PROFESSIONAL SERVICES CONTRACT BETWEEN
THE CITY OF HUNTINGTON BEACH AND
GHD, INC.
FOR
ON-CALL CIVIL ENGINEERING
& PROFESSIONAL CONSULTING SERVICES

THIS AGREEMENT ("Agreement") is made and entered into by and between the City of Huntington Beach, a municipal corporation of the State of California, hereinafter referred to as "CITY," and GHD, INC., a California Corporation hereinafter referred to as "CONSULTANT."

WHEREAS, CITY desires to engage the services of a consultant to provide On-Call Civil Engineering & Professional Consulting Services; and

Pursuant to documentation on file in the office of the City Clerk, the provisions of the Huntington Beach Municipal Code, Chapter 3.03, relating to procurement of professional service contracts have been complied with; and

CONSULTANT has been selected to perform these services,

NOW, THEREFORE, it is agreed by CITY and CONSULTANT as follows:

1. SCOPE OF SERVICES

CONSULTANT shall provide all services as described in **Exhibit "A,"** which is attached hereto and incorporated into this Agreement by this reference. These services shall sometimes hereinafter be referred to as the "PROJECT."

CONSULTANT hereby designates Casey Raines who shall represent it and be its sole contact and agent in all consultations with CITY during the performance of this Agreement.

2. CITY STAFF ASSISTANCE

CITY shall assign a staff coordinator to work directly with CONSULTANT in the performance of this Agreement.

3. TERM; TIME OF PERFORMANCE

Time is of the essence of this Agreement. The services of CONSULTANT are to commence on _____, 20____ (the "Commencement Date"). This Agreement shall automatically terminate three (3) years from the Commencement Date, unless extended or sooner terminated as provided herein. All tasks specified in **Exhibit "A"** shall be completed no later than three (3) years from the Commencement Date. The time for performance of the tasks identified in **Exhibit "A"** are generally to be shown in **Exhibit "A."** This schedule may be amended to benefit the PROJECT if mutually agreed to in writing by CITY and CONSULTANT.

In the event the Commencement Date precedes the Effective Date, CONSULTANT shall be bound by all terms and conditions as provided herein.

4. COMPENSATION

In consideration of the performance of the services described herein, CITY agrees to pay CONSULTANT on a time and materials basis at the rates specified in **Exhibit "B,"** which is attached hereto and incorporated by reference into this Agreement, a fee, including all costs and expenses, not to exceed Two Million Dollars ($2,000,000.00).

5. EXTRA WORK

In the event CITY requires additional services not included in **Exhibit "A"** or changes in the scope of services described in **Exhibit "A,"** CONSULTANT will undertake such work only after receiving written authorization from CITY. Additional compensation for such extra work shall be allowed only if the prior written approval of CITY is obtained.

6. METHOD OF PAYMENT

CONSULTANT shall be paid pursuant to the terms of **Exhibit "B."**

7. DISPOSITION OF PLANS, ESTIMATES AND OTHER DOCUMENTS

CONSULTANT agrees that title to all materials prepared hereunder, including, without limitation, all original drawings, designs, reports, both field and office notices, calculations, computer code, language, data or programs, maps, memoranda, letters and other documents, shall belong to CITY, and CONSULTANT shall turn these materials over to CITY upon expiration or termination of this Agreement or upon PROJECT completion, whichever shall occur first. These materials may be used by CITY as it sees fit.

8. HOLD HARMLESS

A. CONSULTANT hereby agrees to protect, defend, indemnify and hold harmless CITY, its officers, elected or appointed officials, employees, agents and volunteers from and against any and all claims, damages, losses, expenses, judgments, demands and defense costs (including, without limitation, costs and fees of litigation of every nature or liability of any kind or nature) arising out of or in connection with CONSULTANT's (or CONSULTANT's subcontractors, if any) negligent (or alleged negligent) performance of this Agreement or its failure to comply with any of its obligations contained in this Agreement by CONSULTANT, its officers, agents or employees except such loss or damage which was caused by the sole negligence or willful misconduct of CITY. CONSULTANT will conduct all defense at its sole cost and expense and CITY shall approve selection of CONSULTANT's counsel. This indemnity shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as limitation upon the amount of indemnification to be provided by CONSULTANT.

B. To the extent that CONSULTANT performs "Design Professional Services" within the meaning of Civil Code Section 2782.8, then the following Hold Harmless provision applies in place of subsection A above:

"CONSULTANT hereby agrees to protect, defend, indemnify and hold harmless CITY and its officers, elected or appointed officials, employees, agents and volunteers, from and against any and all claims, damages, losses, expenses, demands and defense costs (including, without limitation, costs and fees of litigation of every nature or liability of any kind or nature) to the extent that the claims against CONSULTANT arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of CONSULTANT. In no event shall the cost to defend charged to CONSULTANT exceed CONSULTANT's proportionate percentage of fault. However, notwithstanding the previous sentence, in the event one or more other defendants to the claims and/or litigation is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, CONSULTANT shall meet and confer with CITY and other defendants regarding unpaid defense costs. The duty to indemnify, including the duty and the cost to defend, is limited as provided in California Civil Code Section 2782.8.

C. Regardless of whether subparagraph A or B applies, CITY shall be reimbursed by CONSULTANT for all costs and attorney's fees incurred by CITY in enforcing this obligation. This indemnity shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by CONSULTANT.

9. PROFESSIONAL LIABILITY INSURANCE

CONSULTANT shall obtain and furnish to CITY a professional liability insurance policy covering the work performed by it hereunder. This policy shall provide coverage for CONSULTANT's professional liability in an amount not less than One Million Dollars ($1,000,000.00) per occurrence and in the aggregate. The above-mentioned insurance shall not contain a self-insured retention without the express written consent of CITY; however an insurance

policy "deductible" of Ten Thousand Dollars ($10,000.00) or less is permitted. A claims-made policy shall be acceptable if the policy further provides that:

A. The policy retroactive date coincides with or precedes the initiation of the scope of work (including subsequent policies purchased as renewals or replacements).

B. CONSULTANT shall notify CITY of circumstances or incidents that might give rise to future claims.

CONSULTANT will make every effort to maintain similar insurance during the required extended period of coverage following PROJECT completion. If insurance is terminated for any reason, CONSULTANT agrees to purchase an extended reporting provision of at least two (2) years to report claims arising from work performed in connection with this Agreement.

If CONSULTANT fails or refuses to produce or maintain the insurance required by this section or fails or refuses to furnish the CITY with required proof that insurance has been procured and is in force and paid for, the CITY shall have the right, at the CITY's election, to forthwith terminate this Agreement. Such termination shall not effect Consultant's right to be paid for its time and materials expended prior to notification of termination. CONSULTANT waives the right to receive compensation and agrees to indemnify the CITY for any work performed prior to approval of insurance by the CITY.

10. CERTIFICATE OF INSURANCE

Prior to commencing performance of the work hereunder, CONSULTANT shall furnish to CITY a certificate of insurance subject to approval of the City Attorney evidencing the foregoing insurance coverage as required by this Agreement; the certificate shall:

A. provide the name and policy number of each carrier and policy;

B. state that the policy is currently in force; and

C. shall promise that such policy shall not be suspended, voided or canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice; however, ten (10) days' prior written notice in the event of cancellation for nonpayment of premium.

CONSULTANT shall maintain the foregoing insurance coverage in force until the work under this Agreement is fully completed and accepted by CITY.

The requirement for carrying the foregoing insurance coverage shall not derogate from CONSULTANT's defense, hold harmless and indemnification obligations as set forth in this Agreement. CITY or its representative shall at all times have the right to demand the original or a copy of the policy of insurance. CONSULTANT shall pay, in a prompt and timely manner, the premiums on the insurance hereinabove required.

11. INDEPENDENT CONTRACTOR

CONSULTANT is, and shall be, acting at all times in the performance of this Agreement as an independent contractor herein and not as an employee of CITY. CONSULTANT shall secure at its own cost and expense, and be responsible for any and all payment of all taxes, social security, state disability insurance compensation, unemployment compensation and other payroll deductions for CONSULTANT and its officers, agents and employees and all business licenses, if any, in connection with the PROJECT and/or the services to be performed hereunder.

12. TERMINATION OF AGREEMENT

All work required hereunder shall be performed in a good and workmanlike manner. CITY may terminate CONSULTANT's services hereunder at any time with or without cause, and whether or not the PROJECT is fully complete. Any termination of this Agreement by CITY shall be made in writing, notice of which shall be delivered to CONSULTANT as provided herein. In the

event of termination, all finished and unfinished documents, exhibits, report, and evidence shall, at the option of CITY, become its property and shall be promptly delivered to it by CONSULTANT.

13. ASSIGNMENT AND DELEGATION

This Agreement is a personal service contract and the work hereunder shall not be assigned, delegated or subcontracted by CONSULTANT to any other person or entity without the prior express written consent of CITY. If an assignment, delegation or subcontract is approved, all approved assignees, delegates and subconsultants must satisfy the insurance requirements as set forth in Sections 9 and 10 hereinabove.

14. COPYRIGHTS/PATENTS

CITY shall own all rights to any patent or copyright on any work, item or material produced as a result of this Agreement.

15. CITY EMPLOYEES AND OFFICIALS

CONSULTANT shall employ no CITY official nor any regular CITY employee in the work performed pursuant to this Agreement. No officer or employee of CITY shall have any financial interest in this Agreement in violation of the applicable provisions of the California Government Code.

16. NOTICES

Any notices, certificates, or other communications hereunder shall be given either by personal delivery to CONSULTANT's agent (as designated in Section 1 hereinabove) or to CITY as the situation shall warrant, or by enclosing the same in a sealed envelope, postage prepaid, and depositing the same in the United States Postal Service, to the addresses specified below. CITY and CONSULTANT may designate different addresses to which subsequent notices, certificates or other communications will be sent by notifying the other party via personal delivery, a reputable overnight carrier or U. S. certified mail-return receipt requested:

TO CITY:

City of Huntington Beach
ATTN: Director of Public Works
2000 Main Street
Huntington Beach, CA 92648

TO CONSULTANT:

GHD, Inc.
Attn: Casey Raines
320 Goddard Way, Suite 200
Irvine, CA 92618

17. CONSENT

When CITY's consent/approval is required under this Agreement, its consent/approval for one transaction or event shall not be deemed to be a consent/approval to any subsequent occurrence of the same or any other transaction or event.

18. MODIFICATION

No waiver or modification of any language in this Agreement shall be valid unless in writing and duly executed by both parties.

19. SECTION HEADINGS

The titles, captions, section, paragraph and subject headings, and descriptive phrases at the beginning of the various sections in this Agreement are merely descriptive and are included solely for convenience of reference only and are not representative of matters included or excluded from such provisions, and do not interpret, define, limit or describe, or construe the intent of the parties or affect the construction or interpretation of any provision of this Agreement.

20. INTERPRETATION OF THIS AGREEMENT

The language of all parts of this Agreement shall in all cases be construed as a whole, according to its fair meaning, and not strictly for or against any of the parties. If any provision of this Agreement is held by an arbitrator or court of competent jurisdiction to be unenforceable, void, illegal or invalid, such holding shall not invalidate or affect the remaining covenants and provisions of this Agreement. No covenant or provision shall be deemed dependent upon any other unless so expressly provided here. As used in this Agreement, the masculine or neuter gender and singular or plural number shall be deemed to include the other whenever the

context so indicates or requires. Nothing contained herein shall be construed so as to require the commission of any act contrary to law, and wherever there is any conflict between any provision contained herein and any present or future statute, law, ordinance or regulation contrary to which the parties have no right to contract, then the latter shall prevail, and the provision of this Agreement which is hereby affected shall be curtailed and limited only to the extent necessary to bring it within the requirements of the law.

21. DUPLICATE ORIGINAL

The original of this Agreement and one or more copies hereto have been prepared and signed in counterparts as duplicate originals, each of which so executed shall, irrespective of the date of its execution and delivery, be deemed an original. Each duplicate original shall be deemed an original instrument as against any party who has signed it.

22. IMMIGRATION

CONSULTANT shall be responsible for full compliance with the immigration and naturalization laws of the United States and shall, in particular, comply with the provisions of the United States Code regarding employment verification.

23. LEGAL SERVICES SUBCONTRACTING PROHIBITED

CONSULTANT and CITY agree that CITY is not liable for payment of any subcontractor work involving legal services, and that such legal services are expressly outside the scope of services contemplated hereunder. CONSULTANT understands that pursuant to *Huntington Beach City Charter* Section 309, the City Attorney is the exclusive legal counsel for CITY; and CITY shall not be liable for payment of any legal services expenses incurred by CONSULTANT.

24. ATTORNEY'S FEES

In the event suit is brought by either party to construe, interpret and/or enforce the terms and/or provisions of this Agreement or to secure the performance hereof, each party shall bear its own attorney's fees, such that the prevailing party shall not be entitled to recover its attorney's fees from the nonprevailing party.

25. SURVIVAL

Terms and conditions of this Agreement, which by their sense and context survive the expiration or termination of this Agreement, shall so survive.

26. GOVERNING LAW

This Agreement shall be governed and construed in accordance with the laws of the State of California.

27. SIGNATORIES

Each undersigned represents and warrants that its signature hereinbelow has the power, authority and right to bind their respective parties to each of the terms of this Agreement, and shall indemnify CITY fully for any injuries or damages to CITY in the event that such authority or power is not, in fact, held by the signatory or is withdrawn.

28. ENTIRETY

The parties acknowledge and agree that they are entering into this Agreement freely and voluntarily following extensive arm's length negotiation, and that each has had the opportunity to consult with legal counsel prior to executing this Agreement. The parties also acknowledge and agree that no representations, inducements, promises, agreements or warranties, oral or otherwise, have been made by that party or anyone acting on that party's behalf, which are not embodied in this Agreement, and that that party has not executed this Agreement in reliance on any representation, inducement, promise, agreement, warranty, fact or circumstance not expressly set forth in this

Agreement. This Agreement, and the attached exhibits, contain the entire agreement between the parties respecting the subject matter of this Agreement, and supersede all prior understandings and agreements whether oral or in writing between the parties respecting the subject matter hereof.

29. EFFECTIVE DATE

This Agreement shall be effective on the date of its approval by the City Council. This Agreement shall expire when terminated as provided herein.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their authorized officers.

CONSULTANT,
GHD INC.

By: _____
Carey Raines
print name
ITS: *(circle one)* Chairman/President/Vice President

AND

By: _____
PATRICIA OSOKO
print name
ITS: *(circle one)* Secretary/Chief Financial Officer/Asst. Secretary - Treasurer

CITY OF HUNTINGTON BEACH, a municipal corporation of the State of California

_____
Mayor

_____
City Clerk

INITIATED AND APPROVED:

_____
Director of Public Works

REVIEWED AND APPROVED:

_____
City Manager

APPROVED AS TO FORM:

_____
City Attorney

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their authorized officers.

CONSULTANT,
GHD INC.

By:_____

_____
print name

ITS: *(circle one)* Chairman/President/Vice President

AND

By:_____

_____
print name

ITS: *(circle one)* Secretary/Chief Financial Officer/Asst. Secretary - Treasurer

CITY OF HUNTINGTON BEACH, a municipal corporation of the State of California

_____
Mayor

_____
City Clerk

INITIATED AND APPROVED:

_____
Director of Public Works

REVIEWED AND APPROVED:

_____
City Manager

APPROVED AS TO FORM:

_____
for City Attorney

EXHIBIT "A"

A. STATEMENT OF WORK: (Narrative of work to be performed)

Provide On-Call Civil Engineering and Professional Consulting Services. If Consultant chooses to assign different personnel to the project, Consultant must submit names and qualifications of these staff to City for approval before commencing work.

B. CONSULTANT'S DUTIES AND RESPONSIBILITIES:

See Attached Exhibit A

C. CITY'S DUTIES AND RESPONSIBILITIES:

1. Furnish Scope of Work and provide a request for proposal for each project.

2. City shall issue a task order for each project based upon scope of services, work schedule, and fee proposal submitted.

D. WORK PROGRAM/PROJECT SCHEDULE:

A project schedule will be developed for each project assigned by the City.

EXHIBIT A

EXHIBIT A

Disciplines of Civil Engineering Services Application Form

Circle all that apply

Civil Engineering Service Area	Bidding? Y/N (circle)
• Water/Sewer/Storm Water Engineering	(Yes) / No
• General Civil Engineering	Yes / (No)
• Ocean Engineering	Yes / (No)
• Environmental/Water Quality	Yes / (No)

REQUEST FOR PROPOSAL

VENDOR APPLICATION FORM

TYPE OF APPLICANT: ☐ NEW ☒ CURRENT VENDOR

Legal Contractual Name of Corporation: GHD Inc.

Contact Person for Agreement: Casey Raines

Corporate Mailing Address: 320 Goddard Way, Suite 200

City, State and Zip Code: Irvine, California 92618

E-Mail Address: casey.raines@ghd.com

Phone: 949.648.5200 Fax: _____

Contact Person for Proposals: Jennifer Pawenski

Title: Proposal Manager E-Mail Address: jennifer.pawenski@ghd.com

Business Telephone: 907-644-7829 Business Fax: _____

Year Business was Established: 1928

Is your business: (check one)

☐ NON PROFIT CORPORATION ☒ FOR PROFIT CORPORATION

Is your business: (check one)

☒ CORPORATION
☐ INDIVIDUAL
☐ PARTNERSHIP
☐ LIMITED LIABILITY PARTNERSHIP
☐ SOLE PROPRIETORSHIP
☐ UNINCORPORATED ASSOCIATION

Names & Titles of Corporate Board Members
(Also list Names & Titles of persons with written authorization/resolution to sign contracts)

Names	Title	Phone
Casey Raines	US West EDO Engineering Manager	949.648.5200
See attached page for Corporate Board Member		

Federal Tax Identification Number: 98-0425935

City of Huntington Beach Business License Number: A291789
(If none, you must obtain a Huntington Beach Business License upon award of contract.)

City of Huntington Beach Business License Expiration Date: 1/31/2026

GHD INC.

Officers and Directors

Effective July 24, 2024

OFFICERS

Christopher Hunter 455 Phillip Street, Waterloo, ON N2L 3X2	**Board Chair/Executive Vice President**
Tom Klin 45 Farmington Valley Drive, Plainwell, CT 06062	**Executive Vice President**
Rachel McCaffery 410 Eagleview Boulevard, Suite 110, Exton, PA 19341	**Executive Vice President**
Theodore Whiton 2235 Mercury Way, Suite 150, Santa Rosa, CA 95407	**President**
Derek McBean 70 York Street, Suite 801 Toronto, Ontario M5J 1S9	**Vice President - Legal**
Michael Moran 100 Milverton Drive, Suite 404, Mississauga, Ontario L5R 4H1	**Treasurer**
Patricia Osoko 455 Phillip Street, Waterloo, ON N2L 3X2	**Company Secretary**
Kia Booker 320 Goddard Way, Suite 200, Irvine, CA 92618	**Assistant Company Secretary**
Lindsay Ray 455 Phillip Street, Waterloo, ON N2L 3X2	**Assistant Company Secretary**
Raul Rosa 455 Phillip Street, Waterloo, ON N2L 3X2	**Assistant Treasurer**
Maria Erassova 455 Phillip Street, Waterloo, ON N2L 3X2	**Assistant Vice President- Tax**

DIRECTORS

Jim Giannopoulos
455 Phillip Street, Waterloo, ON N2L 3X2

Theodore Whiton
2235 Mercury Way, Suite 150, Santa Rosa, CA 95407

Michael Moran
100 Milverton Drive, Suite 404, Mississauga, Ontario L5R 4H1

Tom Klin
45 Farmington Valley Drive, Plainwell, CT 06062

Rachel McCaffery
410 Eagleview Boulevard, Suite 110, Exton, PA 19341

Christopher Hunter
455 Phillip Street, Waterloo, ON N2L 3X2

320 Goddard Way | Suite 200
Irvine, California, 92618

Phone: 949.648.5200
www.GHD.com

City of Huntington Beach
Public Works Department
2000 Main Street
Huntington Beach, California 92648

March, 13 2025

Re: On-Call Civil Engineering Professional Consulting Services (Water/Sewer/Storm Water Engineering)

Dear Selection Panel,

GHD is proud to serve Southern California, particularly through our longstanding partnership with the City of Huntington Beach. Known as "the ideal Orange County destination to live, work, and play," "Huntington Beach offers residents a charming community with ideal weather, a diversified economy, a wide variety of housing, an excellent educational system, boat marinas, numerous parks, and exemplary health care," At GHD, we are committed to providing professional services that continue to support the City's mission.

Therefore, we submit our Statement of Qualifications for the On-Call Civil Engineering Professional Consulting Services (Water/Sewer/Storm Water Engineering).

Providing Value

Our Contract Manager, Tim Joyce, and many of our team members are members of the Huntington Beach community and invested in the region. This also allows our team to be highly accessible when needed. Additionally, our unwavering commitment to the local community is demonstrated through our dedicated on-call services to numerous agencies across Southern California, including the City of Huntington Beach. At GHD, we prioritize the unique needs of our partners, delivering tailored solutions that go beyond standard services. As a global leader, we are dedicated to providing innovative and value-driven solutions that enhance the City and its residents' quality of life.

The Right Team

We have selected key personnel based on their proven track record of success with the City of Huntington Beach and similar projects anticipated under this contract. Our proposed team members possess the technical skills and experience necessary for smooth project delivery and demonstrate exceptional dedication and reliability.

Furthermore, GHD offers a vast pool of licensed, accredited, and experienced engineers, planners, and specialists who are highly qualified and versatile. Our local team, bolstered by nearly 500 technical experts in California and nearly 4,000 professionals throughout North America, stands ready to meet the City's needs with unparalleled expertise and commitment We know the City very well. Our Contract Manager, Tim Joyce, lives in and has worked with the City since the mid-2000s and our Principal in Charge, Casey Raines, has worked with the City since 2015.

A Qualified Firm

GHD has proudly served Southern California communities since 1951, building a legacy of collaboration with Huntington Beach and regional municipalities and agencies. Our success is rooted in innovative design and management solutions, consistently delivering exceptional results.

Our continued growth is a testament to our adaptability, embracing emerging technologies and evolving needs to maintain our position as a leading firm. With 15 offices across California, GHD is deeply committed to the sustained prosperity and development of Southern California.

Proven Approach

To date we completed or have ongoing ten projects with the City, ranging from conducting studies to preparing design documents. Our approach leverages time-tested project management methodologies to deliver efficient, comprehensive, and sustainable projects for the City. GHD will collaborate closely with all stakeholders, including the City, to ensure seamless project execution. We understand that robust initial planning and clear communication are the cornerstones of high-quality service delivery. While individual projects under this contract may differ, maintaining a consistent technical and project management strategy with thorough upfront planning is crucial for success. GHD has established proven processes and a culture of end-to-end planning, ensuring every project is executed to the highest standards.

Our goal is to meet and exceed your expectations, delivering complete and successful projects that benefit the community.

Managed from our Irvine office at 320 Goddard Way, Suite 200, Irvine, CA 92618, we look forward to continuing our work with the City.

Authorized to bind, please contact me with any questions at 949.585.5212 or via email at Casey.Raines@ghd.com.

This proposal price is valid for 180 days.

Sincerely,

Casey.Raines
US West-Water Conveyance, Business Group Leader
GHD

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→ The Power of Commitment

Background and Project Summary

Our team has over 65 years of experience in water and wastewater engineering in California, covering planning, design, and construction projects. We collaborate with engineering and operations personnel and community stakeholders to understand each site's unique situation, aiming to minimize downtime and increase public acceptance. Our experienced staff and client-focused philosophy ensure successful and rewarding projects for all stakeholders.

GHD specializes in municipal engineering for cities, counties, and special districts. We understand the distinct requirements of public sector design compared to private development. Our projects provide technical solutions and meet environmental requirements, public needs, funding limitations, regulatory standards, and political realities.

Our expertise includes water supply development, master planning, network analysis, pipelines, pump stations, storage facilities, corrosion control, asset management, and system optimization. We have prepared sewer system management plans, water supply assessments, urban water management plans, and master plans.

Our local GHD team has provided analysis, design, and construction engineering for collection, transmission, and distribution facilities, including storage and high-lift pumping, transmission and distribution pipelines, booster pump stations, elevated and ground-level storage, and telemetry. Below is an outline of GHD's experience in Water/Sewer/Storm Water Engineering, Potable Water Pipeline Engineering, Potable Water Wells, Reservoirs, and Booster Stations, Potable Water Master Plans and Water Financial Plans, Wastewater Engineering, Wastewater Master Plans, and Stormwater Engineering.

Potable Water Pipelines

GHD's team has recently developed plans for over 250 miles of water and recycled water pipelines, ranging from 6 to 96 inches. Our engineers bring extensive experience in linear improvements, including designing new distribution systems for growing communities and upgrading or rehabilitating existing systems in densely populated urban areas.

We have collaborated with various public agencies to deliver plans, technical specifications, and engineering cost estimates for projects such as:

- The West Orange County Water Board Feeder No. 2 Water Transmission Main Relocation Project with the City of Huntington Beach
- The City of San Diego Otay 1st and 2nd Transmission Pipelines
- The City of Anaheim Rural Ridge and Wilshire Water Main Replacements

These projects involved coordination and permitting with Caltrans and governing city departments, as well as the development of traffic control plans, surveying, geotechnical investigations, and potholing. GHD's team is equipped to handle all tasks necessary for the detailed design of new or capital improvements to the City's water system.

Potable Water Wells, Reservoirs, and Booster Stations

The GHD team is currently supporting the City of Huntington Beach with a comprehensive assessment of its potable water facilities. This includes evaluating four storage reservoirs, four booster pump stations, two pressure regulating stations, and nine water wells. Additionally, GHD designed the replacement potable water production well, Well No. 1A, for the city.

Over the past decade, GHD's engineers have designed and upgraded equipment and site improvements for more than 35 well sites across the Southwest U.S., including locations such as Orange County, Camp Pendleton, Huntington Beach, South Coast Water District, Bullhead City, Sun City, Scottsdale, Paradise Valley, Surprise, Buckeye, Maricopa, and the Gila River Indian Community. These well sites feature a variety of designs, including above-ground or submersible motors, discharges to centralized supply facilities or directly into distribution systems, and treatments like arsenic removal, pH adjustment, de-sanding, and disinfection.

Our design engineers have also designed more than 25 pump stations and storage facilities. These designs range from large pump stations capable of moving 60 MGD to aesthetically pleasing infill stations that blend into their communities, merging engineering with art. The GHD team has extensive experience in tank design and rehabilitation, working with tanks ranging from 200,000 to 40 million gallons, including welded steel and AWWA D100 pre-stressed concrete. For Orange County Parks, the GHD team designed a potable water storage tank and production well at Caspers Wilderness Park.

Internationally, GHD's southern California offices have designed two replacement reservoirs, one new booster pump station, and four pressure regulating facilities for the Guam Waterworks Authority. The existing steel reservoirs required significant repairs and were replaced with a 1.0 MG pre-stressed concrete design. Due to the topography, the zone served by one of the reservoirs had customers with varying pressures. To mitigate the inability to relocate the reservoir, a new booster pump station and pressure regulating station were designed to maintain pressures within the desired range. Hydraulic analyses completed in InfoWater verified the storage volumes and requirements for the new pump station.

These potable water production projects required collaboration across multiple disciplines, including civil, mechanical, structural, architectural, electrical, and instrumentation engineering.

Potable Water Master Plan Update and Water Financial Plan Update

The GHD team has prepared and updated the water master plans for several agencies throughout California. These plans evaluate agencies' water supply sources, distribution infrastructure, and demand projections. They also provide recommendations for infrastructure upgrades to ensure an adequate and reliable water supply for our City's current and future needs. Additionally, the City's water financial plan is typically updated to assess the remaining projects' cost, scheduling, and funding. This update also evaluates funding sources versus expenditures, enabling the City to plan for long-term water infrastructure replacement.

Wastewater Engineering (Sanitary Sewer)

GHD is currently designing two wastewater lift stations for the City of Huntington Beach: the Davenport and McFadden Lift Station replacements. Additionally, GHD has extensive local experience in sewer improvement projects and studies, covering over 250 miles of collection system pipelines, sewer master plans, and developer-based capacity studies throughout Southern California. This experience includes trenchless construction and rehabilitation methods and special system facilities such as inverted siphons, air-jumpers, force mains, diversion structures, metering stations, and outfall structures.

We bring a thorough understanding of evaluating alternative alignments, considering factors such as limiting sewer improvements, maximizing the existing capacity of nearby sewers, utilities, constructability, cost, maintainability, value, traffic impacts, community impacts, other City construction activities in the project area, City pavement replacement requirements, and

utilizing existing atlas maps and as-built drawings for sewer, water, storm drain, and electrical systems, along with the latest utility record maps from utility agencies. This provides our engineers with extensive experience planning new collection systems to support expanding communities and replacing or rehabilitating existing systems in dense urban areas. We develop innovative solutions for our clients to address internal structural failures, as demonstrated in the Orange County Sanitation District Project No. 7-66 Sunflower and Red Hill Interceptor Repairs, and capacity deficiencies in the City of Anaheim's Harbor Boulevard, West Street, Wakefield Avenue, and Eleanor Drive Sewer Improvement Project.

Our Principal In Charge, Project Manager, and Task Managers are all NASSCO PACP and MACP certified to evaluate CCTV inspections and assess the condition of sewer pipelines and manholes. Leveraging our extensive evaluation experience from past projects, including the Inland Empire Utilities Agency Haven Avenue Regional Sewer System Repair and Long Beach Water Department S-25 Lift Station Condition Assessment, our team will provide the City with methods to correct any deficiencies (e.g., point repairs, lining, or complete removal and replacement depending on condition). We are also capable of determining repair costs and prioritizing work.

Wastewater Master Plan Update

GHD has recently completed the Wastewater Master Plan update for Huntington Beach and other agencies in California. This comprehensive document evaluates the current condition of the community's wastewater collection and treatment systems, identifies potential issues, and outlines a strategic plan for future improvements. The plan includes necessary upgrades, expansions, and maintenance strategies to accommodate projected population growth and meet regulatory requirements while considering cost estimates and project prioritization.

Storm Drain Design

Drainage design begins at the planning level, where existing infrastructure is evaluated for conveyance capacity and deficiencies. Actual drainage projects are identified in a Master Plan of Drainage (MPD). GHD has assisted various cities with feasibility studies to refine preliminary design ideas and develop these preliminary ideas into actual projects. GHD's drainage team is adept at establishing multi-beneficial drainage projects worthy of grant funding awards. The process by which GHD works with the City on drainage projects, from planning to design and implementation, brings a refreshing approach and innovative perspective to stormwater capture and drainage design. Water Quality and Low Impact Development Design GHD's water quality professionals comprised of Qualified Stormwater Pollution Prevention Plan Developer (QSDs), Qualified Storm Water Pollution Plan Practitioners (QSPs), and Qualified Industrial Stormwater Practitioners (QISPs) have in-depth experience designing, drafting, implementing, and reviewing Storm Water Quality Management Plans (SWQMP), Stormwater Pollution Prevention Plans (SWPPP), and NPDES permit compliance for public and private clients.

→ Methodology

→ The Power of Commitment

Methodology: Implementation Plan

Methods, including controls

Quality Assurance / Quality Control

Our Quality Control Manager Greg Watanabe, PE, will oversee and ensure the implementation of GHD's QA/QC process. Quality Assurance confirms project requirements are being met. Tasks related to project quality, and documenting the quality efforts are performed to foster continuous improvement and the successful delivery of each work product. Quality is an integral part of our PMP, and each deliverable will typically be reviewed at key design milestones (e.g. 30%, 60%, 90% and Final). Our Technical Leads will work with their project delivery teams and City staff to achieve the highest quality deliverables.

Design Quality Management Plan (DQMP)
For each task, a Customized DQMP will be developed, incorporating a series of discipline-specific checklists to be utilized at every stage of the design process. This comprehensive plan will act as a definitive guide, ensuring that all subsequent quality reviews are conducted systematically and consistently.

Intra-discipline Reviews
Each discipline involved in a task order will conduct a thorough Quality Control review before submission. This process will utilize a formal checking and backchecking procedure, supported by a comprehensive set of pre-developed design review checklists. These measures are designed to identify and rectify any discrepancies.

Inter-discipline Reviews
Each discipline will conduct a thorough QC review of the plans, specifications, and other relevant project documents prepared by other disciplines to ensure compatibility and coherence.

Constructability Reviews
Constructability reviews play a crucial role in ensuring the successful execution of construction projects. These reviews examine the design contract documents to confirm that all necessary project information is comprehensively described and included. By doing so, they help identify potential issues early on, allowing for adjustments that can save time and reduce costs during the construction phase. This proactive approach not only enhances the efficiency and feasibility of the project but also ensures that the final outcome aligns with the intended design and quality standards.

Quality Assurance (QA) Certifications
Before each submittal, the QA Manager reviews the documentation prepared during each QC review. This ensures adherence to our DQMP, Scope of Work, and contract terms and conditions. Only after this thorough examination does the QA Manager certify that each document is ready for submittal.

Management Reviews
The final step for all deliverables. The Project Manager and/ or Task Lead perform a final review of each submittal package to ensure it is 100% complete, directions communicated by the City and stakeholders via meetings and correspondence have been followed, and all prior comments have been dispositioned and incorporated

The final step for all deliverables involves a comprehensive review by the Task Manager. This review ensures that each submittal package is 100% complete, adheres to the directions communicated by the City and stakeholders through meetings and correspondence, and incorporates all prior comments and feedback. This process confirms that all requirements are met and that the deliverables are ready for submission.

Document Control

GHD employs a robust document control system designed to make all project documents, including QC checks and comment responses, readily accessible for delivery to the City. This system is structured to collect, categorize, and manage all project documentation efficiently. Furthermore, GHD is committed to adapting this system to align

seamlessly with the City's specific requirements, ensuring a smooth and tailored document management process.

Schedule Control
The schedule, prepared as part of the PMP, will integrate the work of all sub-consultants and include milestones, preparing and processing, as well as in-house Quality Control and agency review. Once the detailed scope is established, our Project Manager will prepare a Critical Path Method (CPM) based schedule using MS Project. As work proceeds and progresses, the project schedule will be closely monitored by the Project Manager. Potential schedule impacts will be tracked to assure timely adjustments are made to compensate as necessary to avoid actual impacts to the schedule. If schedule recovery is required, we will look at different techniques and see which ones can be applied to a particular situation to recover the schedule.

Cost Control
Our Task Managers will track costs and expenditures for each task using our advanced in-house cost-control tools and cost-estimating resources. Before issuing each invoice, the Task Manager will review the project's progress to ensure it aligns with the Project Management Plan (PMP). This review ensures that billing does not exceed the estimated fees outlined in the PMP for services rendered to date.

Risk Management
Task Managers will oversee all risk management activities throughout their assigned project. The process begins with identifying potential risks during the development of the project approach and continues to be revisited throughout the project's lifecycle as part of ongoing project control.

All identified risks are documented in a Risk Register, where they are addressed and tracked to ensure they do not adversely affect the project schedule or budget. If a risk cannot be completely avoided, it is flagged as a potential impact to the budget and/or schedule.

Upon identification, we conduct a comprehensive brainstorming session involving technical, budgetary, and management professionals. This collaborative effort aims to devise solutions that either eliminate the risk or mitigate its impact. By proactively managing risks, we strive to maintain project integrity and ensure successful delivery within the defined constraints.

Internal and External Stakeholders:

GHD recognizes the importance of building support for projects as a proactive risk management strategy. This approach helps maintain the goodwill and social license to operate from the community the City serves.

Engagement and Communications Practice
GHD's Engagement and Communications practice is built on the positive impact that high-quality and professional engagement can have on infrastructure projects. Our methodology includes:

- Stakeholder Analysis: Identifying and understanding the interests and concerns of both internal and external stakeholders.
- Engagement Strategies and Plans: Developing tailored strategies and plans to effectively engage stakeholders.
- Meeting Design and Coordination: Organizing and coordinating meetings to facilitate productive discussions.
- Presentation and Visual Design: Creating clear and engaging presentations and visual materials.
- Facilitation: Leading meetings with a focus on genuine openness and active listening.

Key Practices

- Openness and Active Listening: Demonstrating genuine openness and actively listening during meetings with the community and elected officials.
- Validation and Documentation: Validating and documenting stakeholders' concerns to ensure they are addressed.

- Understanding Assumptions: Seeking to understand the hidden assumptions and beliefs behind stakeholders' concerns.
- Collaborative Solutions: Working with technical professionals to develop solutions that address stakeholders' concerns.
- Communication: Communicating solutions back to the public effectively

Documenting and Implementing Findings

- Detailed Records: Keeping comprehensive records of all stakeholder interactions, including meeting minutes, feedback forms, and digital communications.
- Analysis and Reporting: Analyzing the collected data to identify common themes, concerns, and suggestions. Preparing detailed reports that summarize findings and provide actionable insights.
- Action Plans: Developing action plans based on the documented findings to address stakeholder concerns and integrate their feedback into project planning and execution.
- Follow-Up: Regularly updating stakeholders on the progress of implementing their feedback and demonstrating how their input has influenced project decisions.
- Continuous Improvement: Using stakeholder feedback to continuously improve engagement strategies and project outcomes.

Tools and Platforms

GHD utilizes various tools to enhance stakeholder engagement, including:

- GHD's Proprietary Engage Platform: For creating immersive digital environments.
- Social Pinpoint and Public Input: For providing information to the public and collecting feedback online.
- Audio and Video Meeting Platforms: Such as MS Teams for virtual meetings.
- Mural: A virtual whiteboard for media-rich collaboration.

Employing these methodologies and tools allows the City's project team to be well-supported and positioned as experts, fostering successful stakeholder engagement and project outcomes.

Other implementation strategies

Managing Multiple Task Orders / Project Management Plan (PMP)

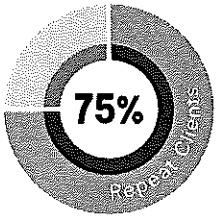
To ensure adherence to the design schedule and budget across multiple task orders, our Task Managers will develop a comprehensive Project Management Plan (PMP) tailored for each task order. This PMP will be shared with all team members and the City, providing a detailed roadmap for the execution of each task order.

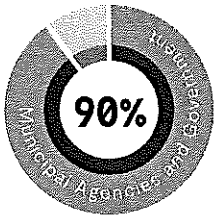
The PMP will outline the roles and responsibilities of each team member and include an independent Quality Management Plan for each task. Additionally, it will feature a robust Communication Plan to ensure efficient and effective communication within the project team.

In alignment with GHD's standard for collaboration, our Task Managers will coordinate closely with the City during the PMP development phase and prior to its implementation. The PMP is designed to be a dynamic, living document that is updated as project needs evolve.

We will employ additional tools to track action items and decisions to ensure on-time and on-budget delivery. We will provide early notification of any potential changes to the contract scope, schedule, or budget, discussing the implications with the City and seeking approval before implementing any changes. Furthermore, we will utilize Earned Value Management to monitor planned versus actual costs, ensuring precise tracking of project progress.

Methodology: Client Satisfaction





To achieve client satisfaction and meet requirements, GHD will undertake the following efforts.

Understanding Client Needs: We prioritize comprehensive initial consultations to gain a deep understanding of our clients' unique needs, goals, and expectations. This process involves engaging in detailed discussions and asking insightful questions to uncover all relevant aspects of the project. Additionally, we conduct thorough requirement analyses to ensure we capture every detail necessary for success. By doing so, we can tailor our approach to meet and exceed client expectations, fostering a strong foundation for a successful partnership.

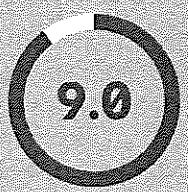
Effective Communication: We are committed to maintaining transparent and consistent communication throughout the project. We will provide regular updates via meetings, detailed emails, and comprehensive reports to ensure the client is always informed of our progress. Additionally, we will establish a robust feedback mechanism to promptly address any concerns or changes requested by the client, ensuring their needs are met efficiently and effectively.

Timely Delivery: We will plan and monitor each phase to achieve timely project milestones by leveraging cutting-edge project management tools and methodologies. By optimizing resource allocation and employing proactive risk management strategies, we will work to prevent delays and seamless and efficient project execution.

Technical Expertise: A team of highly skilled professionals with relevant expertise will assigned to handle various aspects of each task. To ensure our team remains at the forefront of industry advancements, we invest in continuous training and professional development. This commitment to ongoing education enables us to stay abreast of the latest trends and technologies, ensuring that our solutions are innovative, efficient, and cutting-edge.

Sustainability and Compliance: Sustainable practices will be incorporated into project execution to align with environmental and client goals. We will ensure all project activities comply with relevant laws, regulations, and industry standard.

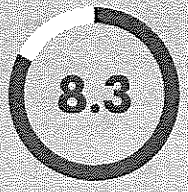
We aspire to be the partner our clients rely on to achieve what matters most to them, their business, and the community in which they operate. Our Commitment begins with "Your Voice," our client feedback program. The program goes beyond listening, capturing the intricacy of client sentiment, and gathering meaningful and actionable feedback. It provides insights that enable us to deeply understand how our clients feel, think, and act. We want to do more than just listen; we want to deliver exceptional experiences by continually enhancing and adapting to meet our clients evolving needs.



Expertise

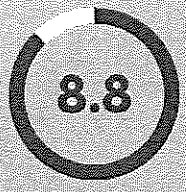
Understanding client needs

Communication and responsiveness



Timeliness

Standard of work



Ease of working with us

Innovative approach

Likelihood to recommend

Methodology: Specific Tasks Required

GHD is committed to delivering efficient and successful projects for the City of Huntington Beach, as we have done for many other municipal clients on similar potable water, sanitary sewer, and stormwater projects. We utilize tools like MS Teams and Office 365 to ensure seamless engagement and collaboration with the City. The frequency of communication will be tailored to each project and established during the kickoff of each task order. Our project delivery approach includes the following key elements:

- **Data Collection:** Meet with City staff, obtain relevant City data, perform field surveys, gather utility information, conduct geotechnical investigations, and execute a potholing plan.
- **Project Base Map:** Create a detailed base map that accurately depicts all existing information, including verifying existing right-of-way and utility locations, which is crucial for the design process.
- **Agency Coordination:** Ensure close coordination with other public agencies or utility owners. Prepare and submit associated permit applications on behalf of the City.
- **Planning and Condition Assessment:** Conduct hydraulic modeling, GIS mapping, land-use analyses, feasibility studies, master planning, financial planning, physical condition assessments, alternatives evaluations, and provide recommendations.
- **Preliminary Design:** Develop alternative concepts where appropriate. Present concepts and decision items to City staff before preparing the final PS&E.
- **Plans, Specifications, and Cost Estimate:** Prepare and process bid documents with City staff at appropriate milestones. Leverage our familiarity with the City's standards and requirements to develop submittals that exceed expectations. Address City comments and obtain approvals from all relevant stakeholders for each subsequent submittal.
- **Bid Process and Construction Support:** Provide technical support throughout the bid process. Respond to RFIs from the contractor, review construction submittals/shop drawings, and prepare record drawings based on revisions documented by the contractor after construction.
- **QA/QC Procedures:** Implement internal quality procedures throughout the process, including extensive in-house communication and reviews of schedule, budget, and product. An independent review by our construction inspection staff is also included.

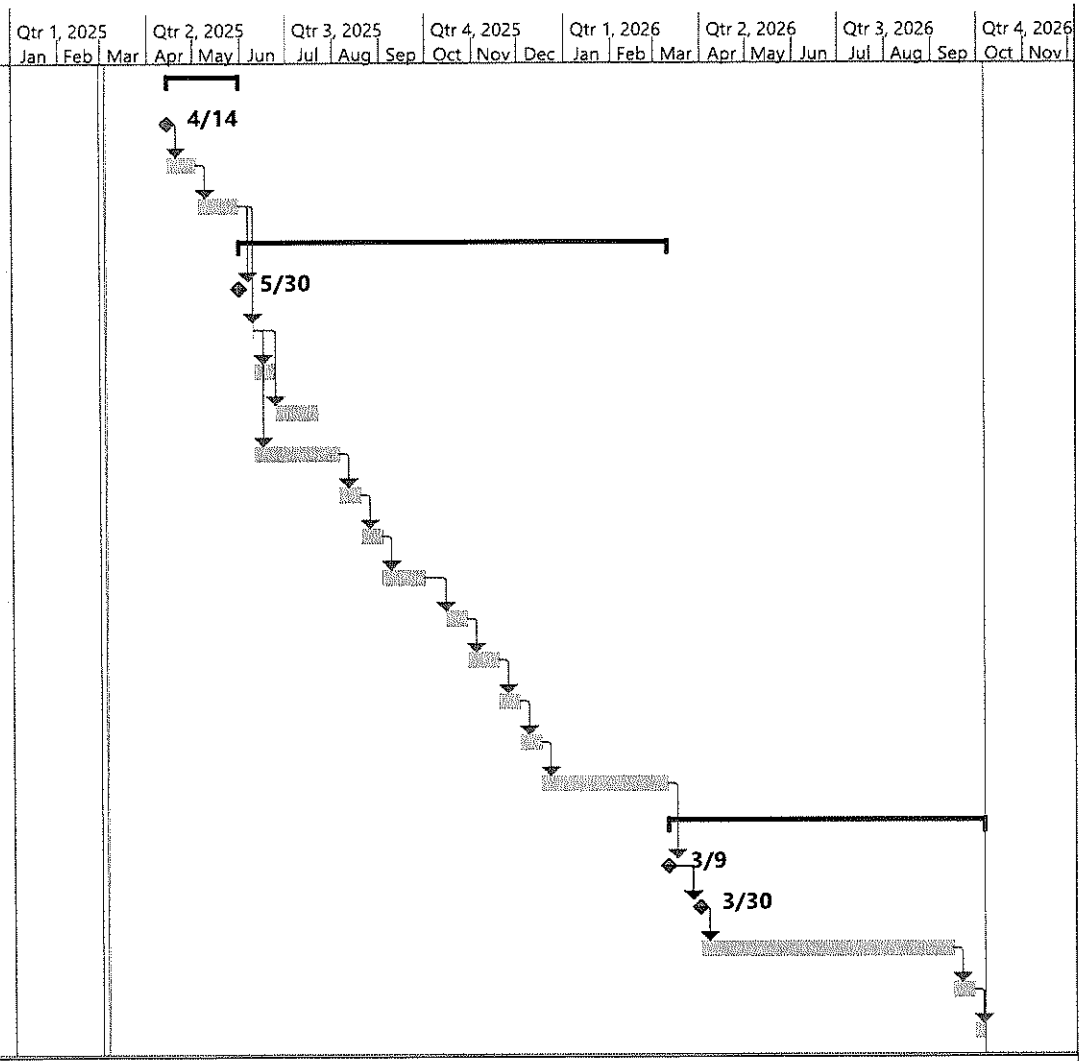
As requested in the RFQ, a sample schedule for a design type task order is shown on the following page.

Tasks Required from City Staff:

- An assigned project manager will be the primary point of contact for the GHD project manager.
- Provide relevant background information for projects, including as-built plans, previous studies or reports, and knowledge transfer from operations and maintenance staff.
- Perform submittal reviews and participate in comment resolution meetings with the GHD team.

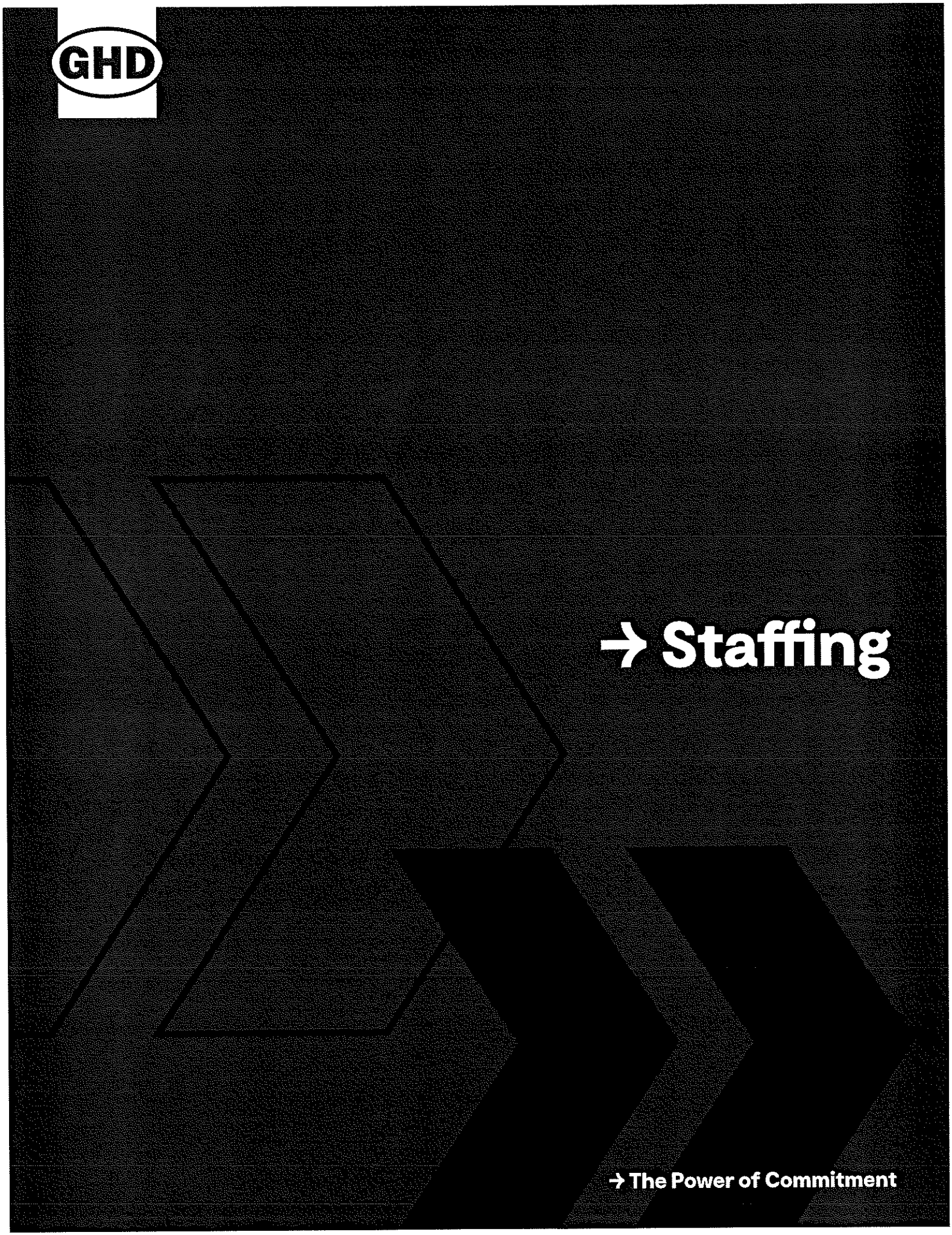
Sample Project Schedule

ID	Task Mode	Task Name	Duration
1		**Solicitation Phase**	**35 days**
2		City Issues Task Order Request	0 days
3		Consultants Prepares Response	15 days
4		City Selects Consultant	20 days
5		**Design Phase**	**201 days**
6		NTP	0 days
7		Kick off meeting	1 day
8		Information review	10 days
9		Field Investigations	20 days
10		Draft PDR	40 days
11		City Review	10 days
12		Final PDR	10 days
13		60% PS&E	20 days
14		City Review	10 days
15		90% PS&E	15 days
16		City Review	10 days
17		Final PS&E	10 days
18		Bid Support	60 days
19		**Construction Phase**	**150 days**
20		City Awards Const Contract	0 days
21		Construction NTP	0 days
22		Construction Support	120 days
23		Prepare As-built Plans	10 days
24		Close out Project	5 days



Project: HB On-Call Schedule
Date: Tue 3/4/25

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


GHD
→ Staffing
→ The Power of Commitment

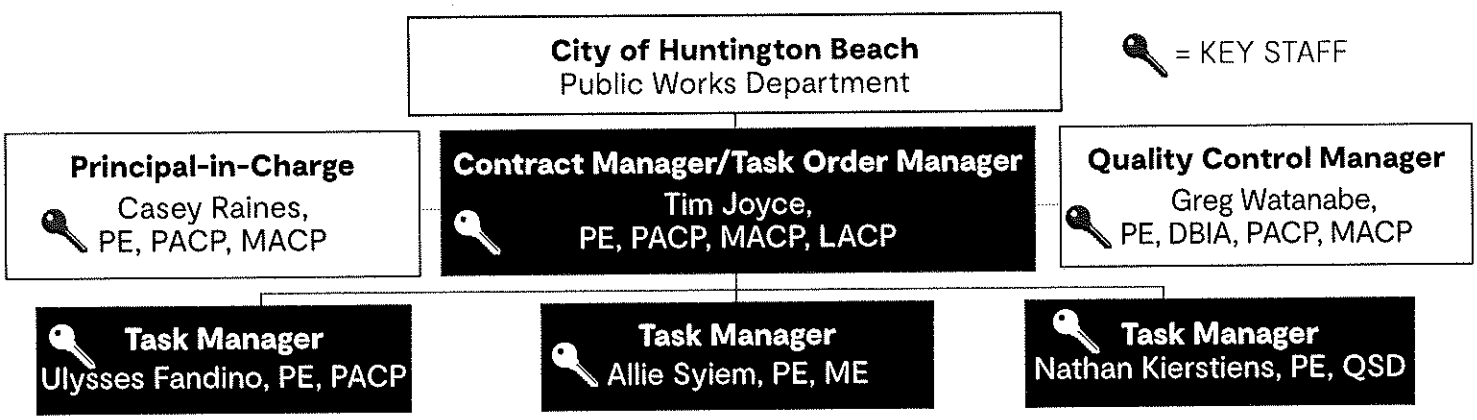
Staffing

Our team members have been carefully selected to meet the requirements to achieve the City's vision. Leading this effort is Contract Manager Tim Joyce, PE, PACP, MACP, LACP, who is local to Huntington Beach. He will take on the role of providing the best solutions to the City. Tim will be the primary point of contact, supported by a team of highly skilled professionals.

Our team of highly qualified sub-consultants, that are also familiar with the City of Huntington Beach and GHD on past projects, has been selected to meet the specific needs of this contract: AESCO for geotechnical engineering, Calvada for surveying, C Below for potholing.

These firms have consistently demonstrated their expertise and reliability through successful collaborations with us on both previous and ongoing projects, including notable work for the City of Huntington Beach. Their proven track record ensures that we can deliver exceptional results for this contract.

The resumes of key team members provided in the following pages highlight the multidisciplinary professionals within our team and identify the project roles and responsibilities assigned to them.



PROJECT RESOURCES

Tunneling
Craig Camp

Corrosion Engineer
Jeff Knauer, PE, ME, NACE CP Specialist

Drainage Design/WQMP
Nathan Towlerton, PE, QSD/QSP

Potable and Wastewater Master Planning
Chris Brothers, PE

Mechanical Engineer/HVAC
Terry Wong, PE, LEED AP

Electrical Engineer/I&C
Mehdi Mardi, EE

Structural Engineer
Gonzalo Roberts-Cervantes, PE

Hydraulic Modeling
Adam Fischer, PE

Asset Management and Financial Planning
Hector Ruiz, E

Site/Civil/Pumps
Pedro Alvarez, PE, PACP

Traffic
Byung Lee, PE, TE

SCADA
Frank Kling

Permitting
Andy Leung, PACP, MACP

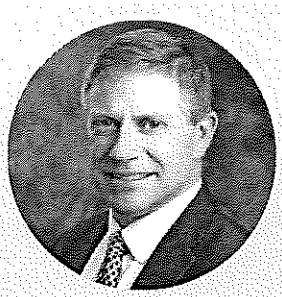
HEC-RAS/Stormwater Master Plan
Nathan Towlerton

Construction Support
Andy Leung, PACP, MACP

Cost Estimating
Steve Ferrero, PE

Hydrogeology/Wells
Ryan Crawford, PG, QSD

Subconsultants		
Geotechnical AESCO	**Survey** Calvada	**Potholing** C Below



Timothy Joyce

PE, PACP, MACP, LACP

Contract Manager

BS, Civil Engineering, University of Connecticut

Civil Engineer, CA #51596

Relevant experience

City-Wide Water Facilities Assessment
Project Manager
City of Huntington Beach | Huntington Beach, CA
Project Manager evaluating the City's water facilities, including booster pump stations, pressure regulating stations, storage reservoirs, and potable water wells. Tasks include defining assets, developing an inventory, establishing asset hierarchy and attributes, creating condition assessment scoring and remaining useful life methodology, developing a digital tool, and conducting condition assessments. The results will inform a 5-year Capital Improvement Plan for the City's water infrastructure

Davenport Lift Station
Project Manager
City of Huntington Beach | Huntington Beach, CA
Project Manager to replace its existing Davenport Sewer Lift Station. The existing lift station will be replaced with a new duplex submersible pump lift station with a separate valve vault and magnetic flow meter in accordance with the City's Sewer Lift Station design Manual.

McFadden Lift Station
Senior Engineer
City of Huntington Beach | Huntington Beach, CA
Senior Engineer for installing a new duplex submersible lift station with a separate valve vault, magnetic flow meter, and on-site emergency generator. The force main replacement included 120 feet of four-inch PVC and 1,100 feet of eight-inch gravity section. The lift station was located in a community park with appropriate screening and a CMU block wall enclosure for the generator.

Eastern Trunk Sewer Manhole Rehabilitation Manhole
Assessment Lead
City of Oxnard | Oxnard, CA
Manhole Assessment Lead for a project that evaluated approximately 170 manholes. Level 1 NASSCO MACP inspections were completed at each manhole and rehabilitation strategies were designed for each. The project also included sewage bypass and traffic control design.

Casey Raines

PE, PACP, MACP

Principal-in-Charge

BS, Civil Engineering, California State Polytechnic University

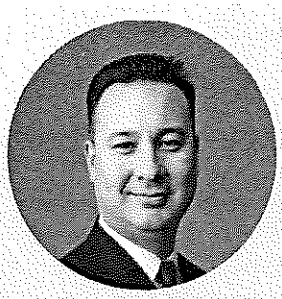
Civil Engineer, CA #76713

Relevant experience

City of Huntington Beach 2022 Sewer Master Plan Update
Project Manager
City of Huntington Beach | Huntington Beach, CA
The Sewer Master Plan Update aims to revise the 2003 plan to address current demands, future growth, system repairs, and emergencies. A dynamic model in InfoWorks ICM was calibrated using data from 18 monitoring sites. To assess peak wet weather response, flow monitoring was conducted over 12 weeks starting in early winter. Based on the capacity evaluation, a capital improvement program was developed for short-term and long-term needs, prioritizing projects to meet service objectives and development deadlines.

McFadden Sewer Lift Station Replacement
Project Manager
City of Huntington Beach | Huntington Beach, CA
Originally built in 1962. Project Manager for installing a new duplex submersible lift station with a separate valve vault, magnetic flow meter, and on-site emergency generator. The force main replacement included 120 feet of four-inch PVC and 1,100 feet of eight-inch gravity section. The lift station was located in a community park with appropriate screening and a CMU block wall enclosure for the generator.

Water Well No. 1 Replacement
Project Engineer
City of Huntington Beach | Huntington Beach, CA
Project Engineer for constructing a replacement water well facility. The original well was decommissioned due to low yield. The project included demolishing the existing well and associated structures. The new wellhead is housed in a CMU building designed to blend into the neighborhood, with separate rooms for chemical injection equipment, storage containers, electrical and instrumentation equipment, water sampling analyzers, an emergency generator, and security equipment. The new well discharge piping is 305 feet of 12-inch PVC.



Greg Watanabe

PE, DBIA, PACP, MACP

Quality Control Manager

BS, Civil Engineering
California State Polytechnic University

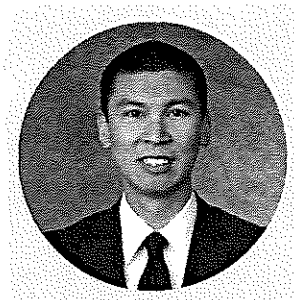
Civil Engineer, CA #67618

Relevant experience

Water Well No. 1 Replacement
Project Manager
City of Huntington Beach | Huntington Beach, CA
Managed the design and construction of a replacement water well facility for the City of Huntington Beach. The original well was decommissioned due to low yield and the construction plans included the demolition of the existing well and associated piping, equipment and structures. The replacement wellhead is contained in a new CMU building designed to blend into the surrounding residential neighborhood. The new building included separate rooms to house chemical injection equipment and storage containers for liquid chlorine and fluoride, electrical and instrumentation equipment, water sampling analyzers, natural gas/ liquid petroleum gas fueled emergency generator, and security equipment. The new well discharge piping is approximately 305 linear feet of 12-inch PVC.

McFadden Sewer Lift Station Replacement
Project Director
City of Huntington Beach | Huntington Beach, CA
Directed the design of the replacement of an existing sewer lift station and force main. The new lift station design includes a duplex submersible pumping system with 15 hp pumps capable of producing 120 gpm housed in a single wet well and a separate adjacent valve vault structure. Other design features include a new 12-inch C900 PVC force main and flow meter.

Anaheim On-Call Professional Services
Project Director
City og Anaheim | Anaheim, CA
Greg served as the Project Director, overseeing compliance with NPDES and Sewer WDR regulations and implementing the capital improvement program (CIP). GHD provided engineering services, including planning, hydrology, hydraulics, design, waste management, grant applications, and water quality compliance. Additionally, GHD offered technical and engineering support for NPDES and Sewer WDR activities and assisted the City of Anaheim with their CIP implementation.



Ulysses Fandino

PE, PACP

Task Manager

MS, Civil Engineering, California State University
BS, Civil Engineering, California State Polytechnic University

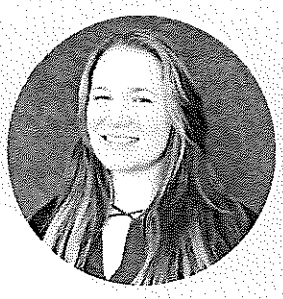
Civil Engineer, CA #64558

Relevant experience

Water Well No. 1 Replacement
Project Engineer
City of Huntington Beach | Huntington Beach, CA
Project Engineer for the construction of a replacement water well facility for the City of Huntington Beach. The original well was decommissioned due to low yield and the construction plans included the demolition of the existing well and associated piping, equipment and structures. The replacement wellhead is contained in a new CMU building designed to blend into the surrounding residential neighborhood. The new building included separate rooms to house chemical injection equipment and storage containers for liquid chlorine and fluoride, electrical and instrumentation equipment, water sampling analyzers, natural gas/liquid petroleum gas fueled emergency generator, and security equipment. The new well discharge piping is approximately 305 LF of 12-inch PVC.

Anaheim Citywide Sanitary Sewers Improvement Program Groups 1-5
Project Engineer
City of Anaheim Public Works Department | Anaheim, CA
Completed the final design plans, specifications, and engineer's construction cost estimates for 11 separate design packages of replacement 10- to 27-inch VCP gravity sewers within the City of Anaheim. The design of replacement sewers included analysis of alternative alignments, implementing trenchless technology (microtunneling and bore-and-jack methods), new right of way acquisition, and positioning new sewers close to existing utilities.

Huntington Beach McFadden Lift Station Replacement
Senior Engineer
City of Huntington Beach | Huntington Beach, CA
Senior Engineer for the the design of the replacement of an existing sewer lift station and force main. The new lift station design includes a duplex submersible pumping system with 15 hp pumps capable of producing 120 gpm housed in a single wet well and a separate adjacent valve vault structure. Other design features include a new 12-inch C900 PVC force main and flow meter.



Allie Syiem

PE, ME

Task Manager

BS, Mechanical Engineering, California Baptist University

Civil Engineer, CA #89090

Mechanical Engineer, CA #39341

Relevant experience

Lift Station No. 1 Replacement
Project Engineer, Mechanical and Civil Engineer
Rainbow Municipal Water District | Bonsall, CA
Design and construction of 1,200 gpm wastewater lift station within close proximity to residential and commercial developments, including odor control; 0.5 MG equalization basin; and upgrade of existing gravity sewer system. Coordinated inter-disciplinary team for the successful development of contract documents and Engineer of Record for civil and mechanical design documents.

Orchard Run Lift Station
Project Engineer, Mechanical Engineer
Valley Center Municipal Water District | Valley Center, CA
Design and construction of 340 gallons per minute (gpm) wastewater pumping station with 20,000-gallon emergency storage basin and carbon adsorber to serve new residential development. Organized and coordinated among the Client, Developer, and project team for the successful design execution and Engineer of Record of mechanical design.

East County Advanced Water Purification Program - Water Treatment Plant Preliminary Design
Mechanical Engineer
Padre Dam Municipal Water District | Santee, CA
Preliminary design of new 11.5 MGD advanced water purification facility used for indirect potable reuse. Responsible for design of the microfiltration feed, reverse osmosis transfer, product water, and plant water pumping stations, coordinated the design of the microfiltration and reverse osmosis systems with subconsultants, developed the site layout, and finalized the hydraulic profile.

Nathan Kierstiens

PE, QSD

Task Manager

BS, Civil-Environmental Engineering, USC

Civil Engineer, CA #68486

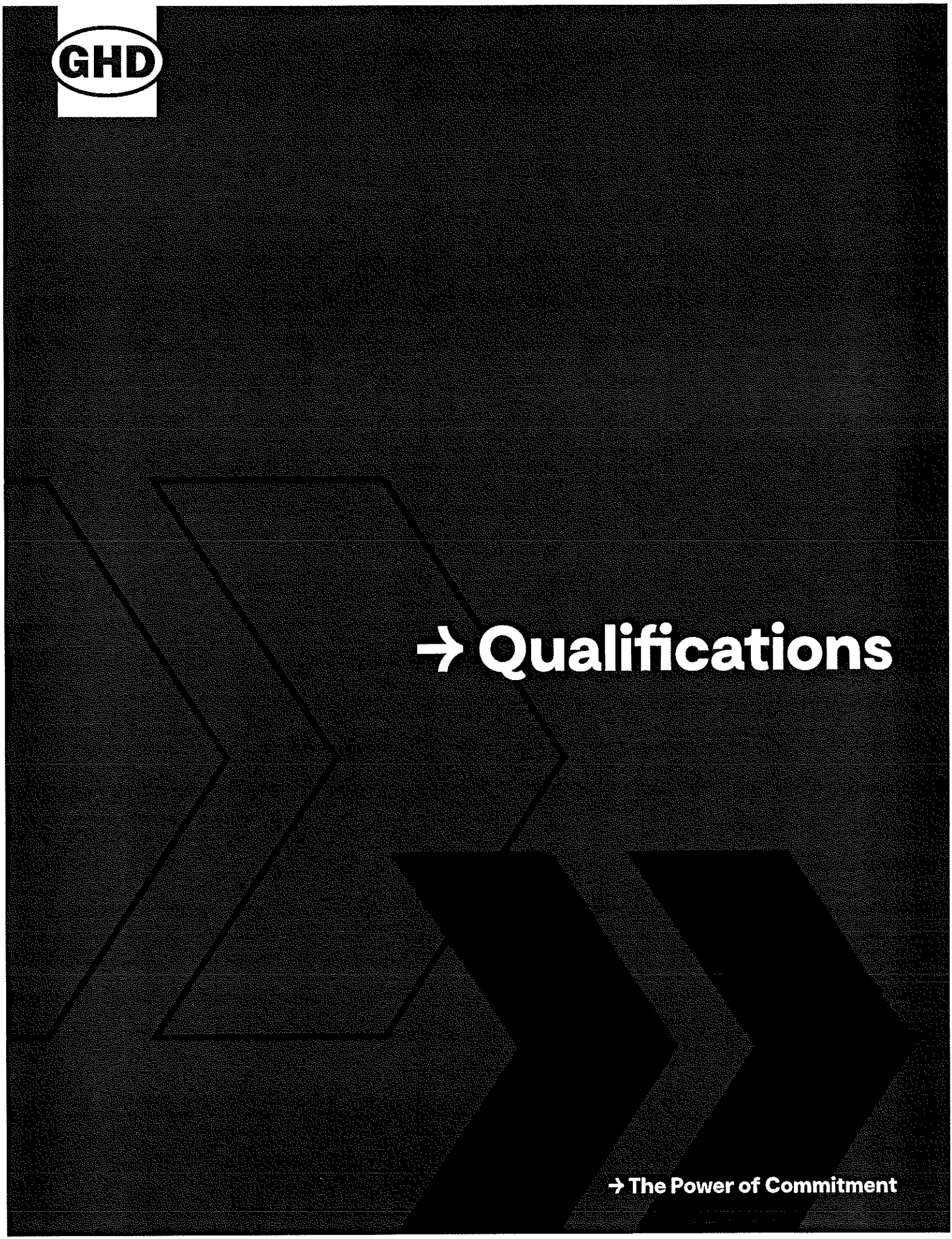
QSD/P, #23488

Relevant experience

Mission Springs Water District AD-12 Service Areas M, F, J, D1, and D2 Sewer
Design Lead
MSWD/ACOE | Mission Springs, CA
Lead Designer of twelve miles of new 8-inch gravity sewer using AutoCAD Civil 3D, utility research, base files, plan and profiles, and hydraulics. Verification of hydraulics for 2,600 linear feet of 21/24-inch gravity sewer.

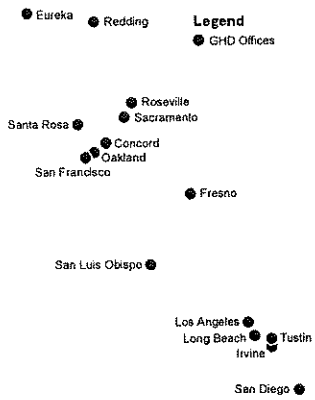
I-15/I-215 Interchange Waterline Relocation Improvements (Devore) Design Build Project
Project Engineer
Caltrans | Devore/San Bernardino, CA
Design of 9,000 LF of new 20-inch waterline along Cajon Boulevard for San Bernardino Municipal Water District (SBMWD), including plan and profile and detail sheets. The 14-page plan set is part of the overall utility plan set for the I-15/I-215 Interchange Project. Design of 1,500 LF of new 12-inch waterline on Devore Road, and 1,500 LF of 8-inch waterline along Cajon Boulevard and Cajon Court for Devore Water Company (DWC), including plan and profile and detail sheets. The 12-inch Devore Road waterline plans include coordination work for the Devore Bridge overpass. The 13-page plan set is part of the I-15/I-215 utility plan set.

Canterbury Elementary School Plumbing Improvements
Design Lead
PCH Architects/LAUSD | Arleta, CA
Delivery of 60/90/Final PSE drawings for Water, sewer, irrigation and pavement improvements, over 1 ½ miles of piping improvements and new trash enclosure. Coordination with architect, plumbing engineer, LAUSD manager.


GHD
→ Qualifications
→ The Power of Commitment

Qualifications - Firm Experience

GHD is a leading global professional services company specializing in water, environment, energy and resources, property and buildings, and transportation sectors. We offer consulting, engineering, environmental, and construction services to create lasting community benefits. As an employee-owned company with over 95 years of experience, GHD values diversity in thought, background, and experience.



Since 1951, GHD has positively impacted communities in southern California, working collaboratively with municipalities and agencies. Our 15 California office locations, including Los Angeles, Long Beach, Tustin, Irvine, and San Diego, reflect our strong local presence and history of success in the region.

At the forefront of the water industry, GHD delivers sustainable water solutions worldwide. We assist water, stormwater, wastewater utilities, city departments, and other water service providers in optimizing infrastructure and adapting to environmental changes. With 65 years of experience in California, our team excels in planning, regulatory coordination, permitting, design, and construction. We work closely with engineering and operations personnel and community stakeholders to minimize downtime and increase public acceptance.

GHD is committed to improving safety, enhancing mobility, and fostering a healthy environment for the community. Our Sustainability Policy guides the integration of social, economic, and environmental considerations into our core business practices. As a member of the World Business Council for Sustainable Development, GHD operates under a Practice Quality Management System (ISO 9001:2015) and an Environmental Management System (ISO 14001:2015), both of which are certified by Lloyds Register Quality Assurance.

GHD AT A GLANCE

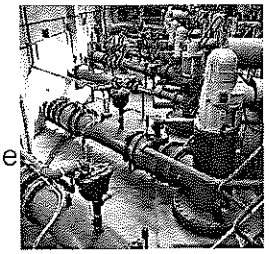
96+ years in operation
135+ countries served
160+ offices worldwide
1.9 B USD revenue 2024
5 global markets
12 K people
45+ service lines

Southern California On-Call Contracts

- Casitas Municipal Water District
- City of Pasadena
- City of Beverly Hills
- Los Angeles County Public Works
- LA Bureau of Engineering
- LA County Metropolitan Transportation Authority
- LA Dept. of Transportation
- CalTrans District 7, LA
- City of Santa Monica
- City of Culver
- LA County Sanitation District
- Central Basin Municipal Water District
- City of Whittier
- Inland Empire Utilities Agency
- LAWA
- City of Downey/Pico Rivera
- City of Moreno Valley
- City of Manhattan Beach
- City of Hermosa Beach
- City of Corona
- City of Anaheim
- Water Replenishment District
- Long Beach Water Department
- City of Signal Hill
- City of Long Beach
- Port of Long Beach
- Eastern Municipal Water District
- Orange County Public Works
- City of Seal Beach
- Orange County Sanitation District
- City of Irvine
- City of Huntington Beach
- City of Oceanside
- City of Carlsbad
- Port of San Diego
- City of San Diego
- Jurupa Community Services District
- City of Ontario

Qualifications - Project Experience

Huntington Beach Water Facilities Assessment



GHD was selected by the City of Huntington Beach to perform an assessment of all the City's water facilities. Facilities in the assessment include four Booster Pump Stations, two Pressure Regulating Stations, four Storage Reservoirs, and nince Potable Water Wells. Components of the project include defining an asset; developing the asset inventory; defining the asset hierarchy and attributes; developing condition assessment scoring and remaining useful life methodology; developing a digital tool; and preforming the field/desktop condition assessment. The results of the assessments will be used to develop a 5-year Capital Improvement Plan for the City's major water infrastructure.

Client: City of Huntington Beach **Dates:** October 2024 - Ongoing

Reference: Lili Hernandez, PE, 714.374.5386, lhernandez@surfcity-hb.org

Key Team Members: Tim Joyce (Project Manager), Hector Ruiz (Asset Management and Financial Planning), Casey Raines (role), Ryan Crawford (Hydrogeology/Wells), Mehdi Mardi (Electrical Engineer), Gonzalo Roberts-Cervantes (Structural Engineer)

Huntington Beach Davenport Lift Station

GHD is providing engineering services to the City of Huntington Beach to replace their existing Davenport Sewer Lift Station. The existing lift station, constructed in 1963, is located on Davenport Drive east of Baruna Lane. The lift station collects wastewater flows from Davenport Island and predominantly consists of low density residential along with a community park. The new lift station will be located on the eastern side of Booster Park near the intersection of Baruna Lane and Davenport Drive.

The existing lift station will be replaced with a new duplex submersible pump lift station with a separate valve vault and magnetic flow meter in accordance with the City's 2001 Sewer Lift Station design Manual. Each submersible pump is designed to pump 200 gallons per minute at a total design head of 24.4 feet. New 8-inch VCP gravity sewer inlet pipe and 4-inch PVC force main outlet pipe are also being constructed. The project also includes a visually screened 30KW natural gas back-up generator in Booster Park.

Client: City of Huntington Beach **Dates:** September 2021 - Ongoing

Reference: Lili Hernandez, PE, 714.374.5386, lhernandez@surfcity-hb.org

Key Team Members: Timothy Joyce (Project Manager), Casey Raines (QAQC), Andy Leung (Staff Engineer), Pedro Alvarez (Project Engineer)

Eastern Trunk Sewer Manhole Rehabilitation

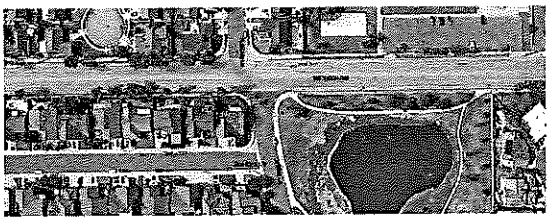
The project involved assessing and designing the rehabilitation of manholes along the Eastern Trunk Sewer, which spans approximately 9 miles. Level 1 inspections were conducted on 163 manholes using the National Association of Sewer Service Companies (NASSCO) Manhole Assessment and Certification Program (MACP) protocols to evaluate their overall condition. Field observations were compiled and analyzed to identify rehabilitation needs for each manhole. Recommendations addressed defects in the cover, frame, chimney, cone, walls, bench, and channel. Specific tasks included preparing a condition assessment report and developing contract bid documents.

Client: City of Oxnard Public Works **Dates:** 2021 - Ongoing

Reference: Jorge Espinoza, 805.200.5415, jorge.espinoza@oxnard.org

Key Team Members: Casey Raines (Project Manager), Tim Joyce, (Assessment Lead), Allie Syiem (Senior Engineer)

Huntington Beach McFadden Lift Station Replacement



GHD is providing engineering services to the City of Huntington Beach to replace their existing McFadden Sewer Lift Station. The existing lift station will be replaced with a new duplex submersible pump lift station with a separate valve vault and magnetic flow meter. To shorten the existing 1,130 linear foot (LF) force main, a new 8-inch gravity sewer will be designed and constructed along McFadden Avenue. A new shorter 6-inch force main will be constructed in Dawson Lane where it will discharge into the new gravity sewer located in McFadden Avenue. Along the existing 8-inch VCP gravity sewer in Dawson Lane, an 8-inch gravity sewer will be designed and constructed to divert the flows to the new wet well.

Client: City of Huntington Beach **Dates:** July 2020 - Ongoing

Reference: Lili Hernandez, PE, 714.374.5386, lhernandez@surfcity-hb.org

Key Team Members: Casey Raines (Project Manager), Greg Watanabe (Project Director), Ulysses Fandino (Senior Engineer), Tim Joyce (Senior Engineer), Andy Leung (Staff Engineer), Mehdi Mardi (Electrical Engineer)

Sewer Master Plan Update

The Sewer Master Plan (SMP) is essential for aligning the current system with ongoing operations, rehabilitation, and maintenance. It ensures compliance with state laws and the 2022 Sewer System Management Plan (SSMP) update.

Huntington Beach contracted GHD to update the SMP, last completed in 2003. The study area includes Huntington Beach and parts of Westminster, Seal Beach, Newport Beach, and Fountain Valley. The population has grown from 11,000 in 1960 to over 200,000 in 2023 due to commercial and industrial development.

The SMP will guide the City in planning and maintaining its sewer assets. A dynamic hydraulic sewer model was developed to create a 10-year Capital Improvement Plan (CIP) addressing capacity deficiencies in gravity sewers, lift stations, and force mains. The system includes 360 miles of sewer, 27 lift stations, and 3 miles of force mains, with wastewater treatment provided by the Orange County Sanitation District (OCSan).

Future development will not significantly impact capacity. However, there are capacity deficiencies during peak wet weather events. To address these, GHD proposed 16 sewer capacity upsize projects. Lift station assessments and hydraulic modeling also informed CIP recommendations.

The SMP report will guide improvements to the City's sanitary sewer system to accommodate current and future development and support the City in continuing to provide high service to its customers. The City will use the project results, in conjunction with other planning and investigative efforts, to prioritize areas of the sanitary sewer system for replacement and rehabilitation work.

Client: City of Huntington Beach **Dates:** 2022-ongoing

Reference: Lili Hernandez, PE, 714.374.5386, lhernandez@surfcity-hb.org

Key Team Members: Adam Fisher (Modeling Engineer), Chris Brothers (Lead Hydraulic Modeler, Technical Lead)

Anaheim On-Call Professional Consulting and Engineering Services

Compliance with NPDES and Sewer WDR regulations as well as implementation of the capital improvement program (CIP). GHD provided engineering services to support planning, hydrology, hydraulics, design, waste management, grant application, and water quality compliance. Specific task orders provided related to NPDES and sewer WDR include:

- Stormwater Credit Program
- Modjeska Park Regional Stormwater Capture BMP
- La Palma Avenue and Richfield Road Storm Drain Improvements Feasibility Study and Final Design
- City of Anaheim State College Boulevard Sewer - Retrofit Regional BMP
- Boysen Park BMP Facility Feasibility Study and Preliminary Design
- Biochar Stormwater BMP Development
- Stormwater and Sanitary Sewer Fee Study
- Stormwater Monitoring and Groundwater Recharge Assessment Report
- Annual Grant Compliance Monitoring and Reporting for Modjeska and La

GHD also provided technical and engineering services for NPDES and Sewer WDR support activities as well as supported the City of Anaheim with implementation of their CIP. Specific Task orders developed to support the CIP included:

- Alley Sanitary Sewer Improvement Program
- Knollwood Sewer Study
- Beach Boulevard Specific Plan Sewer Analysis
- 1000 N Kraemer Sewer Analysis
- Walnut Street and Cerritos Avenue Sewer Improvement
- Alomar Avenue and Loara Street Sewer Improvements

Client: City of Anaheim **Dates:** 2016 - Ongoing

Reference: Keith Linker, 714.765.4141, klinker@anaheim.net

Key Team Members: Casey Raines (Senior Engineer), Greg Watanabe (Project Director), Ulysses Fandino (Project Manager)

Long Beach Utilities Department (LBUD) On-Call Engineering Services

GHD is providing engineering design and construction support services for potable, recycled, and sewer projects on an as-needed basis. We have held the one-year term contracts since 2017 and renewed each year with LBUD The types of projects under this on-call pertain to potable water, recycled water, and sewer system facilities, such as pipeline assessment and design, pump analysis, sewer system capacity studies, and other miscellaneous services.

Client: Long Beach Utilities Department **Dates:** 2017 - Ongoing

Reference: Robert Verceles, 562.570.2337, robert.verceles@lbwater.org

Key Team Members: Casey Raines (Project Manger)

Qualifications: Subconsultants

Survey

Calvada Surveying, Inc. is a Disabled Veteran and Minority Disadvantaged-Owned land surveying firm established in 1989, with a strong presence across the Western U.S. Our clients trust us for our expertise, professionalism, and commitment to exceptional customer service, supported by the latest technology.

CALVADA SURVEYING, INC.

Knowledge & **Competence:** Effective communication, coordination, and adherence to timelines are essential in executing our projects. Our management team maintains daily communication with prime contractor's project managers, ensuring seamless access to survey areas and minimizing costs and project durations. Regular collaboration ensures all commitments are met on schedule and to the highest standard.

Organizational Capacity: We pride ourselves on pioneering advanced land surveying technology while maintaining a strong, family-oriented company culture. Our Corona headquarters houses 48 professionals, including six licensed Professional Land Surveyors and twelve fully equipped two-person field crews.

Familiarity, Knowledge, and Experience: We leverage the latest technology to deliver superior customer service and technical expertise, ensuring timely, accurate results to keep your project on schedule and within budget.

Extensive Experience Across California: Since 1989, we have provided land surveying services throughout California, partnering with leading firms. Our integration of Civil 3D ensures efficient digital data transfer, saving time and costs. Our ability to deploy field personnel on short notice enables us to meet stringent deadlines and deliver critical data for successful project execution.

Geotechnical Engineering

AESCO

AESCO, a woman-owned corporation based in Huntington Beach, California, has been operating since 1993. With 45 employees, AESCO is certified as SBE, WBE, and CBE. Their laboratory holds certifications from DSA, Caltrans, AASHTO/CCRL, and the City of Los Angeles. AESCO specializes in QA/QC construction materials testing, inspection, and geotechnical engineering for various clients, including numerous cities and transportation authorities.

Geotechnical Engineering Capabilities:

- Foundation and pavement design
- Settlement problems
- Compaction monitoring and testing
- Shallow and deepened foundations
- Pressure injected footings
- Earth retaining structures
- Landslide analysis and control
- Expansive/collapsing soils
- Underpinning and special foundations
- Construction dewatering and drainage
- Pipelines and utilities
- Liquefaction analyses
- Fault evaluation

Potholing

C BELOW SUBSURFACE IMAGING An RMA Company

Our highly experienced technicians use advanced equipment to locate underground utilities such as gas, power, waste, communications, and cable/TV. We employ various methods including GPR, CCTV, utility locators, electromagnetic locators, and potholing. Accurate information is crucial to prevent costly delays from unforeseen hazards. We provide information in formats like pull box or electrical reports, potholing reports, underground mapping, 3D modeling, CAD drawings, or surface markings.

Founded in 2009, C Below has been in the utility locating business for fourteen years. Our corporate office is in Corona, CA, allowing us to mobilize quickly throughout Central and Southern California. We have over eighty employees, including sixty-six technicians, a sales department, a Project Engineer, a surveyor, and a CAD technician. We maintain a hands-on approach by using the most accurate technology available.

References of Work Performed Form

(List 5 Local References)

Comany Name: GHD, Inc

1. Name of Reference: City of Huntington Beach

Address: 2000 Main Street, Huntington Beach, CA 92648

Contact Name: Lili Hernandez Phone Number: 714.374.5386

Email: lhernandez@surfcity-hb.org

Dates of Business: 2016-Ongoing

2. Name of Reference: City Of Westminster

Address: 8200 Westminster Blvd., Westminster, CA 92683

Contact Name: Tuan Pham Phone Number: 714.548.3456

Email: tpham@westminster-ca.gov

Dates of Business: 2017-ongoing Project: Ward Street Waterline Relocation

3. Name of Reference: Los Angeles County Sanitation District

Address: 1955 Workman Mill Rd. Whittier, California 90601

Contact Name: Derek Zondervan Phone Number: 562.908.4288 x 2107

Email: dzondervan@lacsd.org

Dates of Business: 2022-ongoing

4. Name of Reference: City Of Culver City

Address: 9770 Culver Blvd. Culver City, California 90232

Contact Name: Mate Gaspar Phone Number: 310.253.5602

Email: mate.gaspar@culvercity.org

Dates of Business: 2017-ongoing

5. Name of Reference: Long Beach Water Department

Address: 1800 E. Wardlow Rd. Long Beach, California 90807

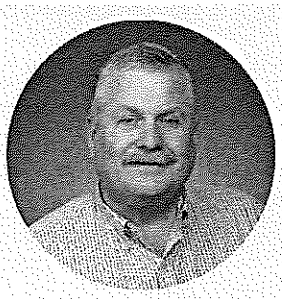
Contact Name: Robert Verceles Phone Number: 562.570.2337

Email: robert.verceles@lbwater.org

Dates of Business: 2017-ongoing

→ Appendix

→ The Power of Commitment



Craig Camp

Tunneling

BS, Mining Engineering,
University of Idaho

Relevant experience

West Orange County Water Board Feeder Number 2
Trenchless Expert
City of Huntington Beach | Huntington Beach, CA
Served as Trenchless Expert for Orange County Water Board's replacement of Feeder #2. Reviewed the alignment and alternatives, geotechnical information, shaft, and pipeline design and provided comments regarding trenchless method, constructability, cost, and schedule. Project included a single undercrossing of I-405, a Caltrans right of way within Orange County, part of the Los Angeles Metropolitan Area.

San Juan Creek 30-inch ETM Replacement Project
Tunneling Manager
Orange County Public Works | Orange County, CA,
Owner's third-party reviewer and inspection during construction of Moulton Niguel Water District's Effluent Transmission Main (ETM) replacement. Provided review of contractor's submittals and microtunneling equipment inspection. Project included design and construction of 2- 50-foot deep water tight shafts, microtunneling under two flood control levies, one on either side of San Juan Creek, and under San Juan Creek for approximately 280 feet.

P-946 Sewer
Trenchless Expert
City of Culver City | Culver City, CA
Reviewed the trenchless design for new trunk sewers consolidating five local pumping stations into a regional facility. Designed approximately 11,500 feet of 8-inch to 15-inch trunk sewers. To mitigate shallow groundwater impacts, 4,500 feet were installed using horizontal auger boring and microtunneling. Coordinated and reviewed designs for segments crossing beneath I-405 and SR 90 freeways and bridges.

Jeff Knauer

PE, ME, NACE CP SPECIALIST

Corrosion Engineer

MS, Mechanical Engineering,
University of California, San Diego

BS, Mechanical Engineering,
University of California, LA

Civil Engineer, CA #68329, WA #50938, HI #15589

Mechanical Engineer, CA #31977, WA #50938,

Certification, National Association of Corrosion Engineers
Cathodic Protection Specialist #9181,

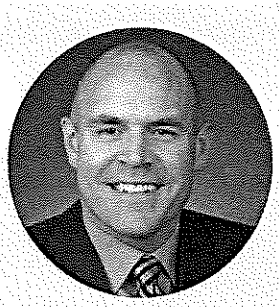
Relevant experience

P1-102 Plant 1 Upgrade
Corrosion Control Design Team Leader
Orange County Sanitation District | Fountain Valley, CA
Served as Corrosion Control Design Team Leader for Orange County Sanitation District as part of $170 million Secondary Activated Sludge Facility 2 at Plant No. 1.

Mission Bay Force Main Relocation
Corrosion Engineer
San Francisco Public Utilities Commission | San Francisco, CA
The project included galvanic cathodic protection design for both 66-inch dielectrically coated welded steel pipe and 66-inch reinforced concrete cylinder pipe portions of the relocated force main

San Ramon Valley Transmission Improvements Projects
Corrosion Engineer
East Bay Municipal Utility District | Oakland, CA
Served as Corrosion Engineer for San Ramon Valley Transmission Improvements Projects' cathodic protection system design. The project included impressed current cathodic protection design for several miles of 69-inch water transmission pipeline.

Rohnert Park Sewer Pond Rehabilitation
Senior Corrosion Engineer
City of Rohnert Park | Rohnert Park, CA
Served as Senior Corrosion Engineer for the study and development of conceptual design improvements for a reinforced concrete sewer pond.



Nathan Towlerton

PE, QSD/P, QISP

Drainage Design/WQMP, HEC-RAS/Stormwater Master Plan

BS, Chemical Engineering (Environmental Process), Oregon State University

Civil Engineer, CA #81643

Relevant experience

Hall Park Detention Basin
Technical Design Lead
Town of Windsor | Windsor, CA
Served as Technical Design Lead for flood mitigation project that converted an existing single-use residential park into a multi-use detention basin and park. The primary goal of the project was to detain peak flows to mitigate flooding at a downstream intersection pone to frequent flooding. Key elements of the project included a diversion system, headwall, low impact development features for water quality, and a unique underdrain system to provide adequate drawdown and provide year-round use of the park.

Dana Point Master Plan of Drainage Update
Project Manager
City of Dana Point | Dana Point, CA
Managed update of city-wide Master Plan of Drainage. The project used the Rational Method module of the Hydrowin 2014 software program to identify storm drain deficiencies and propose corrective improvements. The effort included hydrology/ hydraulic analysis of the City's system for the 10-, 25-, and 100-yr storm events, identification of priority capital improvement projects, and cost estimating of those projects.

Villa Metro Development
Stormwater Design Engineer
Villa Metro | Santa Clarita, CA
Performed hydraulic analysis and design of large-scale underground infiltration gallery for single-family development. Project requirements included structural evaluation of the system and hydraulic design of accompanying diversion structures.

Chris Brothers

PE

Potable and Wastewater Master Planning

MS, Civil and Environmental Engineering, Ohio University

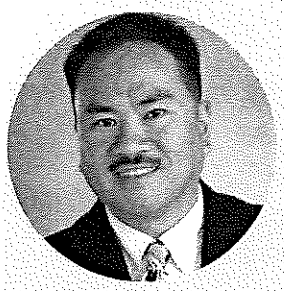
Civil Engineer, CA #68725

Relevant experience

City of Huntington Beach Sewer Master Plan Update
Lead Hydraulic Modeler, Technical Lead
City of Huntington Beach | Huntington Beach
Managed the build, validation, and calibration of an all-pipes dynamic model using Innovyze's InfoWorks ICM 2023. Calibrated the model with 24 flow meters for dry and wet weather conditions. Integrated the City model with the Orange County Sanitation District model for accurate hydraulic capacity assessment. Conducted visual assessments of 29 sewer lift stations. Developed planning-level cost estimates and documented findings in a Sewer Master Plan Update Report.

Long Beach Water Department (LBWD)Sanitary Sewer Master Plan Update
Lead Hydraulic Modeler, Technical Lead
LBWD | Long Beach, CA
Served as Lead Hydraulic Modeler to expand the 2013 hydraulic model in Innovyze's InfoSWMM software, including all sewer mains for near-term development areas. Led calibration of the expanded model using 60 temporary flow meters for dry weather flow conditions. Key tasks included visual assessment of 33 sewer lift stations, system evaluation with updated flows, and staff training. Developed planning level cost estimates for recommended projects, documented in a Sewer Master Plan Update Report.

District No. 2 Sanitary Sewer Master Plan
Project Manager, Technical Lead
Sanitary Sewer District No. 2 | Corte Madera, CA
Project Manager and Technical Lead for a condition assessment program covering 43 miles of gravity main and 5 miles of forcemains. This program includes PACP-certified CCTV inspection of 20 miles of gravity sewer and strategic inspections of manholes and vaults. Managed the CCTV survey/inspection, analyzed data using InfoAsset Manager 2021.4, and coordinated with subconsultants to complete a Condition Assessment Report for Gravity Sewers. The report proposes recommendations for pipes with structural defect scores above 4 and includes assessments of pump stations, forcemains, vaults, and manholes.



Terry Wong

PE, LEED AP

Mechanical Engineer/HVAC

BS, Mechanical Engineering, California Polytechnic State University

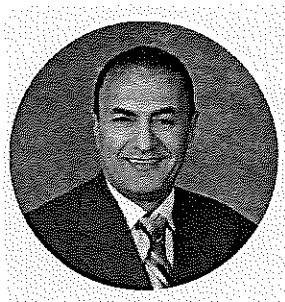
Mechanical Engineer, CA #29562, OR #75472PE, WA # 41185, AZ #53063, NV

Relevant experience

City of Tracy Water Treatment Plant Mechanical Replacement
Project Manager, Mechanical Engineer
City of Tracy | Tracy, CA
Design of the replacement HVAC systems to ensure reliable plant operations, including layout and circuiting of new feeders and disconnects, evaluation and extension of concrete slabs for new equipment, and equipment anchorage at MCC, UV, Chemical, and Controls Buildings. GHD supported the City during bid and construction.

Placer County Water Agency HVAC Replacements
Project Manager, Mechanical Engineer
Placer County Water Agency | Auburn, CA; Newcastle, CA
Design of the modifications to the existing HVAC system to include the replacement of the outdoor heat pump unit and indoor fan coil unit in kind at the Operations and Maintenance Building, the replacement of the outdoor heat pump unit and indoor fan coil unit with package unit at the Filter Gallery Building, the replacement of the outdoor heat pump unit and indoor fan coil unit in kind at the Plant 1 Control Building, and associated appurtenances, the replacement of the outdoor AC units in kind and associated appurtenances at the Main Office.

Vandenberg Air Force Base Building 8290 HVAC Upgrades
Project Manager
US Air Force | Santa Barbara County, CA
Responsible for load calculations, selection of central hot and chilled water plant equipment, and selection of fan coil units to be upgraded from pneumatic to electronic controls.



Mehdi Mardi

EE

Electrical Engineer/I&C

BS, Electrical Engineering, Tehran Sharif University

BS, Applied Physics, Ferdowsi University

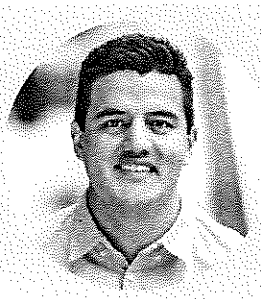
Electrical Engineer, CA #20033

Relevant experience

Long Beach Master Sewer Plan
Lead Electrical Engineer
Long Beach Water Department | Long Beach, CA
The Sewer Master Plan Update aims to evaluate the Department's sewer system for potential deficiencies under current and future conditions, focusing on Planned Development Districts. It assesses 21 lift stations, identifies key improvement elements, and presents a Capital Improvement Program with cost estimates. The report also includes a comprehensive assessment of electrical and instrumentation systems, with evaluations and recommendations.

East County Advanced Water Process
Lead Electrical Engineer
Helix Water District | San Diego, CA
GHD helped with the design of de-chlorination design section of the water pipeline of treatment plant to Lake Jennings, the scope of work for electricidal team is to provide the electrical power to plant, provide automatic transfer switch with backup generator, design automation and radio and fiber communication with treatment plant and security system and Closed-Circuit Television (CCTV). The project design is completed, the construction is in progress, GHD is providing support for construction.

Carlsbad Lift Station Modification
Electrical Engineer
City of Carlsbad | Carlsbad, CA
The scope for work for this project is modification of the pipping and replacing the electrical panels/Programmable Logic Controller (PLC). Electrical design included demolition of the existing electrical power panel and PLC panel and instruments like flowmeter and level switches. Installing new combined electrical and PLC panel with new equipment, new conduit routing and addition of new sump pump and site lighting.



Gonzalo Roberts-Cervantes

PE

Structural Engineer

MS, Earthquake Engineering, State University of New York, Buffalo

ME, Structural Analysis of Monuments and Historical Constructions, University of Minho - University of Catalonia

BS, Civil Engineering, National University of San Agustin

Civil Engineer, CA #80836

Relevant experience

York Field Stormwater Capture Project
Structural Lead
City of Whittier | Whittier, CA
Led the structural design of a cast-in-place diversion structure and two concrete vault structures.

Hermosillo Park Rehabilitation - Stormwater Capture and Infiltration Project
Structural Lead
City of Norwalk | Norwalk, CA
Led the design-build structural design of two cast-in-place diversion structures and a 10,000-square-foot one-story masonry community building

Fischer Sewer Lift Station Seismic Retrofit Project
Structural Lead
McKinleyville Community Services District | McKinleyville, CA
Led the seismic retrofit of an existing lift station. The retrofit scope consisted of enlarging concrete footings, strengthening existing steel trusses, providing out-of-place supports for existing masonry walls and strengthening an existing monorail steel hoist.

Oceanside El Corazon Lift Station
Structural
City of Oceanside | Oceanside, CA
Managed the structural scope of the new lift station structure that includes a masonry building above ground with custom steel trusses and a wood tower. The structure below ground consists of the design of the dry well, wet well, and overflow basin.

Adam Fischer

PE

Hydraulic Modeling

BS, Civil Engineering, Pennsylvania State University

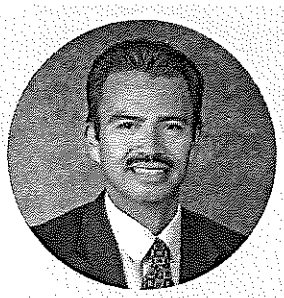
Civil Engineer, CA #72482

Relevant experience

Los Angeles County Sanitation District (LACSD) Districts 1 and 2 Models
Engineer, Modeler, GIS Analyst
LACSD | Los Angeles, CA
LACSD, comprising 24 independent districts, is working on a system-wide model. GHD is constructing models for Districts 1 and 2, which will be integrated with District 8's model. Districts 1 and 2 serve 1.25 million people, cover 77,600 acres, and include 316 miles of sewer, one pumping plant, 213 flow control devices, and one wastewater facility. District 2 receives 9.5 MGD from upstream districts during dry weather. The project involves analyzing 300 flow monitoring locations, real-time pump controls, hydraulic model analysis, and integrating the models using Innovyze's InfoWorks ICM 2024 software.

City of Huntington Beach Sewer Master Plan Update
Engineer, Modeler, GIS Analyst
City of Huntington Beach | Huntington Beach, CA
GHD is updating the City's sewer master plan by analyzing flow monitoring locations, conducting hydraulic model analysis, and prioritizing CIP and O&M needs. Using Innovyze's InfoWorks ICM 2023 software, they are building, validating, and calibrating an all-pipes dynamic model. Geo-spatial development and processing of planning data are establishing system-wide flows for the near-term and 2040 planning horizons. Water billing data for over 46,000 parcels is translated into diurnal loads, aggregated by user classes. Future scenarios are developed based on city input and various planning documents, including 2040 growth projections and the City General Plan Housing Element.

Long Beach Water District Sewer Master Plan Update
Engineer, GIS Analyst
Long Beach Water Department | Long Beach, CA
GHD updated the City's sewer master plan by analyzing 60 flow monitoring locations, conducting hydraulic model analysis, and prioritizing CIP and O&M needs. They developed geo-spatial data to establish system-wide flows for the near-term and 2040 planning horizons. Water billing data was translated into parcel-based diurnal loads for over 35,000 parcels, and future scenarios were developed based on various planning documents and city input.



Hector Ruiz

PE

Asset Management and Financial Planning

MS, Civil and Environmental Engineering and Science, Stanford University

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

Civil Engineer, CA #55245

Relevant experience

AM, Risk & Resiliency Assessment and CMMS
Project Manager
Water Facilities Authority | Upland, CA
GHD developed an asset register and condition assessment protocol for the Agua de Lejos Treatment Plant, integrated with new CMMS workflows. They also created maintenance strategies, recommended CMMS upgrades, and conducted AM training sessions. The Authority is now implementing these initiatives.

Strategic Asset Management and Planning, Pipeline Risk Management Model
Project Manager
Metropolitan Water District of Southern California | Los Angeles, CA
GHD supported the Metropolitan Water District of Southern California with Asset Management (AM) tasks, including workshops, strategy development, and program reviews. Key activities included developing a pipeline risk model action plan, creating a Strategic AM Plan, and addressing tasks such as data management, IT, maintenance management, and asset lifecycle planning.

Metropolitan Water District of Southern California On-Call AM Services
Project Manager
Metropolitan Water District of Southern California | Southern California
Project Manager for providing as-needed Asset Management (AM) planning services to the Metropolitan Water District of Southern California. GHD advised Metropolitan by facilitating workshops and performing reviews to develop their AM program. Collaborated with engineering, operations, maintenance, and AM staff to create a Strategic AM Plan and identify best practices. Conducted several workshops on topics such as data management, IT, maintenance management, gap assessments, condition assessments, and asset hierarchy and register development.

Pedro Alvarez

PE, PACP

Site/Civil/Pumps

BS, Civil Engineering, California State Polytechnic University

Civil Engineer, CA #85667

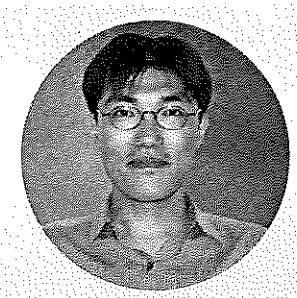
Relevant experience

Water Well No. 1A Replacement of Well No. 1
Project Engineer
City of Huntington Beach | Huntington Beach, CA
Project Engineer for the construction support services for the Water Well 1 Replacement Project. Project demolished existing well and associated piping to replace in a new structure with new associated piping, equipment, and structures. Tasks include reviewing submittals, request for information, and providing updated designs.

Long Beach Water Department Golden Avenue Water Main Replacement
Project Manager
Long Beach Water Department | Long Beach, CA
Project Manager for the design of 1,400 feet of 6-inch water main replacement and new Standard Details for non-metallic pipe use. The project replaced failing metallic pipes and service laterals affected by stray current from nearby cathodically protected pipelines. It included a corrosion review and infrastructure replacement with non-metallic piping to ensure continued community service.

Villas Lift Station
Project Engineer
City of Carlsbad | Carlsbad, CA
Project Engineer for the replacement of sewer lift station including pumps, valves, electrical cabinets, and installation of mechanical vaults. Tasks included utility investigations, feasibility study, preparation of plans, specifications, and opinion of probable construction cost.

Water Main Lining Pilot Project
Project Engineer
Long Beach Water Department | Long Beach, CA
Project Engineer for the rehabilitation of existing water mains in alleys using NSF61 approved pressurized cured-in-place pipe and the replacement of approximately 800 feet of existing six-inch water main. Tasks included research and design of the existing water main system, service connections, utility research, traffic control, permit acquisition, and opinion of probable construction cost.



Byung Lee

PE, TE

Traffic Engineer

MS, Civil & Environmental Engineering, University of California, Berkeley

Civil Engineer, CA, #90221

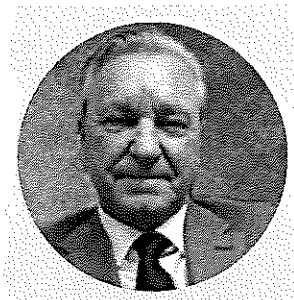
Traffic Engineer, CA #2908

Relevant experience

Shoreline Drive Relocation
Traffic Engineer
City of Long Beach | Long Beach, CA
Responsible for traffic signal installation/modification plans for the realigning and reconstructing several arterial roadways. The project includes realigning Shoreline Drive/Broadway Extension/Golden Shore Improvements and converting the one-way streets of Broadway, 3rd Street and 7th Street to two-way streets.

Artesia Great Boulevard Improvements
Traffic Engineer
City of Long Beach | Long Beach, CA
Project Traffic Engineer responsible for traffic signal modification plans for 12 traffic signals along the corridor with the addition of bicycle facility, pedestrian safety, and transit improvements. The improvements consist of Adaptive Traffic Control System signal enhancements, pedestrian improvements at all pedestrian crossings, Class II bike lanes between Atlantic Avenue and Susana Road, and variety of improvements including upgraded street lighting, improved bus shelters, and bulbouts.

City of Petaluma Traffic Signal Timing Improvments
Project Manager
City of Petaluma | Petaluma, CA
Conducted existing traffic signal audit at 52 signalized intersections within the City and updated the timing parameters to meet the current California Manual on Uniform Traffic Control Devices and City requirements. Upon adjustment of signal timing parameters, coordinated signal timing plans for intersections along McDowell Boulevard and Washington Boulevard were developed and implemented using WaySync Software.



Frank Kling

SCADA

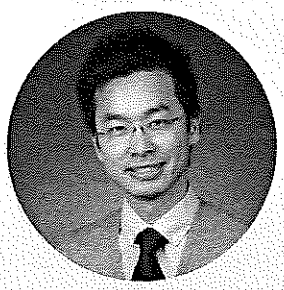
Relevant experience

Regional Water Recycling Plant No. 1 (RP-1) Intermediate Pump Station Upgrades
Lead Instrumentation & Control (I&C) Automation Engineer
Inland Empire Utilities Agency | Chino, CA
Led the I&C design effort for a municipal RP-1 IPS improvements. Project consisted of new Piping and Instrumentation Diagram (P&ID) and PCN development, plans, specifications, and design for upgrading the nine pumps to Variable Frequency Drives (VFDs), PLC Remote I/O, and local control panel modifications.

Phoenix System-Wide WTP DCS Upgrade
Program Manager
City of Phoenix | Phoenix, AZ
Provided the program management for the five-year $12 million DCS upgrade solution to the City of Phoenix Water and Wastewater Department. The project updated over 8,000 I/O at the Cave Creek WRP-8 MGD, 24th Avenue, -140 MGD, Verde 50-MGD, Union Hills 160 MGD, Val Vista 220-MGD and Deer Valley 150 MGD WTP. All plants were keep running with minimal downtime during cut-over.

HiTec PLC and SCADA Development
Automation Engineer
HiTec | Stavanger Norway
Served as a member of the international automation team and provided design and installation support of an open systems DCS solution system for a municipal wastewater plant and collection system. Project consisted of the integration of four redundant controllers into a centralized Ethernet-based SCADA network for complete monitoring, alarming, and diagnostics of operations by plant personnel.

Culver City On-Call Services - I&C
Controls System Consultant
City of Culver City | Culver City, CA
Providing engineering services to audit the client existing emergency notification system and the sewer flow monitoring system. Develop a report on the findings of the site audit and made observations/recommendations for future optimization of the monitoring, maintenance, and management of the sewer Emergency Notification System and the Sewer Flow Monitoring System.



Andy Leung

PACP, MACP

Permitting, Construction Support

BS, Chemical Engineering, University of British Columbia

Relevant experience

Long Beach Water District Sewer Collection System Master Planning Updates
Staff Engineer
Long Beach Water District | Long Beach, CA
Staff Engineer for preparing a full-network sewer collection system hydraulic model for selected areas of the Long Beach Water District service area. Tasks include preparing work plans for the model expansion and quality control, validating existing GIS datasets and hydraulic model, coordinating data research for the model expansion, constructing the expanded hydraulic model, and performing model validations.

Orange County Sanitation District Interceptor Sewer Rehabilitation
Staff Engineer
Orange County Sanitation District | Fountain Valley, CA
Staff Engineer for performing a hydraulic analysis on the existing sewer siphons within a sewer rehabilitation project. Tasks include preparing a hydraulic model using InfoWorks ICM to determine the effects of various siphon improvements alternatives on the existing sewer network, providing a recommendation on the siphon rehabilitation based on the model results, and preparing a technical memorandum to document the findings and recommendations.

Eastern Trunk Manhole Condition Assessment
Staff Engineer
City of Oxnard | Oxnard, CA
Served as Staff Engineer for the sewer manhole condition assessment project to evaluate the existing condition of the manholes and determine the levels of rehabilitations needed. Tasks include Level 1 manhole inspections per National Association of Sewer Service Companies (NASSCO) Manhole Assessment Certification Program, preparation of an assessment report, and the preparation of design plans for the recommended manhole rehabilitations.

Steve Ferrero

PE

Cost Estimating

BS, Civil Engineering, California State University,

Civil Engineer, CA #52267

Relevant experience

SFPUC Southeast WW Plant
Cost Estimator
SFPUC | San Francisco, CA
Construction estimates for package buyouts for yard piping, sitework, demolition, earthwork and plumbing systems.

SFPUC West Side Pump Station
Cost Estimator
SFPUC | San Francisco, CA
Civil and structural estimates for generational upgrade of San Francisco Westside Pump Station. Project includes deep shaft and secant pile construction, new knife gate in deep shaft, new concrete electrical building, large and lengthy new duct banks, underground piping, new structural concrete improvements in existing building, replacement mechanical trash racks and replacement pumps. Protection of existing large wastewater trunk line under the road and considerable street and sidewalk work.

Storm Drain and Pump Station Replacement, Levee Upgrades
Lead Cost Estimator
City of Mountain View Public Works | Mountain View, CA
Construction estimates for multiple projects – levees, shoreline culverts, large diameter storm drains and bio-basins.

East Bay Municipal Utility District (EBMUD) Pump Stations
Lead Cost Estimator
EBMUD | Oakland, CA
Architectural and civil cost estimates for replacement pump stations at Concept design. Approximately $1 million for each site.

Ryan Crawford

PG, QSD

Hydrogeology/Wells

MS, Geology, California State Polytechnic University

BS, Geology, California State Polytechnic University

Professional Geologist, CA #8764

Relevant experience

Town of Windsor Urban Water Management Plan
Project Hydrogeologist
Town of Windsor | Sonoma County, CA
Performed the hydrogeologic analysis to complete the 2016 Urban Water Management Plan update for the Town of Windsor. The analysis includes describing alluvial underflow water sources, summarized current and historical groundwater documents, and conveyed hydrogeological conditions including groundwater depressions in the valley related to over pumping.

City of Sebastopol On-Call Water Resources Engineering
Senior Hydrogeologist
City of Sonoma | Sebastopol, CA
Performed on a variety of tasks under this agreement ranging from engineering reports preparation and technical studies, emergency water supply issues, source water supply quality and treatment, MS4 system monitoring and repair consulting, flood mitigation design, supply well chemistry and flow data, and Regional Water Quality Control Board submittals and correspondence.

Municipal Supply Well Design, Construction Oversight, and Aquifer Test Design
Senior Hydrogeologist
City of Fortuna | Fortuna Wellfield, CA
Responsible for well design, bid specifications package preparation, communication with the California Division of Drinking Water and aquifer/pump testing studies for a new high capacity, multi-aquifer municipal supply well. Worked with the City and subcontractors to provide new high quantity and quality water supplies within specific capture zones. Managed the drilling, logged and prepared a new well design based on site lithologies and sieve analyses to complete the construction design to maximize the production and water quality goals set by the City.

Exceptions: Draft Agreement

1. Section 8 (Hold Harmless): We would like to add a paragraph referencing 2782.8. "If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance of "design professional" services (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault."

2. Section 9 (Professional Liability Insurance): The insurance market dictates GHD's SIR and is confidential to GHD and its insurers. GHD cannot accept an unreasonably low SIR requirement, which does not account for the insurance market for global firms of GHD's size, and therefore, requests this insurance requirement to be removed. GHD is financially sound and able to pay any SIR obligations. To further demonstrate our financial responsibility, we are able to provide a letter of financial viability, which will affirm GHD's commitment and capability to Client to meet our financial obligations

3.Standard of Care (SOC): The SOC is not clearly defined. We would like to add clarity by incorporating it into Section 12 (Termination). Specifically, in the first sentence where it states, "All work required hereunder shall be performed in a good and workmanlike manner," we would like to add "consistent with the level of care and skill ordinarily exercised by **members of GHD's profession practicing in the same discipline and locality under similar circumstances ("Standard of Care").**

EXHIBIT "B"

Payment Schedule (Hourly Payment)

A. Hourly Rate

CONSULTANT'S fees for such services shall be based upon the following hourly rate and cost schedule:

SEE ATTACHED EXHIBIT B

B. Travel Charges for time during travel are not reimbursable.

C. Billing

1. All billing shall be done monthly in fifteen (15) minute increments and matched to an appropriate breakdown of the time that was taken to perform that work and who performed it.

2. Each month's bill should include a total to date. That total should provide, at a glance, the total fees and costs incurred to date for the project.

3. A copy of memoranda, letters, reports, calculations and other documentation prepared by CONSULTANT may be required to be submitted to CITY to demonstrate progress toward completion of tasks. In the event CITY rejects or has comments on any such product, CITY shall identify specific requirements for satisfactory completion.

4. CONSULTANT shall submit to CITY an invoice for each monthly payment due. Such invoice shall:

   A) Reference this Agreement;
   B) Describe the services performed;
   C) Show the total amount of the payment due;
   D) Include a certification by a principal member of CONSULTANT's firm that the work has been performed in accordance with the provisions of this Agreement; and
   E) For all payments include an estimate of the percentage of work completed.

   Upon submission of any such invoice, if CITY is satisfied that CONSULTANT is making satisfactory progress toward completion of tasks in accordance with this Agreement, CITY shall approve the invoice, in which event payment shall be made within thirty (30) days of receipt of the invoice by CITY. Such approval shall not be unreasonably withheld. If CITY does not approve an invoice, CITY shall notify CONSULTANT in writing of the reasons for non-approval and the schedule of performance set forth in **Exhibit "A"** may at the option of CITY be suspended until the parties agree that past performance by CONSULTANT is in, or has been brought into compliance, or until this Agreement has expired or is terminated as provided herein.

5. Any billings for extra work or additional services authorized in advance and in writing by CITY shall be invoiced separately to CITY. Such invoice shall contain all of the information required above, and in addition shall list the hours expended and hourly rate charged for such time. Such invoices shall be approved by CITY if the work performed is in accordance with the extra work or additional services requested, and if CITY is satisfied that the statement of hours worked and costs incurred is accurate. Such approval shall not be unreasonably withheld. Any dispute between the parties concerning payment of such an invoice shall be treated as separate and apart from the ongoing performance of the remainder of this Agreement.

EXHIBIT B

Effective January 2025

GHD Class	GHD Description	2025 CDN/US Rate
	PROFESSIONAL	
A001	Senior Technical Director 1	$ 440.00
A002	Senior Technical Director 2	$ 410.00
A003	Senior Technical Director 3	$ 380.00
A004	Technical Director 1	$ 360.00
A005	Technical Director 2	$ 340.00
A006	Senior Professional 1	$ 310.00
A007	Senior Professional 2	$ 290.00
A008	Professional 1	$ 280.00
A009	Professional 2	$ 240.00
A010	Professional 3	$ 215.00
A011	Vacationer / Intern	$ 200.00
	CONSULTANT	
V001	Executive Consultant 1	$ 565.00
V002	Executive Consultant 2	$ 515.00
V003	Senior Consultant 1	$ 425.00
V004	Senior Consultant 2	$ 380.00
V005	Consultant 1	$ 315.00
V006	Consultant 2	$ 260.00
V007	Consultant 3	$ 210.00
	TECHNICAL	
B001	Lead Design Technician 1	$ 395.00
B002	Lead Design Technician 2	$ 365.00
B003	Lead Design Technician 3	$ 330.00
B004	Senior Design Technician 1	$ 325.00
B005	Senior Design Technician 2	$ 305.00
B006	Design Technician 1	$ 280.00
B007	Design Technician 2	$ 260.00
B008	Drafting/Design 1	$ 250.00
B009	Drafting/Design 2	$ 215.00
B010	Drafting/Design 3	$ 200.00
B011	Drafting/Design 4	$ 190.00
B012	Intern Drafting/Design	$ 170.00

GHD Class	GHD Description	2025 CDN/US Rate
	ADMINISTRATION	
C001	Business Services Manager 1	$ 350.00
C002	Business Services Manager 2	$ 310.00
C003	Senior Business Services 1	$ 240.00
C004	Senior Business Services 2	$ 225.00
C005	Business Services 1	$ 200.00
C006	Business Services 2	$ 190.00
C007	Business Services 3	$ 140.00
	SITE BASED	
S001	Senior Construction Manager	$ 385.00
S002	Construction Manager	$ 335.00
S003	Lead Site Engineer/Supervisor	$ 295.00
S004	Senior Site Engineer	$ 265.00
S005	Site Engineer	$ 250.00
S006	Lead Inspector	$ 255.00
S007	Senior Inspector	$ 205.00
S008	Inspector / Specialist 1	$ 180.00
S009	Inspector / Specialist 2	$ 165.00
S010	Clerk / Specialist 3	$ 155.00
S011	Senior Site Manager 1	$ 165.00
S012	Senior Site Manager 2	$ 155.00
S013	Senior Site Manager 3	$ 145.00
S014	Senior Site Manager 4	$ 135.00
S015	Operator/Labourer 1	$ 135.00
S016	Operator/Labourer 2	$ 125.00
S017	Operator/Labourer 3	$ 105.00
	PROJECT SUPPORT	
D001	Project Support Manager 1	$ 420.00
D002	Project Support Manager 2	$ 395.00
D003	Senior Project Support 1	$ 350.00
D004	Senior Project Support 2	$ 300.00
D005	Project Support 1	$ 285.00
D006	Project Support 2	$ 265.00
D007	Project Support 3	$ 245.00
D008	Project Support 4	$ 220.00
D009	Project Support 5	$ 190.00
D010	Project Support 6	$ 135.00

AESCO

Cost Table

Professional Staffing

Code	Item	$/Unit	Unit
P100	Principal Professional Engineer	$ 220.00	Hour
P101	Senior Geotechnical Engineer	$ 205.00	Hour
P102	Project Engineer / Manager	$ 175.00	Hour
P103	Geologist	$ 185.00	Hour
P104	Quality Control Manager	$ 175.00	Hour
P105	Senior Staff Engineer	$ 170.00	Hour
P116	Health and Safety Officer	$ 205.00	Hour
P115	LA City Deputy Methane Specialist	$ 150.00	Hour
P107	Laboratory Manager	$ 140.00	Hour
P108	Laboratory Technician	$ 115.00	Hour
P109	CADD Operator/Draftsperson	$ 95.00	Hour
P110	Data Processing, Technical Editing or Reproduction	$ 95.00	Hour
P111	Expert Witness Testimony	$ 465.00	Hour
P112	Certified Payroll, per hr.	$ 170.00	Hour
P113	Senior Staff Environmental Engineer	$ 170.00	Hour
P114	Senior Environmental Engineer	$ 205.00	Hour

Field Technician

Code	Item	$/Unit	Unit
T150	Special Inspector (Reinforced Concrete, and Masonry)	$ 125.00	Hour
T151	Special Inspector (Structural Steel, Drilled-In-Anchors	$ 125.00	Hour
T152	Special Inspector for Welding	$ 125.00	Hour
T153	DSA Class I Inspector	$ 145.00	Hour
T154	DSA Class II Inspector	$ 135.00	Hour
T155	Special Inspector for Fireproofing	$ 125.00	Hour
T156	Special Inspector Load Tests or Torque/Bolt)	$ 125.00	Hour
T157	Special Inspector Rebar Sample	$ 125.00	Hour
T158	Special Inspector Pachometer	$ 125.00	Hour
T159	Senior Asphalt Placement Technician	$ 125.00	Hour
T160	Asphalt Placement Technician	$ 125.00	Hour
T161	Asphalt/Concrete Plant Technician	$ 125.00	Hour
T162	ACI/Caltrans Technician	$ 125.00	Hour
T163	Senior Soils Technician	$ 125.00	Hour
T164	Senior Grading Inspector	$ 130.00	Hour
T165	Staff Grading Inspector	$ 125.00	Hour
T166	Soils Technician	$ 125.00	Hour
T167	Pile Driving Inspector	$ 140.00	Hour
T168	AWS Certified Welding Inspector	$ 125.00	Hour
T169	NACE Coating Inspector	$ 150.00	Hour
T170	Field Coring Technician	$ 125.00	Hour
T171	Nondestructive Examination Technician, UT, MT, LP	$ 130.00	Hour
T172	Structural Steel Fabrication Inspector (AWS)	$ 130.00	Hour
T177	Senior Environmental Technician	$ 140.00	Hour

T178	Environmental Technician	$	140.00	Hour
T179	Building Inspector	$	145.00	Hour

Fabrication Shop Inspections

Code	Item	$/Unit	Unit
T173	Structural Steel Inspector (ICC/CBO)	125	Hour
T174	Structural Steel Inspector (AWS)	125	Hour
T175	Batch Plant Quality Control Technician/inspector	125	Hour
T176	Reinforced Concrete, Prestressed Inspector	125	Hour

Field Inspector/Technician Hours

No Work Performed (Work Cancelled) will be charged at 2 hour minimum
All field services charge at 4 hour minimum and 8 hour thereafter

Regular Work Hours

First 8 hours, Monday through Friday, between 5:00 a.m. to 5:00 p.m.
Direct Project expenses outside services will be charged at Cost + 15%.

Time and One-Half

Any increment past first 8 hours through 12 hours, Monday through Friday
First 12 hours on Saturday
Shift between 3:00 a.m. and 5:00 a.m.

Double Time

Any hours past 12 hours Monday through Saturday, all day Sunday and Federal Holidays

Field Analysis

Code	Item	$/Unit	Unit
G200	Soil Boring with Hollow Stem Auger Drilling Portal to Portal	$ 415.00	Hour
G200A	Mobilization and Demobilization for Hollow Stem Auger	$ 350.00	Hour
G201	Backfill Boreholes with Bentonite	$ 26.00	Foot
G202	Backfill Boreholes with Grout	$ 37.00	Foot
G203	Drumming and Disposal of Clean Cuttings	$ 410.00	Drum
G204	Fire Water Buffalo	$ 578.00	Day
G205	Support Truck	$ 158.00	Day
G206	Water Truck	$ 473.00	Day
G207	Mobilization and Demobilization for Rock coring	$ 1,208.00	Each
G208	Rock Coring	$ 478.00	Hour
G209	Decontamination of Vehicle and Equipment (Up to 100 miles)	$ 315.00	Each
G210	Field Resistivity, up to 3 arrays, maximum distance of 40 ft.	$ 1,890.00	Each
G211	Environmental Soil Boring with Hollow Stem Auger Portal to Portal	$ 446.00	Hour
G212	Environmental Soil Boring with Direct Push Portal to Portal	$ 399.00	Hour
G213	Environmental Groundwater Sampling with Grundfos, Portal to Portal	$ 289.00	Hour
G214	Environmental Analysis of soil for waste classification		Quote/Sample
G215	Environmental Analysis of liquid for waste classification		Quote/Sample
G216	Ground Resistance Tester (Four Point Method), plus travel	$ 1,700.00	Each
G217	Potholing, two-man crew	$ 600.00	Hour
G218	Ground Penetrating Radar (GPR) for Locating Utilities	$ 1,500.00	Day

Mix Design Review

Code	Item	$/Unit	Unit
D250	Review of Concrete Mix Design	$ 168.00	Each
D251	Review of Concrete Mix Design, per Trial Batch, 6 cylinder, ACI	$ 250.00	Each
D252	Review of Grout Mix Design	$ 168.00	Each
D253	Review of Mortar Mix Design	$ 168.00	Each

D254	Review of Asphalt Mix Design	$	210.00	Each
D255	Review of Asphalt Mix Design, Caltrans	$	150.00	Each

Sample Pick-Up/Hold

Code	Item	$/Unit	Unit
	All hold samples are charged at the same rate as the testing rate		
U303	Technician for Specimen pick up, minimum 2 hours	$ 120.00	Hour
U304	Vehicle (Up to 100 miles)	$ 75.00	Trip

Field Equipment Charges

Code	Item	$/Unit	Unit
E350	Brass Mold	$ 21.00	Each
E351	Concrete Air Meter	$ 53.00	Day
E352	Concrete Unit Weight (Scale, Bucket, Rod and Mallet)	$ 32.00	Day
E353	Field Vehicle Usage (Up to 100 miles)	$ 74.00	Trip
E354	Concrete/Asphalt Coring Equipment rental (min 4 hrs and 8 hrs after)	$ 200.00	Hour
E355	Fireproofing Adhesion/Cohesion	$ 21.00	Test
E356	Hand Auger Equipment	$ 131.00	Day
E357	Level D Personal Protective Equipment (PPE), per person	$ 42.00	Day
E358	Liquid Penetrating Consumables	$ 32.00	Day
E359	Magnetic Particle Equipment and Consumables	$ 42.00	Day
E360	Ultrasonic Equipment and Consumables	$ 68.00	Day
E361	Nuclear Density Gauge Usage	$ 19.00	Hour
E362	Compaction Test, per location	$ 21.00	Test
E363	Portable Concrete Laboratory-not including Technicians	$ -	Quote/Day
E364	Pachometer (Rebar Locator)	$ 58.00	Day
E365	Environmental PID Usage	$ 200.00	Day
E366	Pull Test Equipment	$ 74.00	Day
E367	Sand Cone Test Kit (Scale, Burner, Sand Cone Apparatus)	$ 179.00	Day
E368	Schmidt Hammer	$ 53.00	Day
E369	Torque Wrench, Small	$ 21.00	Day
E370	Torque Wrench, Large	$ 37.00	Day
E371	Torque Multiplier (Skidmore)	$ 95.00	Day
E372	Miscellaneous Equipment Charge	$ -	Quote Each
E373	Vapor Emission Kit	$ 58.00	Each
E374	Field Resistivity Meter	$ 240.00	Day
E375	Water Level Meter	$ 80.00	Day
E376	Environmental ph/Turbidity/Conductivity/Temp Meter	$ 110.00	Day
E377	Environmental FID Usage	$ 110.00	Day
E378	Environmental groundwater sampling pump	$ 215.00	Day
E379	XRF Lead Analyzer	$ 131.00	Day
E380	Relative Humidity	$ 74.00	Day
E381	GPR (Groud Penetrating Radar), for buried rebar in concrete	$ 90.00	Hour
E382	Load Cell for tension - Maximum 2,000 lb	$ 55.00	Hour
E383	Barologger Solinst A/E 61160	$ 180.00	Day
E384	Drone Site Monitoring & Mapping	$ 225.00	Day
E385	Equipment for Double Ring Infiltrometer Testing per ASTM D3385	$ 750.00	Day
E386	Equipment for Standard Test Method for Permeability of Synthetic Turf Sports Field Based Stone and Surface System by Non-confined Area Flood Test Method. ASTM F2898	$ 250.00	Day
E387	Minor Traffic Control Equipment for residential/minor or secondary collector (signs and cones)	$ 1,700.00	Day
E388	Zefon High Volume Air Sampling Pump	$ 150.00	Day
E389	Zefon Rotameter	$ 40.00	Day

E390	PCM Air Cassettes	$	15.00	Each
E391	TEM Air Cassettes	$	15.00	Each
E392	Ghost Wipes for surface sampling, including lead and beryllium testing	$	5.00	Each
E393	TEM Cassette, 25mm, Microvac for collection of fibers and particulate	$	15.00	Each
E394	Automatic Pull-off Adhesion Tester (ASTM C1583)	$	350.00	Day
E395	50mm Dolly's for ASTM C1583	$	65.00	Each

Schedule of Fees for Laboratory Services

Concrete Tests

Code	Item		$/Unit	Unit
C400	6" x 12" Cylinder: Compression Strength (ASTM C39)	$	37.00	Test
C401	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293, or CTM 523)	$	84.00	Test
C402	Cylinders: Splitting Tensile Strength (ASTM C496)	$	84.00	Test
C403	Core Compression including Trimming (ASTM C39)	$	53.00	Test
C404	Concrete Core Compression excludes sampling (C42)	$	58.00	Test
C404	Coring of Test Panels in Lab	$	26.00	Each
C405	Diamond Sawing of Cores or Cylinders (ASTM C642)	$	26.00	Test
C406	Density, Absorption, and Voids in Hardened Concrete (ASTM C642)	$	315.00	Test
C407	Modulus of Elasticity Static Test (ASTM C469)	$	131.00	Test
C408	Unit Weight Including Lightweight Concrete	$	68.00	Test
C409	Lightweight Concrete Fill, Compression (C495)	$	27.00	Test
C410	Drying Shrinkage Up to 28 Days: Three 3" x 3" or 4" x 4" Bars, Five Readings up to 28 Dry Days (ASTM C157)	$	394.00	Test
C411	Additional Reading	$	47.00	Set of 3 Bars
C412	Storage Over Ninety (90) Days	$	37.00	et of 3 Bars/Mont
C413	Splitting Tensile Strength (C496)	$	55.00	Test
C435	Coefficient of Thermal Expansion of Concrete (CRD 39, AASHTO T336)	$	840.00	Test
C436	Compression Test (ASTM C495 and C472)	$	47.00	Test
C437	Air Dry Density (ASTM C472)	$	37.00	Test
C438	Oven Dry Density (ASTM C495)	$	63.00	Test
C439	Sample Trimming in the lab, up 6" diameter	$	21.00	Test

Concrete Block, ASTM C140

Code	Item		$/Unit	Unit
C412	Compression (3 Required Per ASTM C90)	$	63.00	Each
C413	Absorption/Moisture Content/Oven Dry Density (3 Required per ASTM)	$	95.00	Each
C414	Linear/Volumetric Shrinkage (ASTM C426)	$	105.00	Test
C415	Web and Face Shell Measurements	$	47.00	Test
C416	Tension Test	$	179.00	Test
C417	Core Compression	$	58.00	Test
C418	Conformance Package (CTM 90)	$	63.00	Test
C419	Shear Test of Masonry Cores: 2 Faces	$	95.00	Test
C420	Efflorescence Test (3 Required), each	$	58.00	Test

Laboratory Trial Batch: Cement, Concrete, Grout and Mortar

Code	Item	$/Unit	Unit
L450	All trial batch for cement, concrete, grout, mortar, etc		Quote Each

Brick Masonry Tests

Code	Item		$/Unit	Unit
M500	Modulus of Rupture: Flexural (5 Required Per ASTM), each	$	58.00	Test
M501	Compression Strength (3 Required Per ASTM), each	$	53.00	Test
M502	Absorption: 5 Hour or 24 Hour (5 Required), each	$	53.00	Test
M503	Absorption: 7 Day (CTM 67)	$	50.00	Test

M504	Absorption (Boil): 1, 2, or 5 Hours (5 Required), each	$	84.00	Test
M505	Initial Rate of Absorption (5 Required), each	$	42.00	Test
M506	Moisture as Received (CTM 67)	$	25.00	Test
M507	Saturation Coefficitent (CTM 67)	$	60.00	Test
M508	Efflorescence (5 Required), each	$	89.00	Test
M509	Core: Compression, each	$	74.00	Test
M510	Shear Test on Brick Core: 2 Faces, each	$	95.00	Test

Masonry Prisms

Code	Item	$/Unit	Unit
M508	Compression Test: Composite Masonry Prisms Up To 8" x 16"	$ 210.00	Test
M509	Compression Test: Composite Masonry Prisms Larger Than 8" x 16"	$ 305.00	Test
M510	Masonry: Cutting of Cubes or Prisms	$ 74.00	Test

Mortar and Grout

Code	Item	$/Unit	Unit
M511	Compression: 2" x 4" Mortar Cylinders	$ 47.00	Test
M512	Compression: 3" x 3" x 6" Grout Prisms, Includes Trimming	$ 63.00	Test
M513	Compression: 2" Cubes (ASTM C109)	$ 63.00	Test
M514	Compression: Cores (ASTM C42)	$ 63.00	Test
M515	Mortar Expansion (ASTM C806)	$ 315.00	Test

Fireproofing Tests

Code	Item	$/Unit	Unit
F550	Oven Dry Density	$ 79.00	Test
F551	Adhesion/Cohesions Testing, per hour, 4 hour minimum	$ 126.00	Test

Gunite and Shotcrete Tests

Code	Item	$/Unit	Unit
C420	Core Compression Including Trimming (ASTM C42)	$ 63.00	Test
C421	Compression 6" x 12" Cylinders	$ 37.00	Test
C422	Compression: Cubes	$ 42.00	Test

Soils and Aggregate Tests

Code	Item	$/Unit	Unit
S599	Atterberg Limits/Plasticity Index (ASTM D4318)	$ 147.00	Test
S600	California Bearing Ratio (ASTM D1883)	$ 375.00	Test
S601	Chloride and Sulfate Content (CTM 417, CTM 422)	$ 152.00	Test
S602	Consolidation, Full Cycle (ASTM 2435, CTM 219)	$ 289.00	Test
S603	Cleanness Value: 1" x #4 (CTM 227)	$ 194.00	Test
S604	Cleanness Value: 2.5" x 1.5" or 1.5" x .75" (CTM 227)	$ 310.00	Test
S605	Corrosivity Series: Sulfate, Cl, pH (CTM 643 and 417)	$ 210.00	Test
S606	Lab Resistivity	$ 131.00	Test
S607	Direct Shear Test (ASTM D3080)	$ 268.00	Test
S608	Direct Shear Test, per point	$ 116.00	Test
S609	Direct Shear Test Sample Remolding (ASTM D3080)	$ 47.00	Test
S610	Durability Index Fine Aggregate	$ 168.00	Test
S611	Expansion Index (ASTM D4829, UBC 18-2)	$ 163.00	Test
S612	Durability Index: Coarse Aggregate	$ 168.00	Test
S613	Maximum Density: Methods A/B/C (ASTM D1557 or D698, CTM 216)	$ 194.00	Test
S614	Maximum Density: Check Point abrasion (ASTM D1557)	$ 79.00	Test
S615	Maximum Density: AASHTO C (Modified) (AASHTO T-180)	$ 210.00	Test
S616	Moisture Density Rock Correction	$ 168.00	Test
S617	Moisture Content (ASTM D2216, CTM 226)	$ 26.00	Test
S617A	Moisture, Ash and Organic Matter of Peat/Organic Soils	$ 100.00	Test

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S618	Density: Ring Sample (ASTM D2937)	$	32.00	Test
S619	Density: Shelby Tube Sample (ASTM D2937)	$	58.00	Test
S620	Organic Impurities (ASTM C40)	$	100.00	Test
S621	Failing Head Permeability (ASTM D2434)	$	263.00	Test
S622	R-Value: Soil (ASTM 2844)	$	373.00	Test
S623	R-Value: Aggregate Base (ASTM D2844)	$	373.00	Test
S624	Sand Equivalent (ASTM D2419, CTM 217)	$	137.00	Test
S625	Soil Classification (ASTM D2487)	$	37.00	Test
S626	Sieve #200 Wash Only (ASTM D1140)	$	100.00	Test
S627	Sieve with Hydrometer: Sand to Clay (ASTM D422)	$	305.00	Test
S628	Sieve Analysis including Wash (ASTM C136)	$	179.00	Test
S629	Sieve Analysis Without Wash	$	126.00	Test
S630	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 202)	$	100.00	Test
S631	Specific Gravity and Absorption: Fine(ASTM C128, CTM 207)	$	168.00	Test
S632	Swell/Settlement Potential: One Dimensional (ASTM D4546)	$	173.00	Test
S633	Unit Weight Coarse Aggregate	$	84.00	Test
S634	Unit Weight Fine Aggregate	$	84.00	Test
S635	Voids in Aggregate (ASTM C29)	$	95.00	Test
S636	Unconfined Compression (ASTM D2166, CTM 221)	$	105.00	Test
S637	LA Rattler	$	205.00	Test
S638	pH of soil	$	26.00	Test
S639	Pocket Penetration Test	$	11.00	Test
S640	Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer (ASTM D3385)	$	2,200.00	Test
S641	Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-Confined Area Flood Test Method ASTM F2898	$	1,100.00	Test
S637	Shrinkage of Soil Mixture	$	290.00	Test
S638	Hydraulic Conductivity of Saturated Porous Materials by Flexible Wall (ASTM D5084)	$	240.00	Test
S639	Consolidated Drained Triaxial Compression Test for Soils (ASTM D7181)	$	280.00	Test
S640	Consolidated Undrained Triaxial Compression Test for Cohesive Soils (ASTM D4767)	$	315.00	Test
S641	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils (ASTM D2850)	$	295.00	Test
S642	Triaxial Shear, C.D., three points, (CTM 230)	$	280.00	Test
S643	Triaxial Shear, C.U., three points (ASTM D4767, CTM 230)	$	315.00	Test
S644	Triaxial Shear, U.U., one point (ASTM D2850, CTM 230)	$	295.00	Test
S645	Wax Density (ASTM D1188)	$	63.00	Test
S646	Clay Lumps and Friable Particles (CTM 142)	$	55.00	Test
S647	Crushed Particles (CTM 205)	$	75.00	Test
S648	Mortar Making Properties of Fine Aggregate (CTM 87)	$	140.00	Test

Asphalt Concrete Tests

Code	Item	$/Unit	Unit
A650	Asphalt Core Density	$ 63.00	Test
A651	Extraction % AC by Ignition Oven (CTM 382)/ Binder	$ 184.00	Test
A652	Gradation on Extracted Asph (ASTM D6507 andD5444, CTM 202, and CTM 382)	$ 105.00	Test
A653	Moisture Content (CTM 370)	$ 79.00	Test
A654	Maximum Theoretical Specific Gravity (RICE) (ASTM D2041, CTM 309)	$ 168.00	Test
A655	Specific Gravity and Absorption: Coarse (ASTM C127, CTM 206)	$ 95.00	Test
A656	Specific Gravity and Absorption: Fine (ASTM C128, CTM 207)	$ 168.00	Test
A657	Sieve Analysis (ASTM D5444 and C136)	$ 100.00	Test
A658	Sieve Analysis with Wash (ASTM D5444)	$ 147.00	Test
A659	Sand Equivalent (ASTM D2419)	$ 142.00	Test
A660	5 pt LTMD Bulk Specific Gravity (CTM 308, CTM 375)	$ 299.00	Test
A661	Flat and Elongated Particles (ASTM D4791)	$ 221.00	Test
A662	Fine Aggregate Angularity (AASHTO T304 A)	$ 205.00	Test
A663	Maximum Density HVEEM (ASTM D1560)	$ 221.00	Test
A664	Maximum Density Marshall (ASTM D1559 and D561)	$ 221.00	Test

A665	Mix Stability (CTM 304)	$	221.00	Test
A668	Wet track Abrasion Loss (ASTM D3910), each	$	184.00	Test
A669	Extraction % of Emulsion (ASTM D6307)	$	163.00	Test
A670	Slurry seal field consistency test (ASTM D3910)	$	89.00	Test
A671	Maximum Theoretical Unit Weight (ASTM D2041)	$	160.00	Test

Reinforcing Steel

Code	Item	$/Unit	Unit
R700	Bend Test: #11 or Smaller	$ 68.00	Test
R701	Bend Test: Larger Than # 11	$ 100.00	Test
R702	Tensile Test: # 11 or Smaller	$ 89.00	Test
R703	Tensile Test: # 14	$ 121.00	Test
R704	Tensile Test: # 18	$ 300.00	Test
R705	Slippage Test In Addition to Tensile Test (Per Caltrans 52-1.08C)	$ 350.00	Test
R706	Tensile Test: Mechanical Splice # 11 and Smaller	$ 130.00	Test
R707	Tensile Test: Mechanical Splice # 14	$ 180.00	Test
R708	Tensile Test: Mechanical Splice # 18	$ 350.00	Test
R709	Tensile Test: Welded # 11 and Smaller	$ 90.00	Test
R710	Tensile Test: Welded # 14	$ 130.00	Test
R711	Tensile Test: Welded # 18	$ 300.00	Test
R712	Sample Straightening for Bend or Tensile Test (if required)	$ 65.00	Test
R713	Testing Multi-Wire Steel Prestressing Strand	$ 350.00	Test
R714	Tensile Test: T-Head #11 and Smaller	$ 160.00	Test
R715	Tensile Test: T-Head #14	$ 210.00	Test
R716	Tensile Test: T-Head #18	$ 300.00	Test
R717	Tensile Test: Welded Hoops # 11 and Smaller	$ 130.00	Test
R718	Tensile Test: Welded Hoops # 14	$ 180.00	Test
R719	High Strength Bolt, Nut and Washer Conformance, set, A-32	$ 135.00	Test
R720	Structural Steel Tensile Test up to 200,000 lbs. (machining extra), A370	$ 45.00	Test

Metal Testing

Code	Item	$/Unit	Unit
R714	Hardness Test (Rockwell) and Brinnel (ASTM E18)	$ 79.00	Test
R715	Hardness Test of Nuts	$ 89.00	Test
R716	Hardness Test of Bolts	$ 105.00	Test
R717	Hardness Test of Washers	$ 89.00	Test
R718	ASTM F606 Bolt Axial, Wedge Tensile and Proof load	$ 125.00	Test

Concrete Coring Services

Code	Item	$/Unit	Unit
C423	Equipment Concrete (4 and 8 hour minimum)	$ 210.00	Hour
	Individual Core Prices (all prices are for a four core minimum job):	$ -	
C424	Slab on Grade Coring for 2",3" and 4" Diameter (first 6" depth) each	$ 74.00	Test
C425	Slab on Grade Coring for 6" and 8" Diameter (first 6" depth) each	$ 79.00	Test
C426	Slab on Grade Concrete Core (price per inch after 6" depth)	$ 11.00	Test
C427	Wall Cores 2",3" and 4" (first 6" in depth) each	$ 89.00	Test
C428	Wall Concrete Core (price per inch after 6" in depth), per inch (Wall core pries based on Contractor supplying access to area to be cored)	$ 11.00	Inch
	Miscellaneous Concrete Coring Prices:	$ -	
C429	Patching Slab on Grade Cored Holes with 2500 psi Concrete Patch, each	$ 21.00	Test
C430	Thickness Determination per ASTM C42, each	$ 21.00	Test
C431	Compression Strength Determination	$ 68.00	Test

Asphalt Concrete Coring Services

Code	Item	$/Unit	Unit

AESCO

	Alternate Individual Core Prices (all prices are for a four core minimum job):			
A661	Asphaltic Concrete Cores 2",3" and 4" Diameter (First 6" in depth), each	$	74.00	Test
A662	Asphaltic Concrete Cores 6" and 8" Diameter (First 6" in depth), each	$	74.00	Test
A663	Asphaltic Concrete Cores price per inch after 6" in depth, each	$	11.00	Test
	Miscellaneous Asphaltic Coring Prices:			
A664	Patching of Core Drilled Holes Using Cold Patch Material, each	$	32.00	Test
A665	Thickness Determination per ASTM C42, each	$	37.00	Test
A666	Specific Gravity for Determination of Percent Compaction per ASTM D 2726, each	$	47.00	Test
A667	Specific Gravity for Determination of Percent Compaction by Paraffin, each	$	68.00	Test

Environmental Tests

Code	Item	$/Unit		Unit
N800	Asbestos Polarized Light Microscopy (PLM) 6-hour/rush Turnaround, each	$	35.00	Test
N801	Asbestos Polarized Light Microscopy (PLM) 8-hour Turnaround, each	$	23.00	Test
N802	Asbestos Polarized Light Microscopy (PLM) 24-hour Turnaround, each	$	21.00	Test
N803	Asbestos Polarized Light Microscopy (PLM) 48-hour Turnaround, each	$	18.00	Test
N804	Asbestos Polarized Light Microscopy (PLM) 72-hour Turnaround, each	$	17.00	Test
N805	Asbestos Polarized Light Microscopy (PLM) 5-day Turnaround, each	$	14.00	Test
N806	Asbestos Polarized Light Microscopy (PLM) 10-day Turnaround, each	$	12.00	Test
N807	Phase Contrast Microscopy (PCM) 6-hour Turnaround, each	$	28.00	Test
N808	Phase Contrast Microscopy (PCM) 24-hour Turnaround, each	$	21.00	Test
N809	Phase Contrast Microscopy (PCM) 48-hour Turnaround, each	$	18.00	Test
N810	Phase Contrast Microscopy (PCM) 3-day Turnaround, each	$	14.00	Test
N811	Phase Contrast Microscopy (PCM) 5-day Turnaround, each	$	12.00	Test
N812	Asbestos Transmission Electron Microscopy (TEM) AHERA, 6-8 hour Turnaround, each	$	202.00	Test
N813	Asbestos Transmission Electron Microscopy (TEM) AHERA, 24 hour Turnaround, each	$	144.00	Test
N814	Asbestos Transmission Electron Microscopy (TEM) AHERA, 48 hour Turnaround, each	$	127.00	Test
N815	Asbestos Transmission Electron Microscopy (TEM) AHERA, 3-day Turnaround, each	$	115.00	Test
N816	Asbestos Transmission Electron Microscopy (TEM) AHERA, 5-day Turnaround, each	$	110.00	Test
N817	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 4-hour Turnaround, each	$	120.00	Test
N818	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 8-hour Turnaround, each	$	115.00	Test
N819	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 24-hour Turnaround, each	$	110.00	Test
N820	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 48-hour Turnaround, each	$	98.00	Test
N821	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 72-hour Turnaround, each	$	92.00	Test
N822	Asbestos Polarized Light Microscopy (PLM) 1000 Point Count, 5-day Turnaround, each	$	81.00	Test
N823	Asbestos TEM NIOSH 7402, same day Turnaround, each	$	133.00	Test
N824	Asbestos TEM NIOSH 7402, 24-hour Turnaround, each	$	111.00	Test
N825	Asbestos TEM NIOSH 7402, 72-hour Turnaround, each	$	87.00	Test
N826	Asbestos TEM NIOSH 7402, 5-day Turnaround, each	$	81.00	Test
N827	Asbestos TEM Microvac Dust Quantitative, 6-hour Turnaround, each	$	345.00	Test
N828	Asbestos TEM Microvac Dust Quantitative, 24-hour Turnaround, each	$	250.00	Test
N829	Asbestos TEM Microvac Dust Quantitative, 48-hour Turnaround, each	$	230.00	Test
N830	Asbestos TEM Microvac Dust Qualitative, 24-hour Turnaround, each	$	180.00	Test
N831	Asbestos TEM Microvac Dust Qualitative, 48-hour Turnaround, each	$	173.00	Test
N832	Asbestos TEM Microvac Dust Qualitative, 3-day Turnaround, each	$	144.00	Test
N833	Asbestos TEM Microvac Dust Qualitative, 5-day Turnaround, each	$	127.00	Test
N834	Lead Wipe Dust (Flame Atomic Absorption), 4-hour Turnaround, each	$	41.00	Test
N835	Lead Wipe Dust (Flame Atomic Absorption), 6-hour/same day Turnaround, each	$	23.00	Test
N836	Lead Wipe Dust (Flame Atomic Absorption), 24-hour Turnaround, each	$	18.00	Test
N837	Lead Wipe Dust (Flame Atomic Absorption), 48-hour Turnaround, each	$	15.00	Test
N838	Lead Wipe Dust (Flame Atomic Absorption), 3-day Turnaround, each	$	12.00	Test
N839	Lead Air Sample (Flame Atomic Absorption), 4-hour Turnaround, each	$	41.00	Test
N840	Lead Air Sample (Flame Atomic Absorption), 6-hour/same day Turnaround, each	$	23.00	Test
N841	Lead Air Sample (Flame Atomic Absorption), 24-hour Turnaround, each	$	18.00	Test
N842	Lead Air Sample (Flame Atomic Absorption), 48-hour Turnaround, each	$	15.00	Test

N843	Lead Paint Chip (Flame Atomic Absorption), 3-day Turnaround, each	$	12.00	Test
N844	Lead Paint Chip (Flame Atomic Absorption), 4-hour Turnaround, each	$	41.00	Test
N845	Lead Paint Chip (Flame Atomic Absorption), 6-hour/same day Turnaround, each	$	23.00	Test
N846	Lead Paint Chip (Flame Atomic Absorption), 24-hour Turnaround, each	$	18.00	Test
N847	Lead Paint Chip (Flame Atomic Absorption), 48-hour Turnaround, each	$	15.00	Test
N848	Lead Paint Chip (Flame Atomic Absorption), 3-day Turnaround, each	$	12.00	Test
N849	Lead Soil (Flame Atomic Absorption), 3-hour Turnaround, each	$	46.00	Test
N850	Lead Soil (Flame Atomic Absorption), 6-hour Turnaround, each	$	35.00	Test
N851	Lead Soil (Flame Atomic Absorption), 24-hour Turnaround, each	$	27.00	Test
N852	Lead Soil (Flame Atomic Absorption), 32-hour Turnaround, each	$	22.00	Test
N853	Lead Soil (Flame Atomic Absorption), 48-hour Turnaround, each	$	20.00	Test
N854	Lead Soil (Flame Atomic Absorption), 3-day Turnaround, each	$	19.00	Test
N855	Lead Soil (Flame Atomic Absorption), 4-day Turnaround, each	$	18.00	Test
N856	Lead Soil (Flame Atomic Absorption), 5-day Turnaround, each	$	17.50	Test

***Escalation Rate**

AESCO will apply a 4% escalation rate to fees at the beginning of each calendar year to account for cost increases. This rate will be reflected in all project-related billings starting January 1 of each year.

Prevailing Wage Rate Schedule (2025)

Item Description	Unit	Unit Price
Field Support		
Field Survey Crew & Equipment (Prevailing Wage) *	Hour	$385.00
Round Trip Travel Time & Costs	Hour	$165.00
Office Support		
Principal	Hour	$275.00
Director Surveying/Professional Land Surveyor	Hour	$235.00
Senior Project Manager	Hour	$195.00
Project Surveyor	Hour	$180.00
GPS Post Processing	Hour	$170.00
Survey Technician	Hour	$165.00
Drafting/AutoCAD Technician	Hour	$130.00
Accounting / Clerical	Hour	$90.00
Reimbursable Costs		
In-House Reproductions		Cost + 15%
Printing and Materials		Cost + 15%
Parking and Tolls		Cost + 15%
Express Mail, Courier, Next Day Service		Cost + 15%
Special Sub-Consultant Services (GPR, etc.)		Cost + 10%
Miscellaneous Services		
Per Diem (when required)	Day	Per GSA Schedule
Consultation in Connection with Litigation	Hour	$465.00
Transportation (per 2025 IRS Mileage Rate)	Mile	$0.69
Overtime and Saturday Rates		
	Hour	1.5 times Hourly Rate

The hourly rate increases 3% per year to cover cost of living. Also, a 10% mark-up will be added to any sub-consultants utilized to cover project management and administration costs. Hourly rates good for 2025.

*4 or 8 Hour Minimum

GPR
Mapping
Potholing
Utility Locating
CCTV Pipe Inspection

C BELOW

SUBSURFACE IMAGING

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Estimate

Job No.	08-250389-P
Quote No.	00058348
Date:	03-04-2025
Expires on:	06-04-2025
Payment Terms:	T&M | NET 30
Prevailing Wage	Yes

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Bill To
GHD
175 Technology Dr., Suite 200
Irvine, CA 92618

Opportunity Name

City of HB On Call

Primary Contact
Jennifer Pawenski
707-521-0222
jennifer.pawenski@ghd.com

Jobsite Address
City of Huntington Beach
Various locations
Huntington Beach, CA

Sales Rep	Ext.	Email	Cell
Robert Foster		robertf@cbelow.com	+1 9516270112

C Below, Inc. (C Below) submits this proposal for the City of HB On Call project. Our proposal is based on the enclosed estimated hourly breakdown and the C Below Schedule of Fees. To successfully complete the outlined scope of services in this proposal, our field technicians will need uninterrupted clear access to the work area and the appropriate project documentation. We appreciate the opportunity to provide you with our services and look forward to helping ensure a safe and successful project.

C BELOW
SUBSURFACE IMAGING
An RMA Company

Utility Locating Scope of Work

C Below will provide a comprehensive Utility Investigation of the outlined area shown on Exhibit A (exhibit will be provided at a future date).

The purpose of this investigation is to find all utilities outlined below to quality level (QL) B per ASCE 38-02. (see attached documentation on available quality levels).

C Below will exhaust any and all utility locating methods, plus "tribal knowledge", to positively identify the horizontal and vertical locations of the utility lines.

This includes utilizing the equipment listed below:

- Electromagnetic Locator (Locator)
- Locatable CCTV Push Camera. No video will be provided unless specifically included in your quote. (Push Cam)
- Ground Penetrating Radar (GPR).
- Locatable Duct Rodder (Ram Rod).
- Crawler Camera and lateral Launch Equipment if specifically included in your quote. (Crawler)

Deliverables- Utility locations along with depth estimates will be marked directly on the surface (Please reference your Markings Card for explanations of these.)

Mapping Scope of Work

At the completion of this project the client will be provided a comprehensive 2D utility map in CAD and PDF. Client shall provide CAD background for utilities to be added to. While our maps do include utility depth estimates from the surface, survey elevations are not included unless specifically requested at the time of this estimate.

PHASE 1 | Utility Mark Out w/ Waterbased Paint. Utility marks will remain on the site unless the client has hired C Below to remove the markings.

PHASE 2 | C Below's Mapping Team will pick up the markings with the depth estimates from PHASE 1. Mapping shall be completed within a reasonable time frame to assure integrity of marks.

PHASE 3 | Quality review with the Lead Technicians and the Mapping Team to ensure the quality of the deliverable and applicable notes.

Potholing Scope of Work

C Below will perform (5) potholes as indicated in the client provided potholing exhibit (will be provided at a future date). A standard pothole is 12 in x 12 in, performed to the top of pipe or encasement with sand backfill and a permanent surface patch.

Additional costs: Potholes outside of our standard will be billed based on actual depth or conditions. Limitations on work hours may cause additional mobilization or traffic control charges. Permitting fees will be adjusted to

actual costs.

If C Below is not hired to mark the locations of the potholes, they will be performed off of the utility provider's marks under the client's direction. Utility providers typically do not mark out sewer or storm drain lines. Dry holes are considered billable. Locating is a separated line item that will be represented on your estimate.

Client will be provided a detailed potholing report at the conclusion of the investigation.

SERVICE INCLUDES

Dig Alert Coordination & Delineation
Vacuum Excavation to top of utility, encasement or stop depth
Permanent Cold Patch
Sand Backfill
Removal of Debris
Pothole Report

SERVICE DOES NOT INCLUDE

Encroachment Permit
Hot Patching
Slurry Backfill
Standard Traffic Control
Engineered Traffic Control Plans
Extensive Traffic Control
Flagging for Traffic Control
Sidewalk Concrete Panel Replacement
Removal of Dig Alert Marks
Survey of Pothole Locations pre or post pothole
Please request a quote if any of the above services are needed

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Product Line Items

	Estimated Costs
Utility Locating	$4,460.00
Mapping	$1,720.00
Potholing	$7,290.00
Total USD	**$13,470.00**

Estimate Worksheets

Utility Locating				
Item	Quantity	Unit	Unit Price	Total
Locating | Certified Supervising Technician	8	HR	$195.00	$1,560.00
Locating | Trained Certified Assistant Technician	8	HR	$180.00	$1,440.00
Travel Time | Crew	2	HR	$255.00	$510.00
Project Coordination	6	HR	$95.00	$570.00
Administrative	4	HR	$95.00	$380.00
			Subtotal	**$4,460.00**

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Mapping				
Item	Quantity	Unit	Unit Price	Total
Mapper | Certified Supervising Technician	4	HR	$230.00	$920.00
Drafting | In-house Drafting in AutoCAD	3	HR	$150.00	$450.00
Mapping | Travel Time | Single Tech	2	HR	$175.00	$350.00
			Subtotal	**$1,720.00**

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Potholing				
Item	Quantity	Unit	Unit Price	Total
Potholing Hourly Crew: Incl surface breaking, sand backfill, and perm cold patch repair	8	HR	$595.00	$4,760.00
Potholing | Travel Time | Crew	2	HR	$325.00	$650.00
Vacuum Excavation Spoil Removal and Dump Fee: Removal of excavated spoils and dumping of material	1	EA	$950.00	$950.00
Pothole Report	1	UNIT	$550.00	$550.00
Project Coordination	2	HR	$95.00	$190.00
Administrative	2	HR	$95.00	$190.00
			Subtotal	**$7,290.00**

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Quality Level Definitions

Quality Level D is the most basic level of information for utility locations. It comes solely from existing utility records or verbal recollections, both typically unreliable sources. It may provide an overall "feel" for the congestion of utilities but is often highly limited in terms of comprehensiveness and accuracy. QL-D is useful primarily for project planning and route selection activities.

Quality Level C involves surveying visible utility facilities (e.g., manholes, valve boxes, etc.) and correlating this information with existing utility records (QL-D information). When using this information, it is not unusual to find that many underground utilities have been either omitted or erroneously plotted. Its usefulness, therefore, is primarily on rural projects where utilities are not prevalent or are not too expensive to repair or relocate.

Quality Level B involves the application of appropriate surface geophysical methods to determine the existence and horizontal position of virtually all utilities within the project limits. It addresses problems caused by inaccurate utility records, abandoned or unrecorded facilities, and lost references. Decisions regarding location of storm drainage systems, footers, foundations and other design features can be made to avoid conflicts with existing utilities. Slight adjustments in design can produce substantial cost savings by eliminating utility relocations.

Quality Level A is the highest level of accuracy and involves the full use of the subsurface utility investigation method. It provides information for the precise plan and profile mapping of underground utilities through the nondestructive exposure of underground utilities, and provides the type, size, condition, material and other characteristics of underground features.

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Service Exceptions and Limitation

Locating Exceptions

Our services do not include the location of irrigation lines and associated control valves. We are able to locate sewer and storm drain lines if access is made available. We do not locate abandoned/extra conduits containing no interior cable and we do not locate fiber optic lines or lines without a metallic shield or lacking a tracer wire. C Below has the ability to locate nonmetallic lines but it is outside our normal scope of services. Should the need arise to locate these types of lines, please contact us for an additional quote.

GPR Exceptions

There needs to be at least 8 inches clearance around the perimeter of the scanning area to accommodate the GPR antenna; especially at structure intersections. Scanning surfaces need to be relatively flat with no water present. GPR can penetrate 12 inches of concrete or masonry, but accuracy decreases with increased steel congestion. Indications show up on the radar screen as hyperbolas. The center of the hyperbola is the center of the indication. GPR data, under most circumstances, does not allow for the interpretation of an indications size, only the center location of the indication and embedment depth. Indications such as reinforcing steel or conduit spaced closer than 2 inches on center may show up as one indication.

Mapping Exceptions

Please be sure to provide any project documents prior to dispatch. A workable CAD file is required if mapping is to be performed. JPG, TIFF, PDF files are not preferred and may affect the quality of the final product. If no CAD file can be provided, additional costs may apply. A complete and editable background must be provided by the client to ensure the quality of the final product.

Potholing Exceptions

For billing purposes, C Below defines a standard pothole with the dimensions of 1' X 1' X 5' deep. Deviations from this standard definition require rate increases for additional time and materials to facilitate the client requests. Because potholing rates and other associated costs are based on the assumption of 8 hour work days, additional fees may apply if work is limited to less than 8 hours per day. These fees may include, but are not limited to: additional traffic control, travel time, and disposal fees. Standard pothole pricing includes holes at locations with a soil surface or an asphalt surface up to 6-inches thick. Additional fees will apply if the asphalt surface is over 6" thick or the proposed hole location has a concrete surface. If during the potholing operation the soil is found to have large aggregate or other debris over 3-inches in diameter, ground water, roots or hazardous materials, additional fees will apply. For further clarification please speak to your C Below representative. Optional Services include: hot patching per City requirements, slurry backfill, standard or engineered traffic control plans, trenching or excavation beyond standard pothole dimensions.

CCTV Exceptions

All lines designated by the client for need of inspection must have clear unobstructed access points. Information gathered during the inspection must be agreed upon prior to dispatch. For added scope of water jetting additional fees apply.

Traffic Control

Standard Traffic Control includes one lane closure with minimal signage not spanning an intersection. Extensive Traffic Control includes multiple lane closures, arrow boards, multiple signage requirements, spanning of intersections, flaggers, and other non-standard setups.

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GENERAL CONDITIONS

AGREEMENT. This agreement is made by and between C Below, Inc. ("C BELOW") and the party that accepted C BELOW's proposal or requested that C BELOW perform Services ("Client"). C BELOW shall mean the aforementioned entity, any of its affiliates or subsidiaries, to the extent same are performing any of the Services under this Agreement, and their respective engineers and employees. This "Agreement" includes C BELOW's proposal and any exhibits or attachments noted in the proposal or incorporated by reference including but not limited to these General Conditions. Requesting Services from C BELOW shall constitute acceptance of the terms of these General Conditions.

1. **SCOPE OF SERVICES.** Services means the service(s) performed by C BELOW for Client or at Client's direction. C BELOW's findings, opinions, and recommendations are based upon data and info C BELOW obtained by and furnished to C BELOW at the time of the Services. C BELOW may rely upon information provided by the Client or third parties. Client may request additional work or changes beyond the scope of Services described in C BELOW's Proposal. If any alteration or addition of Services are requested by the Client ("Additional Services"), C BELOW may provide a proposal detailing the additional scope of work, time extension and associated fees for Client's review. Client shall provide written acceptance of such. C BELOW shall not be obligated to perform the Additional Services, if Client does not follow these procedures, but instead directs, authorizes, or permits C BELOW to perform the Additional Services without written acceptance. To the extent C BELOW does perform the Additional Services without written acceptance, C BELOW will be paid for this work according to its proposal for same or current fee schedule.

2. **DELAYS.** C BELOW shall be entitled to an equitable adjustment to the project schedule and compensation to compensate C BELOW for any increase in time or costs necessary to perform the Services under this Agreement due to any cause beyond C BELOW's reasonable control. All promises related to the time of the Services are approximations by C BELOW and are subject to the Client and contractor's schedules, weather conditions, travel conditions, disputes with workmen or parties, accidents, strikes, natural disasters, health emergencies, discovery of hazardous materials, differing or unforeseeable site conditions or project conditions, acts of governmental agencies or authorities, or other causes. In no event shall C BELOW be responsible for any damage or expense due to delays from any cause, other than to the extent the damage or expense is directly caused by C BELOW's own proven negligence after having been warned in writing by the Client of the damage or expense which may result from the delay.

3. **MINIMUM CHARGES.** All locating Services are based on a minimum of four hours. Over four hours shall be a minimum of eight hours. If a technician is scheduled to perform a service and no work is performed, a two-hour minimum charge shall apply (show-up charge).

4. **WORKING HOURS** C BELOW's regular workweek is Monday - Friday. Normal work hours are 7:00 am – 5:00 pm. For work performed Monday – Friday, overtime hours (1.5 times the contracted hourly rate) apply after eight hours worked per day. Premium time hours (2 times the contracted hourly rate) apply after twelve hours worked per day. Work performed on Saturday shall be billed at 1.5 times the contracted hourly rate. Work performed on Sundays and Holidays shall be billed at 2.0 times the contracted hourly rate. Holidays observed by C BELOW are New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, the day after Thanksgiving and Christmas. Overtime hour charges shall be in one-hour increments.

5. **SCHEDULING & CANCELLATION** A minimum of 24-hours' notice is required when scheduling C BELOW's Services. If Services are requested the same day or after 2:00 pm the preceding day, a premium expedite fee of $75 per technician will apply. If Services are canceled less than 24 hours before the scheduled start time, a fee of $75 per technician will apply.

6. **PREVAILING WAGE** The prices quoted within are NOT Prevailing Wage or Union unless specifically stated on the first page of this document. If this project requires Prevailing Wage, our hourly rates will increase the proportional percentage increase every July 1 in accordance with the wage listed by the Director of Industrial Relations which is tied to any applicable union or collective bargaining agreement documented annual increases plus corresponding changes in our general administration and overhead expenses. These adjustments shall become the agreed upon basis for charges by C BELOW to the Client.

7. **CERTIFIED PAYROLL** The prices quoted within are not subject to certified payroll. If Certified Payroll is required, C BELOW's hourly administrative rates will be increased to adhere to the requirement. If Client requests certified payroll after C BELOW commences its Services, then Client will be required to pay for the increased costs.

8. **C.O.D.** Projects totaling less than $5,000.00 in Services

for Clients that have not submitted credit approval through the C BELOW accounting department shall be performed on a Cash on Delivery (C.O.D.) basis. Prior to the start of our Services the C BELOW technician will collect a check from the Client. Alternatively, the Client can opt to pay by Credit Card by filling out a Credit Card Authorization form. If this method is chosen, then a 3% processing fee will be applied. For all other projects, please see the COMPENSATION AND PAYMENT TERMS section of this document (Section 28).

9. **REIMBURSABLE EXPENSES** Outside services performed by others and direct costs expended on the Client's behalf, are charged at cost plus 15%. Equipment and materials purchased/rented by C BELOW exclusively for the project will be invoiced at cost plus 15%. Business license fees for project specific requirements will be invoiced at cost plus 15%.

10. **SERVICE AUTHORIZATION** Written requests will be considered authorization to perform billable work. The Client shall designate member(s) of their staff who have authority to request our Services and notify C BELOW in writing as their authorized representative. Otherwise, all service requests are billable.

11. **PROPOSAL VALID DURATION** Proposed Master Fee Schedule of Rates, Term & Conditions and General Conditions stated within are valid for 30 days from proposal date.

12. **C BELOW RESPONSIBILITIES**. Services performed by C BELOW under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the same profession currently providing the same or similar services under similar circumstances in the same locality and in accordance with applicable standards in effect at the time the Services are performed. C BELOW MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. C BELOW will not be responsible for inaccurate or incomplete information provided to it by Client, individuals or entities for which CLIENT is responsible for, co-consultants or other reasonably reliable sources; for site conditions of which it was not actually informed; for unauthorized modifications to or deviations from C BELOW's instruments of service or the use of unfinalized instruments of service for any purposes including bidding or cost estimating; for hazardous materials or toxic substances at the project site; for the specification of products or equipment for purposes consistent with the manufacturer's published literature; for decisions made by others relating to materials and equipment decisions made by others; for the services and instruments of service provided by others even if incorporated into C BELOW's instruments of service for ease of reference or otherwise; for the performance of the Project's contractors and materials suppliers; for construction means, methods, techniques, sequences or procedures, including without limitation investigation or demolition procedures and safety precautions and programs; and for the actions or inactions of others including utility companies, other consultants and governmental or quasigovernmental agencies. The Services being provided for by C BELOW do not relieve the Client of the responsibility of having to comply with California Government Code §§4216 - 4216.9. It is expressly understood by the Client that C BELOW's Services are not a substitute for compliance with California government Code §§4216 - 4216.9.

Client acknowledges that findings prepared by C BELOW are based on limited information and recognizes that subsurface conditions or other actual conditions may vary from those encountered at the location where explorations are made by C BELOW. Client is responsible for notifying the appropriate party or professional regarding the findings noted by C BELOW and C BELOW accepts no liability in connection therewith. C BELOW shall not be responsible for the interpretation by others of information developed by C BELOW and makes no guarantee that C BELOW's findings are properly implemented by any party. C BELOW shall not be held liable for problems that may occur if C BELOW's recommendations are not followed. To the fullest extent permitted by law Client shall indemnify and hold harmless the Indemnitees (as defined below) from and against any and all Losses (as defined below) arising from or related to interpretations made by others.

13. **CLIENT PARTICIPATION.** Client will make available to C BELOW all information in Client's possession regarding existing and proposed conditions at the site, of which C BELOW may rely on to perform its Services. Such information shall include, but not be limited to, plot plans and topographic surveys. Client shall immediately transmit to C BELOW any new information concerning site condition which becomes available, and any change in plans or specifications concerning the project. C BELOW shall not be liable for any inaccurate or incorrect advice, judgment or decision which is based on any inaccurate information furnished by Client and Client, to the fullest extent permitted by law, shall indemnify the Indemnitees from and against any and all Losses arising out of, or contributed to, by such inaccurate information. In the event Client, the project owner, or other party makes any changes in the plans and specifications, Client agrees to hold C BELOW harmless from any liability arising out of such changes, and Client assumes full responsibility unless Client has given C BELOW prior notice and has received C

BELOW's written consent for such changes. C BELOW does not assume responsibility for any conditions at the Client's site(s) that may present a danger, either potential or real, to health, safety, or the environment. Client hereby agrees that it is the Client's responsibility to notify any and all appropriate federal, state, or local authorities, as required by law, of the existence of any such potential or real danger and otherwise to disclose to all appropriate or affected individuals or entities, in a timely manner, any information that may be necessary to prevent any danger to health, safety, or the environment. Client assumes sole responsibility for determining whether the quantity and the nature of Services ordered by Client is adequate and sufficient for Client's intended purpose.

14. **THIRD PARTIES** To the fullest extent permitted by law and to the extent not resulting from C BELOW's proven negligence, Client agrees to defend, indemnify, and hold harmless C BELOW and all of its agents, affiliates, subsidiaries, officers, directors, representatives, and employees and their successors (collectively the "Indemnitees") from and against any and all claims, demands, suits, losses, charges, losses, causes of action, liability, costs, defense costs, disbursements, expense (including attorney fees and costs at trial and appeal), and/or allegations of responsibility ("Losses") by any and all third parties including but not limited to, contractors, subcontractors, agents, employees (including without limitation Client's employees), assignees transferees, successors, invitees, neighbors, and the public relating in any way to this Agreement, the Services, or the project. It is expressly understood and agreed that the enforcement of these terms and conditions shall be reserved to the Client and C BELOW. Nothing contained in this Agreement shall give or allow any claim or right of action whatsoever by any third person. It is the express intent of the Client and C BELOW that any such person or entity, other than Client or C BELOW, receiving Services or benefits under this Agreement shall be deemed an incidental beneficiary. Neither party may assign this Agreement or any right or obligation hereunder without the prior written consent of the other party, which shall not be unreasonably withheld or delayed; provided, however, that no consent shall be necessary in the event of an assignment to a successor entity resulting from a merger, acquisition or consolidation by or of C BELOW or an assignment to an affiliate or subsidiary of C BELOW.

15. **DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS.** Client shall furnish to C BELOW all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any hazardous waste, toxic, radioactive, or contaminated materials prior to commencement of the Services. Client warrants that it has made reasonable efforts to disclose known or suspected hazardous materials on or near the project site. Client agrees that the discovery of such unanticipated hazardous materials constitutes a changed condition which may require either a re- negotiation of the scope of C BELOW's Services or termination of such Services or this Agreement. Client recognizes that the discovery of hazardous materials may necessitate immediate protective measures to safeguard the public health and safety and agrees to compensate C BELOW for measures that in C BELOW's professional opinion are justified to preserve and protect the health and safety of site personnel and the public. Client agrees to compensate C BELOW for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials. Client agrees that in the event of the discovery of hazardous materials at the site it will report such discovery to the proper authorities as required by federal, state, and local regulations. Client also agrees to inform the project site owner in the event that hazardous materials are encountered at the site. Notwithstanding any other provision of the agreement, to the fullest extent permitted by law Client waives any claim against C BELOW and agrees to defend, indemnify, and save the Indemnitees harmless from and against any and all Losses arising from the presence of hazardous materials on the project site. There is a risk that potholing may result in contamination of certain subsurface areas. To the fullest extent permitted by law Client waives any and all Losses against, and agrees to defend, indemnify, and save the Indemnitees harmless from and against any and all Losses which may arise as a result of subsurface contamination caused by potholing. Client also agrees to adequately compensate C BELOW for any time spent and expenses incurred in defense of any such claim.

16. **SITE CONDITIONS.** Client shall secure all necessary approvals, notices, permits, licenses, and consents from all owners, lessees, contractors, and other possessors of the Project, necessary to commence and complete the Services, and will provide C BELOW access to the project site for all equipment and personnel necessary for the performance of the Services, unless specifically stated within the Estimate Worksheets or Scope of Work in C BELOW's proposal. C BELOW shall be allowed free access to the site. Client understands and agrees that C BELOW shall only be responsible for losses which directly result from C BELOW's negligence. Client is responsible for the accuracy of locations for all subterranean structures and utilities. To the fullest extent permitted by Law, Client waives any claim against C BELOW, and agrees to defend, indemnify, and hold the Indemnitees harmless from and against any and all Losses from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate C BELOW for any time spent or expenses incurred by C BELOW in defense of any such claim.

17. **ENVIRONMENTAL LIABILITY.** Neither this Agreement nor the providing of Services will operate to make C BELOW an owner, operator, generator, transporter, treater, storer, or arranger for disposal or treatment within the meaning of the Resource Conservation Recovery Act, Comprehensive Environmental Response Compensation and Liability Act, or within the meaning of any other law governing the handling, treatment, storage, or disposal of hazardous materials. To the fullest extent permitted by Law, Client will indemnify, defend and hold the Indemnitees harmless from and against any and all Losses arising or claimed to arise from violations by Client of any and all environmental laws, rules, and regulations relating to the existence, generation, current or future ownership, storage, transport, or disposal of pre-existing hazardous substances and wastes, but this indemnity shall not cover such loss, damage, cost or expense to the extent caused by C BELOW's proven negligence in performing the Services under this Agreement. For purposes of this Agreement, a pre-existing hazardous substance is any hazardous substance or hazardous waste having been generated by Client or existing on Client's premises prior to the date of this Agreement.

18. **OWNERSHIP AND LEGAL USE OF DOCUMENTS.** All notes, data, reports, original final reproducible drawings, plans, specifications, calculations, and studies memoranda assembled or prepared by C BELOW are instruments of service with respect to the subject project, and C BELOW shall retain an ownership and property interest therein, whether or not the project is completed. The Client may make and retain copies for information and reference in connection with the subject project; however, such documents are not intended or represented to be suitable for re-use by the Client or others. Any modification, changes, or reuse without written verification or adaptation by C BELOW for the specific purpose intended will be at the Client's sole risk and without liability or legal exposure to C BELOW, and the Client, to the fullest extent permitted by law, agrees to indemnify and hold harmless the Indemnitees from and against any and all Losses whatsoever arising out of or resulting therefrom.

19. **ALLOCATION OF RISK AND LIMITATION OF LIABILITY.** The parties have evaluated the respective risks and remedies under this Agreement and agree to allocate the risks and restrict the remedies to reflect that evaluation. Notwithstanding any other provision to the contrary in this Agreement and to the fullest extent permitted by law, Client agrees to restrict its remedies under this Agreement against C BELOW, its parents, affiliates and subsidiaries ("C BELOW Covered Parties"), so that the total aggregate liability of C BELOW Covered Parties shall not exceed $5,000 or the actual paid compensation for the Services performed by C BELOW under this Agreement, whichever is less. This restriction of remedies shall apply to any and all Losses of any nature arising from or related to this Agreement without regard to the legal theory under which such liability is imposed. Claims must be brought within one calendar year from performance of the Services.

20. **LIABILITY FOR OTHERS.** C BELOW shall not be responsible for supervising, overseeing, or controlling the Client's contractors or for their means and methods, procedures, performance, or site safety. C BELOW shall not be responsible for the acts or omissions of the Client, owner, architect, architect's other consultants, contractor, subcontractors, other third parties or their respective agents, employees, assigns, successors, or any other persons ("Others"). C BELOW shall have no authority to control Others regarding their work or their safety practices. C BELOW does not control or guarantee the work of Others. C BELOW has no duty to inspect or correct health and safety deficiencies of Others. C BELOW will not be responsible for the failure of Others to perform in accordance with their undertakings and the providing of C BELOW's Services shall not relieve Others of their responsibilities to the Client or Others. C BELOW reserves the right to report to the Client any unsafe conditions observed at the Project without altering the foregoing.

21. **CONSEQUENTIAL DAMAGES WAIVER.** Notwithstanding anything to the contrary in this agreement and to the fullest extent permitted by law, Client and C BELOW waive against each other any and all claims for or entitlement to special, incidental, indirect, consequential, delay, punitive, or similar losses or damages arising out of, resulting from, or in any way related to the project or this Agreement.

22. **INSURANCE.** C BELOW will maintain the following insurance coverages and amounts: (1) Workers Compensation insurance as required by law, (2) Employer's Liability insurance with coverage of $1,000,000 per each accident/employee, (3) Commercial General Liability insurance with coverage of $1,000,000 per occurrence/aggregate, (4) Automobile Liability insurance with coverage of $1,000,000 combined single limit, and (5) If C BELOW is providing professional Services, Professional Liability insurance with coverage of $1,000,000 per claim/aggregate. Client shall name C BELOW as additional insured on its Builder's Risk policy. Client shall require any general contractors working on the project site to include C BELOW in any indemnity that the Client requires such contractors to provide to the Client and as an additional insured under any such contractor's general liability insurance policy. Client shall provide C BELOW with a certificate of insurance evidencing the required insurance.

Additional insurance coverage can be obtained at an additional cost to the Client. These costs can be obtained by quotation from C BELOW.

23. **RESOLUTION OF DISPUTES.** Either party may initiate a dispute resolution by providing written notice to the other party setting forth the subject of the claim, dispute, or controversy and the requested relief. The recipient of such notice shall respond within 5 business days with a written statement of its position and a recommended solution to the claim.
If the parties cannot resolve the dispute through negotiation, either party may refer the claim, dispute, or controversy to a panel ("Panel") consisting of a designated senior representative from each party ("Representative"), who shall have the authority to resolve it. The Representatives shall not have been directly involved in the Services and shall negotiate in good faith. No written or verbal representation made by either party in the course of any Panel proceeding or other settlement negotiations shall be deemed to be a party's admission. If the representatives are unable to resolve the dispute within 15 business days, either party may pursue its respective legal and equitable remedies. A party's failure to abide by the foregoing dispute resolution procedures prior to that party's filing of a lawsuit shall result in the dismissal of said lawsuit until the party has abided by the foregoing dispute resolution procedures. Exclusive of lien claims, any legal action or proceeding brought to enforce or otherwise arising out of or relating to this Agreement shall be brought in the county where the C BELOW office originating the work or proposal is located. Each party waives its right to a jury trial in any court action arising between the parties, whether under this Agreement or otherwise related to the work being performed under this Agreement.

24. **COMPENSATION AND PAYMENT TERMS.** Client agrees that an invoice amount is due when received unless otherwise agreed. A service charge of one and one-half percent (1-½%) per month (but not exceeding the maximum allowable by law) will be added to any account not paid within 30 days after the invoice date. In the event that any portion of the account remains unpaid 30 days after the invoice date, C BELOW may immediately discontinue Services on any and all projects for Client, or withhold any final report or instrument of service, or demand prepayment of fees at C BELOW's option. Client shall pay all costs incurred by C BELOW in collecting any delinquent amount, including staff time, court costs and attorney fees. To the fullest extent permitted by law, failure to make payment within sixty (60) days of invoice shall constitute a release of C BELOW from any and all claims which Client may have, either in tort or contract, and whether known or unknown at the time. Should Services based on a fee schedule be performed beyond the end of the calendar year, C BELOW's current fee schedule shall apply unless otherwise negotiated in advance.

25. **TERMINATION.** This Agreement may be terminated without cause by either party upon thirty (30) days written notice, and at any time by either party if the other party defaults in the performance of any material provision of this Agreement and such default continues for a period of seven (7) days after written notice thereof. In the event of termination, C BELOW will be paid for Services performed through the date of termination, plus reasonable termination expenses, including the cost of completing analyses, demobilization, records and reports necessary to document job status at the time of termination.

26. **ENTIRE AGREEMENT.** This Agreement constitutes the entire agreement between the parties and shall supersede other prior agreements and representations. No amendments to this Agreement shall be valid unless made in writing and signed by the parties. If Client uses its standard business forms, all pre-printed terms and conditions contained in or on such forms shall be deemed stricken and null and void. If the terms and conditions of this Agreement conflict with the terms and conditions of any other agreement or document this Agreement shall govern and control over any such conflict. The invalidity or unenforceability of any portion(s) of this Agreement shall in no way affect the validity or enforceability of any other portion(s) hereof. Any invalid or unenforceable portion shall be severed from the Agreement and the balance of the Agreement shall be construed and enforced as if the Agreement did not contain a particular portion held to be invalid or unenforceable. This Agreement may be executed in several counterparts, each of which shall be deemed an original having identical legal effect. The titles, captions and headings of this Agreement are included for ease of reference only and will be disregarded in interpreting or construing this Agreement. C BELOW shall not be bound by any language incorporating by reference any contract or term of any contract unless the term or terms incorporated by reference are specifically furnished to C BELOW and are expressly agreed to in a writing signed by C BELOW.

C BELOW
SUBSURFACE IMAGING
An RMA Company

1385 Old Temescal Rd., Suite 100
Corona, CA 92881
1-888-90-BELOW
Fax: (909) 606-6555

UTILITY LOCATING

Utility locating is an imperative first step prior to geotechnical excavation during pre-construction. Damaged lines are not only expensive to repair but can be extremely dangerous. Starting your project with the knowledge of the types and locations of underground utilities on the job site is an important and cost-effective way to ensure a safe and successful project.

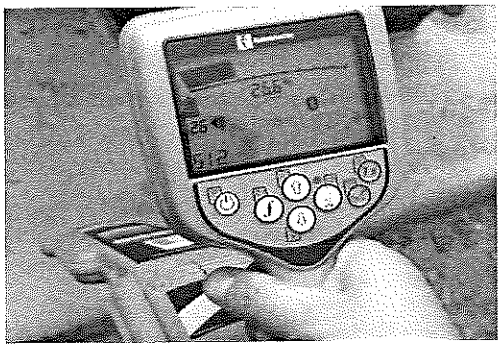
C Below has the ability to locate horizontal and vertical locations for all underground utilities including water, gas, power, waste, communications and cable/TV.

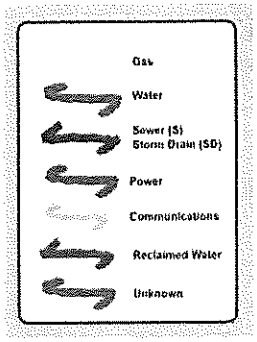
Our technicians will mark all indications directly on the surface of all surveyed areas using the American Public Works Association (APWA) Uniform Color Code. All utility locating marks are made in accordance with the Common Ground Alliance (CGA) Best Practices.

Once lines have been found, there are several options a technician can use for marking the utility locations. Spray paint is the most common, but flags or whiskers are also utilized in areas that have heavy traffic, or where sprinklers may cause the paint to become unreadable prior to excavation. Computer-aided design or CAD drawings of our findings can also be provided upon request.

Our utility locating services shall include only those materials commonly used for locating and marking indications. Clear access to scanning areas need to be provided by the client. Should the area to be scanned not be accessible from the ground, the client will provide the means (man lift, scaffold, etc.) for our technician to properly perform their work.

For utility locating we locate all underground utilities using a standard electromagnetic utility locator. With this method, we are able to find: main water supply lines and associated branch lines made of metal (conductive) or water lines installed with a "tracer wire", all sewer and waste lines by electromagnetic location, power lines, telecommunication lines, gas lines with tracer wires.





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An RMA Company

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GROUND PENETRATING RADAR (GPR)

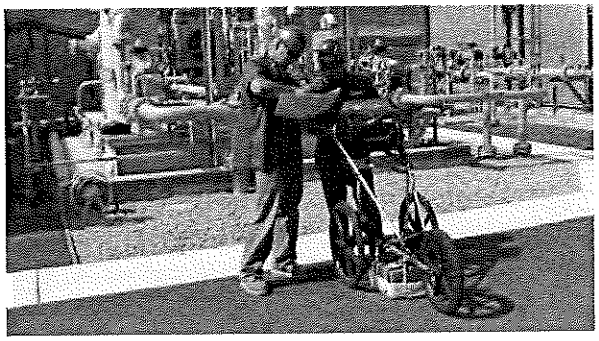
C Below uses GPR for locating reinforcing steel, prestressing strand, conduit and other indications in concrete and masonry structures. We use this method because it is one of the safest, fastest and most accurate methods currently available. With the ability to penetrate up to 18 inches of concrete, our technicians can map all indications directly on the scanning surface prior to coring, cutting or drilling.

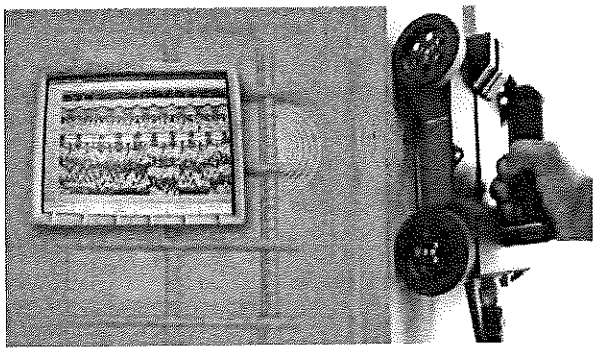
With such a large penetration range, GPR can be used with access to only one side of the scanning area with no need to place film on the opposite surface (as is needed with other methods). Our technicians determine the thickness of concrete and masonry structures to determine the spacing and depth of indications. In certain cases, the size of the indication can be estimated.

As these indications are found, they are displayed to the technician in real-time. They are displayed on the GPR monitor when changes in the conductivity of the scanned area represent locations of rebar, conduit, pipe, voids, and other objects located beneath the surface. Once located, the indication is marked in accordance with the APWA Uniform Color Code.

GPR is incredibly versatile and offers ease of use on job sites. It emits about 1% the power of a cell phone signal to perform its functions. Other methods require a safety perimeter around work areas. We prefer to use GPR because we are able to work in occupied sites and buildings where temporary evacuation is not an option. The equipment is very portable and can be moved to location quickly, making scanning of multiple areas a fast, efficient and manageable process. The practicality of this service supersedes traditional methods of utility locating, but it can also be used in conjunction with them.

With the ability to locate nonmetallic utilities up to 12 feet deep, you can be sure most lines will be identified.





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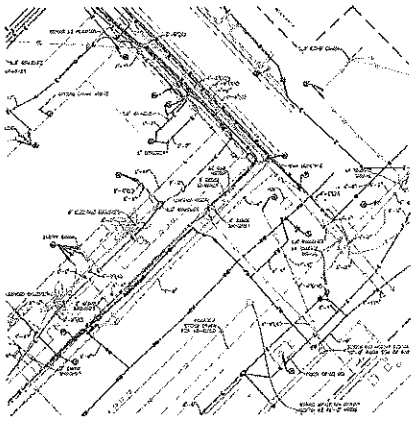
UNDERGROUND MAPPING

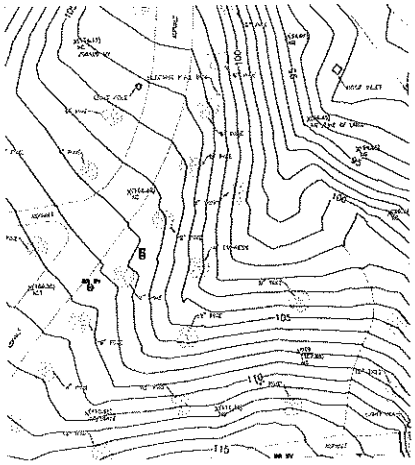
C Below will provide our client with electronic and/or printed documentation of our utility investigation when mapping is added to our locating scope of work. Utility locations will be plotted in a client provided site drawing with clear, easy to read detail. Each utility is labeled and color coded in accordance with the indications marked in the field. We prepare CAD drawings to ensure the industry's most accurate drawings. The details of these drawings are based upon client specifications. Some of these options include depth, pipe diameter and materials, connection points, and all unknown utilities.

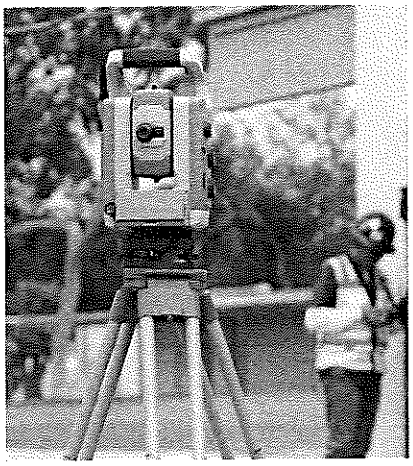


In addition to 36" x 24" prints, our drawings can also be saved in PDF format for simple distribution and viewing. Our detailed drawings can be used to provide designers and contractors with an overview of what to expect when performing site work. All mapping is done under the supervision of a licensed civil engineer.

ADDITIONAL SURVEYING SERVICES

In addition to mapping our utility location markings, we offer a full range of surveying services.





- ADA
- BOUNDARY
- A.L.T.A./N.S.P.S
- TOPOGRAPHIC
- CROSS-SECTIONS
- ENCUMBRANCE MAPS
- ORTHO AERIAL PHOTOS

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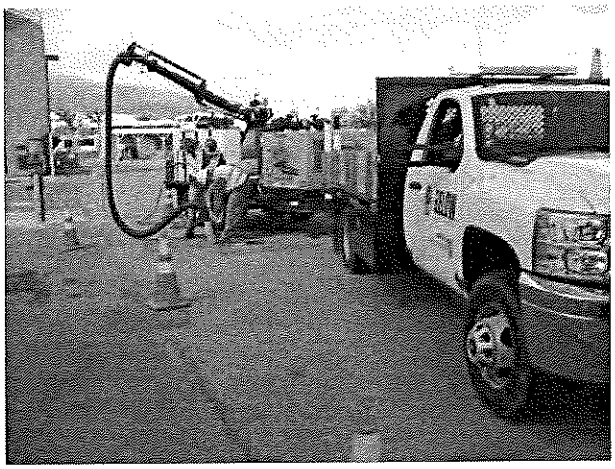
POTHOLING

Potholing is also known as vacuum excavation and is used for the purpose of identifying the axis of an underground utility. When the utility is revealed, the type of material and utility size are documented. The data collected during these excavations are beneficial in all phases of construction. Based upon the soils conditions or scope, C Below will choose to use air or water to create the pothole. Potholes made to expose facilities encased in concrete, will stop at the encasement. The top of the encasement will then be recorded as the top of the facility.

After documenting our findings, each pothole will be backfilled, compacted, and a perm-a-patch or hot patch will be provided depending upon client specifications.

A potholing report complete with photographs are provided at the conclusion of the job documenting the location, utility found, depth to top of pipe, utility size, material and the soil conditions. If no utility is found within the predetermined depth of the pothole, it will be considered a dry hole. Additional holes may be necessary to provide a positive location of the utility.

C Below technicians performing potholing



Potholing equipment

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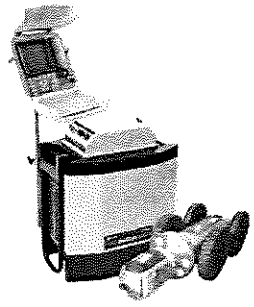
CCTV PIPE INSPECTION AND CRAWLER CAM

C Below provides video pipe inspection that will give vital information to help properly maintain utility and pipe facilities. We perform this service on sanitary sewer and storm drain lines specifically identified by the client or client's representative. CCTV pipe inspection includes trained personnel and the use of a push camera and/or crawler camera depending on the size of the line.

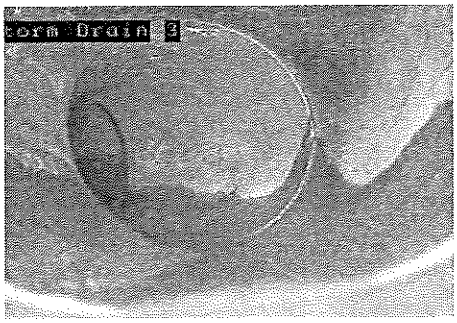
During this inspection, videos are recorded in full color MP4 files that can be viewed easily on all computers. Captions can be added to the video to help identify the technician findings. Our push cameras can video lines as small as 3" in diameter while our crawler cameras can do pipes upwards of 72". The video technology offers high quality assessment of all piping, including joints. We offer quick results with the ability to transfer video feed via USB and Bluetooth technology.

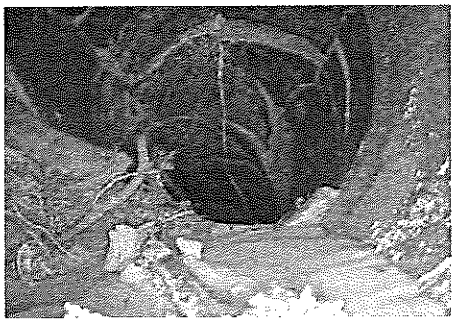
Standard details recorded during the inspection include: obstructions or blockages, root intrusion, structural damage, pipe offsets and flow conditions. Problem areas found will be identified on the surface for easy identification.

In the event that any blockage is found, we are able to provide water jetting to clear the obstructions. Sanitary Sewer and Storm Drain lines may contain debris and blockages that limit the ability to perform CCTV Pipe Inspection. C Below can arrange for an outside contractor to jet all lines prior to CCTV pipe inspection to ensure the full length of the pipe can be filmed.



CCTV Crawler Cam





Intact and damaged storm drains as recorded by our CCTV