southern California and throughout the United States with a wide range of experience and qualifications that are dedicated to providing high-level service and being responsive to your needs.

TEAM MEMBER | DISCIPLINE	OFFICE LOCATION
Luis R. León, PE, BCEE, ENV SP | Project Manager / Sewer Rehabilitation Technical Lead	Claremont, CA
Joseph Nye, PE, PMP | Principal in Charge	Los Angeles, CA
Albert Rodriguez, PE | QA/QC, Technical Advisor (Conveyance Design)	Austin, TX
Neill Hampton, PE | QA/QC, Technical Advisor QC (Conveyance Design)	Dallas, TX
Anthony Henry | QA/QC, Technical Advisor (Hydraulic Modeling)	Austin, TX
Dan Ellison, PE, SE | QA/QC, Technical Advisor (Condition Assessment & Rehabilitation)	Ventura, CA
John Coffman, PE, CCM | Sewer Design Technical Lead	Ventura, CA
Todd Engstrand, PE | Task Order Manager	San Diego, CA
Gail Masutani, PhD, PE | Task Order Manager	San Diego, CA
Brian Watanabe, PE | Task Order Manager	Walnut Creek, CA
Alex Yescas, PE, CFM, ENV SP | Task Order Managers	San Diego, CA
Steve Friedman, PE, BCEE, PMP | Task Order Manager	Irvine, CA
Tom Hoffman, PE | Task Order Manager	Folsom, CA
Lock Kwan, PE | Task Order Manager	Walnut Creek, CA
Mandira Sudame, PE | Task Order Manager	San Diego, CA
Kevin Calderwood, PE | Task Order Manager	Folsom, CA
Steve Pool, PE | Task Order Manager	Denver, CO
Leanne Hammond, PE, ENV SP | Hydraulic Modeling and Collection System Planning	San Diego, CA
Joel Engleson, EIT | Hydraulic Modeling and Collection System Planning	San Diego, CA
Oscar Gonzalez, PE | Constructability and Construction Management	Los Angeles, CA
Ron Perkins, PE, CCM | Constructability and Construction Management	Folsom, CA
Tom Hamlin, PE, SE | Structural	Phoenix, AZ
Pete Bredehoeft, CEP | Cost Estimating	Atlanta, GA
Chris Easter, PE | Odor Control	Richmond, VA
Badri Badriyha, PhD, PE | Odor Control	San Diego, CA
Sean Hoss, PE | Field Services	Claremont, CA
Lucy Jaramillo, NACE CP-2 | Field Services	Claremont, CA
Dean Gipson, PE, JD | Design Guidelines	San Diego, CA
Chandrikaa Balendhran, PE, BCEE | Design Guidelines	Irvine, CA
Daniel Celaya | CADD / BIM	San Diego, CA
Glenn Espanto | CADD / BIM	San Diego, CA
Norma Bacani | CADD / BIM	Riverside, CA
Paul Paramo | CADD / BIM	Riverside, CA
Janelle Moyer, PE, CFM, ENV SP | Civil Design	Irvine, CA

TEAM MEMBER | DISCIPLINE	OFFICE LOCATION
Charlie Allaben, PE | Force Mains	Bellevue, WA
Curtis Gauthier, PE | Force Mains	Irvine, CA
Andi Corrao, PE | Condition Assessment	San Diego, CA
Brien Clark, PE, NACE CP-4 | Condition Assessment	Claremont, CA
Tim Gnibus | Environmental	Irvine, CA
Clint Meyer AICP | Environmental	San Diego, Ca
Stephanie Shamblin Gray, PE | Environmental	Irvine, CA

6.3.4.1 Regional Business Enterprise (RBE) Incentive

HDR is a qualified RBE, having maintained an office in Los Angeles since 2005. HDR has additional offices located in Claremont, Riverside, San Diego, Irvine and Long Beach.



THIS CERTIFICATE MUST BE POSTED AT PLACE OF BUSINESS

CITY OF LOS ANGELES TAX REGISTRATION CERTIFICATE

THIS CERTIFICATE IS GOOD UNTIL SUSPENDED OR CANCELLED

BUSINESS TAX ISSUED:05/23/2018

ACCOUNT NO.	FUND/CLASS	DESCRIPTION	STARTED	STATUS
0000032976-0001-9	L049	Professions / Occupations	04/15/1996	Active

ISSUED TO

HDR ENGINEERING INC

8404 INDIAN HILLS DRIVE
OMAHA, NE 68114-4049

350 S GRAND AVENUE SUITE #2900
LOS ANGELES, CA 90071-3406

COPY

ISSUED FOR TAX COMPLIANCE PURPOSES ONLY
NOT A LICENSE, PERMIT, OR LAND USE AUTHORIZATION

ISSUED BY:

Clari Bartels

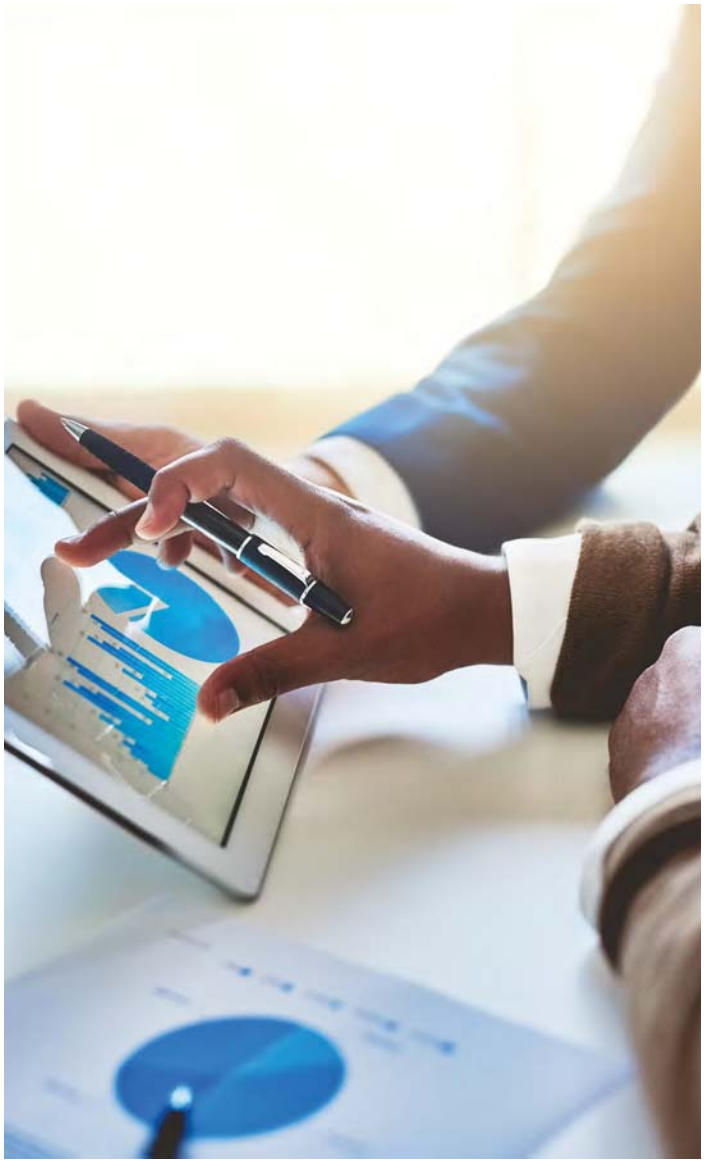
DIRECTOR OF FINANCE

"No registration certificate or permit issued under the provisions of the Business Tax ordinances of the LAMC, or the payment of any tax required under the provisions of the Business Tax ordinances of the LAMC shall be construed as authorizing the conduct or continuance of any illegal business or of a legal business in an illegal manner."

NOTIFY THE OFFICE OF FINANCE IN WRITING OF ANY CHANGE IN OWNERSHIP OR ADDRESS- Office of Finance P.O. Box 53200 Los Angeles CA 90053-0200
IMPORTANT – READ REVERSE SIDE

6.3.5 Financial Condition

As an employee-owned firm, our assets are managed and invested with exceptional care. We have established strong risk controls and are committed to managing our company with an eye toward long-term financial health and stability. This commitment has enabled us to thrive for over 100 years in every economic environment and allows us to be a reliable partner for our clients. As of February 2021, new company policy requires a signed confidentiality agreement for external distribution of our audited financial statements. Audited financial statements are available upon request with a signed confidentiality agreement. Our most recent Annual Report and the HDR, Inc. and Subsidiaries Condensed Financial Statements for the most current year and the prior two years are included in **Appendix B**. **These documents contain confidential or privileged information and are being submitted to meet client requirements. The unauthorized use or dissemination of any confidential or privileged information is prohibited.**



Claims and Litigation

In today's legal environment, claims and litigation are a reality for any large company in the industry, regardless of performance or merit. When claims do occur, we are proactive and cooperative in reaching a resolution that is fair and reasonable to all. We value the confidences of our clients as well as our contractual commitments to confidentiality, and do not discuss with third parties the circumstances involving ongoing projects. We would take the same position with information regarding our work on this project.

If necessary, we would be willing to meet in person with you to discuss the merits or background of past claims. However, there are no claims or litigation that could impede our ability to perform this project, and we have maintained professional liability insurance in force continually since 1958 for the protection of us and our clients.

A

APPENDIX A

Non-Collusion Declaration

ATTACHMENT B

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

RFP No. 03956

ON-CALL ENGINEERING SERVICES

NON-COLLUSION DECLARATION
(Public Contract Code §7106)

I, Anna Lantin, PE, declare, as follows:

I am the Vice President of

HDR Engineering, Inc., the party making the attached bid.

I know of my own personal knowledge and declare under penalty of perjury, that the attached bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone will refrain from bidding; that the bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted its bid price or any breakdown of the bid price, or the contents of his bid, or divulged information or data relative to its bid, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent of any such corporation, partnership, company, association, organization, or bid depository to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

06/10/2021
(Date)

Los Angeles, CA
(Location) Anna Y. Lantin

(Signature of Bidder)

B

APPENDIX B

Financial Statements

Subject: Request for HDR Audited Financial Statements

Date: February 26, 2021

Hello –

HDR values its business relationships and is committed to providing information to assist in the evaluation of HDR as a future or continued partner. We understand that you want to perform due diligence necessary to assess our financial stability as a business partner.

HDR is a privately held 100% employee owned company and views our financial statements as confidential information, not for public disclosure. Ernst and Young (EY) has operated as our independent auditor since 2011 and have issued unqualified audit opinions since that time. To avoid disclosure of our complete financial statements, we have engaged EY to prepare a report confirming key financial figures, as calculated from the HDR's 2020 consolidated financial statements, for purposes of providing data to clients (and prospective clients) operating within the United States.

If you have questions regarding the attached report, please contact (Joe Cox, Regulatory Reporting & Compliance Manager / joe.cox@hdrinc.com / 402.926.7159) or me.

Thank you.

Galen Meysenburg

Chief Financial Officer

Enclosure

Ernst & Young LLP
155 North Wacker Dr.
Chicago, IL 60606

Tel: +1 312 879 2000
ey.com

Building a better working world

Report of Independent Auditors

HDR, Inc.
1917 S. 67th Street
Omaha, NE 68106

We have audited, in accordance with auditing standards generally accepted in the United States, the consolidated financial statements of HDR, Inc. and Subsidiaries (the Company) prepared by management in conformity with U.S. generally accepted accounting principles as of and for the years ended December 26, 2020 and December 28, 2019 (the Consolidated Financial Statements), and have issued our report, with an unqualified opinion thereon, dated February 26, 2021.

Certain amounts included in these audited Consolidated Financial Statements are as follows (in thousands):

	2020	2019
• Revenues	$ 2,744,316	$ 2,599,877
• Revenues less subcontractor costs	2,043,352	1,926,437
• Total current assets	1,627,097	1,361,944
• Total assets	1,988,080	1,766,128
• Total current liabilities	709,527	665,958
• Total debt	6,858	548
• Total liabilities	1,237,555	1,102,585
• Total stockholders' equity	750,525	663,543
• Working capital *	917,570	695,986
• Current ratio ^	2.293	2.045
• Debt-to-total stockholders' equity ratio #	0.009137	0.000825

** Working capital represents total current assets less total current liabilities*
^ Current ratio represents current assets divided by current liabilities
 # Debt-to-total stockholders' equity ratio represents total debt divided by total stockholders' equity

This report is intended solely for the information and use of management, the owners of the Company, potential and existing clients and is not intended to be and should not be used by anyone other than these specified parties or for any other purpose other than assessing the credit worthiness of the Company. We have performed no audit of, or any auditing procedures with respect to, any consolidated financial statements of the Company since the date of our report referred to above.

Ernst + Young LLP

February 26, 2021

HDR, Inc. and Subsidiaries

Condensed Consolidated Financial Statements
(In Thousands)

Balance Sheet	2020	2019
Assets		
Current assets	1,627,097	1,361,944
Non-current assets	360,983	404,184
Total assets	$ 1,988,080	$ 1,766,128
Liabilities		
Current installments of long-term debt	3,519	503
Current liabilities	706,008	665,455
Long-term debt, excluding current installments	3,339	45
Non-current liabilities	524,689	436,582
Stockholders' equity	750,525	663,543
Total liabilities and stockholders' equity	$ 1,988,080	$ 1,766,128
Income Statement		
Net revenues	2,043,352	1,926,437
Net operating income	104,333	78,399
Net income	117,095	87,408
Statement of Cash Flows		
Net cash flows from operating activities	434,814	251,319
Net cash flows from investing activities	(10,029)	(84,266)
Net cash flows from financing activities	(87,871)	(49,226)
Other	3,121	7,128
Net change in cash and cash equivalents	340,035	124,955

I hereby certify that the above information is accurate and represents the operating results and balance sheet positions of HDR, Inc. and Subsidiaries as of and for the periods ended December 26, 2020 and December 28, 2019, and that such amounts have been agreed to the audited financial statements without exception.

Galen J. Meysenburg, Chief Financial Officer

HDR, Inc. and Subsidiaries

Condensed Consolidated Financial Statements
(In Thousands)

Balance Sheet	2019	2018
Assets		
Current assets	1,361,944	1,129,663
Non-current assets	404,184	354,898
Total assets	$ 1,766,128	$ 1,484,561
Liabilities		
Current installments of long-term debt	503	4,899
Current liabilities	665,455	552,568
Long-term debt, excluding current installments	45	253
Non-current liabilities	436,582	354,724
Stockholders' equity	663,543	572,117
Total liabilities and stockholders' equity	$ 1,766,128	$ 1,484,561
Income Statement		
Net revenues	1,926,437	1,762,822
Net operating income	78,399	102,868
Net income	87,408	115,265
Statement of Cash Flows		
Net cash flows from operating activities	251,319	150,421
Net cash flows from investing activities	(84,266)	8,220
Net cash flows from financing activities	(49,226)	(115,170)
Other	7,128	(3,456)
Net change in cash and cash equivalents	124,955	40,015

I hereby certify that the above information is accurate and represents the operating results and balance sheet positions of HDR, Inc. and Subsidiaries as of and for the periods ended December 28, 2019 and December 29, 2018, and that such amounts have been agreed to the audited financial statements without exception.

Galen J. Meysenburg, Chief Financial Officer

HDR, Inc. and Subsidiaries

Condensed Consolidated Financial Statements
(In Thousands)

Balance Sheet	2018	2017
Assets		
Current assets	$ 1,129,663	$ 1,119,693
Non-current assets	354,898	382,017
Total assets	1,484,561	1,501,710
Liabilities		
Current installments of long-term debt	$ 4,899	$ 4,015
Current liabilities	552,568	654,320
Long-term debt, excluding current installments	253	3,865
Non-current liabilities	354,724	301,777
Stockholders' equity	$ 572,117	$ 537,733
Total liabilities and stockholders' equity	$ 1,484,561	$ 1,501,710

Income Statement		
Net revenues	1,762,822	1,693,932
Net operating income	102,868	76,324
Net income	115,265	82,671

Statement of Cash Flows		
Net cash flows from operating activities	150,421	184,800
Net cash flows from investing activities	8,220	(25,904)
Net cash flows from financing activities	(115,170)	(79,383)
Other	(3,456)	2,206
Net change in cash and cash equivalents	40,015	81,719

I hereby certify that the above information is accurate and represents the operating results and balance sheet positions of HDR, Inc. and Subsidiaries as of and for the periods ended December 29, 2018 and December 30, 2017, and that such amounts have been agreed to the audited financial statements without exception.

Galen J. Meysenburg, Chief Financial Officer

20 TWENTY STRONG

ANNUAL REPORT

HDR

20/20 STRONG

20/20 vision is crystal clear. Focused. Enlightening.

The year 2020 asked us to see the world with new clarity. We were tested, asked to live and work in unforeseen ways.

Simple tasks became complex. Days seemed like years. Change became the norm.

We were challenged to take a fresh look at how we could care for each other. Support our clients. Serve our communities.

We answered by staying true to who we are. We drew on an inner core of strength — a resilience born from being:

> Strong.
> Smart.
> *Human.*

The year that signifies perfect vision revealed our true nature — a team that looks out for one another to be our best for the world.

We learned, we adapted, we matured.

At a time when our vision could have been clouded by circumstances, we kept clear focus and saw new ways forward.

We see that we were 20/20 STRONG.

PROUD TO BE EMPLOYEE OWNERS

Employee ownership defines our culture, motivating us to give our best — not only for our own future, but for one another's. As we enter the 25th anniversary of HDR's employee ownership model, we reflect on how the benefits of that 1996 decision affect us today and every day.

"Employee ownership adds a whole new dimension to working as a team. There's a broader sense of pride in the team I work with and a focused sense of responsibility in what we do."

Jason-Emery Groen, Design Director | *Kingston, ON, CAN*

> **"Employee ownership's not just an abstract detail.** This is a company that really invests in its employees. It's always putting the long-term sustainability of the company before short-term profit."
>
> Sebastian Smoot, Water/Wastewater Engineer | *Fulton, MD, USA*

"Employee ownership promotes competitive team play, provides a healthy sense of ownership in your daily work, and is one of many compelling reasons to put your best effort forward. For me, it means being accountable for those qualities and expecting the same from my fellow co-owners."

Eric Aubry, Rail Transit Project Engineer | *Riverside, CA, USA*

> **"Employee-owned companies are a rarity.** HDR provides employees with a sense of ownership and an alternative method to building a retirement fund. HDR is the second employee-owned company I have worked for, and I appreciate how effectively the ESOP is marketed and communicated to employees at all levels."
>
> Jade Dean, Geospatial Information System Analyst | *Long Beach, CA, USA*

"I matter as an employee: my work, my opinion, my quality, my ethics, my experience, my leadership, all of it. The best part of my statement is this is also true for EVERY employee owner."

Gretchen Dolson, Renewables Practice Leader | *Lincoln, NE, USA*

> **"I love working for an employee-owned company.** I feel that it instills a sense of communal effort in every person that works for HDR. Instead of looking out for oneself, I think it helps remind people that we are all in this together as part of an effort that benefits all of us and, in turn, benefits us individually. Best ME, Best WE!"
>
> Scott Flodin, Highway EIT | *St. Louis, MO, USA*

RESOLUTE AND RESILIENT IN 2020

To get through any crisis, we must support one another. In 2020, we faced our share of challenges, and we worked together to adapt, persevere and grow.

We became more resilient and better connected, and thanks to you, we found new ways to be Unrivaled.

It took tremendous sacrifice. I know the year challenged you to adapt the way you live and work. I want to thank each of you for showing how HDR responds when tested.

Caring Connections

We did it by leveraging technology so we could work from home and connect with our clients and each other. We fulfilled our mission as an essential business serving our communities, even converting hotels into hospitals.

We did it by taking care of each other to address COVID-19. We developed health and safety guidance for all staff, and we adjusted our operations to comply with local guidelines and provide a safe environment in our offices.

And we did it by using our 2022 Strategic Plan as our guide. We overcame 2020's challenges and embraced our Best Me and Best We concepts when we needed to most. This included:

- **Fully integrating Hurley Palmer Flatt Group.** All HPF client and employee information transitioned to our system, enhancing our teaming and collaboration.
- **Creating the Building Engineering Services Business Group.** The BES Professional Services platform unites world-class engineers and designers serving the Financial, Hotel, Leisure & Entertainment, Tech/Media/Telecom & Data, and Commercial & Corporate Office markets.
- **Becoming a more inclusive and diverse organization.** We further developed our Inclusion & Diversity program as issues of racial bias and discrimination escalated around the world. Abe Carrillo joined as Inclusion & Diversity Director, and we formed eight Employee Network Groups to help us create a supportive environment where everyone feels welcome and empowered to contribute.
- **Converting classroom trainings to a virtual environment.** We increased the number of employees taking part by more than 30 percent, offering shorter-format courses, launching on-demand training for project managers and pivoting key courses to a virtual format. We also added new career development tools for employees.
- **Enhancing our top-tier strategic advisory practice.** We hired Eric Roecks as Director of Advisory Services, bolstering our services in business strategy and transformation, risk management, decision support and program development.

Through it all, we sustained our resolve to help our communities, supporting a number of organizations to address the pandemic, racism and discrimination, food relief, natural disasters and more. The HDR Foundation issued more than $960,000 in grants and expanded into Canada, further extending our aid for important philanthropic projects.

We also transitioned leadership after the retirements of Chief Operating Officer (COO) Charlie O'Reilly and Transportation Group President Brent Felker. Tim Crockett succeeded Charlie as COO, and Dave LeCureux became Chief Strategy Officer, with both appointed to the HDR Board of Directors.

Growth, Recovery, Opportunity

Together, our efforts brought strong financial results. We finished 4.2 percent ahead of 2019 in bookings, 6.5 percent ahead in net fees earned and 9.1 percent ahead in normalized net profit. It was a unique year with significantly reduced travel and conference costs. Still, our utilization was very high, a testament to your commitment to our clients.

In 2020, we made a virtual environment work. But I look forward to our return to the in-person engagement that drives our creativity, quality and growth.

I'm optimistic about 2021 and the promise of recovery. We must stay focused on supporting one another, doing quality work and capitalizing on opportunities. In doing so, we'll fulfill our purpose to make great things possible for our clients, our communities and each other.

I'm humbled and honored to be part of this great company.

Thank you for being part of our journey.

Eric Keen
Chairman and Chief Executive Officer

A MEASURE OF OUR STRENGTH

2020 challenged us to be resourceful in fulfilling our role as an essential business for our clients. By nearly every measure, we showed how strong we could be and finished with some very good financial results.

It was a very different year due to the pandemic. Travel and conference costs were significantly reduced, resulting in a $31 million savings. Employees also used less PTO, and our utilization was very high. As a result, our normalized profit was up 9.1 percent from 2019.

Other key numbers were very strong: net bookings were up 4.2 percent over 2019, and net fees earned were up 6.5 percent. For the second year in a row, Transportation exceeded $1 billion in bookings.

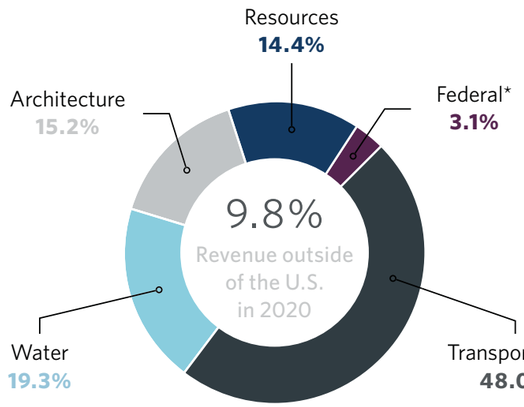
We exceeded our cash forecast by finishing with $749 million, which is important for covering our stock repurchase obligations and investing in future growth of the company. We also added $90 million to our capital reserve fund, bringing it to $130 million. This is money set aside for future contingencies.

These efforts brought a very good return to employee owners. The HDR stock price increased 26.44 percent, the fourth straight year of double-digit growth.

In an unforgettable year, we were strong for our clients and each other.

Maintaining a Diverse Portfolio

Revenue by Business Group



**8% of our revenue is generated through Federal including all Business Groups for 2020*

Outperforming 2019

↑ 4.2%
Net Fees Booked

↑ 6.5%
Net Fees Earned

↑ 39.7%
Actual Net Profit

↑ 9.1%
Normalized Net Profit

Increasing our value

26.44%
Stock Growth Over 2019

17.39%
10-year Average Annual Return

ROAD TO UNRIVALED

Despite the many challenges we all faced last year, we are proud and grateful to receive recognition for our continued resilience and commitment to making great things possible.

#2
Top Architecture/Engineering Firms
Building Design+Construction, Giants 400

#6
Top 500 Design Firms
Engineering News-Record

#7
Top 100 in Green Buildings Design Firms
Engineering News-Record

#10
America's Largest Majority Employee-Owned Companies
National Center for Employee Ownership

Our global impact:

10,300
Employees

200+
Offices around the globe

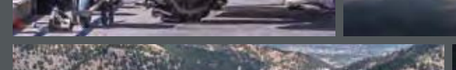
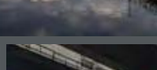
11
Countries with permanent offices

18
Envision-verified projects
(more than any other firm)

Photo provided courtesy of Leila Rice, APR, HRSD Director of Communications >










A YEAR IN REVIEW

JAN. Australian Bushfires

At the end of 2019 and into early 2020, bushfires caused unprecedented damage throughout Australia. Our Sydney, Brisbane and Melbourne colleagues remained safe, but many of their friends and family were affected. We established a Red Cross fundraiser, and our CEO, Eric Keen, authorized a $25,000 contribution on behalf of HDR. Thanks to the generosity of our employees, we raised more than $75,500 for bushfire relief and recovery.

"The care and support from our global HDR colleagues is very much appreciated, and serves to reinforce that we are truly a global company."

Mark Fairweather | *Brisbane, Australia*

MAR. Our First Response to COVID

By March, the COVID-19 pandemic was affecting our employees across the world. Our CEO, Eric Keen, created what would be the first of many video updates. He discussed the unprecedented measures we would all need to take, individually and as a company. Even as we navigated new work arrangements, school closings, and limited travel, we were reminded that our clients are counting on us.

"Your message really made me feel good as I listened because it shows me HDR understands what we are going through."

Michael Tepedino | *Charlotte, NC, USA*

APR. The HDR Foundation's Response to COVID-19

Earlier this year, the HDR Foundation donated $150,000 to Feeding America and $150,000 to Direct Relief. Feeding America provides food assistance to millions of Americans, with its COVID-19 Response Fund going directly to stocking local food banks. Direct Relief works in the U.S. and internationally to equip doctors and nurses with life-saving medical resources.

"We all want to do our part during this crisis and provide assistance to those most in need."

Nancy Hales | *Vancouver, WA, USA*

JUN. A Challenge to Change

As the social justice movement sparked conversation and conviction across the country, Eric Keen wrote a message to staff regarding racism, discrimination and civil unrest.

"Our commitment to our Black employees is to stand with you, committed to using our voices to ensure that at HDR you are heard, understood and supported."

Eric Keen, CEO

JUN. Supporting our LGBTQ+ Employees

Our promise to do things right means supporting an inclusive and diverse environment where all are respected and accepted. We remain dedicated to providing equality for our LGBTQ+ employees, who we celebrate this month.

"When you're a 100+-year-old company, you've evolved through changing times. We are survivors. We do the right thing."

Kaia Nesbitt
Denver, CO, USA

AUG. Why We Celebrate Women's Equality Day

Women's Equality Day celebrates the achievements of women's rights activists and reminds us of the unique daily struggles that women face. It is a chance for us to continue our efforts to provide equal opportunities for all, at work and in our communities. One hundred years ago, just three years after HDR was founded, women gained the right to vote in America. The world has changed, and so have we.

"With all of the uncertainty in the world today, these types of messages amplifying what has gone unsaid (or not said enough) for too long are very much needed. This struck a chord with my daughter, and I am sure it will with many others."

Brian Hoppy | *Wynnewood, PA, USA*

NOV. Record Year for HDR Foundation

The HDR Foundation recently awarded 10 large grants totaling more than $455,000 — bringing the foundation to a record total of $963,899 awarded in 2020.

"Our firm has a long history of being committed to the communities in which we serve and live, and to be part of such a vital component of our ability to create a deep and lasting legacy is humbling."

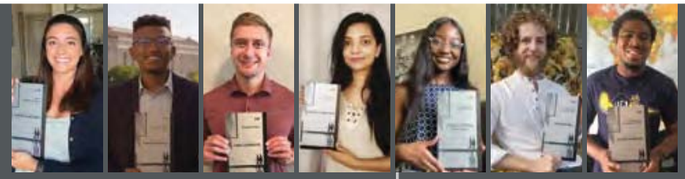
Jerome Brown | *Arlington, VA, USA*

JUL. HDR Foundation Expands into Canada

The HDR Foundation Board of Directors announced the expansion of its philanthropic efforts to HDR offices in Canada. Canadian employees are now able to participate in grant sponsorship, fundraising and community grant-making decisions.

"Our Canadian employees are generous and committed to their local communities. Being able to make an even bigger difference through the HDR Foundation is a great way forward, and we are so proud to be a part of this."

Kim Gosteli | *Vancouver, BC, Canada*



SEP. Meet HDR's 2019-2020 Scholarship Winners

The pandemic sidelined a lot of opportunities for students in 2020, but HDR's Scholarship Program helped make sure all was not lost. Seven students each received a $10,000 scholarship that can be used to offset graduate school costs. They also participated in virtual mentoring opportunities with HDR employees this fall.

"HDR's Scholarship Program provides a conduit to engage the future of our industry, and marks the beginning of a relationship with the next generation of engineers."

David Wong | *Rosemont, IL, USA*

NOV. Proudly Supporting Our Veterans

On Veterans Day and Remembrance Day, we paused to remember the veterans and servicemen and servicewomen of our nations. We are constantly thankful for our 315 veterans and reservists, for their courage and sacrifice.

"I'm in awe of the contribution and sacrifice our military veterans have made. They have been a force for good, a force for peace and a force for freedom, giving voice to the oppressed and providing a beacon of hope to all."

Jason Fanselau | *Folsom, CA, USA*

CREATING A BETTER WORLD

A Global Effort for Ontario Line

Expected to accommodate nearly 400,000 daily boardings, the Ontario Line will provide relief to TTC's Line 1, serve fast-growing areas such as Liberty Village, and bring transit to underserviced priority neighborhoods like Thorncliffe Park and Flemingdon Park. This 16-kilometer, 15-stop rapid-transit line is a flagship project for the province of Ontario. Serving as the technical advisor, HDR employees represent nearly half of the 1,000+ person team. This includes colleagues from 55 offices in Toronto, Calgary, Vancouver, Brisbane, Israel, and across the U.S.

Ontario Line | *Toronto, Ontario, Canada*

Overcoming International Travel Restrictions

Working remotely adjusted how we collaborate, but it didn't affect our progress. In collaboration with New Zealand-based architects Warren & Mahoney, our team in Australia successfully kept the AUD $1B New Dunedin Hospital project on track. As the team began project user group meetings, international travel restrictions prevented the Australian team from traveling. They quickly pivoted to webinar calls, with 20+ colleagues effectively contributing to the design, just as if they were all in a room together.

New Dunedin Hospital | *Dunedin, New Zealand*

Evolving with the Environment

When we began work with the National Park Service at Arches National Park, our goal was to develop a scenario planning tool to improve the experience of visitors while protecting natural resources. As our client's needs and visitors' concerns evolved, our team readily adapted. We discovered new ways to apply our expertise and assisted NPS in evaluating scenarios to reopen the park safely. With our newly developed Visitation Scenario Management tool, our client was able to adapt to social distancing requirements to keep the park open and safe for its staff and visitors.

Arches National Park Visitation Scenario Management Tool | *Moab, UT, USA*

The Show Must Go On — Safely

Following national COVID-19 closures, the Delfont Mackintosh Theatre Group faced new government requirements in order to return their theatre sites to full permissible operation. Our HDR | Andrew Reid team worked to make sure all eight London locations conformed to current guidelines. We first looked at back-of-house areas and then the ventilation and air conditioning in public areas to be compliant. We also provided the theatre group with a safe ventilation strategy. In a challenging time, our expertise provided much-needed reassurance to our clients and the communities who enjoy their facilities.

Delfont Mackintosh Theatre Group Ventilation Operation | *London, UK*

Largest Solar Project in U.S. History

When Samson Solar Energy Center is completed in 2023, it will produce 1,310 megawatts of power — enough energy to power nearly 300,000 homes. We served as a trusted advisor throughout the first phase, and will integrate with Invenergy's team to review civil and structural engineering design. Located in northeastern Texas, this project will support three municipalities and provide clean, cost-effective energy to five large companies, including McDonald's and Google.

Samson Solar Energy Center | *Northeastern TX, USA*

Showing Up No Matter What

Our field services teams can't manage construction projects from home. Even with increased COVID precautions, we continued to show up for our clients to keep projects on schedule. This included the San Francisco Public Utilities Commission's 250-million-gallons-per-day New Headworks Facility, which will improve preliminary treatment for approximately 80 percent of San Francisco's combined collected flows. The Water Business Group also supported what will be the largest facility of its kind in the U.S. — the $300 million Tertiary Treatment Facility at Sacramento's Regional San. Showing up no matter what not only shows our commitment to our clients, but to projects that are integral to local communities.

San Francisco PUC, Southeast Water Pollution Control Plant, New Headworks Facility
San Francisco, CA, USA
Sacramento Regional County Sanitation District, Regional Wastewater Facility, Tertiary Treatment Facility | *Elk Grove, CA, USA*

hdrinc.com

350 South Grand Avenue, Suite 2900
Los Angeles, CA 90071
213.239.5800

hdrinc.com

We practice increased use of sustainable materials and reduction of material use.

June 10,
2021

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

COST PROPOSAL

On-Call Engineering Services

Bid No. 03956

QuestCDN No. 7825153

June 10, 2021

Ms. Maribeth Tan, Senior Buyer
Purchasing Section
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90601

RE: Cost Proposal for On-Call Engineering Services, RFP No. 03956

Dear Ms. Tan and Members of the Selection Committee,

HDR Engineering, Inc. (HDR) has developed cost information for the services being requested by the Los Angeles County Sanitation Districts (Districts). The Districts requested professional services related to the On-Call Engineering Services. The professional services associated with the work were described in the proposal. This cost information includes a detailed breakdown of our proposed hourly billing rates.

We are excited about this opportunity to collaborate with you and your staff. If you have any questions or need additional information, please contact **Luis León** at **909.377.8314** or **Luis.Leon@hdrinc.com**.

Sincerely,
HDR Engineering, Inc.

Anna Lantin, PE
Vice President, Authorized Signatory
350 S. Grand Ave., Suite 2900
Los Angeles, CA 90071
714.368.5691
Anna.Lantin@hdrinc.com

Luis R. León, PE, BCEE, ENV SP
Project Manager, Associate Vice President

Rate Schedule

Our Proposed hourly rate schedule by job classification is included below. Rates may be subject to adjustment on January 1 of each calendar year based on the Los Angeles Region CPI. If HDR seeks a rate adjustment, HDR will prepare a written request for an annual rate adjustment each year.

CLASSIFICATION	HOURLY RATE (REGULAR TIME)
PROJECT LEADERSHIP, QUALITY CONTROL, AND KEY STAFF	
Project / Contract Manager	$350
Sewer Rehabilitation Technical Lead	$350
Sewer Design Technical Lead	$350
Principal-In-Charge	$350
QA/QC Reviewer and Technical Advisor	$350
Hydraulic Modeling and Collection System Planning Lead	$310
Constructability and Construction Management Lead	$350
Operations Lead	$250
Structural Lead	$265
Cost Estimating Lead	$300
Odor Control Lead	$310
Field Services Lead	$250
Design Guidelines Lead	$350
Civil Design Lead	$275
Forcemain Design Lead	$275
Condition Assessment Lead	$350
Environmental Lead	$350
Asset Management Lead	$350
Design-Build Lead	$350
TECHNICAL AND ADMINISTRATIVE SERVICES	
Technologist	$250
Senior Technologist	$350
Project Manager	$290
Senior Project Manager	$335
Senior Engineer	$265
Registered Civil Engineer	$265
Registered Structural Engineer	$265
Registered Electrical Engineer	$265
Registered Mechanical Engineer	$265
Design Engineer	$215
Project Engineer I	$190
Project Engineer II	$220
Project Engineer III	$250

CLASSIFICATION	HOURLY RATE (REGULAR TIME)
TECHNICAL AND ADMINISTRATIVE SERVICES (CONTINUED)	
Staff Engineer I	$140
Staff Engineer II	$150
Staff Engineer III	$165
Engineering Intern	$90
Drafter	$135
Designer	$160
Senior Designer	$200
Operator	$175
Senior Operator	$225
Technician	$125
Field Technician	$110
Administrative I	$90
Administrative II	$135

Direct costs will be billed at cost, with no additional markup.

While we are not proposing subconsultants as part of our team, should the Districts request a specific subconsultant we will apply a 15% markup on those costs.

EXHIBIT B - RFP

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

REQUEST FOR PROPOSALS

ON CALL ENGINEERING SERVICES

BID No. 03956

QUESTCDN No. 7825153

CONTACT: Maribeth Tan, Senior Buyer

DUE DATE & TIME: June 10, 2021 at 11:00 a.m.

LAST DAY FOR QUESTIONS: May 26, 2021

Robert C. Ferrante
Chief Engineer and General Manager

Los Angeles County Sanitation Districts | Purchasing Section | 1955 Workman Mill Road | Whittier, CA 90601
Phone: 562-908-4288 ext. 1400 | Email: bids@lacsd.org

Table of Contents

REQUEST FOR PROPOSALS
for
RFP No. 03956 QuestCDN No. 7825153
ON-CALL ENGINEERING SERVICES

May 2021

1. INTRODUCTION AND BACKGROUND

The Los Angeles County Sanitation Districts (Districts) are issuing this Request for Proposal (RFP) requesting Statements of Qualifications (SOQs) and Hourly Rates from qualified engineering consulting firms (Respondents) to provide general engineering design services in support of the Districts' wastewater collection system operations on an as-needed basis for a period of up to three (3) years. Each Proposal shall include SOQs and Hourly rates provided in separate electronic files. In issuing this RFP, the Districts are seeking to identify and prequalify firms possessing the technical expertise and resources to perform the project management, and/or civil, structural, and mechanical design of:

- Sewer Rehabilitation and new sewer construction projects
- Miscellaneous design support tasks, including but not limited to hydraulic modeling, cost estimating for both design and construction, and specialized studies/reports.
- Review and updates to various design guidelines and procedures, including presentation of updates to Districts' staff.

Respondents may propose to subcontract portions of the design services listed above if they are unable to provide all listed services. However, in the selection process, preference will be given to Respondents that can provide the design services using their own forces and an additional bonus will be given to Respondents whose staff work in a Regional Business Enterprise (RBE) as defined in Section 6.3.4.1.

The District encourages participation in its engineering services contracts by all members of the community including Minority Business Enterprises (MBE), Women Business Enterprises (WBE), Disadvantaged Business Enterprises (DBE), Disabled Veterans Business Enterprises (DVBE) and Small Business Enterprises (SBE). The District has established an aspirational goal of 20 percent overall participation by such firms. Although such participation is encouraged, award of a contract is not based on race, gender, disabled, disadvantaged or small business status.

1.1. Background

The Districts are a public agency focused on converting waste into resources like recycled water, energy and recycled materials. The agency consists of 24 independent special districts serving about 5.6 million people in Los Angeles County. The service areas cover approximately 850 square miles and encompass 78 cities and unincorporated areas in the county.

The Districts were created in 1923 to construct, operate, and maintain facilities that collect and treat domestic and industrial wastewater (sewage). The agency operates and maintains a regional wastewater collection system, which includes approximately 1,400 miles of sanitary sewers ranging in diameter from 8- to 144-inches, 48 pumping plants, and 11 wastewater treatment plants that transport and treat about half the wastewater

in Los Angeles County. The Sewer Design Section is responsible for the design of sewer rehabilitation and new sewer construction projects.

1.2. Objective

To maximize efficiency and reduce costs, the 24 Sanitation Districts work cooperatively with one administrative staff headquartered at the Joint Administration Office (JAO) near the City of Whittier. The Engineering Department is located at the JAO and includes the Sewer Design Section. The Districts intend to supplement the work of the Sewer Design Section by using qualified and experienced consulting firms to augment the work of the Sewer Design Section due to the large number of projects that have been identified to be completed in the next few years.

2. CONTRACT DETAILS AND ASSIGNMENT OF WORK

The Districts will evaluate the Proposals submitted by the Respondents in response to this RFP and develop a list of engineering consulting firms (Consultants) who, in the Districts' opinion, are most-qualified to provide ALL the listed design services. The overall goal of this RFP process is to enter into Engineering Services Agreements (ESAs) with up to four (4) firms and allocate up to approximately $1,000,000 for each firm to provide on-call engineering design services for the term of the ESA. The Districts anticipates that the selected Consultants may be retained for up to three (3) years after the award date or until the allocated budget has been spent. The Districts' selection of a Consultant and execution of an ESA is NOT a guarantee of any work or quantity of work. Selected Consultants will be hired to perform work under the ESA on an as-needed basis at the sole discretion of the Districts. The Districts hereby reserve the right to use any, all, or none of the funds allocated to each Consultant.

When engineering services are required, a Consultant will be presented with the scope of the project and will be asked to prepare a detailed proposal indicating the time and expenses required to complete the project. The Consultant will be expected to respond to requests for detailed scope proposals in a timely manner. Once the proposal is approved by the Districts, the Consultant will be issued a Task Authorization Form (TAF) that details the agreed-upon scope, budget, schedule, deliverables and associated progress payments (see Attachment A for a sample TAF). No subsequent work shall be performed by the Consultant prior to receiving a written Notice to Proceed from the Districts. If a Consultant fails to respond in a timely manner or is unable to meet the requested project schedule, the Districts reserve the right at its sole discretion to present the work to another Consultant for development of a proposal. As each project may have a completely different scope of work, Respondents are not required to possess expertise in all listed areas.

3. SCOPE OF WORK

The scope of work to be performed by the Consultants awarded an ESA may include civil, structural, and mechanical engineering and design, and construction management support (responding to submittals, RFIs, etc.), for the project types listed below. The Consultants shall provide engineering services in conformance with Districts' standards and in full compliance with all applicable laws, standards, and codes, including the Standard Specifications for Public Works Construction (Greenbook), latest approved edition, and the Districts' amendments thereto. The general design process and typically required deliverables for the Consultant's work are provided for reference in Section 4 of this RFP.

3.1. Sewer Rehabilitation and Construction Projects

Perform preliminary and detailed design of small and large diameter sewer rehabilitation projects and new sewer construction projects. Qualified firms shall have experience in the preparation of design, plans, specifications, cost estimates and contract documents for capital improvement projects involving rehabilitation of small and large diameter sewers by cured-in-place pipe lining, sliplining and other rehabilitation methods, construction of new sewers by open trench construction, jacking and tunneling, construction of new sewer force mains, rehabilitation of existing force mains, preparation of sewer flow studies, environmental documentation, constructability reviews and reports.

3.2. Miscellaneous Design Support and Engineering Tasks

In addition to the engineering design projects, the Consultant may be asked to perform hydraulic modeling of the sewer collection system; provide environmental/planning and construction management support; and perform special engineering studies/reports. Consultants may also be asked to review various design manuals and procedures used bye the Sewer Design Section, including the presentation and training of Districts' staff related to any updates.

4. TYPICAL PROJECT ADMINISTRATION STEPS FOR SEWER REHABILITATION AND CONSTRUCTION PROJECTS

The Districts will approach one of the selected Consultants having the appropriate qualifications to complete a proposed project. The Consultant will have the opportunity at that time to review the scope of the proposed project and provide a preliminary proposal that includes a preliminary cost estimate and project schedule AND a list of key staff members that will be assigned to the project. If the initial Consultant does not have the resources to complete the project within the specified time frame or provides what is deemed an excessive cost proposal, the District can advance to the next available Consultant without any legal or financial impacts to either party. Projects will generally proceed through the following three (3) phases: (1) Preliminary Engineering Phase (including a Pre-Design Evaluation), (2) Detailed Design Phase, and (3) Construction Management Support Phase. However, proposals may be requested for starting at any of the three phases or for support-type projects that do not typically follow said phasing.

Once a preliminary proposal is requested, the Consultant shall coordinate with the Districts and other necessary and appropriate government units, utilities, organizations, and persons in order to ascertain project requirements. Not all projects require the same level of detail and the Districts and Consultant will work together to determine what level of detail is required. The Consultant will then prepare and submit a detailed staffing plan, QA/QC plan, and cost proposal for providing the requested engineering services for the current phase of the proposed project.

The cost proposal shall be broken down to show expected labor hours for each phase of the work and the associated labor costs, including work performed by outside subconsultants. The staffing plan, QA/QC plan, and cost proposal shall be submitted to the Districts for review and approval prior to start of any work. Once the Districts and the Consultant have agreed and accepted the plans and cost proposal, the Consultant and Districts will sign and execute a Task Authorization Form (TAF) that will establish the scope, budget, schedule, staffing, deliverables, and progress payments for that phase of the project. The Consultant shall propose a project manager for each TAF. The Consultant's project manager shall oversee the TAF to the completion of the project and shall not be replaced without the Districts' authorization. The Districts may at any time request

that a project manager be replaced. The project manager is responsible for submitting monthly progress reports that will include an earned value analysis of the project. The project manager will immediately notify the Districts of proposed staffing changes, and any major changes in scope, budget or schedule.

4.1. Preliminary Engineering Phase

During this phase, the project scope is defined, general consensus on design parameters is reached, and project constraints are identified, including, but not limited to regulatory and permitting constraints, design and construction schedule, and site conditions. The end goal of this phase is to have a Preliminary Design Report (PDR) or a Work Scope Memo (WSM) that provides the Districts with enough detailed information to make effective decision on the project goals, requirements and costs. Preliminary Engineering generally includes the following tasks:

4.1.1. Scoping Meetings – The purpose of this meeting is to have the project's requestor (Wastewater Collection Systems (WCS) Operations) clarify the scope of work as discussed in the Design Request.

4.1.2. Site Visits – The Consultant's Project Manager, Design Engineer and assigned designers should schedule and conduct a site visit with District's Design and Operations staff to become familiar with the project area and identify constraints. During the site visit, confirm that as-built drawings reflect what is on and below the ground and note any modifications or changes to be surveyed or added electronically to the background drawings.

4.1.3. Existing Conditions and Background Drawings – The District will provide any existing as-built drawings that apply to the project to the Consultant. The Consultant shall investigate, analyze, and measure the existing facilities to the extent necessary to determine the information necessary for project work. The Consultant shall request and obtain substructure information from all utilities within the project area.

4.1.4. Identify additional investigative work required by geotechnical, survey, or other service providers. The District may provide the geotechnical and/or surveying consultant under a separate contract.

4.1.5. For new sewer construction projects, the Consultant shall calculate ultimate flow conditions by performing a sewer area study in accordance with the District's procedures.

4.1.6. CCTV Inspection Review – The District will provide access to CCTV inspection records for the existing sewer. The CCTV records shall be reviewed to confirm the condition of the sewer and to help determine the method of repair, or if repair is necessary.

4.1.7. Relief, Replacement, or Rehabilitation – All available alternatives shall be evaluated based on ultimate flow conditions, sewer condition, available alignments, flow bypass capabilities, and cost. Alternatives may include a new relief sewer and maintaining the existing sewer in service, a replacement sewer and removing the existing sewer from service, a combination of relief and rehabilitation, various methods of rehabilitation, or a combination of the above. An estimate of the costs for the various alternatives should be included.

4.1.8. Preliminary Design and Construction Schedule – Prepare a schedule showing the time frames for developing construction drawings, specifications and other related information for the 50%, 90% and 100% Phases, and the anticipated duration for construction of the selected alternative.

4.1.9. Cost estimate for the proposed design and construction.

4.1.10. The PDR or WSM shall include the following:

4.1.10.1. Background - Include the location and description (optional) of the existing sewer alignment, year(s) constructed, lengths, diameters and materials of pipe, and the reason for the project. Describe the condition of the sewer. Attach a figure(s) showing the existing (and proposed) alignments. Include an aerial photo of the area showing all District's facilities for large or complex projects.

4.1.10.2. Area Study and Flow Capacity- Include the current dry weather peak flow, wet weather peak flow if available, the ultimate peak flows based on land use and 2050 (or identify other year) population with a recommendation for which flows should be used, and the ultimate peak wet weather flows if this can be estimated. Also, include as applicable, the flow capacities for the existing sewer and various pipe size options for relief and/or replacement sewers, together with the percent d/D for the existing sewer and each option. Attach schematic(s) showing pipe size, junctions, current and ultimate peak flows, flow depths and flow capacities of the proposed and existing sewers. For rehabilitation, include the flow capacities and percent d/D of the rehabilitated sewer using the reduced pipe internal diameter and the lower Manning's roughness coefficient as appropriate.

4.1.10.3. Discussion - For relief and/or replacement, discuss and compare the various options, provide tables showing the construction cost for each option, describe the alignment, available corridor or substructure interferences, local sewer and lateral connections, rehabilitation needs, constructability, right of way requirements, indicate if it is in Caltrans or railroad property, upcoming construction in the area, potential contamination along specific alignments, agency requirements, traffic, operations and maintenance (O&M) considerations, and anything else that may have a bearing on the recommendation. For rehabilitation, recommend the extent of rehabilitation based on CCTV and show on a figure. Include a discussion of right of way, rehabilitation method, capacity after lining, pump bypass or flow diversions, manhole condition and recommendation, and cost.

4.1.10.4. Recommendation - Indicate the recommended option and include lengths, diameters, materials, and cost. Also include major considerations for the specific project, such as right of way issues, jacking/tunneling, groundwater, etc. For rehabilitation, indicate the recommended rehabilitation method of the sewer and also include recommended methods for rehabilitation of manholes and structures.

4.1.11. Once the District and the Consultant have reviewed and resolved any outstanding issues, the Consultant will receive a final progress payment according to the TAF.

4.2. Detailed Design Phase

Once the PDR or WSM has been completed, the TAF for the Detailed Design Phase is broken into four (4) specific milestones: 50% Design, 90% Design, 100% Design, and Advertise/Award/Bid. The Consultant shall not proceed from one milestone to the next until so directed by the Districts.

4.2.1 50 Percent Design Milestone

The Consultant shall prepare and submit 50 percent design documents to the District for review. All drawings shall conform to the latest version of the Sewer Design Drafting Standards. At the 50 percent stage the plans should include the following information:

4.2.1.1 Cover sheet with Project Title, General Location map, and Vicinity Map.

4.2.1.2 Data from field survey and geotechnical work.

4.2.1.3 Plan and Profile sheets showing proposed work.

4.2.1.4 Detail sheets showing any necessary manhole, structure, or miscellaneous details.

4.2.1.5 Table of Contents for Special Provisions

4.2.1.6 Updated construction cost estimate and updated construction schedule.

Once the District and the Consultant have reviewed and resolved any outstanding issues identified during the 50 percent design review, the Consultant will be provided with a copy of the Districts' Special Provision Templates which are to be incorporated, as required, into the 90 percent submittal package. The Consultant will receive a progress payment according to the TAF and will be issued an NTP to move to the 90 Percent Design Phase.

4.2.2 90 Percent Design Milestone

The Consultant shall prepare and submit 90 percent design documents to the District for review. These drawings and specifications are expected to be as close to final as possible. No major changes are expected after this phase, only minor drafting and typographical changes/corrections are expected. At the 90 percent stage, the plans should include the following information:

4.2.2.1 Complete electronic set of construction drawings showing all plans, profiles, and details.

4.2.2.2 Draft Special Provisions.

4.2.2.3 Updated construction cost estimate, and updated construction schedule.

Once the District and the Consultant have reviewed and resolved any outstanding issues identified during the near final review of the detailed design and specifications, the Consultant will receive a progress payment according to the

TAF and will be issued an NTP to move to the 100 Percent Design Phase.

4.2.3 100 Percent Design Milestone

The Consultant shall prepare and submit 100 percent Contract Documents and final construction cost estimate to the Districts for review. At the 100 percent stage, the plans and specifications should be complete and ready for inclusion in the Bid Package released to the general public inviting bids on the proposed work. These documents shall be as complete as possible to reflect the level of detail specified in the Preliminary Engineering Phase. Payment for this phase will not be made until the District accepts the Contract Documents as "Complete". All drawings shall be signed and stamped by the Professional Engineer who had responsible charge over the content of the associated construction drawings. Said engineer shall be a professional engineer registered in the State of California in the discipline covered by the drawings.

4.2.4 Advertise/Bid/Award Milestone

The Districts' Design staff will take the lead on this phase of the project, including coordinating advertisement of the Bid Package/Contract Documents, acceptance of bids, and award of contract to the lowest, responsible, responsive bidder. The Consultant shall be responsible for providing answers to RFIs during the bidding phase and shall assist in preparing and producing any addenda required to address contractor questions. The Consultant shall assist in preparing any evaluations and/or recommendations regarding the awarding of the project.

4.3. Construction Management Support Phase

After award of a contract, the Districts' Construction Management (CM) Section will take the lead on management of the project through construction completion. Prior to the start of construction, the Districts and the Consultant will draft and execute a new TAF to establish the budget for construction management support work by the Consultant. This phase will include review and approval of submittals, responding to the contractor's Requests for Information (RFIs), and assisting CM staff with resolution of construction issues. This may also include participation by the Consultant in on-site meetings with CM staff and the contractor. As described below, the Consultant's staff will be required to use Oracle Unifier™ software for transmittal of all correspondence during the construction phase.

4.4. Software Requirements

The Consultants will be required to use MicroStation CONNECT Edition Update 10 or newer to prepare all CAD drawings. The Consultants will be required to use Bluebeam Revu Standard (or better) to distribute all design deliverables for Districts' review thru Bluebeam's Studio Sessions feature, including the PDR, 50 percent design, 90 percent design, and 100 percent design documents. The Consultants will also be required to utilize Oracle Unifier™ software for routing of design-related documents and for all correspondence during the Construction Management Support phase. At the Consultants' sole expense, the Consultants shall provide Bluebeam Revu Standard software for their staff assigned to Districts' projects. The Districts will provide licensing and training for Oracle Unifier™ for the Consultants' staff. The Consultants shall include

budget for their staff to attend Unifier™ training in the TAF proposals as appropriate.

5. SOLICITATION INFORMATION AND KEY DATES

5.1. Schedule

Issue RFP	May 7, 2021
Last Day for Questions	May 26, 2021
Proposal Due Date	**No later than 11:00 a.m. on June 10, 2021**
Districts' Board of Directors Approval to Award Contract	Anticipated in August 2021

5.2. Proposal Format

The proposal shall sufficiently describe and demonstrate the Respondent's understanding of and approach to the scope of this RFP.

The Proposal shall include the Solicitation Form with authorized signature provided in Part 5.3 below. Failure to include the signed Solicitation Form with the Proposal will disqualify the Proposal from consideration.

Respondents shall respond to all the Districts' requests for information listed in this RFP in the order in which they appear. All information, calculations, footnotes, comments, text, advertising literature, etc., shall be in the English language. Only English engineering units shall be used. To facilitate the review process, the SOQ and Hourly Rates shall follow the format outlined in the respective sections of this RFP. All pages shall be numbered. Pages in appendices need not be numbered but shall be tabbed for convenient access. Concise language and direct answers are preferred to lengthy discussion and non-pertinent information. Failure of the Respondent to organize the information required by this RFP as outlined may results in the Districts, at its sole discretion, deeming the Proposal nonresponsive.

5.3. Proposal Submittal

Upload Proposals in two (2) separate files to QuestCDN per the below:

1) **Technical Proposal**
2) **Cost proposals**

The Proposal shall be uploaded no later than **11:00 a.m. on Thursday, June 10, 2021** to QuestCDN.com. QuestCDN's clock is the official time. The Districts is not responsible for Internet Service Provider (ISP) transmission interruptions.

https://qap.questcdn.com/qap/projects/prj_browse/ipp_browse_grid.html?projType=all&provider=7047059&group=7047059.

Any Proposals submitted after the above time and date, or to any other person or address will be rejected. Please direct all questions to Ms. Maribeth Tan at btan@lacsd.org. **Last day for questions is Wednesday, May 26, 2021.**

5.4. Solicitation Form

FAILURE TO SIGN AND SUBMIT THIS PAGE WITH PROPOSAL WILL DISQUALIFY YOUR RESPONSE

The Consultant shall identify which general scope(s) of work the firm is agreeing to provide engineering services for by checking the appropriate box(es) below. Failure to identify which scopes(s) are being proposed will disqualify your response.

- ☐ Sewer Rehabilitation and new sewer construction projects
- ☐ Miscellaneous design support tasks, including but not limited to hydraulic modeling and specialized studies/reports

If awarded, the undersigned offers and agrees to furnish the services listed in this RFP at the prices and terms stated, subject to mutually agreed upon terms and conditions. Additionally, the undersigned warrants and represents their authority to bind the firminto an agreement subject to the terms and conditions of this Request for Proposal.

Company Name: _____

Street Address: _____

City, State Zip: _____

Email: _____

Telephone: _____

By (Authorized Signature): x	Date Signed: x
Print name and title of Authorized Signatory	

ALL SPECIFICATIONS, TERMS, AND CONDITIONS OF THIS PROPOSAL WILL BE INCORPORATED INTO ANY RESULTING AGREEMENT.

6. SOQ REQUIREMENTS

6.1. Cover Letter

The Respondent's SOQ shall include a cover letter of transmittal attesting to its accuracy, signed by an individual authorized to execute binding legal documents on behalf of the proposing firm. The cover letter shall provide the name, address, telephone number of the Respondent along with the name, title, address, telephone number and email address of the executive that has the authority to contract with the Districts.

6.2. General Company/Team Information

The SOQ shall include the ownership, organization, and background of the Respondent.

The following information shall be provided by the respondent:

- Names of partners or officers.
- Name and contact information for the Project Manager who will act as the principal contact person for all Districts' projects. The Project Manager shall be a professional engineer registered in the State of California with no less than ten (10) years of experience in design and/or project management of projects relevant to the Scope of Work in Section 3.
- All names under which the proposing firm has conducted business during the preceding five (5) years.
- Complete organization chart with all key personnel listed, including senior staff responsible for QA/QC. The line of authority and communication for the entire project team shall clearly be shown.
- What portions of the services, if any, will be subcontracted to sub-consultants.

If sub-consultants are proposed, the proposed contractual relationships between the Respondent and sub-consultants shall be outlined in the SOQ. The Respondent shall describe the history of the relationships among team members, including a description of past working relationships.

The Respondent shall recognize that its key employees assigned to this project will be used as a basis for ranking and selecting firms. Therefore, changes to the Respondent's proposed team, including substitution or addition of sub-consultants or key employees, may alter suitability of the project team for project assignments after award of an ESA.

6.3. Qualifications

Respondents to the RFP shall demonstrate their ability by providing the technical qualifications of the Respondent, individual team members, and sub-consultants, if any, relevant to the Scope of Work identified in Section 3. The Districts reserve the right to conduct an independent verification of the Respondent's technical qualifications by contacting project references, accessing public information, or by contacting independent parties. Additional information may be requested during the evaluation of technical qualifications. The Respondent shall provide the following information to demonstrate its technical qualifications:

6.3.1 Company Experience and Past Performance

The Respondent shall provide its experience with designing projects relevant to the proposed Scope of Work identified in Section 3. For each scope area, the Respondent shall provide project descriptions for a minimum of three (3) projects completed in the last ten (10) years within the State of California and/or any other state in the United States of America. For each of the projects identified, provide the following information:

- Name and location of project
- Client (include address and phone number)
- Reference contact of the client
- General description of the referenced project
- General description of the services provided by the respondent
- Status of the project
- Change order rate of the project, as a percentage (total change orders divided by original capital contract amount)
- Key personnel involved with the referenced project with their specific duties including all management personnel
- Applicability and relevance of the referenced project to the services required by the Districts

6.3.2 Key Project Staff Experience

The Respondent shall provide the qualifications of key staff proposed to be assigned to the Districts' project. A brief resume for each key staff member shall be submitted that includes experience relevant to the Scope of Work in Section 3 of this RFP. The same key staff identified in the SOQ shall be used during the assigned design projects. At a minimum, the resumes shall include:

- Staff person's name;
- Labor category;
- Office location;
- Number of years of technical experience;
- Number of years with current firm;
- Areas of expertise and/or experience
- Educational background
- Proposed role in on-call contract

6.3.3 Project Management Method

The Respondent shall provide a narrative describing how the project management would occur within the Respondent's organization. This would include individual staff's roles and responsibilities in various phases of project development, methods of schedule and budget control, QA/QC procedures, etc.

6.3.4 Location of Project Staff

Due to the complexity of the work and the necessity for timely and effective communications during the various phases of the work, the District requires that **ALL** project staff are physically located within the United States of America during the course of the project. Multi-national firms shall not allow work to be performed on the project by staff located outside of the United States of America.

6.3.4.1 Regional Business Enterprise (RBE) Incentive

An RBE is a business that has maintained an office for a minimum of one year within the District's service area and/or the adjacent five counties. Those six counties are as follows: Los Angeles, San Bernardino, Riverside, Orange, San Diego and Ventura. The business must have a business permit or license issued by the local jurisdiction in which it is located. Firms participating as prime Respondents that qualify as an RBE will receive five (5) percentage points toward total scoring points.

6.3.5 Financial Condition

The respondent shall provide full disclosure of information regarding its financial condition and, if applicable, the financial condition of the corporation willing to guarantee the respondent's obligations under the ESA (Project Guarantor). The disclosure shall include a copy of the Respondent's most recent Annual Report. The respondent shall also submit the most current annual financial statement and the financial statements for the two (2) years immediately prior to the current one. Furthermore, the respondent shall identify the number of unpaid judgments against them over $1,000,000 in the past five (5) years. The respondent shall also identify the number of disputed claims over $5,000,000 in the past five (5) years.

7. HOURLY RATES REQUIREMENTS

In a separate electronic file, the Respondent shall submit Hourly Rates for all proposed key project staff. The hourly rate for each classification shall be fully burdened and include all indirect and overhead costs. At a minimum, the rates provided shall include:

- Project Manager
- Registered Civil Engineer
- Registered Structural Engineer
- Registered Mechanical Engineer
- Registered Electrical Engineer
- Design Engineer
- Designer
- Drafter
- Administrative (if applicable)

In addition, the work resulting from the RFP process may involve direct costs (e.g., reproduction, travel, etc.). Direct costs shall be billed at cost plus the selected Consultant's markup. Respondents shall include their proposed markup percentage rates for direct costs with the

Hourly Rates portion of the Proposal. Respondents shall be aware that travel time will not be billable.

Annual cost of living escalators will be allowed for all proposed rates and shall not exceed the Consumer Price Index (CPI) – Los Angeles Region for the preceding year. The rates submitted shall be good through end of June 2022.

8. REVIEW AND EVALUATION OF PROPOSALS

8.1. SOQ

The Districts will evaluate SOQs submitted by the firms in response to this RFP and select a limited number of the most qualified Respondents to be placed on an on-call list to provide engineering services. The following table represents the evaluation criteria and weighted percentage (%) points that will be considered during the evaluation process. Each SOQ will be competitively evaluated on its relative strengths and weaknesses against the following criteria listed below and as described in Section 6:

Evaluation Criteria	Weights
Company Qualifications and Record of Past Performance	35%
Key Personnel and Staff	35%
Project Management Method	10%
Financial Condition of Company(s)	10%
Ability to self-perform all services listed in Section 3	5%
RBE per Section 6.3.4.1	5%
Total	**100%**

8.2. Hourly Rates

Hourly Rates will be reviewed after the SOQs have been review and ranked. The Hourly Rates submitted shall be used to negotiate the fair and reasonable costs for the services. If the Districts are unable to reach an agreement with one or more of the top ranked Respondents, the Districts will terminate negotiations and negotiate with the next highest-ranked Respondent.

8.3. Districts Rights and Options

The Districts, at their sole discretion, reserve the following rights:

- To determine which responsible Respondents, if any, shall be included in the on-call list resulting from this RFP;
- To reject any, or all, Proposal or information received pursuant to this RFP;
- To supplement, amend, substitute or otherwise modify this RFP at any time by means of a written addendum;

- To cancel this RFP with or without the substitution of another RFP or prequalification process;
- To request additional information;
- To verify the qualifications and experience of each respondent;
- To take any action affecting the RFP, the RFP process, or the services or facilities subject to this RFP that would be in the best interests of the Districts;
- To require one (1) or more Respondents to supplement, clarify or provide additional information in order for the Districts to evaluate the SOQs and Hourly Rates submitted; and
- To waive any minor defect or technicality in any SOQ received.

9. TERMS AND CONDITIONS

A) General Contract Conditions

This RFP shall serve as a binding technical and contract document that outlines and prescribes the terms and conditions of the on-call services, and how administrative tasks are to be performed. The Districts' ESA, this RFP, each TAF and subsequent written amendments thereto, and all parts of the Consultants' Proposal and written amendments thereto that are accepted in writing by the Districts shall constitute the sole and exclusive ESA between the Consultant and the Districts. No verbal modifications to the ESA are allowed or recognized. **The Districts do not recognize, or sign contract documents proposed by Consultants.**

B) RFP Headings and Format

The section headings and captions of this RFP are for the sole convenience of the parties. The section headings, captions and arrangement of this RFP do not in any way affect, limit, amplify, or modify the terms and provisions of this RFP. The singular form shall include plural, and vice versa. The RFP shall not be construed as if it had been prepared by one of the parties, but rather as if both parties had prepared it. Any provision thereof that is found court of proper jurisdiction to be ambiguous or inconsistent, either internally or in relation to other provisions contained herein, shall be construed in accordance with a fair and ordinary meaning so as to effectuate the intent of the parties to this RFP and subsequent ESA. Unless otherwise indicated, all references to sections are to this RFP. All exhibits referred to in this RFP are attached to it and incorporated in it by reference. The preamble and all recitals to this RFP are also incorporated herein.

C) Changes in Schedule or Scope of Work

After issuance of a TAF, the Districts reserve the right to change the scope of work at any time during the project. Changes in work scope could include elimination, reduction, or addition of optional or non-optional work tasks. If the Districts want the Consultant to perform work that is not within the scope of services described in the TAF, the Districts shall direct the Consultant to perform such work in writing as an amendment to the TAF. Prior to the performance of any such work requested by the Districts, the Consultant shall provide the Sanitation Districts with a written notification to the Districts detailing the Consultant's understanding of the change in scope and how the Consultant's proposal and/or current project would be affected.

A change in the scope of services is defined as either an increase or decrease in the

number of hours beyond the estimated labor hours for an individual(s) working on a task or sub-task or the total number of hours for any given work task or sub-task identified in the TAF, or a change in the individual(s) hourly wages as identified in the Consultant's proposal; and, any outside direct or indirect costs or services). A change in the scope of services also is defined as a change in the Consultant's schedule (either the total estimated time to conduct work, or time for any identified task or sub-task) from the schedule provided in the Consultants TAF.

The Consultant may identify that a change in the scope of services identified in a TAF requires a change, which shall be defined as follows; either a change in the scope of services of an individual sub-task or a major task item; a change in the costs of labor, direct or indirect costs of an individual work task item or major task; or, a change in the proposed schedule of work or deliverables due to the Districts. Should any such change in the scope of services occurs, the Consultant is required to immediately notify the Districts both verbally and in writing. The Consultant shall not proceed with any work activity on this change, or incur any costs or expenses related to the change until the Consultant has identified the nature of the change, the Districts have agreed in writing to the amendment to the TAF conditions, and have issued a formal notice to proceed with such change as agreed. In a separate "stand-alone" letter to the Districts' Project Manager, the Consultant shall state the nature of the out-of-scope work, the proposed cost to perform the out-of-scope work, and any changes to the project schedule from the performance and from the nonperformance of such work. The "stand-alone" letter shall be uniquely identified with a Subject Header in Bold Font Type stating "NOTIFICATION OF CHANGE IN SCOPE". The "stand-alone" letter shall not be combined or concealed with any other form of transmittal, including but not limited to required project transmittal letters, progress letters, reports, drafts, emails or invoices. If the Consultant performs any out-of-scope work without the prior written approval from the Districts' Project Manager, or has not submitted his change in the scope of services in the form as previously identified in this section, the Consultant shall have de facto waived its rights to compensation for performing any such work. The Consultant shall not perform any out-of-scope work without the prior written approval of the Districts.

D) Invoicing and Payment

To allow for regular, continuous budget management, the Consultant shall submit invoices on at least a quarterly basis to invoices@lacsd.org detailing time used, and expenses incurred during completion of each tasks. For each task, each invoice shall include columns totaling (1) current monthly expenses, (2) previously billed expenses, (3) total billed to date, (4) proposed task budget, (5) remaining budget, (6) percent completion for each task, and (7) percent of budget remaining on each task and for the total budget. Failure to submit quarterly invoices may result in delayed and partial payments.

Each quarterly invoice shall detail labor charges, charges for subcontractors' services, and other direct costs. All charges shall be broken down and listed on a per-task basis. Each invoice for any particular month shall list in detail all charges incurred for each specific project and task performed during that quarter.

The Consultant shall expect to be paid on a time and material basis with a not-to-exceed budget for each task. Under the category of labor charges, each invoice shall list the name and project title of each team member who worked on each individual project task during the month that is being invoiced. The number of labor hours worked by each named

employee of the Consultant's firm on each individual task and the wage and billing rates per hour for each named employee shall be listed in the invoice. Names, titles (i.e. John Doe, Project Manager, etc.) and labor hours shall be in accordance with the TAF.

Personnel billing rates in accordance with the Consultant's Cost Proposal may be escalated in subsequent years for the duration of the project. Annual percent increases to hourly wages only will be implemented July of every year during the contract based upon the increase in the Consumer Price Index (C.P.I.) for All Urban Consumers for the Los Angeles - Long Beach – Anaheim area using the 1982-84 = 100 base for March to March, according to the following chart:

Increase in C.P.I.	Percent Salary Increase
>0 - 3.0%	3.00%
3.0 - 9.0% from 3.0% to 9.0% in the C.P.I.	3.00% plus 66 $^{2}/_{3}$% of the increase
9.0 - 12.0% from 9.0% to 12.0% in the C.P.I.	7.00% plus 50% of the increase
12.0 and above	8.50%

A decrease in the C.P.I. will result in no hourly wage increase. A C.P.I. of zero will result in no hourly wage increase.

The Consultant shall be held liable for the output and conduct of their own and of subcontracted personnel, and for lost time or additional personnel-hours and associated costs incurred due to the actions of the Consultant's personnel, subcontracted personnel, the use of inadequate equipment, or for equipment failure. Disputed items of work shall not be paid until resolved. The Districts shall hold these items in abeyance. The Districts' Project Manager shall authorize payments as soon as each invoice has been reviewed and verified, not to exceed thirty days from the date of receipt of the invoice.

The budget for each task shall be tracked and managed separately from the budgets for all of the other tasks. If the Consultant believes that it may not be able to complete the required scope of work for any task within the respective budget for that task, the Consultant shall immediately notify the Districts. Any task that is authorized in writing to be over budget by the Districts shall be denoted as such in the monthly invoices. The invoice shall clearly show the total percentage of completion for each activity; the total amount expended for each activity; the summation of the total amount expended for all activities; the total amount paid as of the date of the invoice; and the total amount due on this invoice.

The invoice(s) shall not include a change in the scope of services as identified in Section C. Changes in the scope of services that have been approved and authorized in writing may

be invoiced under a separate, stand-alone invoice in the format previously identified above.

E) Severability

If any term or provision of this RFP and subsequent ESA shall, to any extent, be held invalid or unenforceable, the remainder of this contract shall not be affected.

F) Insurance Requirements

The Consultant shall defend, indemnify and hold free and harmless the Districts, its officers, agents, and employees from and against any and all claims, demands, actions, loss or liability, arising out of negligent errors, omissions or acts of the Consultant or its subcontractors in performing the Consultants obligations herein. This indemnity shall extend to the payment of all costs of litigation including reasonable attorney's fees with respect to any cause of action referred to above.

The Consultant shall secure and maintain until the completion of the on-call services such insurance as shall protect it and the Districts in such a manner and at such amounts as set forth below. The Consultant shall pay the premiums for said insurance coverage.

The Consultant shall furnish to the Districts, certificates of insurance and endorsements verifying the insurance coverage as required by this RFP. These certificates of insurance and endorsements shall be delivered to the Districts within seven (7) days after the Sanitation Districts have awarded an ESA. The Districts reserves the right to require complete and accurate copies of all insurance policies required by this RFP. Coverage provided by Consultant's policies shall be primary coverage. The Districts shall receive thirty (30) days prior written notice of a policy cancellation or reduction in coverage. Insurers shall have at least an "A" policyholders rating and "X" financial rating in accordance with the current Best's Key Rating Guide. The insurance provided under the ESA shall include policies providing coverage to include each of the requirements set forth below in amounts that meet or exceed the minimums set forth herein. The Consultant shall provide insurance coverage through insurers, which meet the following terms:

G) Insurance Coverage

a) General Liability

The Consultant shall maintain General Liability Insurance with an endorsement naming the "Los Angeles County Sanitation Districts" and the applicable property owner(s), to be identified later, as additional insured and a standard cross liability clause or endorsement. The limit of insurance shall not be less than $3,000,000 per occurrence.

b) Automobile Liability

The Consultant shall maintain automobile liability insurance with coverage for any vehicle including those owned, leased, rented or borrowed. The limit amount for this insurance shall be not less than $1,000,000 per occurrence combined single limit.

c) Professional Liability

The Consultant shall maintain professional liability insurance with coverage for wrongful acts, errors, or omissions committed by Consultant in the course of work

performed for the Districts under this ESA. This insurance shall include coverage for liability assumed under this ESA when such liability is caused by Consultant's negligent acts, errors, or omissions. The limit for this insurance shall be not less than $1,000,000 per occurrence. The effective dates for this insurance shall start within seven (7) calendar days after the Districts' Board of Directors approves award of an ESA and shall be valid for five (5) calendar years after completion of a TAF subject to this ESA.

d) Workers' Compensation

The Consultant shall maintain Workers' Compensation Insurance as required by law in the State of California and Employer's Liability Insurance (including disease coverage) in an amount not less than $1,000,000 per occurrence. This insurance shall also waive all right to subrogation against the Districts, its employees, representatives and agents.

H) Protection of Property and Existing Facilities

The Consultant shall be held responsible for the preservation of all public and private property on and adjacent to the working areas and shall be required to exercise due caution to avoid and prevent any damage, injury, or nuisance thereto because of this operation.

Should any direct or indirect damage, injury, or nuisance result to any public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a consequence of the non-execution thereof, on the part of the Consultant or any of his employees or agents, such property shall be restored by, and at the expense of, the Consultant. The degree of restoration or recompense shall be, at a minimum, equivalent to restore existing conditions before the damage, injury, or nuisance occurred.

I) Cooperation with Others

The Consultant is cautioned that other Consultants or Contractors may be on the job sites at times during this contract. The Consultant shall not willfully or unnecessarily interfere with any ongoing operations, or with Districts' Contractors or other forces engaged in site maintenance or repairs, nor with any other Consultant or Contractor engaged in work for the Districts.

The Consultant shall observe all site speed limits and shall follow safe driving habits.

J) Clean-Up

The Consultant shall remove from the work and storage areas all debris incidentals to his investigation and work. All refuse and debris shall be disposed of at the nearest appropriately permitted disposal facility. The work and storage areas shall be restored to their original condition to the satisfaction of the Districts. At the end of each working day, the Consultant shall ensure that all soil and water generated during the day as well as all supplies incidental to the daily operation shall be properly stored. This daily clean-up is to be completed during the normal working hours, and the Consultant must allow adequate time to complete a proper cleanup of the site during the defined working hours.

K) Interaction with the Public

All persons employed by the Consultant shall display good conduct and maintain a high degree of professionalism. Any questions received by the public regarding the nature of

this project should be forwarded to the Districts project personnel.

L) Proposal Requirement Conformance

In submitting a response to this RFP and a subsequent TAF, the Consultant is deemed to understand and agree to the full measure of work specified therein. The Consultant further understands that all services therein shall be provided whether or not a service was specifically responded to in the Consultant's Proposal or TAF. It is further understood that all costs in providing the services specified herein shall be borne by the Consultant. Costs involved in providing a service therein specified shall not be considered as work claims, subject to additional reimbursement unless specifically authorized by the Districts in writing.

M) Damage to Equipment

The Consultant shall be fully responsible for the condition of and proper maintenance and operation of equipment appropriate for this investigation and the site conditions and shall neither have nor make any claim for damage that may occur to equipment as a result of the requirements of this investigation.

N) Electronic Format Submittal Requirements

The RFP shall be in PDF text-searchable format (Adobe Acrobat latest version). It is preferred that all documents be transferred to the PDF format from its native application. If this is not possible, then the documents shall be scanned in a PDF format.

The file size must not exceed 75MB. If a chapter or section is too large to achieve a file size that does not exceed 75MB, a chapter/section may be logically divided with each division being a separate file.

All material shall be scanned at a minimum resolution of 300 dpi. For color text, charts, drawings, graphs, and/or photographs, the scanned image shall be in color. For black and white text, charts, drawings, graphs, and/or photographs, the images shall be scanned in black and white unless a particular item requires a grey scale for a superior quality image. Gray scale shall never be used for the entire document.

All scanning shall conform with the following ANSI/AIIM standards: ANSI/AIIM MS44-1988 (R1933), Recommended Practice for Quality Control of Image Scanners, and AIIM TR38-1996, Compilation of Test Targets for Document Imaging Systems.

O) Termination

The Districts shall have the right to terminate the ESA without cause upon its giving the Consultant thirty (30) days advance written notice of its election to do so. The ESA may be terminated by either party hereto upon thirty (30) days advance written notice to the other party hereto in the event of substantial failure by said other party to perform in accordance with the terms of the ESA through no fault of the terminating party. No such termination for cause shall be effected unless the other party is given: (1) not less than ten (10) calendar days written notice (delivered by certified mail return receipt requested) of intent to terminate; and, (2) an opportunity for consultation with the terminating party before the said thirty (30) days' notice. Late payment by the Districts of approved invoices shall not constitute a substantial failure to perform unless the Districts has received written notification of overdue payment and payment is not made within fourteen (14) days after receipt of such notification. Consultant agrees not to terminate due to delays of up to one (1) year caused by the Districts. However, in the event of delays in excess of

six (6) months, caused by other than the Consultant, the Consultant's compensation and schedule for performance shall be subject to renegotiation.

In the event of termination by the Districts without cause, the Consultant shall cease all work and the District will compensate the Consultant for all agreed upon services performed and costs incurred up to the effective date of termination for which the Consultant has not been previously compensated. The Consultant shall be entitled to payment of all costs incurred to the date of termination and that portion of the fees prorated to the date of termination based on the percentage of the total hours and work completed as approved by the Districts.

In the event of termination for cause, the rights and obligations of the parties shall be determined in accordance with applicable principles of law and equity. Upon receipt of notice of termination from the Districts, the Consultant shall promptly stop its services, unless otherwise directed, and deliver to the Districts all data, drawings, reports, estimates, engineering calculations, summaries and such other information and materials as may have been accumulated by the Consultant in the performance of any TAF associated with this ESA whether completed or in progress. Any use by the Districts of incomplete information and materials shall be at the sole risk of the Districts.

P) Non-Disclosure Agreement

The Consultant shall not divulge to any third party, without the prior written consent of the Districts, any information developed or obtained through the Districts, in connection with the performance of this RFP unless: a) the information is known to the Consultant prior to obtaining the same from the Districts; b) the information is, at the time of disclosure by the Consultant, then in the public domain; or c) the information is obtained by the Consultant from a third party that did not receive the same, directly or indirectly, from the Districts.

Q) Ownership of Documents

All reports as well as original reports, plans, studies, memoranda, computation sheets, survey data, computer hardware or software developed or purchased specifically for the work under this RFP, and other documents assembled or prepared by the Consultant, or furnished to the Consultant in connection with this RFP shall be the property of the Districts. Copies of said documents may be retained by the Consultant but shall not be made available by the Consultant to any individual or organization without the prior written approval of Districts. Any reuse of said documents on an extension of a project or on any other project by the Districts without written verification or adaptation by the Consultant for the specific purpose intended shall be at Districts' sole risk and without liability or legal exposure to the Consultant, and the Districts shall indemnify and hold the Consultant harmless from all claims, damages, losses and expenses including attorney's fees, arising out of or resulting from any such reuse by the Districts. Any preliminary or working drafts, notes, or inter-agency or intra-agency memoranda which are not expected to be retained by the Consultant or the Sanitation Districts in the ordinary course of business shall be exempt from disclosure to any public entity under provisions of the Public Records Act.

R) Access to Work and Records

Representatives of the Districts shall be allowed access to the work whenever it is in preparation or in progress. The Consultant shall provide proper facilities for such access and inspection.

The Districts, or any authorized representatives of the Districts, shall have access to any books, documents, papers, and records of the Consultant that are pertinent to the Project for the purpose of making audit, examination, excerpts, and transcriptions.

The Consultant shall maintain and make available for reasonable inspection by the Districts accurate detailed records of its costs, disbursements and receipts with respect to items forming any part of the basis for billings to the Districts. Such inspections may be made during regular office hours at any time until one (1) year after the final payment under this ESA is made.

S) Notices

All notices or other communications to either party by the other shall be deemed given when made in writing and delivered or mailed (not e-mailed) to such party at their respective addresses as follows:

County Sanitation Districts of Los Angeles County
1955 Workman Mill Road
Whittier, California 90601
ATTN: Mr. Anthony Howard, Division Engineer
Sewer Design Section

Consultant's Name
Consultant's Address
ATTN: Consultant's Point of Contact

Either party may change its address or representative for such purpose by giving notice thereof to the other in the same manner.

T) Litigation

Should litigation be necessary to enforce any term or provision of this ESA, or to collect any portion of the amount payable under this ESA, then the prevailing party shall be entitled to recover reasonable attorney's fees in addition to any other relief to which the prevailing party would otherwise be entitled.

U) Compliance

The selected Consultant shall abide by and obey all applicable Federal, State, and local laws, rules, regulations and ordinances.

V) Governing Laws and Requirements

Performance of services herein shall be governed and construed in accordance with the laws of the State of California. The selected Consultant hereby agrees that in any action relative to the performance of said services, venue shall be in the County of Los Angeles, State of California.

W) Confidentiality

The Consultant and its Project team shall not release information or documentation associated with work under this RFP to anyone outside the Sanitation Districts without the express written consent of the Districts.

ATTACHMENTS

ATTACHMENT A

SAMPLE - TASK AUTHORIZATION FORM (TAF)
LOS ANGELES COUNTY SANITATION DISTRICTS
BLANKET ORDER NO. ###
(Consultant Name)

COMPLETED BY DISTRICT:

TAF No. **###** **Project Title**	**(Consultant Name)** **Proposal No.: ###**
District's Project/Task Number	**####### / ##-##-##**

District's Project Contact Information			
Title	Name	email	Phone No.
Districts Project Manager	Name	name@lacsd.org	(562)908-4288 x ####
Districts Project Engineer/Task Leader	Name	name@lacsd.org	(562)908-4288 x ####

TASK DESCRIPTION/PURPOSE:

The District has requested a proposal to

SCOPE OF WORK:

MATERIALS PROVIDED BY DISTRICTS:

DELIVERABLES FROM CONSULTANT:

COMPLETED BY CONSULTANT

(Consultant's Name) Project Contact Information			
Title	Name	email	Phone No.
Project Manager	Name		(###) ###-#### x ####
Project Engineer/Task Leader	Name		(###) ###-#### x ####
Project Engineer	Name		(###) ###-#### x ####
Project Designer	Name		(###) ###-#### x ####
Subconsultant 1	Name		(###) ###-#### x ####
Subconsultant 2	Name		(###) ###-#### x ####

PROPOSED TASKS AND DELIVERABLES:

Consultant will complete the following tasks and provide associated deliverables:

SCHEDULE FOR COMPLETION OF TASK:

Consultant will begin work upon receiving notice to proceed. Anticipated completion dates for completing above listed tasks and providing associated deliverables:

TOTAL ESTIMATED COST TO COMPLETE TASK:

Consultant will perform the tasks described above on a time-and-materials basis in accordance with the 2020 Professional Fee Schedule from our on-call contract with the District, as amended. (Note that work outside standard working hours (e.g. nights and/or weekends) will only be charged at increased labor rates if preauthorized by the District's Project Manager.)

Consultant Lead Assignments and Hourly Rates:

Project Manager ..... $XXX

Senior Engineer..... $XXX

Project Engineer ..... $XXX

Professional Staff ..... $XXX

Technician..... $XXX

CADD Operator ..... $XXX

Word Processor ..... $XXX

Total Hours:

Project Manager ..... XX **hrs**

Senior Engineer..... XX **hrs**

Project Engineer ..... XX **hrs**

Professional Staff ..... XX **hrs**

Technician..... XX **hrs**

CADD Operator ..... XX **hrs**

Word Processor ..... XX **hrs**

Estimated costs for the corresponding scope items; summarized below.

Consultant Labor:	$XXX
Consultant Expenses:	$XXX
Subcontractor Costs:	$XXX
Total:	$XXX

ATTACHMENT B

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

RFP No. 03956

ON-CALL ENGINEERING SERVICES

NON-COLLUSION DECLARATION
(Public Contract Code §7106)

I,_____, declare, as follows:

I am the_____of

_____,the party making the attached bid.

I know of my own personal knowledge and declare under penalty of perjury, that the attached bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone will refrain from bidding; that the bidder has not in any manner, directly or indirectly sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted its bid price or any breakdown of the bid price, or the contents of his bid, or divulged information or data relative to its bid, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent of any such corporation, partnership, company, association, organization, or bid depository to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

_____
(Date)

_____
(Location)

_____
(Signature of Bidder)

LOS ANGELES COUNTY
SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

May 28, 2021
RFP No.: 03956

ADDENDUM NO. ONE

RFP 03956 – ON-CALL ENGINEERING SERVICES, dated May 7, 2021.

PART 1
GENERAL INFORMATION – CHANGES AND REVISIONS

1. Section 9. Terms and Conditions

INSERT: X) Prevailing Wages

Pursuant to applicable provisions of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages and not less than the general prevailing rate of per diem wages for legal holiday and overtime work, for each craft or type of workman needed to execute the work contemplated under this agreement, as ascertained by the Director of the Department of Industrial Relations, shall be paid to all workmen performing field work on said work by the Consultant or by any subcontractor doing or contracting to do any part of said work.

A copy of the listing of the general prevailing wage rates may be obtained from the State of California Department of Industrial Relations, Office of Policy, Research, and Legislation, P.O. Box 420603, San Francisco, California, 94142-0603, or by visiting their website at www.dir.ca.gov.

2. Section 2. CONTRACT DETAILS AND ASSIGNMENT OF WORK; first paragraph, second sentence add the following to the end:

INSERT: (see Attachment C for a sample ESA)

3. Attachments

INSERT: ATTACHMENT C: SAMPLE ENGINEERING SERVICES AGREEMENT ESA

PART 2
GENERAL INFORMATION – QUESTIONS AND CLARIFICATION

The following questions were received by the Districts' and below are the answers.

1. **QUESTION:** RFP Section 1 states "preference will be given to Respondents that can provide the design services using their own forces". Section 4.1.4 states "District may provide the geotechnical and/or survey or other service providers". Is LACSD expecting firms to propose Geotechnical,

Surveying and other field services in their response? Would a proposal not be given preference if subs are proposed for these roles?

ANSWER: *Preference to Respondents that can provide the design services using their own forces is referring to the design engineers/managers such as Civil Mechanical, Electrical, and Structural engineers that will be working on the projects and the designers/drafters that will be preparing the plans. Necessary field work such as survey and geotechnical investigations (i.e. performing exploratory borings) does not need to be performed by each consultant's in-house staff; sub-consultants for the field work will be acceptable. It is not necessary to propose the firms but would like to know in the proposal if such subconsultants will be utilized if necessary and would like to know the Respondents ability to obtain these services in a timely manner. The Districts have obtained On-Call Survey Consultants and have On-Call Geotechnical Consultants (managed by our Structural Design Section) and in some cases, the Districts may require the use of these services; however the Districts would like the flexibility of using these services or the Consultant's (subconsultant's) services if necessary.*

2. **QUESTION:** Regarding Section 4.1.5, can LACSD provide the "sewer area study" procedure? Is there a need to have flow monitoring capabilities or other flow monitoring field service folks to complete a study?

   ANSWER: *If an area study is required for a particular project, the Districts will provide the procedures and guidance as necessary. Alternatively, the District's may provide the design flows. The District's Wastewater Collection System have flow monitoring at some locations and flow monitoring can be requested if necessary; however, some special projects may require flow monitoring field service to complete a study and the Consultants can propose flow monitoring field service if required; subconsultants will be allowed for this work.*

3. **QUESTION:** CCTV subconsultant –Should we include this on our team, or will the Districts be handling this through a separate contract?

   ANSWER: *As stated in Section 4.1.6 of the RFP for CCTV Inspection Review – The Districts will provide access to CCTV inspection records for the existing sewer and therefore, a CCTV subconsultant is not necessary.*

4. **QUESTION:** Potholing - Should we include this on our team, or will the Districts be handling this through a separate contract?

   ANSWER: *No, potholing if required for a specific project/task will be handled using District's potholing contractors.*

5. **QUESTION:** RFP Section 6.3.5 – We are a private corporation and do not have an annual report to disclose, but we are able to provide financial statements for the prior years as requested. Will that be acceptable?

   ANSWER: *Providing financial statements for prior years in lieu of an annual report to determine the respondent's financial condition is acceptable.*

6. **QUESTION:** RFP Section 6.3.5 – Will the LA County Sanitation Districts accept the financial statements as a separate (3rd) electronic document listed as "Confidential and Proprietary"?

   ANSWER: *The Districts will accept the submission of the financial statements as a separate electronic document listed as "Confidential and Proprietary".*

7. **QUESTION:** RFP Page 1 – The RFP states that "The District has established an aspirational goal of 20 percent overall participation by such firms." Is there a DBE goal requirement?

   ANSWER: *The 20 percent aspirational goal refers to overall participation in all members of the community including Minority Business Enterprises (MBE), Women Business Enterprises (WBE), Disadvantaged Business Enterprises (DBE), Disabled Veterans Business Enterprises (DVBE) and Small Business Enterprises (SBE). This overall goal includes DBE and is not a specific goal requirement. As stated in the RFP, participation is encouraged but award of a contract is not based on race, gender, disabled, disadvantaged or small business status. Evaluation Criteria is referenced in Section 8 of the RFP.*

8. **QUESTION:** RFP Section 7 – In the cost proposal, is the respondent expected to assign an hourly rate to each specific key individual and list their names, or is it acceptable to simply assign hourly rates to each labor classification?

   ANSWER: *In the cost proposal, the respondent is not expected to list specific names; it is acceptable to assign hourly rates to the classification (i.e. Project Manager, Civil Engineer, Designer, etc.).*

9. **QUESTION:** Is a draft Engineering Services Agreement (ESA) is available for review?

   ANSWER: *See Attachment C: Sample Engineering Services Agreement ESA, attached hereto.*

All other items remain the same.

Very truly yours,

Maribeth Tan

Maribeth Tan
Senior Buyer

BT:ee
Attachment: ATTACHMENT C: SAMPLE ENGINEERING SERVICES AGREEMENT ESA

ATTACHMENT C

ENGINEERING SERVICES AGREEMENT

This Engineering Services Agreement ("Agreement") is dated _____ ("Effective Date") and is between District No. 2, a county sanitation district organized and existing under the County Sanitation District Act, Health and Safety Code Section 4700 *et seq.*, (the "District") and <Consultant> ("Engineer"). The District and the Engineer are collectively referred to in this Agreement as the "Parties."

The District requested proposals for consulting firms to provide engineering services on an on-call basis for various existing and future projects (the "Project"). Engineer's proposal to provide such services under this Agreement is set forth in Exhibit "A" to this Agreement (the "Proposal"). The services to be provided by Engineer pursuant to the Proposal are set forth in the District's Request for Proposals ("RFP") for the Project (Exhibit "B" to this Agreement) and constitute the "Work."

The Parties therefore agree as follows:

1. Agreement

The RFP and the Proposal are incorporated into this Agreement. In the event that there is any conflict or inconsistency between the provisions of the RFP, the Proposal and/or this Agreement, the provisions of this Agreement will prevail.

This Agreement may be executed in any number of counterparts and all such counterparts shall constitute a single instrument. Delivery of an executed counterpart by facsimile or electronic transmission (in .pdf format or other electronic imaging) shall have the same force and effect as delivery of an original counterpart.

2. Engineer's Services

2.1 Scope of Services by Engineer. The Engineer shall provide engineering services as described in this Agreement. In performance of the Work, Engineer shall comply with all applicable Federal, State and local laws, rules, regulations, ordinances, and industry practices.

2.2 Engineer's Standard of Care. The standard of care applicable to Engineer's Work under the Agreement will be the degree of skill and diligence ordinarily employed by engineers performing the same or similar services, under the same or similar circumstances, in the State of California. The Engineer shall re-perform any Work not meeting this standard without additional compensation.

2.3 Engineer's Estimates and Projections. Engineer's opinions regarding the potential cost, financial analyses, economic feasibility projections, and schedules for potential future construction of the project are projections only and do not reflect: the ultimate cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Engineer does not warrant that the District's actual project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates, but Engineer shall provide such projections in accordance with the standard of care set forth in Section 2.2 of this Agreement.

3. District's Obligations

3.1 District-Provided Information and Services. The District shall furnish the Engineer available drawings, studies, reports and other data pertinent to Engineer's services and obtain or authorize Engineer to obtain additional reports and data as required. The Engineer is entitled to use and rely upon all such information and services provided by the District or others in performing Engineer's services under the Agreement except as otherwise stated by the District in connection with the information and services provided.

3.2 Access. The District shall arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services hereunder. Engineer shall comply with all applicable laws and with the District's requirements for persons on the District's premises.

4. Compensation and Payment for Engineering Services

4.1 Engineer's Compensation: The Task Authorization Form (TAF) system shall be used to issue the Work under this Agreement. When engineering services are required, Engineer will be presented with the project scope and will be asked to prepare a detailed Project Plan indicating the Project Manager, key personnel, and the time and expenses required to complete the Work. Once the Project Plan is approved by the District, the Engineer will be issued a TAF that details the agreed-upon scope, budget, schedule, deliverables and associated progress payments. The compensation payable by the District for the engineering services performed by the Engineer shall be per the final signed TAF for the Work. The total not-to-exceed budget for all Work performed by the Engineer is $1,000,000. The breakdown of expenses for each TAF shall be as follows.

a. **Direct Costs.** Direct Costs will be the hourly rates paid by the Engineer to its employees for time directly chargeable to the Project, exclusive of the costs for fringe benefits for those employees and other payroll costs. Engineer shall ensure that its employees maintain accurate records of the time chargeable to the Project.

b. **Overhead Costs.** Overhead Costs will be all business expenses allocated by the Engineer for rendering engineering services for the Project, including the fringe benefits for the employees who will be utilized on the Project. The Engineer's overhead cost will be charged to the District as a fixed percentage of the Direct Costs.

c. **Indirect Costs.** Indirect Costs will be all other identifiable costs of the Engineer directly chargeable to the Project, including, but not limited to, reproduction of reports, plans, specifications and other documents; preparation for meetings; travel costs; computer services; supplies used in the work; and communication expenses, that are necessary for the Engineer to fulfill its responsibilities for the Project.

d. **Subconsultant Costs.** Subconsultant Costs will be the costs paid by the Engineer to Subconsultants for providing services as required to assist the Engineer in the design and preparation of the deliverables for this Project.

e. **Fixed Fee.** The Fixed Fee shall be the profit of the Consultant and shall be a fixed percentage of the direct and overhead cost for each component of the Project.

4.2 Payment to Engineer. Engineer shall be compensated in accordance with Section 9 (D) of the RFP.

5. Duration, Schedule and Delay

5.1 Duration. Engineer's performance of the Work shall commence on the date identified in the District's Notice to Proceed. Engineer shall complete the Work in accordance with the agreed-upon schedule defined in each TAF (TAF Project Schedule).

5.2 Delay. The Engineer shall perform its services with due diligence and agrees to use its best efforts to complete the work involved in the Project in accordance with the TAF Project Schedule. The Engineer shall immediately advise the District of any delay in the TAF Project Schedule resulting from causes within or beyond its control. In the event of any such delay by causes within the Engineer's control, the Engineer shall promptly outline and implement appropriate actions required to overcome such delay, including, but not limited to, one or more of the following:

- Assignment of additional personnel to the Project;

- Utilization of overtime at no increase in compensation by the District; and
- Change in management structure or approach.

The foregoing is not intended to relieve the Engineer of responsibility for delay for which it would be responsible under this Agreement.

In the event of delay by causes beyond its control, the Engineer shall promptly provide the District with written notice of the delay and take all reasonable action to mitigate the effect of such delay. If the delay is beyond Engineer's control and without its fault or negligence, the time for the performance of its services may be equitably adjusted by written amendment subject to the District's approval of the extent of such delay. If the District determines that the Engineer has suffered additional costs that could not reasonably have been avoided, the District will compensate the Engineer for those additional costs.

Neither of the Parties will be responsible for delays in the performance of their obligations hereunder caused by strikes, action of the elements, acts and/or decisions of any governmental agency or by third parties, other than either Parties' consultants or subconsultants, which could not reasonably have been foreseen, or by civil disturbances, or any other cause beyond its reasonable control. Engineer will not be responsible for any delay by the District in supplying information and reviewing submittals by the Engineer.

6. Changes and Extra Work

The District may make changes within the general scope of this Agreement and may request the Engineer to perform additional services not covered by the original scope of work defined in a TAF. If the Engineer believes that any proposed change or direction given by the District causes an increase or decrease in the cost and/or the time required for the performance of the Work defined in a TAF or this Agreement, the Engineer shall so notify the District no later than five days after the date of receiving notification of a proposed change or the changed direction. The Engineer shall perform such services and will be paid for such services pursuant to a negotiated and mutually agreed change order signed by the Parties to this Agreement. If the Engineer determines that any work beyond the Work is necessary for completion of the Project, the Engineer shall notify the District and receive written approval prior to starting that work. If the Parties do not agree whether the Engineer is entitled to additional compensation or the extent of such compensation for work the Engineer determines is extra or changed work, the Engineer shall proceed with the work and the issue of the compensation shall be reserved for later determination as provided in Section 9 of this Agreement.

7. Personnel Assignment

Engineer agrees to utilize the key personnel as submitted to the District in its Project Plan, including its Project Manager. The Project Manager will be the primary contact for the District and should have a thorough knowledge of all aspects of the Project and its status. During the term of this Agreement, no replacement of the Project Manager or any of the key personnel of Engineer's Project team or its sub-consultants may be made without the written approval of the District, which approval will not be unreasonably withheld. Nothing in this Section is intended to or may be construed to prevent Engineer from employing or hiring as many employees as Engineer deems necessary for the proper and efficient performance of its services.

The District may request a change in the assignment of the key personnel. Engineer shall change key personnel to the satisfaction of the District within 30 days following written direction to change by the District.

8. Notices

All notices or other communications regarding this Agreement to either party by the other shall be deemed given when made in writing and delivered or mailed (not e-mailed) to such party at their respective addresses as follows:

Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, California 90601
ATTN: Samuel Espinoza

<Consultant>
<Mailing Address>
<City, State, Zip Code>
ATTN: <Project Manager>

Either party may change its address or representative for such purpose by giving notice thereof to the other in the same manner.

9. Governing Law, Dispute Resolution and Litigation

Engineer's performance of this Agreement shall be governed and construed in accordance with the laws of the State of California. Except as provided with respect to termination in Section 9 (O) of the RFP, if any dispute arises between the Parties with respect to the Work, compensation for the Work, or any other matter with respect to this Agreement, the Parties shall, if both agree, submit the matter to non-binding mediation. If the mediation does not resolve the dispute, the dispute shall be resolved through litigation. Venue for any action relating to this Agreement will be in the County of Los Angeles, State of California.

10. Third Parties

The services to be performed by Engineer are intended solely for the benefit of the District. No person or entity not a signatory to the Agreement may rely on Engineer's performance of its Work under this Agreement, and no third party will obtain any right to assert a claim against the Engineer by assignment of indemnity rights or otherwise accrue to that party as a result of this Agreement or Engineer's performance of the Work.

11. Entire Agreement

This Agreement represents the entire understanding between District and Engineer as to those matters contained herein. No prior oral or written understanding is of any force or effect with respect to those matters covered in this Agreement.

12. Action by Chief Engineer

Except as otherwise provided in this Agreement, the Chief Engineer and General Manager of the District ("Chief Engineer") may take all actions on behalf of the District in connection with any approvals or actions required of or by the District under this Agreement, and Engineer may rely on any such actions by the Chief Engineer as having been approved or required by the District under all applicable laws.

<CONSULTANT>

_____

Signature

Name

Title

DISTRICT NO. 2 OF THE

LOS ANGELES COUNTY SANITATION DISTRICTS

By: _____

Chairperson

Attest:

_____

Secretary

Approved as to Form:

Lewis Brisbois Bisgaard & Smith LLP

By: _____

District Counsel