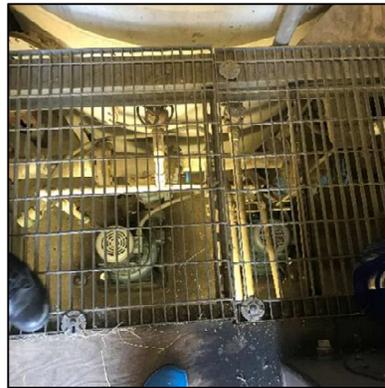




City of South San Francisco

Proposal for:
**Oyster Point Sanitary Sewer Pump
Station Relocation, SS2202**
November 3, 2022



November 3, 2022

Matthew Ruble, PE
Principal Engineer
City of South San Francisco
315 Maple Ave
South San Francisco, CA 94080

Re: **RFP: Oyster Point Sanitary Sewer Pump Station Relocation, SS2202**

Dear Mr. Ruble:

It is with great pleasure that Wilsey Ham submits our proposal for the Oyster Point Sanitary Sewer Pump Station Relocation Project No. SS2202. We are confident that our team's experience designing and administering sanitary sewer pump station projects combined with our knowledge of the project site and conditions combined with our public agency management experience will prove to be a huge benefit to the City in the development of this project. Our company contact information is included below.

Wilsey Ham; Attn: Brandon Davis; 3130 La Selva Street, Suite 100, San Mateo, CA 94403; T. (650) 349-2151; F. (650) 345-4921; bdavis@wilseyham.com

Oyster Point Marina is located at the end of Oyster Point Blvd. in South San Francisco. The site is an old municipal landfill that was closed in the late 1970s, topped with a clay cap to comply with state regulations. Due to the flat nature of the eastern half of the marina, a pump station was installed that included a combination vacuum/ejector pump. The vacuum pumps draws out the wastewater from the facilities on the eastern half of the marina, and the ejector pump discharges the flows to the City's sewer system to the west. The redevelopment in the area, and raising of the site to address sea level rise concerns, has resulted in the need to relocate the pump station and the adjacent east basin electrical switch gear cabinet. The scope for this project includes designing the new pump station and the electrical switch gear to a new location chosen by the City. This will include evaluating the vacuum/ejector pump station and determining how to reestablish the inflows. Our initial thought is to convert the pump station and vacuum system serving the east basin to a traditional force main system. This is discussed in further detail in the proposal.

Wilsey Ham is uniquely experienced and positioned to assist the City with this project. Wilsey Ham has worked on the Oyster Point Development Project at Oyster Point Marina for the last 15 years. Our experience includes preparing construction documents for the excavation and relocation of refuse on-site, the new clay cap, repair of deficient clay cap, the new wet utility infrastructure including sanitary sewer force mains, the relocated City of South San Francisco Pump Station #1, the realignment of roadways and the new parking lot and Bay Trail. We are currently working on the City's Phase 2C and Harbor Master Spit projects, both located within the Oyster Point Marina. In addition to our work at Oyster Point, Wilsey Ham has also been the prime consultant for the City on the rehabilitation projects for Pump Station #2, Pump Station #4, Pump Station #8, and the Pump Station #4 Sewer Force Main project.

As the Principal Engineer for our team, I will be responsible for entering into the contract with the City. I have over 25 years of experience supervising, managing, and designing sanitary sewer projects for public agencies in the San Francisco Bay Area. Our staff is well trained in public agency bid package preparation and we strive to be highly responsive to design a successful pump station project in the time available.



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Matthew Ruble

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Wilsey Ham's Project Manager and Design Manager will be **Eric Cohen, P.E.** Eric brings over 15 years over public infrastructure design to his role in managing this project. Eric has served as the project manager for all of the Oyster Point projects mentioned above. Eric is NASSCO PACP certified and has managed numerous sanitary sewer system and pump station projects throughout the Peninsula and greater San Francisco Bay Area, including in South San Francisco, San Carlos, Hillsborough, San Bruno, Brisbane and Berkeley. These projects have required managing subconsultants, collection system design, force main design, regulatory permitting, evaluating trenchless methods, careful consideration of existing utilities, and highly organized project management. Through this experience, he has gained a wide breadth of technical knowledge in the project development of sanitary sewer projects.

Wilsey Ham has assembled a strong team of sub-consultants to assist us in the performance of the project duties. We have included Schaaf & Wheeler, who will assist with the design of the pump station. We have worked together on several sanitary sewer pump stations on the peninsula, including Pump Stations #1, #2, #4, and #8 in South San Francisco and Lift Station #4 in Brisbane. Schaaf & Wheeler has extensive experience in pump station design all over the Bay Area, with a strong working relationship with the staff at the Water Quality Control Plant. This rapport with the maintenance staff allows them to identify the City's needs for their pump station projects early, including specifying the correct electrical and pump equipment and establishing the working space needed for a well-functioning pump station. Glen Anderson, who has helped assess over 150 pump stations in his career, will serve as the project manager for Schaaf & Wheeler.

The work Wilsey Ham has performed at Oyster Point has required close coordination with the project geotechnical engineering firm, Langan. This relationship has resulted in an understanding of the project site conditions, including the depth of the refuse layers and the thicknesses of the clay cap. With this knowledge, we are able to provide designs that limit the penetration of the clay cap to the greatest extent possible, minimizing needs for costly clay cap repairs. Site settlement is another common issue at this site. Our team has developed an in-depth understanding, allowing us to prepare a pump station design that minimizes the need for expensive alternative foundation designs. The project manager for Langan is Justin Ray. Justin was the project manager on the Oyster Point development project.

The electrical engineer for the project is TJCAA. They have worked with Schaaf & Wheeler on several pump station projects in the Bay Area. Paul Giorsetto will serve as the Project Manager. He has nearly 40 years of experience working on municipal electrical systems. Our structural engineer is Biggs Cardosa Associates, who have worked on several pump stations in South San Francisco with both Wilsey Ham and Schaaf & Wheeler. Anthony Notaro will serve as project manager.

Wilsey Ham understands the enormous importance and benefit in providing consistent key personnel throughout the project. Therefore, all of our key personnel are committed to performing their role in our services through the life of the project.

We have also included AGS, Inc. on our team for horizontal utility locating and Exaro Technologies Corporations for potholing services, if needed. Our sub-consultants contact information is included below.

Schaaf and Wheeler; 4699 Old Ironsides Dr., Ste. 350, Santa Clara, CA 95054; Glen M. Anderson; ganderson@swsv.com; T. (408) 246-4848

Langan; 1 Almaden Blvd., Suite 590, San Jose, CA 95113; John Gouchon; jgouchon@langan.com; T. (408) 283-3600, F (408) 283-3601

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TJC and Associates, Inc.; 1111 Broadway, Suite 300, Oakland, CA 94607; Anne Broughton;
abroughton@tjcaa.com; T. (510) 251-8980

Biggs Cardosa Associates; 865 The Alameda, San Jose, CA 95126; Anthony Notaro;
jgouchon@langan.com; T. (408) 296-5515

AGS, Inc.; 1605 School Street, Moraga, CA 94556; Pierre Armand;
parmand@advancedgeo.com; T. (445) 866-1171

Exaro Technologies Corporation; 1831 Bayshore Highway, Burlingame, CA 94596; Jose Dominguez; jd@exarotec.com; T. (650) 777-4324, F. (650) 777-4326

At Wilsey Ham, we understand that the staff at many cities can often be stretched thin, with more projects and public expectations than there is time to address them. Our goal is to serve as extension of City staff, providing the highest level of service while minimizing the demands on staff's time. We take pride in being very responsive to our clients, and we welcome the opportunity to provide this level of service to the City.

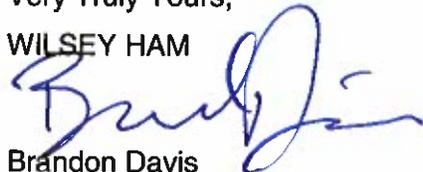
We have read the City's Agreements for Professional Consultant Services included in the RFP and propose alternative indemnity clause language in Section 8 of the proposal. We have also reviewed the e-procurement portal for this project and not noted any addenda being issued.

As an officer of the firm, I am the principal contact person authorized to negotiate with the City and bind our firm contractually. Please feel free to give me a call if you have any questions or would like to discuss our proposal in more detail. I can be reached at our address show below, my direct telephone line (650) 286-8428, or by email: bdavis@wilseyham.com.

We believe our team will provide the right balance of construction experience, design skills and cost effective design to provide the City with the best service possible. Wilsey Ham is committed to exceeding the City's expectations and we thank you for the opportunity to submit this SOQ.

Very Truly Yours,

WILSEY HAM



Brandon Davis
Principal Engineer
RCE #61024

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Consultant Information, Qualifications & Experience

1.1 Project History

Over the past twenty years, Wilsey Ham has worked on several pump station projects in South San Francisco and other municipalities on the peninsula, including in neighboring Brisbane. For these projects, we have worked closely with Schaaf & Wheeler to develop pump station plans that incorporate the wants and needs of City O&M staff while providing long lasting infrastructure improvements. We have a strong working relationship that keep projects on budget and on schedule.

In addition to our pump station work, we also have experience working on public infrastructure projects that are over municipal landfills and Bay Mud. Individually, each component adds complexity to a project, but when both are present it offers a unique challenge with respect to settlement. We have worked with Langan on several projects at Oyster Point that involved extensive settlement and the need to excavate landfill waste and repair the clay cap, which requires environmental clearances with the County.

Examples of our team's experience working on pump stations and over landfills can be found in the following section.

1.2 Project Experience and Performance

Pump Station Experience

Below are examples of Wilsey Ham's and the design team's experience in the service areas requested by the City.

Relocation of South San Francisco Industrial Sewage Pump Station No. 1 City of South San Francisco

Over the past two decades, Wilsey Ham and Schaaf & Wheeler prepared contract documents to rehabilitate eight of the City's sewage pumping stations (with individual station capacities ranging up to 13 MGD) as part of a multi-phase, multi-year project. The project was intended to rehabilitate major

trunk lines, interceptors, force mains and sewage pump stations serving commercial and industrial tributaries east of U.S. Highway 101 as ordered by the RWQCB in a Cease-and-Desist Order.



Figure 1: Original Pump Station #1 prior to relocation

Pump Station No. 1 is the pump station located at the end of Oyster Point Boulevard near the Oyster Point Marina. It was relocated, with an entirely new facility constructed. This 0.86 MGD Industrial Sewage Pump Station receives sewage from the Oyster Point commercial area and discharges sewage through a force main to a gravity sanitary sewer manhole near the intersection of Oyster Point Blvd. and Gull Drive.

Sanitary sewer service could not be interrupted, so the existing pumping facility remained operable throughout construction to avoid temporary pumping. As part of the construction plans, the old Pump Station No. 1 was demolished, with some of the underground facilities abandoned.

Our team developed a basis of design (BOD) report, including alternative pump station configurations (e.g. wet well / dry pit; variable speed and constant speed). Plans and cost estimates for each of the

alternatives were prepared to the 30% submittal level to document selection of the preferred pump station relocation plan. This document noted potential constructability issues, operational phasing and existing pump station demolition, utility conflicts and permitting requirements.

Our team prepared the PS&E package for bidding, which included detailed electrical and structural design. We also obtained City permits including a building permit, fire department approval and other regulatory approval required for construction. After the submittal of final contract documents, our engineers provided bid and construction support services.

Team:

Wilsey Ham (Prime, Civil), Schaaf & Wheeler (Pump Station Design), Biggs Cardosa Associates (Structural), Langan (Geotech)

Staff:

Eric Cohen (WH), Supervising Engineer, Chuck Anderson (S&W), Anthony Notaro (BCA), Justin Ray (Langan)

Dates:

Project Start: January 2019
Project Complete: August 2021

Contract Amount:

\$500,000

Construction Cost:

\$4.2 million

Funding Source:

Private Development

Client and Contact:

Kilroy Realty (Developer)

Jonas Vass

Executive Vice President
100 First Street, Suite 250
San Francisco, CA 94105
(415) 778-7741

Project Owner:

City of South San Francisco (Operator)

Eunejune Kim

Public Works Director
315 Maple Avenue
South San Francisco, CA 94080
(650) 877-8550

Eunejune.kim@ssf.net

Expansion of South San Francisco Industrial Pump Station No. 2

City of South San Francisco

Industrial Pump Station No. 2 receives sewage from the Oyster Point Boulevard area, including discharge from Pump Stations No. 1 and 14. Pump Station No. 2's discharge force main travels south to a gravity sanitary sewer manhole along Gateway Blvd.

Wilsey Ham and Schaaf & Wheeler designed the rehabilitation of the 3.5 MGD Industrial Sewage Pump Station No. 2 in South San Francisco. Our engineers worked with the City to understand the existing service loads, including anticipated dry-weather low flows and peak wet weather discharge that must be accommodated by temporary pumping facilities during construction.

Due to development phasing, inflow to the pump station may change over time. Therefore our engineers designed an operational system that can maintain flushing velocities within the discharge force main under initial low inflow conditions as well as the ultimate peak wet weather loading with full capacity.

Our team developed a basis-of-design (BOD) report including alternative pump station configurations. Plans and cost estimates for each of the alternatives were prepared to the 30% submittal level to document selection of the preferred pump station relocation plan. This document noted potential constructability issues, operational phasing, utility conflicts and permitting requirements.

Since this project was located on private property within a pump station easement, we needed to work with the landowner to obtain the easements needed. Wilsey Ham's survey department drafted the plats and legals needed for the expansion of the pump station, which the City presented to

the landowner. An agreement was made where the easements were granted in exchange for architectural improvements to the station that better fit with the surrounding architecture that was being constructed. Our team coordinated with the landowner's architect and landscape architect to incorporate the façade improvements into the bid documents.



Figure 2: Pump Station No. 2 after completion of construction.

Our team prepared the PS&E package, including electrical, structural and architectural design, for bidding. We also obtained City permits including a building permit, fire department approval and other regulatory approval required for construction. After the submittal of final contract documents, our engineers provided bid and construction support services.

Team:

Wilsey Ham (Prime, Civil), Schaaf & Wheeler (Pump Station Design), Biggs Cardosa Associates (Structural), Langan (Geotech)

Staff:

Eric Cohen (WH), Supervising Engineer, Chuck Anderson (S&W), Victoria O. Belli (S&W), Anthony Notaro (BCA)

Dates:

Project Start: January 2018

Project Complete: August 2021

Contract Amount:

\$380,000

Construction Cost:

\$3.2 million

Funding Source:

City of South San Francisco Wastewater

Client/Project Owner:

City of South San Francisco

Eunejune Kim

Public Works Director

315 Maple Avenue

South San Francisco, CA 94080

(650) 877-8550

Eunejune.kim@ssf.net

Sierra Point Sewage Lift Station No. 4

City of Brisbane

Wilsey Ham and Schaaf & Wheeler

completed design services for the

replacement and relocation of Sewage Lift

Station No. 4 for the City of Brisbane on

Sierra Point Parkway. The new pump

station is designed for a firm capacity of 1.4

million gallons per day. By relocating the

pump station on site, the existing pumping

facility remained operational throughout

construction to avoid lengthy and expensive

bypass pumping.

Station elements include a below-grade vault housing sewage grinders; a below-grade wet well housing rail-mounted submersible pumps; pump discharge piping, fittings and valves; a magnetic flow meter; an air release/air vacuum valve suitable for wastewater; an emergency bypass connection; new motor control center and main switchgear; grinder motors and controls; standby diesel engine-generator with automatic transfer switch; a jib crane for equipment removal; a CMU building to house electrical controls and a standby generator with automatic transfer switch; and site access improvements.

The existing and replacement pump stations are built on top of an existing closed landfill. Special design considerations included a deep foundation using piles and a methane gas mitigation system. Coordination with the County Health Department was required, including the issuance of a post-closure development plan. During construction, precautions were taken to dispose of excavated soils.

Team:

Wilsey Ham (Prime, Civil), Schaaf & Wheeler (Pump Station Design), Biggs Cardosa Associates (Structural)

Staff:

Eric Cohen (WH), Supervising Engineer, Chuck Anderson (S&W), Anthony Notaro (BCA),

Dates:

Project Start: February 2019
Project Complete: May 2022

Contract Amount:

\$550,000

Construction Cost:

\$4.4 million

Funding Source:

Private Development

Client and Contact:

Project Management Advisors (Developer)

Devin Bertsch

Project Director
1 Tower Place, Suite 200
South San Francisco, CA 94080
(650) 491-8801

Project Owner:

City of Brisbane (Operator)

Randy Breault

Public Works Director
50 Park Place
Brisbane, CA 94005
(415) 508-2130
rbreault@brisbaneca.org

Design of Pump Station Improvements

City of Oakland

The City of Oakland’s Pump Station Master Plan of 2007 identified the upgrade of 6 existing sanitary sewer pump station facilities.

In order to comply with an administrative order from the EPA, the City of Oakland hired Schaaf & Wheeler to design improvements to these sanitary sewer pump stations. Designed improvements included the installation of new wet wells or rehabilitation of existing wet wells, installation of new engine generators, new controls, new pumps, new piping/valves, new force mains, bypass pumping

connections and necessary site improvements.

The end goal of the project was to have low maintenance pump stations that they can certify for compliance with the EPA and RWQCB requirements for reliability.

Each of the six stations presented unique challenges that had to be addressed during the design. These challenges are related to the location of pump stations including being:

- adjacent to a creek,
- located in a busy roadway in front of a community college and
- located in a neighborhood with sensitive neighbors.

To mitigate these challenges, each station was evaluated for alternative design and construction options to minimize the impact to the surrounding area. For the station next to a creek, strict protection measures were put in place. For the station adjacent to a community college the station location was moved to minimize the amount of work affecting the school. Where neighbors were concerned about the pump station, the rehabilitation was designed to minimize the station’s visual impact by reducing equipment size and masking it with landscaping/fencing. Schaaf & Wheeler also coordinated the project and obtained permits from 10 different agencies during the design process.

Team:

Schaaf & Wheeler (Pump Station Design), TJCAA (Electrical Design)

Staff:

Glen Anderson (S&W), Paul Giorsetto (TJCAA)

Dates:

Project Start: 2014
Project Complete: 2017

Contract Amount:

\$411,000

Construction Cost:

\$2.1 million

Funding Source:

Capital Improvements

Client and Contact:

City of Oakland

David Ng

Supervising Engineer

250 Frank H. Ogawa Plaza, Suite 4314

Oakland, CA 94612

(510) 238-7267

dng@oaklandca.gov

Landfill Experience

Below are examples of Wilsey Ham's and the design team's experience with developments over a landfill.

Oyster Point Phase IC – Streets and Utilities

City of South San Francisco

The Oyster Point peninsula was operated as a Class III municipal landfill (Oyster Point Landfill) from about 1956 until it stopped accepting waste in 1970. Landfill closure activities were performed around the site in the 1970's and 1980's in accordance with State of California Regional Water Quality Control Board (RWQCB) regulatory guidelines that governed at that time; this was prior to the adoption of California Code of Regulations (CCR) Title 27, the regulatory document currently governing Class III landfill closures. Improvements were installed over the refuse, including a harbor, marina facilities, park area, roads, utilities, walkways and other features.

Redevelopment of the Oyster Point peninsula is currently in progress, with Phase IC in the final stages of construction. For this project, Wilsey Ham and Langan worked together to prepare the construction documents for the following:

- Relocation of 200,000 cubic yards of refuse on site
- Installation of new clay cap over excavated refuse
- Repair deficient clay cap around the 40-acre site
- Relocation of Oyster Point Blvd. and Marina Blvd
- Installation of new wet utilities, including sanitary sewer gravity main, sanitary

- force main, water main, and storm drain.
- Construction of new Bay Trail
- Construction of new marina park and beach
- Parking Lot Installation



Figure 3: Aerial image of Oyster Point Phase IC improvements.

For the project, Langan performed numerous studies to evaluate the existing landfill, clay cap, and underlying subsurface conditions. Through these investigations, Langan made recommendations for excavations, clay cap installation, clay cap tie-ins and other details needed for the landfill waste relocation. Wilsey Ham incorporated these recommendations into the construction document set that was bid. Before construction began and with input from Wilsey Ham., Langan prepared a Landfill Post-Closure Development Plan to meet the requirements of Title 27 CCR landfill post-closure development standards. This plan needed to be approved prior to construction began, and provided a blue print for the policies and procedures the contractor needed to follow. During construction, Langan oversaw regrading of the landfill on behalf of the City, preparing reports for submission to the San Mateo County Environmental Health Services (SMECS) and Regional Water Quality Control Board (RWQCB) for approval. At the completion of the project, Wilsey Ham prepared as-built drawings showing that the critical aspects of the landfill closure plan, such as the thickness of the clay cap, were installed appropriately. These record

drawings were submitted to SMCEHS and RWQCB by Langan for approval and recordation.

With the underlying characteristics of the soil, settlement was a challenging aspect of this project. Wilsey Ham prepared a grading plan for the site, which was analyzed by Langan to estimate the amount of settlement that was expected. Site design was then adjusted by Wilsey Ham to incorporate the anticipated settlement into the design. For example, the longitudinal slopes of the road were maxed at 4.5%, which allowed for settlement without exceeding ADA standards.

In the marina, two new restrooms were designed and installed. Since the restrooms were below the gravity mains in the roadway, sump pumps were designed to eject the wastewater generated. The sump pumps were placed outside of the buildings, discharging through new force mains that discharged to the gravity system in Oyster Point Blvd. Although settlement is a concern for structures, the City wanted the restrooms to settle with the surrounding area to minimize tripping hazards that may develop and to keep the cost down. The restrooms were designed with mat slabs to achieve this.

Team:

Wilsey Ham (Prime, Civil), Langan (Geotech/Environmental), Biggs Cardosa Associates (Restroom Structural)

Staff:

Eric Cohen (WH), Supervising Engineer, Justin Ray (Langan Geotech), Hayley Farr (Langan Environmental)

Dates:

Project Start: January 2019

Project Complete: August 2021

Contract Amount:

\$500,000

Construction Cost:

\$60 million

Funding Source:

Public/Private Partnership

Client and Contact:

Kilroy Realty (Developer)

Jonas Vass

Executive Vice President
100 First Street, Suite 250
San Francisco, CA 94105
(415) 778-7741

Project Owner:

City of South San Francisco

Eunejune Kim

Public Works Director
315 Maple Avenue
South San Francisco, CA 94080
(650) 877-8550

Eunejune.kim@ssf.net

The Shore at Sierra Point

City of Brisbane

The Shore at Sierra Point Development project is a multi-phase project located in Brisbane, CA that consists of the development of a 23-acre site into a bio-tech campus. The project includes the construction of a parking lot, five buildings, a parking garage, a recreational landscape for outdoor, BCDC improvements and all utilities require to serve the buildings.

The project is underlain by bay mud and landfill refuse, covered with an engineered landfill cap. For building design, Wilsey Ham set the finished floor elevations for all buildings after re-evaluating site due to differential settlement. The settled elevation of the clay cap was used to coordinate building foundation and structural section to determine the lowest FF elevations could be lowered and still avoid penetration of the existing clay cap. The clay cap was also influential for the utility design. Where penetration of the clay cap was unavoidable, repair details were developed and approved by the regulatory agencies. Coordination with the California Department of Drinking Water (DDW) was needed for approval of all water mains for the project.

Wilsey Ham's Civil Engineering and Land Surveying departments provided the following services:

- Entitlement Consultation

- Topographic Mapping
- Site Improvement Design
- Grading and Drainage Design
- Drainage Analysis
- Stormwater Mitigation
- Water Design over Landfill
- Public Infrastructure Design
- Permit Processing
- Construction Documents
- Construction Administration
- Construction Staking

Team:

Wilsey Ham (Civil)

Staff:

Eric Cohen (WH)

Dates:

Project Start: 2017

Project Complete: 2022

Contract Amount:

\$1.5 million

Construction Cost:

\$1.0 billion plus

Funding Source:

Private Development

Client and Contact:

Healthpeak (Developer)

Project Management Advisors

Devin Bertsch

Project Director

1 Tower Place, Suite 200

South San Francisco, CA 94080

(650) 491-8801

Genesis Marina

City of Brisbane

Located at the former Sierra Point Landfill, Genesis Marina will provide 550,000+ SF of laboratory and Class A office space serving the science and biotech community. Three separate five- to six-story buildings will overlie a two-story podium garage, with a shared outdoor space overlooking the San Francisco Bay. Sierra Point, once part of San Francisco Bay, was progressively filled between about 1963 and 1975.

Blanketing the site is significant thickness of compressible landfill refuse and Bay Mud, 52 to 64 feet thick. The geotechnical

engineers evaluated the potential for long-term settlement of refuse and Bay Mud to occur at the site. Because of the magnitude of the settlement, they concluded the proposed development should be supported on steel H-piles. The refuse layer was regraded at the center of the site, and a clay cap and cover needed to be placed across the site. During construction, Langan observed site preparation, grading, refuse relocation, compaction of fill/backfill, clay cap construction and repair, pile installation, utility trench backfill, and subgrade preparation for pavements and hardscape.

To comply with state landfill regulations, Langan's environmental team developed a Post Closure Development Plan, which was submitted to and approved by the San Mateo County Environmental Health Department Local Enforcement Agency and Regional Water Quality Control Board. They also prepared a Site Management Plan and Dust Monitoring Plan, designed a landfill gas mitigation system, and developed Construction Quality Assurance (CQA) plans for the landfill gas mitigation system and the landfill cover. Their environmental services during construction included implementation of a CQA program for the landfill cover, environmental site management, and dust monitoring.

Team:

Langan (Geotech/Environmental)

Staff:

Justin Ray (Langan Geotech)

Dates:

Project Start: January 2019

Project Complete: 2023

Construction Cost:

\$60 million

Funding Source:

Private Development

Client/Owner and Contact:

Phase 3 Realty (Developer)

Adam Cashner

Senior Vice President

4380 La Jolla Village Drive, Suite 230

San Diego, CA

(858) 546-0888

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Organization and Approach

2.1 Project Team

Wilsey Ham has assembled a design team that is not only experienced with pump station projects, settlement, landfills and the Bay, but is experienced with the Oyster Point Development project itself.

The following pages contain:

- Firm Introduction
- Staffing Plan
- Professional References
- Office Locations
- Organizational Chart

Team resumes are included in Section 8.

Wilsey Ham

Wilsey Ham, Inc. is an 80-year old civil engineering and land surveying firm that has been serving public agencies in the San Francisco Bay area since 1942. From our inception, we have assisted local governments throughout the Bay Area with all manner of civil engineering and land surveying needs, including extensive work on sanitary sewer projects, most recently in Burlingame, San Bruno, San Carlos, Daly City, South San Francisco and Berkeley.

Wilsey Ham has worked at this site for over 12 years and we are the engineer of record for Phase IC. In addition, we have served as the prime consultant on several City of South San Francisco pump station projects.

Our sanitary sewer projects have included evaluating sewer collection systems, recommending installation methods, designing force mains, identifying pump station layouts, preparing Bid Documents and providing assistance during bidding and construction. Our Survey Department provides a wide array of field survey and mapping services that are useful for sanitary sewer projects, including topographic surveys, construction staking, and easement plat and legal descriptions.

Wilsey Ham will be responsible for managing the project as a whole. In

addition, we will prepare the existing base mapping, grading plans, force main plans and design improvements outside of the new pump station.

Staffing

The following proposed staff will work on this project:

- Brandon Davis: Project Principal
- Eric Cohen: Supervising Engineer
- Robert Hutton, Supervising Surveyor
- Engineering Support Staff

References

- **City of South San Francisco**
Eunejune Kim, PE
Director of Public Works
(650) 877-8551
Eunjune.Kim@ssf.net
- **City of Brisbane**
Randy Breault, PE
Director of Public Works
(415) 508-2130
rbreault@brisbaneca.org
- **City of Burlingame**
Kevin Okada, PE
Senior Engineer
(650) 558-7213
kokada@burlingame.org

Office Location

- 3130 La Selva Street, Suite 100
San Mateo, CA 94403

Schaaf & Wheeler

Schaaf & Wheeler (S&W) is a civil engineering firm whose expertise is in water resources. With over 30 years of experience in wastewater design, they are relied upon by both public and private sector clients to add value to their projects. S&W are distinguished for their pump station design, preparing construction documents for dozens of pump stations in the San Francisco Bay Area, including eight in South San Francisco.

For this project, they will be the lead designers of the pump station. As lead designer, S&W will layout the wet well, pump house and any other site

appurtenances that are needed. For the pump station design, they will manage the electrical and structural engineers. This will ensure a smooth and efficient design process.

Staffing

The following proposed staff are available to work on this project:

- Charles Anderson: Project Principal
- Glen Anderson: Project Manager
- Engineering support staff

References

- **City of South San Francisco**
Eunejune Kim, PE
Director of Public Works
(650) 877-8551
Eunejune.Kim@ssf.net
- **City of Brisbane**
Randy Breault, PE
Director of Public Works
(415) 508-2130
rbreault@brisbaneca.org
- **City of Oakland**
David Ng, PE
Supervising Engineer
(510) 238-7267
dng@oaklandca.gov

Office Location

- 4699 Old Ironsides Drive, Suite #350
Santa Clara, CA 95054

Langan

The project team geotechnical engineer is Langan, who has been involved with the environmental and geotechnical aspects of the Oyster Point project over the past 15 years. They have performed numerous studies to evaluate the existing landfill, clay cap, and underlying subsurface conditions. Currently, Langan is overseeing regrading of the landfill and construction of new streets and utilities as part of the Phase IC improvements, on behalf of the City. With their experience at the site, Langan has developed an investigation plan that limits the field investigations needed to obtain the needed design data, while also identifying additional investigations that have been

necessary during the Phase IC permitting process that is not requested in this RFP.

Langan will be responsible for preparing the geotechnical report for the project, providing recommendations to the design team. In addition, they will prepare the needed post-closure landfill development plan and process it with San Mateo County Environmental Health Services (SMCEHS) and the Regional Water Quality Control Board (RWQCB). During construction, they will observe the project and prepare the needed report for both agencies.

Staffing

The following proposed staff are available to work on this project:

- John Gouchon: Project Principal, Geotech
- Jeff Ludlow: Project Principal, Environmental
- Justin Ray: Project Manager
- Hayley Farr: Project Engineer

References

- **City of South San Francisco**
Eunejune Kim, PE
Director of Public Works
(650) 877-8551
Eunejune.Kim@ssf.net
- **City of Brisbane**
Randy Breault, PE
Director of Public Works
(415) 508-2130
rbreault@brisbaneca.org
- **City of Oakland**
David Ng, PE
Supervising Engineer
(510) 238-7267
dng@oaklandca.gov

Office Location

- 135 Main Street, Suite 1500
San Francisco, CA 94105

TJC and Associates, Inc.

The project electrical engineer is TJC and Associates, Inc. (TJCAA). They provide instrumentation, controls and electrical design services that involve evaluation, planning and design of facility and industrial electrical applications. These services

include electrical power distribution and industrial motor control. TJCAA has worked with Schaaf & Wheeler on several pump station projects in the Bay Area. In addition, they have also worked with municipalities and utility districts to upgrade aging electrical distribution equipment.

TJCAA will be responsible for the design of electrical design of the pump station equipment and the relocation and upgrade of the electrical switchgear equipment.

Staffing

The following proposed staff are available to work on this project:

- Paul J. Giorsetto, P.E.: Project Principal
- Anne Broughton, PE: Senior Electrical Engineer

References

- **City of South San Francisco**
Eunejune Kim, PE
Director of Public Works
(650) 877-8551
Eunjune.Kim@ssf.net
- **City of Brisbane**
Randy Breault, PE
Director of Public Works
(415) 508-2130
rbreault@brisbaneca.org
- **City of Oakland**
David Ng, PE
Supervising Engineer
(510) 238-7267
dng@oaklandca.gov

Office Location

- 1111 Broadway, Suite 300
Oakland, CA 94607

Biggs Cardosa Associates

The project team structural engineer is Biggs Cardosa Associates (BCA). BCA was the structural designer for several City of South San Francisco pump stations. They also served as the structural engineer for evaluating the wall options studied by the City for the Harbor Master Spit project at Oyster Point. Biggs will apply this recent experience in low capacity soils, settlement and landfill construction to the design and

value engineering of the Oyster Point Pump Station.

BCA will be responsible for the structural design of the pump station slab, wet well, pump house foundation and the CMU structure.

Staffing

The following proposed staff are available to work on this project:

- Anthony Notaro: Project Manager
- Engineering support staff

References

- **Midpeninsula Regional Open Space District**
Scott Reeves
Senior Capital Project
(650) 772-3645
sreeves@openspace.org
- **City of Sunnyvale**
Jennifer Ng, PE
Assistant City Engineer
(408) 730-7430
jng@sunnyvale.ca.gov

Office Location

- 869 The Alameda
San Jose, CA 95126

Advanced Geological Services

Advanced Geological Services, Inc. (AGS) was formed in 1995 to provide innovative geophysical imaging and consulting services to the environmental, engineering and construction industries. AGS routinely uses ground penetrating radar (GPR), time-domain electromagnetic (EM), frequency-domain EM, and electrical resistivity methods for locating underground features. AGS has worked with Wilsey Ham on numerous sanitary sewer projects, including in San Bruno, Berkeley, and South San Francisco.

Staffing

The following proposed staff are available to work on this project:

- Pierre Armand, Senior Geophysicist

Office Location

- 1605 School Street
Moraga, CA 94556

2.2 Organization Chart

The organizational chart at the end of this section provides a visual illustration of our team's structure, including our subconsultants. The team member's role is shown under each person's name.

2.3 Project Management Approach

Subconsultant Management & Coordination

Our subconsultants for pump station design, electrical, structural, utility location, and geotechnical services play an integral role in our ability to meet the City's schedule needs. We fully understand that time is of the essence for the proposed work. To succeed, our entire team must accomplish their tasks in accordance with our proposed schedule.

Wilsey Ham has included subconsultants on our team with whom we have a track record of success, and are proven team members for accomplishing project goals. The ability to meet the deadlines in our proposed schedule was a discussed with each subconsultant and their commitment to meet the schedule was a condition to be on our team. We have developed internal deadlines for our team that are more aggressive than our proposed schedule to meet the City's schedule goals, while providing ourselves with some buffer. To monitor our progress, our Project Managers will conduct a bi-weekly call with each subconsultant to make sure their work is on track, and to help us address any unexpected delays.

We require that our subconsultants provide us with a three-week rolling schedule so that we can keep the City apprised of our planned work areas. The work product of each subconsultant is reviewed by our Project Manager to make sure they have fulfilled their project obligation and have not missed any required evaluation area.

Our staff will perform occasional site visits to verify that our subconsultants are using

proper traffic control utility marking and soils investigation operations. This is critical to ensure the safety of workers and the general public.

In summary, these key steps help us manage our subconsultants: 1) upfront schedule commitment; 2) ongoing communication throughout the project; 3) rolling schedule updates; and 4) checking their work.

Schedule Management

We monitor our internal project schedules on a weekly basis to assess our progress relative to the schedule. If we need to assign additional staff or work overtime, we prefer to do that early in the process to get us back on schedule as opposed to waiting until later in the project.

Project Communications

Our Principal Engineer, Brandon Davis, will be our point of contact with the City for all contract issues and has overall responsibility to ensure that the City is satisfied with our services.

Our Project Manager, Eric Cohen, will be the primary point of contact with the City for all of the day-to-day project communications and coordination. He will attend all project meetings with the City and has full responsibility for our team's project development and work product as well as our on-time delivery.

We view the City's Project Manager (CPM) as the key contact for the City who will provide our team with project direction, feedback, comments, decisions and approvals. We understand that the CPM must be kept apprised of all of our project activity. Due to the current demands placed upon the City's engineers, we understand that the CPM may delegate some of their duties and responsibilities to other City staff or consultants, and in that case we would then modify our communications accordingly to meet the CPMs direction. If allowed by the CPM, our Project Engineers will also have direct communication with

City representatives for information requests and other tasks. In summary, we envision all project direction and decisions will be exchanged between our Project Manager and the City's Project Manager, or their designee.

2.4 Quality Assurance/ Quality Control

Controlling our product quality helps control construction costs.

One of the primary responsibilities of our PM is to monitor the contract documents as they are being prepared to avoid any significant errors in the design approach and plan preparation methods.

For design review submittals, our PM will carefully review the entire plan set to make sure that the plans are accurate, make sense, and are consistent throughout the plans, estimates and specifications. Everything is highlighted after it has been reviewed so that we know we have not missed anything.

When the PM is satisfied with the plans and specifications, they are submitted to the Project Principal for checking. The Project Principal, who has the most project and design experience, repeats this detailed process of review and highlighting.

For the final review submittal, the entire QA/QC process outlined above is repeated. In addition, quantities between the plans, estimate and bid schedule are checked to make sure there is not a bust. The plans are crosschecked against the bid schedule to make sure that every work item proposed on the plans is described and included in a bid item for payment. This is a critical step to make sure that no work items are overlooked. Lastly, the pay description of the unit of measure for each item in the specifications is checked against the bid schedule to make sure they are consistent and to eliminate this potential loophole for a Contractor to claim an extra.

City of South San Francisco
Matthew Ruble, PE
Principal Engineer

Brandon Davis, PE
Principal Engineer
Wilsey Ham

Eric Cohen, PE
Project Manager
Wilsey Ham

Glen Anderson
Project Manager
Schaaf & Wheeler

Justin Ray
Project Manager
Langan

Robert Hutton
Supervising
Surveyor

Paul Giorsetta
Principal Engineer
TJCAA

Engineering Dept.
Support Staff
Wilsey Ham

Anthony Notaro
Project Manager
Biggs Cardosa

3

Scope of Work

3.1 Understanding

We understand that the City of South San Francisco is requesting proposals to relocate the vacuum/ejector pump station and the electrical switch gear cabinet at the Oyster Point Marina. The marina is being redeveloped to improve the public infrastructure, improve public access, address sea level rise and add new buildings, including a biotechnology campus and a 350-room hotel. The existing pump station and switch gear are currently located within the future buildout alignment of Marina Blvd, several feet lower than the projected future sea-level rise elevations. In addition, they are in conflict with the future hotel access at the eastern edge of the hotel parcel. The City would like to relocate the pump station and the switchgear cabinet prior to the commencement of hotel construction in mid-June 2025.



Figure 1 Existing vacuum pumps located within the pump house.

The existing sewer collection system for the east basin of the Oyster Point Marina consists of a series of vacuum pipes servicing each of the facilities to the east of the Harbor Master Road, including the Harbor Master Building. The vacuum pipes, installed in the early 1980's, are connected to two vacuum pumps and a vacuum tank located within the existing pump station. When activated, the vacuum pumps and tank create a negative pressure within the vacuum pipes, drawing sanitary sewer wastewater from each of the aforementioned facilities and discharging the effluent into a wet well located within the pump house. Two additional ejector pumps located within the wet well turn on periodically to discharge the wastewater to a City maintained sewer pump to the west.



Figure 2 Vacuum tank located within the existing pump house.

The vacuum/pump is maintained by the Harbor District but it is our understanding that the City will maintain the new pump

station. The new pump station will be moved to a location chosen by the City.

In addition to relocating and reconstructing the pump station, the adjacent electrical switchgear will also need to be moved. Much like the pump station, this switchgear serves the entire Oyster Point Marina east of Harbor Master Road. This includes powering lights, irrigation, the Harbor Master Building, the Yacht Club, restrooms, live-aboard docks and other marina facilities. The existing configuration includes PG&E joint trench in Marina Blvd. to a transformer located across the street from the switchgear. The power runs from the transformer to an adjacent PG&E cabinet, where it is metered. The power then runs across the road in conduit to the switchgear cabinet, where it is distributed to the existing facilities throughout the east basin. The new switchgear will be moved to a location chosen by the City.

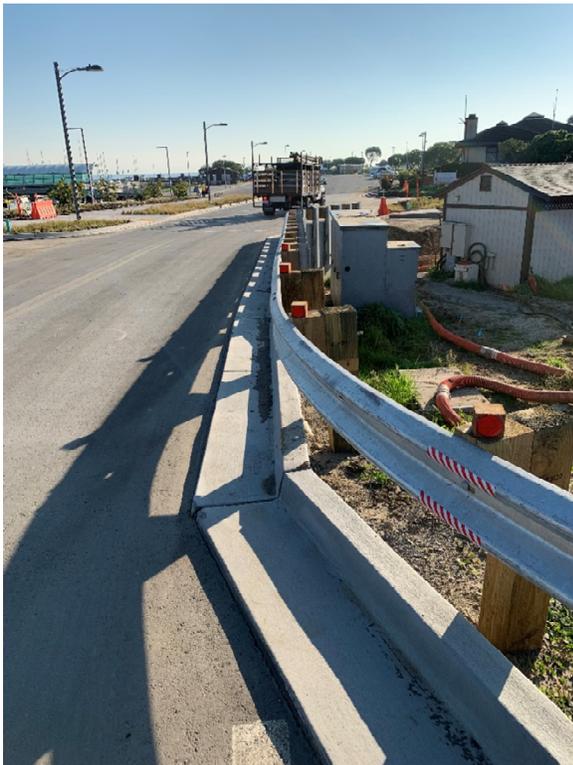


Figure 3 Existing switchgear in the center with the vacuum/ejector pump station on the right. The realigned Marina Blvd. is to the left, roughly 4 to 5-feet higher in elevation.

The existing infrastructure is located over an existing closed landfill that consists of solid waste covered by a impermeable clay cap. Title 27 of the state regulations requires that any work that disturbs the clay cap will need to repair it to be compliant. Since the project will install a new wet well, it is a near certainty that the clay cap will be penetrated and landfill waste will be excavated and off-hauled. In addition, the soil conditions of landfill waste over bay mud makes the site extremely susceptible to ground settlement. These site conditions will need to be evaluated and addressed in the design.

The City has broken down the required professional services into the following tasks:

- Perform site investigations, including an as-needed topographic survey to prepare an Existing Site Conditions Plan identifying existing facilities and sewer mains served by the pump;
- Evaluate the existing vacuum station/ejector pump infrastructure and sewer lines to determine the feasibility of converting the new pump station into a traditional pressure system;
- **Perform geotechnical investigations and prepare a landfill post-closure plan;**
- Prepare conceptual plans;
- Prepare construction documents; and
- Perform bidding and construction support services.

Given the nature of the project, it is imperative that the selected consultant(s) work closely with the City as a team member to minimize disruption to the marina and its inhabitants while constructing the new infrastructure within the time frame identified by the City. To this end, we believe that several key components of the project must be executed very well in order to achieve success. These components include:

- The existing sewer infrastructure data must be completely understood and documented to enable a thorough evaluation of the system.

- The design must take into account the time it will take to switchover to the new equipment to minimize the time the power is down in the east basin.
- Each phase of the project (conceptual, construction document and construction) must be well-managed to ensure that the data gathering, design, and construction are executed in the most cost effective and consistent manner.
- The design team will need to communicate regularly with the City's project manager and team to keep them apprised of the project status and issues to resolve.

In light of this understanding, Wilsey Ham proposes the following approach to providing design services to the City.

3.2 General Approach

Project Initiation

When notified to proceed by the City, we will schedule a kickoff meeting with the City Engineering, Water Quality Control Plant (WQCP) O&M staff and the project team to review project scope, goals, and strategies. This meeting will allow us to come to an understanding as to the City's wants and needs for the pump station replacement, which can be incorporated into the design moving forward. At this meeting, we will collect pertinent information from the City including record drawings, GIS maps of the sewer system, storm drain and other City-owned utility records. We will also perform a site reconnaissance visit to inspect and photograph the existing station, switchgear and existing facilities and evaluate the potential relocation areas on site. This will help our team determine the best approach for studying the feasibility of converting the system into a traditional force main system. The preliminary project schedule will be updated to confirm the agreed-upon project delivery. Project schedules will be revised to help meet special deadlines when requested.

Record Search and Site Investigations

After the project has been initiated, we will immediately begin to research existing records and perform a site investigation. We currently have base map information from several of our projects in the area, including topographic surveys from the Phase 2C and Harbor Master Spit. We will supplement these surveys with a field survey performed in the new pump station location chosen by the City. For any work needed on the sewer piping from the harbor facilities to the new pump station, existing aerial should be sufficient for design. A small contingency of survey budget will be saved for any conform grading that is needed during design.

We will request new utility records from the utility companies to add to our base maps. We do not anticipate there being any public utilities other than water (Calwater) since the PG&E joint trench ends at the pump station. To help find the private utilities, our utility locator, AGS, will perform GPR locating on site, marking any utilities found with paint. They have experience previously locating existing utilities for the Phase 1C project and understand the conditions. With the GPR, our intent is to determine depths to the pipes, although if the pipes are below the clay cap they could be difficult to identify. Our survey crews will follow AGS and shoot the paint marks to add to our base maps.

We do not recommend potholing at this time due to the uncertainties of the exact location of the clay cap. If a potholing contractor penetrated the clay cap, then the remediation could be costly. Considering the lower volume of existing utilities in the east basin, we believe any potholing should occur once construction has begun and a post-closure plan has been approved.

When our base mapping has been completed, we will perform a site visit to confirm the findings, revising them as needed.

Pump Station Evaluation and Design

As mentioned previously, the existing pump station is a combination vacuum/ejector pump system. The vacuum pumps and tanks create a negative pressure in the sewer discharge pipes, drawing the wastewater from the marina facilities into the wet well. The City would like the designers to evaluate this vacuum and determine the feasibility of converting to a traditional system.

Our initial thoughts are that the existing vacuum style of pump station is seldom used by utility agencies due to the complexity of the mechanical systems and reliability concerns. In addition to these concerns, any break or leak in the vacuum line can lead to drawing groundwater into the sewer pipeline, and drastically increase station inflows. Considering that this system was built 40 years ago and perhaps within a closed landfill, we would recommend moving away from vacuum pumps for the new pump station.

Our team, led by Schaaf & Wheeler, will perform an evaluation of alternative pump station configurations, including the vacuum/ejector system. Due to the concerns stated above and the probability of needing to rebuild the existing 40-year old piping system, we will most likely recommend converting to a traditional pump station with small sump pumps at the harbor facilities to replace the vacuum system.

After the evaluation, our team will prepare conceptual plans proposing to construct a new pump station as recommended, relocating the station as directed by the City. Based on the relatively small size of the station, the following improvements are anticipated:

- Construction of a new centralized pump station, consisting of a precast concrete wet well, approximately five feet in diameter, and approximately 10 to 20 feet below grade with submersible, rail-mounted pumps.

- Construction of a new CMU electrical building, adjacent to the wet well to house the proposed motor control center and switchgear. The station can be equipped with a manual or automatic transfer switch, to allow for generator operation.
 - It is anticipated that the station would be equipped with the City's typical alarms for sewer pump stations.
- Each of the buildings currently served by the vacuum pipe system will need to be equipped with a small sump pump system to convey building flows to the centralized pump station.
 - A generic alarm for each of these stations would be routed to the centralized station, if desired by the City.

A Basis of Design (BOD) technical memorandum will be prepared to summarize the results of the meeting with WQCP O&M and our recommendations from the findings of the vacuum station evaluation. The BOD memo will identify pump station alternatives and the equipment that is proposed to be installed in the new station. Conceptual plans and a cost estimate will be prepared for each alternative to document selection of the preferred pump station relocation plan. This document will also note potential constructability issues, operational phasing, utility conflicts and permitting requirements. We will rely on the design inflow requirements established in the RFP to set the firm pumping capacity and evaluate pump performance over the range of expected operation for the life of the project.

Once the BOD memo and conceptual plans are approved, we will move into the construction document phase.

Electrical Switchgear

As mentioned above, relocation of the station will include a new switchgear. It is important to note that the existing switchgear serving the station also serves most of the remaining areas east of the

Harbor Master Road that are not being redeveloped. In order to ensure that these areas maintain electrical service, the new switchgear will need to be sized to accommodate these loads. Furthermore, the existing electrical feeds (from the existing switchgear to the buildings), will need to be located in the field so that the existing conduits can be intercepted. Junction boxes will be installed at the intercept location to eliminate the need for pulling of new wires.

The new switchgear can be installed within the new electrical building at the City's direction. The existing switchgear has suffered deterioration due to being exposed to a marine environment over the last 40 years. Placing inside the CMU building would provide additional protection to the equipment.

Conceptual plans for the relocation of the switchgear will be prepared along with a section in the BOD memo summarizing the proposed options.

Force Main

If the City agrees that the existing vacuum piping is unreliable and that a new force main and sump pump system force main is preferred, we will prepare a conceptual plan force main set to be included with the BOD memo. A new force main system will be laid out to each harbor facility with sewer service. A sump pump will be included at each of the service connection points. We will lay out one force main with a connection point for each ejector pump needed. To allow for future development, we will coordinate with the City to install capped ends where the force main could be expanded in the future. Blow-off valves would be installed at these ends to allow for maintenance.

Since the site is a closed landfill, we are limited in the types of piping that we can use. For this application, the HDPE C901/C906 will most likely be the recommended pipe material. The fused pipe ends that lack joints allow for a pipe system

with essentially no infiltration, and have proven to have a long service life in these environments.

Our previous work on the site has given us an advantage in understanding where the existing clay cap is located. We will evaluate our existing data on the elevations of the clay cap to blayout the best new force main pipe alignments to avoid penetrating the cap to the greatest extent practical. While penetrating an existing clay cap is not always avoidable, limiting it can save the City from having to perform too many costly clay cap repairs. Although we will try to avoid these repairs, we will work with Langan to develop a detail for partial and full clay cap penetration repairs, including an alternative bid item in the construction documents to price the repairs. The detail will be based on previously approved designs by the regulatory agencies. This will help protect the City by keeping contractor change orders for repairs within a competitively bid unit price.

Geotechnical and Environmental

Langan Engineering and Environmental Services, Inc. (Langan) has been involved with the environmental and geotechnical aspects of the planning and development of Oyster Point over the past 15 years. They have performed numerous studies to evaluate the existing landfill, clay cap, and underlying subsurface conditions.

Langan will use the existing subsurface data in their files, along with their experience and expertise regarding landfill redevelopment and pump station design to support the relocation of the existing sanitary sewer pump station. For this project Langan will:

- Prepare a geotechnical investigation report and environmental post-closure development plan per the requirements of Title 27 California Code of Regulations (CCR);
- perform oversight related to the environmental and geotechnical aspects of construction.

Geotechnical

We anticipate a review of existing subsurface data available in our team's files will show that the proposed pump station site is underlain by fill (landfill cover, generally consisting of a heterogeneous mix of sand, silt, gravel, and clay cap) over refuse, Bay Mud, stiff clay and dense sand, that is all situated over bedrock. The thickness of the refuse layer is on the order of 30 feet. The Bay Mud is about 80 feet thick, and bedrock is about 180 feet below ground surface.

Using the subsurface information from previous investigations, Langan will perform engineering studies to develop conclusions and recommendations regarding:

- Soil and groundwater conditions at the site;
- Most appropriate foundation type(s) for the proposed structures;
- Design criteria for the appropriate foundation types, including appropriate depth, allowable bearing pressure, modulus of subgrade reactions, and lateral capacity, as appropriate;
- Estimates of total and differential settlement of new foundations under design loads;
- Site seismicity and seismic hazards, including liquefaction and associated hazards;
- Lateral earth pressures for design of below-grade walls;
- Excavation, dewatering, and temporary slopes;
- Repairing the low permeability layer (clay cap), where penetrated;
- Temporary shoring system;
- Seismic design criteria in accordance with 2019 and 2022 California Building Code (CBC);
- Site grading and criteria for fill placement and compaction;
- Soil subgrade preparation; and
- Construction considerations.

They will provide the conclusions and recommendations in a draft written report, which will also include a project site description, vicinity map, site map, and boring logs. An electronic version of the draft report will be sent to the project team and the City for review.

Environmental

Regulatory oversight of the Oyster Point Landfill falls under the San Mateo County Environmental Health Services (SMCEHS) Local Enforcement Agency (LEA) as well as the Regional Water Quality Control Board (RWQCB). Vertical developments overlying the landfill are required to submit a Post-closure Development Plan (PCDP) and Application detailing how the proposed project will comply with Title 27 CCR landfill post-closure development standards. The PCDP will contain information regarding soil management (including clay cap repair during construction), foundation installation, landfill gas mitigation, and utility settlement monitoring and repair.

We anticipate gaining SMCEHS and RWQCB approval of the PCDP will likely take several months and require meetings and correspondence to address questions. Langan will prepare up to two iterations of the PCDP (draft and final) and attend up to five 2-hour meetings with the project team and regulatory agencies to discuss the PCDP. For each 2-hour meeting, we have assumed 3 hours total (2-hour meeting plus 1-hour travel/preparation) for one environmental project manager and one environmental staff.

Based on the limited footprint of the proposed pump station site, we have assumed dust monitoring will not be required as part of this project and that dust control measures included in the PCDP will be sufficient.

Further, based on our recent experience on other similar projects, we assume that the full County PCDP application fee will not be

required and that County PCDP review time will be billed at their hourly rate directly to the City (County review fees not included in this proposal).

Structural

Biggs Cardosa Associates (BCA) will provide structural services for the project. They will provide structural calculations for the pump house foundation, wet well, and CMU building. The foundation for the building will be the most critical aspect of the structural design. Being over landfill and 80-feet of bay mud, settlement will be a critical item to incorporate into the design.

Construction Document Phase

60% Design

At the initiation of the design phase, we will continue with design development and detailed civil, mechanical and electrical design. Design will reflect those items identified in the basis of design report and by field conditions. With the existing utilities identified, the affected utility owners will be contacted to determine design requirements with respect to their utility and, if necessary, relocation and construction restrictions. As mentioned above, the only utility we anticipate in the vicinity of the new pump station that is not owned by the City of South San Francisco are Cal Water water mains.

If permits from outside agencies are required, the permit process will be initiated at this time. Since outside agency review can greatly impact the schedule, scope and cost of a project, early project involvement by the affected agencies is paramount for a successful project. We have learned to request the maximum time allowed for each regulatory permit even if it far exceeds the time needed for a project. That way if the project is delayed, the permit may still be active at a later date. This can help avoid the additional time and expense of requesting a permit extension or a new permit.

Preliminary plans, technical specifications, estimates, calculations and schedule will be

submitted to the City as part of the 60% plan package.

Final Design

Upon receipt of City comments on the 60% design, Wilsey Ham and our sub-consultants will prepare the detailed plans, specifications and construction estimate. The improvement plans will include plan and profile views as well as construction details.

We will develop a design with careful attention to detail to ensure that the proposed improvements match the facilities and existing improvements at conform points.

The technical specifications will be developed using the City's standard format and will be packaged with the City's Notice to Bidders, Bid Schedule, General Specifications and Special Provisions. The Special Provisions will be prepared to address the required work hours, provisions for pedestrian and vehicular access, protection of existing improvements, measurement and payment, and other requirements that will facilitate the management of the construction. The construction cost estimate will also be updated.

At each submittal, the Construction Document package will be submitted to the City for their review and comment. After the City's review, Wilsey Ham will meet with the City to go over their comments. Wilsey Ham will address the City's comments in the next PS&E package submittal and a written response to City comments will be provided.

After the PS&E set is complete, the entire package will be thoroughly checked through our quality control process, as described in Section 2 of this proposal. This final PS&E package will then be submitted to the City for their review. After the City's review, any remaining City comments will be addressed and the Bid Package will be issued for bid.

Bid Phase Support

Engineering support during the bidding phase of a project includes:

- Attendance at the pre-bid meeting
- Response to bidder inquiries
- Preparation of bid addenda
- Contractor bid and qualifications review
- Summarize bids and recommend award of project

Construction Support Services

During the Construction Phase of a project, good communication with the project team, Agency and Contractor aids achieving construction schedules.

We provide timely reviews of submittals, shop drawings and written responses to Contractor RFI's to keep construction moving in a timely fashion. In addition to coordinating with the City throughout the construction phase, our engineers will conduct site visits to review the construction effort as it relates to the design intent. Upon construction completion, our team will use the contractor markups to create the Record Drawings.

The following is a detailed summary of our proposed scope of work for the project.

3.3 Scope of Services

Task 1 – Project Management

- Attend a kickoff meeting and perform a site visit.
- Perform overall project coordination.
- Perform QA/QC reviews and revisions of the conceptual plans, BOD memo, 60%, 90% and 100% PS&E contract documents.
- Develop and update project schedule. Monitor schedule and budget.
- Coordination with sub-consultants.
- Identify and coordinate with stakeholders, specifically the San Mateo Harbor District and the hotel property developer.
- Project management for sub-consultants.

Task 1 Deliverables

Project schedule will be provided in electronic (PDF) format.

Task 1 Schedule

An updated project schedule will be provided at the beginning of the project and as requested.

Task 2 – Record Search and Site Investigation

- Obtain record utility information from the utility companies.
- Perform utility locating using GPR and other electronic methods. Pick up marking with field survey.
- Perform supplemental topographic field survey of the pump station location.
- Set up base map in CAD.
- Perform site visit to review the existing conditions. Revise base maps in CAD based on field findings.
- Review record data of the pump station and landfill record drawings.

Task 2 Deliverables

None

Task 2 Schedule

Task 2 will take roughly 1-month.

Task 3 – Conceptual Design and Basis of Design

- Prepare conceptual pump station plans with alternatives included.
- Prepare conceptual electrical switchgear relocation plans.
- Prepare conceptual force main and sump pump plans.
- Prepare conceptual engineer's cost estimate.
- Prepare Basis of Design technical memorandum.
- Meet with City to review BOD memo and conceptual plans.

Task 3 Deliverables

Draft technical memorandum and final technical memorandum will be provided in electronic (PDF) format. Conceptual plans will be provided in PDF format.

Task 3 Schedule

Task 3 will take roughly 2-months.

Task 4 – Geotechnical and Environmental Services

- Perform geotechnical studies.
- Prepare geotechnical report.
- Prepare Post-closure Development Plan.
- Coordinate with regulatory agencies, including attending up to five one-hour meetings.

Task 4 Deliverables

The Geotechnical Report and the Post-closure Development Plan will be provided in electronic (PDF) format.

Task 5 Schedule

The Geotechnical Report will take roughly 2-months. The Post-closure Development Plan will be prepared with the 90% PS&E package.

Task 5 – Contract Documents

- Prepare 60% pump station plans.
- Prepare 60% electrical switchgear relocation plans.
- Prepare 60% force main and sump pump plans.
- Prepare technical specifications.
- Update engineer's cost estimate.
- Submit 60% PS&E package to City.
- Meet with City to review 60% PS&E package.
- Address City comments on Plans and develop to 90%.
- Address City comments on estimate and develop to 90%.

- Address City comments on technical specifications and develop 90%.
- Prepare Contract Book.
- Submit 90% PS&E package to City.
- Meet with City to review 90% PS&E package.
- Address City comments on 90% PS&E package and develop to 100% PS&E.
- Submit 100% PS&E package to City for Bidding.

Task 5 Deliverables

60%, 90% and 100% PS&E Packages will be provided in electronic (PDF) format.

Task 5 Schedule

60% PS&E package will take roughly 2-months. 90% PS&E package will take roughly 2-months. 100% PS&E package will take roughly 3-weeks.

Task 6 – Public Bidding/Construction Support Services

- Attend pre-bid meeting.
- Respond to bidders questions.
- Issue up to two bid addenda.
- Attend pre-construction meeting.
- Review and approve submittals.
- Review and respond to RFIs.
- Review and respond to C.O. requests.
- Prepare minor plan revisions to address field conditions.
- Perform substantial completion inspection and prepare punchlist.
- Prepare record drawings.
- Provide geotechnical and environmental observation during construction.
- Prepare PCDP Completion Report.
-

Task 5 Deliverables

Bid Addenda, submittal reviews, RFI reviews, C.O. reviews, minor plan revisions, punchlist, record drawings and PCDP Completion Report will be provided in electronic (PDF) format.

Task 5 Schedule

As needed by the City.

3.4 Budget and Schedule Management

Cost Control and Budget Management

The Project Manager will be responsible for performing an earned value analysis each month with the billing cycle. This analysis will check the percent used of the budget for the project against the planned used budget at the end of the month. This will help us determine if our burn rate is higher than the production rate and how efficient we have been with the budget up to that point. If we find that the burn rate is higher than the production rate, we will make adjustments to improve our efficiency.

Schedule Management

To help perform the earned value analysis, the Project Manager will prepare a monthly progress schedule. This schedule will help determine if the budget being used is consistent with the project progress being made. If it is found that the planned progress is not meeting the actual progress made for the project, adjustments will be made to bring the project back on schedule.

Breakdown of Hours

See next page for breakdown of the total hours proposed for this project.

City of South San Francisco
Oyster Point Sanitary Sewer Pump Station Relocation, SS2202

Task Hours

11/3/2022

Task	TASK DESCRIPTION	S&W SUB-CONSULTANTS	LANGAN SUB-CONSULTANTS	TJCAA SUB-CONSULTANTS	BCA SUB-CONSULTANTS	AGS SUB-CONSULTANTS	TOTAL WH LABOR HOURS
1.	Project Management						
1	Kick-off Meeting and site visit	18	0	28	0		12
2	Project Coordination	23	0	55	0		20
3	Quality Control Reviews and Revisions	32	0	51	0		52
4	Develop & Monitoring Schedule, Monitor Budget	9	0	18	0		24
5	Sub-consultant Coord	0	62	0	0		16
6	Coord with City of SSF	28	0	18	0		28
7	Identify & conduct outreach to stakeholders	0	0	0	0		16
8	Project Management for Sub-Consultants	9	0	0	0		0
9	Reimbursibles	0	0	3	0		0
	Subtotal	120	62	174	0	0	168
2.	Record Search and Site Investigation						
1	Obtain Record Utility Information	14	0	0	0		11
2	Utility locating (optional)	0	0	0	0	24	40
3	Perform topographic field survey	0	0	0	0		29
4	Set up project base map	0	0	0	0		11
5	Perform site visit to review ex conditions, revise base maps	23	0	18	0		6
6	Review record data	25	14	32	0		5
7	Reimbursibles	5	0	5	5		0
	Subtotal	67	14	55	5	24	102
3.	Conceptual Design and Basis of Design						
1	Prepare conceptual Pump Station Plans	83	39	0	0		18
2	Prepare conceptual Electrical Switchgear Relocation Plans	9	0	55	0		5
3	Prepare conceptual force main and sump pump plans	0	0	0	0		45
4	Prepare conceptual engineer's cost estimate	18	0	51	0		9
5	Prepare Basis of Design Memo	69	0	55	0		22
6	Meet with City to review BOD	5	0	18	0		4
7	Reimbursibles	0	0	0	0		0
	Subtotal	184	39	179	0	0	103
4.	Geotechnical and Environmental Services						
1	Perform geotechnical Studies	0	0	0	0		0
2	Prepare geotechnical report	0	67	0	0		8
3	Prepare Postclosure Development Plan	0	75	0	0		18
4	Coordinate with regulatory agencies	0	35	0	0		4
5	Reimbursibles	0	0	0	0		0
	Subtotal	0	176	0	0	0	30
5	Contract Documents						
1	Prepare 60% Pump Station Plans	145	25	0	0		26
2	Prepare 60% Elec. Switchgear Relocation Plans	14	0	336	0		18
3	Prepare 60% Force Main and Sump Pump Plans	69	0	0	0		110
4	Prepare technical specifications	78	0	129	0		28
5	Update engineers cost estimate	23	0	0	0		7
6	Submit 60% PS&E package to City	9	0	0	0		7
7	Meet with City to review 60% PS&E package	5	0	0	0		4
7	Address City Comments on Plans, develop to 90%	78	0	8	232		72
8	Address City Comments on estimate, develop to 90%	9	0	8	0		7
9	Address City comments on tech specs, develop to 90%	23	0	25	114		9
10	Prepare contract book	0	0	0	0		34
11	Submit 100% PS&E ro City for Bidding	5	0	5	0		7
12	Meet with City to review 90% PS&E package	28	0	14	0		4
13	Address City Comments on 90% PS&E, finalize 100% PS&E	14	0	9	92		41
14	Submit 100% PS&E ro City for Bidding	0	0	0	0		7
	Reimbursibles	0	0	0	0		0
	Subtotal	499	25	534	438	0	381
6	Public Bidding/Construction Support Services						
1	Attend Pre-Bid Meeting	5	0	12	0		4
2	Respond to bidders questions	0	25	0	7		8
3	Issue up to two bid addenda	21	0	18	0		12
4	Attend Pre-Construction Meeting	9	5	18	0		4
5	Review and approve submittals (29 max)	106	25	110	37		40
6	Review and respond to RFIs (10 max)	16	25	21	23		18
7	Review and respond to C.O. requests (5 included)	16	0	9	0		10
8	Prepare minor plan rev's to address field conditions (3 max)	41	0	0	0		27
9	Perform substantial completion inspection, prep punchlist	18	0	0	0		12
10	Prepare record drawings	28	0	28	6		21
11	Provide Geotech and Environ. Observ during Construction	0	495	0	0		0
12	Prepare PCDP Completion Report	0	58	0	0		0
13	Reimbursibles	0	0	0	0		0
	Subtotal	260	633	216	72	0	156
GRAND TOTAL		1,129	949	1,158	515	24	940

4

Schedule of Work

4.1 Schedule

Please see the following page for a detailed schedule of the work planned to be performed. The schedule includes the critical path of the work items, start, finish and predecessors. All tasks are shown with each completion date.

5

Conflict of Interest Statement

Wilsey Ham currently has on-all agreements with the City to provide consulting services for the disciplines of Engineering, Wastewater and Survey. Wilsey Ham is also working directly for the City on the adjacent Oyster Point Phase 2C Landscaping Project and the Harbor Master Spit Project.

In addition, Wilsey Ham is currently working for Kilroy Realty for the development of Oyster Point Phase 1C and Phase 3C Streets and Utilities projects.

We do not believe that these relationships will have an impact on the final outcome of the plan.

6

Litigation

Wilsey Ham has not been involved in any litigation in connection with our projects over the past ten years.

8

Resumes

8.1 Resume Index

Cohen, Eric – Wilsey Ham – Project Manager

Davis, Brandon – Wilsey Ham – Project Principal

Anderson, Glen – Schaaf & Wheeler – Project Manager

Anderson, Charles – Schaaf & Wheeler – Project Principal

Giorsetto, Paul – TJC and Associates – Project Manager

Farr, Hayley – Langan – Project Engineer

Ray, Justin – Langan – Project Manager

Ludlow, Jeffrey – Langan – Project Principal, Environmental

Gouchon, John – Langan – Project Principal, Geotech

Notaro, Anthony – Biggs Cardosa Associates



Eric Cohen, PE, QSD, PACP

Supervising Engineer

ERIC COHEN has served as a Project Manager on a variety of municipal and commercial projects. His design experience includes sanitary sewer systems analysis, sanitary sewer pump stations, sewer video evaluation, gravity sewer design, sewer force main design, preparing construction documents and specifications, and providing construction management services. He has obtained his PACP certification from NASSCO for reviewing and analyzing sewer systems.

Eric will be the primary Project Manager on the Oyster Point Pump Station Project. Eric is a strong leader for the project design team and an effective communicator with our clients. In this role, he will prepare the scope of work and fee, provide guidance for our project engineers, manage the project design and provide quality control and quality assurance on all projects.

Some of Eric's distinguishing qualifications include:

- Project Management for a variety of capital improvement projects
- Sanitary sewer design and constructability analysis
- Knowledge of several type of sewer construction methods
- Sewer video inspection analysis
- Trenchless installation methods
- Manhole inspection assessment
- Agency permitting
- Management and coordination of subconsultants

Some of Mr. Cohen's recent projects include:

- South San Francisco Pump Station No. 1, City of South San Francisco
- South San Francisco Pump Station No. 2, City of South San Francisco
- Brisbane Lift Station No. 4, City of Brisbane
- Oyster Point Phase IC Streets and Utilities, City of SSF/Kilroy, CA
- Oyster Point Phase 2C, City of South San Francisco
- Avenues 1-1 and 1-2 Water and Sewer, San Bruno, CA
- Hillsborough Parrot-Glenbrook-Melrose SS Rehabilitation, Town of Hillsborough
- San Carlos Sanitary Sewer Rehabilitation Project, San Carlos, CA
- PS#4 Sanitary Sewer Force Main Project, City of South San Francisco, CA

References include:

- Hae Won Ritchie, PE – City San Bruno - 650.616.7067 - hritchie@sanbruno.ci.gov
- Javad Ghaffari – Town of Hillsborough - 650.627.6651 – jghaffari@hillsborough.net

AREAS OF EXPERTISE

Municipal Sewer Systems
 Municipal Water Systems
 Municipal Storm Drain Systems
 Pavement Design and Street Reconstruction
 Infrastructure Master Plans
 Bike/Pedestrian Facilities
 Plat Review and Approval
 Project Presentation

REGISTRATION

Civil Engineer, RCE
 California C77616

QSD/QSP, #23719, Ca

NASSCO PACP Certified

PROFESSIONAL EXPERIENCE

Managing Engineer
 Wilsey Ham, Inc.
 2011– Present

Project Engineer
 Green Valley Consulting
 2010-2011

Project Engineer
 Adobe Associates, Inc.
 2006-2008

EDUCATION

B.S. Civil Engineering
 California Polytechnic State University, San Luis Obispo, CA



BRANDON S. DAVIS, P.E., QSD

Principal Engineer

BRANDON DAVIS has acquired a wide range of engineering and management experience in his 25 years of civil engineering practice. He has served as the Principal Engineer and Project Manager on a wide range of sanitary sewer collection systems projects, including on pump station projects. He has a strong understanding of pipe installation methods, including conventional open trench installation, pipe bursting, pipe-reaming and cured-in-place pipe. In his role, he has had the ultimate responsibility for all phases of project development, including site investigation and master planning, development of construction documents for bidding, and construction administration. His broad range of experience gives him the ability to use his technical design skills to identify the potential impacts of design issues on a project as a whole and to identify possible solutions on projects with complicated constraints.

As Wilsey Ham's Project Principal Engineer, Brandon will be responsible for entering into a contract with the City. In addition to ensuring all contractual obligations are met, Brandon will serve as a technical and managerial resource to the entire Wilsey Ham team in a supervisory role. Ultimately, the Principal Engineer ensures that quality services are being provided to our clients.

Some Mr. Davis's Projects include:

- South San Francisco Pump Station No. 1, City of South San Francisco
- E. Burlingame Ave & Anza Bridge Utilities Improvements, City of Burlingame
- Park Plaza Dr., Southgate Ave., San Fernando Way, and Miriam Sy. Sanitary Sewer Main Rehabilitation, City of Daly City
- South Rollins Road Utility Improvements, City of Burlingame
- SR1 San Pedro Creek Bridge Replacement/Creek Widening, Pacifica, CA
- East-West Connector Streets & Utilities, City of South San Francisco, CA
- 2014-2015 Street Pavement Rehabilitation, City of Menlo Park, CA
- Ralston Corridor Pedestrian Improvements & Traffic Analysis, Belmont, CA
- San Pablo Avenue Green Stormwater Spine, Various, CA
- Old Town One-way Traffic Operations, City of San Pablo, CA
- Sir Francis Drake Boulevard Resurfacing, Marin County, CA
- Alhambra Avenue (North) Improvement Project, City of Martinez, CA

References include:

- Kevin Okada, PE - City of Burlingame - 650.558.7213 - kokada@burlingame.org
- Roland Yip, PE - City of Daly City – 650.991.8151 – ryip@dalycity.org

AREAS OF EXPERTISE

Sanitary Sewer Collection
Streets & Highways
Green Infrastructure
Bikeways
Storm Drainage Systems
Underground Utility Design
Site Development
Special Districts Management

REGISTRATION

Civil Engineer, RCE C61024
California

QSD/QSP, #00159
California

PROFESSIONAL EXPERIENCE

Supervising Engineer
Wilsey Ham, Inc.
1997 – Present

TRAINING AND CERTIFICATIONS

National Storm Water Summit

ABAG NPDES Erosion Control Seminar

Stormwater Pollution Prevention and Stormwater Quality Control Training

EDUCATION

B.S. Civil Engineering
California State University, Chico

Glen M. Anderson, PE Vice President



Glen M. Anderson, PE has 15 years of experience in sanitary sewer system, potable water, and stormwater assessment and design as well as the associated construction support and management associated with those projects. Glen has successfully completed work on several sanitary sewer main and trunk rehabilitation projects. He has worked on sanitary sewer pump station rehabilitation projects throughout the Bay Area.

Additionally, Glen has performed condition assessments for more than 150 sanitary sewer and stormwater pump stations. Glen's potable water experience projects include the assessment and rehabilitation of booster pump stations, design of a water tanks and planning and design for potable water wells and pipelines. In addition to design, Glen has provided construction support and management services for a variety of projects, including wells, pipelines, storage tanks, pump stations, and generator installations.

Selected Project Experience

Wastewater Systems

Wastewater Pump Stations
Assessment (6 Stations)
Delta Diablo

Crestmoor and Lomita Pump
Stations and Forcemain
City of San Bruno

City of San Mateo Basin 2/3
– Pump Station
Rehabilitations
Stantec/City of San Mateo

Lift Stations J&K and D, F &
W
City of Morgan Hill

PSQ Reserve Flow and URD
Project
East Bay Municipal Utility
District

Assessment and Engineering
for Sanitary Sewer Main
Rehabilitation
City of San Mateo

Force Main Appurtenance
Projects ESDC
Ross Valley Sanitary District

Cabrillo Avenue Sewer Main
Abandonment and
Replacement
City of Santa Clara

South Trunk Sewer Relief
Line
City of San Mateo

Madera Lift Stations (11 Lift
Stations
County of Madera

Mariner's Island No. 5 and
No. 6 Pump Station
Rehabilitation
City of San Mateo

Sanitary Sewer Pump Station
Repairs
City of Fontana

Pump Station Rehabilitations
City of Alameda

Sanitary Sewer Lift Station M

Education

BSCE, Civil and
Environmental Engineering,
University of California,
Davis

Licenses

Registered Civil Engineer,
California C76720

Certifications

NASSCO PACP, MACP, and
LACP Certified, Cert. No. U-
714-06021855

Affiliations

Pipe Users Group – NorCal
American Water Works
Association

City of Morgan Hill

S. San Francisco Sanitary
Sewer Pump Station No. 8
Rehabilitation
City of S. San Francisco

City of San Mateo Sanitary
Sewer Pump Station
Assessment
City of San Mateo

Morgan Hill Trunk Sewer No.
2
City of Morgan Hill

Stormwater Systems

Baylands Stormwater Pump
Station No. 2
City of Sunnyvale

Rehabilitation of Failed 96"
Stormwater Corrugated Metal
Pipe
Town of Moraga

O'Connor Pump Station
Improvement Feasibility
Study and Design
City of East Palo Alto

Vista Bella Stormwater Pump
Station Design, Half Moon
Bay
Ruggeri-Jensen-Azar

Citrix Stormwater Pump
Station Design, Santa Clara
Kier & Wright

Silviera Stormwater Pump
Station Design, Gilroy
Ruggeri-Jensen-Azar

Sears Point Stormwater
Pump Stations Design, 2
Stations
Ducks Unlimited, Inc.

Marsten Pump Station
City of Burlingame

San Francisquito Creek
Stormwater Pump Station
City of Palo Alto

Blanco Drain Stormwater
Pump Station
Monterey County Water
Resources Agency

Hope Street Stormwater
Pump Station
City of San Jose

Baylands Stormwater Pump
Station No. 1
City of Sunnyvale

Water Delivery Systems

Oak and Jones Water
System Planning
Summerhill Homes

Water System Planning and
Design
Confidential Client

Country Club and Victoria
Water Booster Pump Stations
City of Petaluma

Cherry Creek Water Pump
Station
City of Hillsborough

Assessment of City Wells
City of Santa Clara

Water System Modeling and
Design
Great Oaks Water Company

Watkins Gate Well and
Pipeline Project
Marina Coast Water District

Well 34 Site Improvements
Marina Coast Water District

Shady Lane Water System
Improvement
San Jose Water Company

Stonegate Water Supply
Project
County of San Benito

San Jerardo Water System
Improvements
County of Monterey

Segunda Pump Station Pump
replacement
California American Water

El Torro Wells
California American Water

Valley Christian School Pump
Station Rehabilitation
Valley Christian School

Charles D. Anderson, PE President



Charles D. Anderson, PE has more than 30 years of experience in the areas of flood control and drainage, water supply and distribution, wastewater collection and pumping, surface water hydrology, and groundwater. As a project manager, he is involved in all phases of project management and implementation, from project feasibility to construction document preparation and construction support for a wide range of public and private clients.

He has completed numerous flood insurance studies (FIS) and letters of map revision (LOMRs) for FEMA. Chuck's projects generally have multidisciplinary teams that help policy makers arrive at reliable decisions for protecting communities from flood risk and the threat of climate change, most particularly sea level rise. His San Mateo Bayfront Levee Improvement Project won state and regional awards.

Chuck demonstrates expertise in watershed and stochastic hydrology, open channel hydraulics, closed conduit hydraulics, pump station design, and storm drainage as well. His background also includes pipeline design, storage tank design, pump station design, hydraulic network modeling, wastewater collection includes septic systems, sanitary sewer design, pump station design, sanitary sewer modeling, and master planning.

Selected Project Experience

Water Supply, Storage, and Distribution

Anderson Dam Seismic Retrofit Project
Valley Water

Bear Gulch Reservoir PMF
California Water Service Company

San Jose General Plan Update, Water Supply Summary
David J. Powers & Assoc.

Kahakuloa Acres Private Water System Evaluation and Two Storage Tanks
Maui, Hawaii

Upper Miocene Canal,
Paradise

Cotton Shires and Associates
Vista Pump Station and Water Tank Improvement
Town of Hillsborough/CSG Consultants

Kern River Raw Water Pumping Plant Forensic Investigation
Noriega and Bradshaw, LLP

Konocti Harbor Water Treatment, Storage, and Distribution Evaluation
Page Mill Properties

Water System Network Modeling, Flow Testing, & Fire Flow Calculations
City of San Jose

Education

BCE, Georgia Institute of Technology

MSCE (Water Resource Engineering), Stanford University

Licenses

Registered Civil Engineer, California C43776

Hawaii 15647

Nevada 11518

Washington 39715

Affiliations

American Council of Engineering Consultants

American Society of Civil Engineers

Floodplain Management Association

Potable wells, storage tanks, and water mains for Coyote Valley Specific Plan
City of San Jose

Waimanalo Reservoir Assessment, Martin v. State of Hawaii
State of Hawaii

Well Nos. C-20, C-21, C-22, and C-23
City of San Jose

Carmel Development Company Water System Mediation, Monterey
Harry & Linker, LLP

Potable and Irrigation Water Supply, Storage & Distribution Systems
Coyote Creek Golf Club

Recycled Water Systems

Retrofit Design for Paper Mill
California Container
Corporation, Santa Clara

Recycled Retrofits and
Waterline Extensions
City of Santa Clara

Lake Merced Country Club
Storage Tank and Pump
Station
DBS Structures, Inc.

Customer Retrofit Plans for
Recycled Water Use
South Bay Water Recycling
Program

The Villages Golf Course
Irrigation Pump Station
City of San Jose

Floodplain Management and Infrastructure

West Channel Enhancement
Google, Inc.

San Francisquito-Adobe
Creek Flood Study
Wood Rogers/Valley Water

Miller Creek Floodplain
Forensics and Testimony
Marin County/SMART

San Felipe Road Floodplain
Giacalone Management, Inc.

Foster City Levee
Improvements
City of Foster City

Annual Levee Inspection
City of San Mateo

Millbrae and Burlingame
Shoreline Area Protection
and Enhancement Project
San Mateo County Flood and
Sea Level Rise Resiliency
District (OneShoreline)

Downtown West Los Gatos
Creek Restoration
Google, Inc.

Berryessa/Penitencia
Watershed Flood Study
Wood Rogers/Valley Water

Palo Alto Flood Basin Sea
Level Rise Impact Study
Valley Water

Lower Penitencia Creek
Improvements
Wood Rogers/Valley Water

Colma Creek Floodplain
Analysis
City of South San Francisco

Guadalupe River Bridge
Hydraulics at Railyard Place
Biggs Cardosa Associates

Upper Llagas Creek Flood
Protection Project
Woodard & Curran/Valley
Water

Permanente Creek Flood
Protection Project
Mott MacDonald/Valley
Water

Storm Water Detention
Basins at Truckee River
Reno-Sparks Indian Colony

San Francisquito Creek
Hydrology Study Peer
Review
Valley Water

Christopher Ranch Flood
Study (Uvas Creek)
Christopher Ranch

Bayfront Canal Redwood City
Flooding Issues
Stanford Real Estate

Old Mountain View Alviso
Road Bridge Replacment
Hydraulic Study
Biggs Cardosa Associates

Highway 101
Pedestrian/Bicycle
Overcrossing at Adobe Creek
Biggs Cardosa Associates

Wrigley-Ford Creek Long
Term Monitoring
HT Harvey & Associates

North Gilroy Neighborhood
District Urban Services Area
Amendment
EMC Planning Group

Silicon Valley BART
Extension Floodplain
Analysis
Santa Clara Valley
Transportation Authority

Bayfront Levee Improvement
Project
City of San Mateo

San Tomas Aquino Creek
Flood Study
Valley Water

Recertification of Uvas,
Stevens and Lower
Penitencia Creek Levees
Valley Water

Truckee River Levee and
Floodwall System
CFA Engineers

O'Neill Slough Tide Gate
Structure
City of San Mateo

Julian Street and William
Street Bridge Retrofits at
Coyote Creek
Biggs Cardosa Associates

South Sutter County Flood
Control Alternatives
Sacramento Area Flood
Control Agency

SW Lemmon Valley Flood
Control Master Plan/Channel
Improvements
CFA, Inc.

Wooster Avenue Bridge
Replacement
Advanced Engineering
Design

Lower Cache Creek Flood
Control Barrier and
Woodland Measure S
Shute, Mihaly & Weinberger

Sunnyvale West Channel
Google, Inc.

Other Notable

Stochastic Analysis of Interim
Dam Reliability, Anderson
Dam Seismic Retrofit
Valley Water



Education

MBA, UC Berkeley;
1988

MS, Electrical
Engineering and
Computer Science;
UC Berkeley; 1980

BS, Electrical
Engineering and
Computer Science;
UC Berkeley; 1978

Professional Registrations

Electrical:

CA 11674, AK, AZ,
CO, HI, ID, NM,
NV, OR, UT, WA,
WI

Control Systems:
CA 7106

LEED Accredited
Professional

Professional Affiliations

- Institute of Electrical and Electronics Engineers
- Instrumentation, Systems, and Automation Society

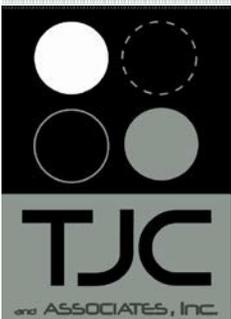
Office Address

1111 Broadway
Suite 300
Oakland, CA 94607

Paul J. Giorsetto, P.E., LEED AP – Vice President

Paul Giorsetto, a licensed engineer since 1984, has extensive design experience in the areas of electrical power distribution, electrical industrial applications, control systems, and instrumentation. His specific experience includes electrical system modeling and planning; medium and low-voltage electrical distribution designs of water, wastewater and industrial waste treatment facilities; plant instrumentation; and SCADA systems for in-plant and telemetry-based systems.

- **Reservoir A1/A2, Booster Pump Station B/C Project; Marina Coast Water District, Marina, CA; ICE Project Manager.** Project included improvements to District infrastructure to address several operational issues in its multi-zone potable water distribution system. Improvements included two new Zone A reservoirs to increase storage, improve zone pressure control, and facilitate time-of-day operation; new Zone B and Zone C booster stations at the reservoirs site to improve operations; and off-site improvements to the existing Ord Well Field chlorination system including new hypochlorite dosing systems and new standby generator.
- **Graham Hill WTP Electrical Improvements Project; City of Santa Cruz Water Department, Santa Cruz, CA; Project Engineer and TJCAA Project Manager.** Renovation, expansion, and improvements to the electrical distribution system at the City's main Graham Hill WTP. This project included verification and design validation to establish the conceptual approach. Final design for upgrades to the electrical system included a new utility 21 kV primary service, 480 V main-tie-main switchgear with source transfer logic, remote switchgear console for arc-flash considerations, 1,500 kW engine-generator set, and a dedicated electrical building.
- **Pacheco Pumping Plant ASD Replacement Project; Valley Water, Santa Clara, CA; Lead Instrumentation Engineer, Project QA/QC, and TJCAA Project Manager.** This project included replacement of 12 existing, 2,000 hp, 5 kV, wound-rotor motor speed controls with new PWM ASDs. Work included analysis of drive technologies, review of prequalification and procurement delivery methods, control system interfaces to large drives, and modifications to the existing controls to support interim operation of parallel control systems during construction.
- **Bradford Storm Drain Pump Station Design; City of Redwood City, Redwood City, CA; Engineer of Record.** Electrical and I&C for pump station renovation and upgrades. Design includes replacement of existing pumps with new 150 HP to 600 HP motors with VFD control. Design challenges include renovation with larger rated equipment, standby generator, and new PG&E service on very constrained site and with numerous nearby sensitive receptors.
- **Ross Booster Station Upgrades; Water Division, Pasadena Water and Power, Pasadena, CA; Project Engineer.** Development and evaluation of alternatives for providing emergency power to a booster pump station constructed in 1958. Evaluation addressed cost, siting, maintenance, power, air quality, noise, and performance. Provided planning-level cost estimates and recommendations.
- **Potable Water Pump Station Standby Generators/Emergency Response Project; Dublin San Ramon Services District, Pleasanton, Dublin, and San Ramon, CA; Project Manager.** Site electrical analysis and condition assessments for installation of standby power equipment at 17 sites across the DSRSD service area, with the objective of providing extended standby power capability to meet water supply reliability requirements during the PG&E Public Safety Power Shutdown program. Developed standby operation strategies, generator sizing criteria, and coordinated direct procurement of generators.
- **Simmons Slough Drainage Improvement, Stormwater Pump Stations; Marin County Flood Control and Water Conservation District, Novato, CA; Project Manager and Engineer of Record.** I&C and electrical design services for renovations to an existing stormwater pump station on San Francisco Bay. Final design included PG&E utility coordination including overhead line extension, new utility metering enclosure, outdoor-rated MCC, independent normal and backup pump controls, and provision for a portable standby generator.
- **West Ranch Recycled Water Main Extension (Phase 2D); Castaic Lake Water Agency, Santa Clarita, CA; Engineer of Record.** Design of instrumentation, controls, and electrical systems for a new recycled water pump station. Work included predesign and design including load calculations, coordination of a new 480 V SCE service, new facility 480 V distribution, VFD-driven recycled water pumps, motor controls, and remote telemetry.
- **Arc Flash Hazard Assessment; Monterey One Water, Marina, CA; Project Manager.** TJCAA provided an arc flash hazard analysis for remote lift and pump stations. The study analyzed 51 sites, determined the risk of an arc flash at each facility, and developed recommendations for improvements to reduce or eliminate the identified risks. Using SKM PowerTools®, TJCAA prepared models for each site, analyzing existing equipment ratings, protection, device coordination, and arc flash levels. TJCAA made recommendations for equipment upgrades and settings to improve coordination and/or reduce arc flash energy and established documentation.



HAYLEY FARR, EIT

PROJECT ENGINEER

ENVIRONMENTAL ENGINEERING

Ms. Farr is a project engineer with five years of environmental consulting experience working in California, primarily in the San Francisco Bay Area. She provides project management and technical support services for a wide range of complex projects, including landfill redevelopments. Ms. Farr manages and conducts field investigations to collect soil, soil gas, groundwater, and indoor air data to evaluate the need for engineering systems, prepares environmental reports (including Phase I and II Environmental Site Assessments, Monitoring Reports, and Site Mitigation Plans) and engineer's estimates, designs and monitors vapor intrusion mitigation systems, and provides quality assurance oversight during construction to confirm adherence with plans and specs.



SELECTED PROJECTS

- Oyster Point Phase I and II Landfill Redevelopment – Final Closure Plan and Postclosure Development Plan preparation, regulatory agency coordination, and construction oversight, South San Francisco, CA
- UCSF Laurel Heights Campus Redevelopment, 3333 California Street – Site Mitigation and Dust Monitoring Plan preparation, San Francisco, CA
- Genentech Building 40, 44, and 48 – Vapor mitigation system design, oversight, and reporting, South San Francisco, CA
- 2000 Bryant Street – Dust monitoring, Site Mitigation Plan implementation, Vapor mitigation system oversight, San Francisco, CA
- Mission Bay Block 6 West – Methane mitigation system design, oversight, and reporting, San Francisco, CA
- Meals on Wheels, 2230 Jerrold Street – Vapor mitigation system design, oversight, and reporting, South San Francisco, CA
- San Francisco Marin Food Bank, 2550 Kerner Blvd – Methane mitigation system repair design and oversight, San Rafael, CA
- California Pacific Medical Center Mission Bernal Campus, 3555 Cesar Chavez St – Site Mitigation Plan preparation and implementation, San Francisco, CA
- Midway Village Phase I Redevelopment – Vapor mitigation system design, Daly City, CA
- Nouveau Cleaners, 11 West 37th Ave – Site history review and vapor intrusion assessment, Environmental investigation preparation, San Mateo, CA
- One Piedmont, 230-240 W McArthur – Vapor Mitigation System peer review, Oakland, CA
- Phase I Environmental Site Assessments – Various sites in California

EDUCATION

B.Sc., Environmental Engineering
California Polytechnic State University
San Luis Obispo

REGISTRATION

Engineer in Training (EIT)

CERTIFICATIONS

40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER)

Envision Sustainability Professional (ENV SP)

LEED Green Associate

First Aid/CPR/AED

AFFILIATIONS

Engineers Without Borders

American Society of Civil Engineers

Corporate Social Responsibility Representative

JUSTIN RAY, PE, GE

SENIOR PROJECT MANAGER

GEOTECHNICAL ENGINEERING & PROJECT MANAGEMENT

Mr. Ray has provided geotechnical engineering services for numerous projects throughout Northern California, including commercial and residential developments for mid- and high-rise buildings, and education and medical facilities. As a Senior Project Manager, his experience includes project management, engineering analysis, construction observation, and subsurface investigation for projects involving ground improvement, driven and drilled pile foundations, drilled pier foundations, shallow foundations, earthwork, and deep excavations. Mr. Ray has performed engineering analyses to determine settlement behavior of soil under new loading and earthquake loading, seismic hazards including liquefaction potential and lateral spreading, slope stability, bearing capacity of foundations, lateral and vertical capacity of deep foundations, and behavior of deep excavations and earth retention systems. In addition Mr. Ray manages Langan's soil laboratory which is accredited by AMRL, and the California Division of the State Architect (DSA, LEA No. 287).



EDUCATION

M.S., Geotechnical Engineering
University of California, Berkeley

B.S., Civil & Environmental Engineering
University of California, Los Angeles

PROFESSIONAL REGISTRATION

Professional Engineer (PE)
in CA

Geotechnical Engineer (GE)
in CA

AFFILIATIONS

American Society of Civil Engineers
2009-present

Deep Foundations Institute
2011 – Present

San Francisco Geo-Institute,
Member 2012 – Present
Treasurer 2017 – 2019

Urban Land Institute. Young Leaders Group,
Member 2020 - Present
Forums Chair – 2021

SELECTED PROJECTS

- Oyster Point Landfill Redevelopment, South San Francisco, CA
- Oyster Point Phase 1 Vertical Construction, South San Francisco, CA
- Oyster Point Phase 2 Vertical Construction, South San Francisco, CA
- Oceanwide Center, San Francisco, CA
- California Northstate University – Hospital, Sacramento, CA
- Alameda Landing Waterfront, Alameda, CA
- 1150 Clay Street, Oakland, CA
- 40 Harrison, Street, Jack London Square, Oakland, CA
- 855 Brannan Street Apartments, San Francisco, CA
- Ventura County Med Center Hospital Replacement Wing, Ventura, CA
- Equity Potrero, San Francisco, CA
- Redwood City Jefferson Apartments, Redwood City, CA
- San Jose Earthquakes Stadium, San Jose, CA
- 1110 Jackson Street, Oakland, CA
- Lakehouse Commons, Oakland, CA
- 2 Kaiser Plaza, Oakland, CA
- San Francisco State - Creative Arts Building, San Francisco, CA
- San Francisco Unified School District
 - Lowell High School
 - Paul Revere Elementary School
 - Longfellow Elementary School
 - McAteer Campus Modernization
 - Thurgood Marshall High School
- 1266 9th Avenue, Apartments, San Francisco, CA
- AVA Apartments, 55 9th Street, San Francisco, CA
- Rosewood-Madison Slope Repair, San Bruno, CA
- VA Palo Alto Polytrauma/Rehabilitation Center, Palo Alto, CA

LANGAN

JEFFREY F. LUDLOW, PG

PRINCIPAL

ENVIRONMENTAL ENGINEERING

Mr. Ludlow has 37 years of experience in marketing, designing, and managing multidisciplinary environmental projects for private and public clients. Mr. Ludlow directs technical staff and subcontractors and provides project strategy, scheduling, budgetary control, and client and regulatory interfacing for projects ranging in size from \$1,000 to over \$4 million. His wide range of environmental experience includes assessing and remediating point source and nonpoint-source releases of organic and inorganic chemicals from tanks, sumps, waste ponds, wastewater streams, mine tailings and audits, and landfills. Mr. Ludlow developed Langan's vapor intrusion mitigation practice and has designed vapor control and landfill gas mitigation systems for dozens of commercial and residential development projects in Northern and Southern California. These projects typically involve construction of new buildings over groundwater contaminated with volatile organic compounds (VOCs), and petroleum hydrocarbons or are on former landfills with methane gas mitigation issues. In most projects, Langan also provided geotechnical engineering services and design input to the building foundation system. This integrated approach has allowed Mr. Ludlow to design vapor mitigation solutions that are cost effective, constructible and integral to other building systems that minimize disruption of the normal building activities.



EDUCATION

B.A., Geology
Southern Oregon State
College, Ashland

PROFESSIONAL REGISTRATION

Professional Geologist in
CA and NY

AFFILIATIONS

California Groundwater
Association

SELECTED PROJECTS

Landfill Projects

- Related Santa Clara Landfill Post-Closure Mixed Use Development Santa Clara, CA
- Oyster Point Landfill Post-Closure Development and Methane Mitigation, South San Francisco, CA
- Port of San Francisco Pier 94 Landfill Closure, San Francisco, CA
- Sierra Point Business Center Multiple Projects Landfill Post-Closure Development, Brisbane and South San Francisco, CA
- Bascom Creekside mixed-use Redevelopment of Former Landfill, Methane Mitigation System Design, Campbell, CA
- America Center Landfill Closure and Post-Closure Development, San Jose, CA
- Westport Office Park Landfill Post-Closure Development Operation and Maintenance Program, Redwood City, CA

Office Campuses

- Maude & Mathilda Research & Development (R&D) (LinkedIn and Apple) Campus Vapor Mitigation Sunnyvale, CA
- Oyster Point Life Sciences Campus, South San Francisco, CA
- Sierra Point Business Center, Methane Mitigation Landfill, Brisbane, CA
- Symantec Corporation Chengdu, China
- LinkedIn Campus Vapor Mitigation Design, Sunnyvale, CA
- Sandler Neurosciences Center at UCSF Mission Bay, Methane Mitigation Design, San Francisco, CA
- Jessie Square Garage, Jewish Museum, San Francisco, CA

LANGAN

JEFFREY F. LUDLOW, PG

- Sierra Point Business Center, Methane Mitigation Landfill, Brisbane, CA
- America Center Mass Grading and Landfill Closure, San Jose, CA

Higher Education

- J. David Gladstone Institutes Blocks 41-43, Parcel 2, Mission Bay,
- Sandler Neurosciences Center at UCSF Mission Bay, Methane Mitigation Design, San Francisco, CA
- UCSF Parnassus Research and Administration Building, San Francisco, CA

Public Agency Contracts

- Alcatraz Island Hazardous Materials Preliminary Assessment, San Francisco, CA
- Grand Canyon National Park, Site and Health Risk Assessment, Grand Canyon National Park, AZ
- Port of Oakland New Harbor Facilities Center, Oakland, CA
- San Francisco Public Utilities Commission, San Francisco, CA
- Siskiyou County Emergency Response Soil Remediation Monitoring, Siskiyou County,
- Yosemite National Park Remediation and Stormwater System Assessment, Yosemite, CA
- City of Hercules Phase I & II Environmental Site Assessments, Hercules, CA

Industrial/Warehouse

- MUNI Maintenance Facility Soil and Groundwater Remediation, San Francisco, CA
- MUNI Substation Redevelopment, 1140 Fillmore Street, San Francisco, CA
- Ryerson-Tull Steel Facility, Emeryville, CA
- Sacramento Army Depot RI/FS, federal Superfund site, Sacramento, CA

Military Bases

- Fort Ord/Sierra Army Depot Closure Plan Reports, Northern CA
- Hunters Point CERCLA Remedial Investigation, San Francisco, CA
- Sacramento Army Depot RI/FS, federal Superfund site, Sacramento, CA
- SFRA Hunters Point Shipyard, San Francisco, CA

Large-Scale Urban Development

- City Place Santa Clara landfill post-closure development Santa Clara, CA
- Hunters Point CERCLA Remedial Investigation, San Francisco, CA

Retail/Commercial Projects

- Santa Paula Dry Cleaners, Ventura, CA
- Century Center Shopping Center, Modesto, CA
- Hayward Cleaners, Creekside Center, Hayward, CA

Hospitals

- Sutter Health Van Ness Campus, San Francisco, CA
- Sutter Health Mission Bernal Campus, San Francisco, CA
- Kaiser Medical Center, Mission Bay Blocks 41-43, Parcel 4, Methane Mitigation, San Francisco, CA

JOHN GOUCHON, PE, GE

PRINCIPAL

GEOTECHNICAL ENGINEERING & PROJECT MANAGEMENT

Mr. Gouchon provides geotechnical engineering services for numerous projects, including mid- and high-rise buildings, commercial and residential structures, parking structures, bridges, landfills, reservoirs, levees, and embankments. He is responsible for construction observation, engineering analysis, and technical management for projects involving driven and drilled pile foundations, drilled pier foundations, mat foundations, earthwork, and deep excavations. In addition, he provides recommendations for pavement design, estimates settlements, evaluates liquefaction potential and slope stability, performs seismic hazard studies, and develops seismic response spectra and time histories for structural analyses. Mr. Gouchon has extensive experience performing ground motion studies for hospitals and school projects requiring approval by the Office of Statewide Health Planning and Development (OSHPD) and the California Geologic Survey (CGS).



EDUCATION

M.S., Geotechnical Engineering University of California, Berkeley

B.S., Civil Engineering University of California, Berkeley

PROFESSIONAL REGISTRATION

Professional Engineer (PE) in CA, NY

Geotechnical Engineer (GE) in CA

AFFILIATIONS

American Society of Engineers (ASCE) 1985 - present

EERI 2002 - present

SELECTED PROJECTS

Office Campuses

- Cityview, San Jose, California
- 200 Park Ave., San Jose, California
- Platform 16, San Jose, California
- 160 Harrison Street High-Technology Facility, Seismic Strengthening, San Francisco, CA
- 303 Almaden Office Tower, San Jose, CA
- 350 Mission Street, Future Salesforce Headquarters, San Francisco, CA
- Apple Campus, San Jose, CA
- Britannia Cove at Oyster Point, Biotechnology Business Complex, South San Francisco, CA
- Broadcom Office and Parking Structures, San Jose, CA
- Burlingame Point, Office/Life Science Campus, Burlingame, CA
- China Basin Office Building, San Francisco, CA
- Electronic Arts, Redwood City
- Equinix Facility Expansion, San Jose, CA
- Fremont Tech Center, Fremont, CA
- Google Charleston East Campus and Transit Center, Mountain View, CA
- Google Technology Facility at NASA Ames Research Center, Mountain View, CA
- Bayview Campus at NASA Ames and Off-Site Improvements, Mountain View, CA
- HGST Campus, San Jose, CA
- Intuit Campus, Mountain View, CA
- NVIDIA Campus, Santa Clara, CA
- Oracle Campus (Headquarters) Redwood City, CA
- Oracle Island Parkway Campus, Belmont, CA
- Oracle, Santa Clara, CA
- Oyster Point Landfill Redevelopment, South San Francisco, CA
- Britannia Cove at Oyster Point, Biotechnology Business Complex, South San Francisco, CA

LANGAN

JOHN GOUCHON, PE, GE

- Pacific Stock Exchange, San Francisco, CA
- Pixar Animation Studios, Emeryville, CA
- Samsung Headquarters, San Jose, CA
- Samsung R&D Campus (625 Clyde Avenue), Mountain View, CA
- Shoreline Technology Park, Mountain View, CA
- Sierra Point Business Center, Landfill Redevelopment, Brisbane and South San Francisco, CA
- Sun Microsystems, Menlo Park, CA
- Wells Fargo Center, Sacramento, CA
- LAM Research Campus, Milpitas, CA
- Meridian Plaza, Sacramento, CA
- 160 Harrison Street, High-Tech Facility, San Francisco, CA
- 1500/1580 Mission Street, Office/Residential, San Francisco, CA
- 1015 Martin Avenue, Data Center, Santa Clara, CA
- 3801/3803 East Bayshore Road, Office, Mountain View, California
- 384 Santa Trinita, Office, Sunnyvale, CA
- 399 West Java Drive, Office, Sunnyvale, CA
- 525 Berry Street, Office, San Francisco, CA
- 1350 Shorebird Blvd., Campus Amenities Addition, Mountain View, CA
- China Basin Landing, Office, San Francisco, CA
- Concar Property, Office, San Mateo, CA
- Portofino, Office, Redwood City, CA

Mixed-Use

- City Place Santa Clara Landfill Redevelopment, CA
- The Hills at Vallco, Cupertino, CA
- 1750-1770 Fulton Street, Mixed-Use Development, San Francisco, CA
- Bay Meadows Racetrack Redevelopment,
- Oceanwide Center, 1st and Mission streets, Tower 1 for Office Space and Tower 2 for Hotel and Condominiums, San Francisco, CA
- Santa Clara Square, Residential/Office/Retail, Santa Clara, CA
- Transbay Block 9, Residential/Retail, San Francisco, CA
- Transbay Blocks 6/7, Residential /Retail, San Francisco, CA
- Nazareth Plaza, San Mateo, CA
- Mission Town Center, Santa Clara, CA
- Aviato – 199 Bassett Street, Mixed-Use Tower, San Jose, CA
- Fountain Alley, San Jose, CA
- CityView, San Jose, CA
- Park Habitat, San Jose, CA
- 200 Park Avenue, San Jose, CA

Data Centers

- Equinix SV10, SV11 and SV12, San Jose, CA
- Equinix SV5ibx Data Center, San Jose, CA
- Equinix Great Oaks & Santa Teresa Blvd., San Jose, CA
- Terremark Data Center – 2970 Corvin Drive, Santa Clara
- 1231 Comstock, Santa Clara, CA
- 2225, 2255, and 2285 Martin Avenue, San Clara, CA
- 2175 Martin Avenue, Santa Clara CA
- 1111 Comstock Street, Santa Clara, CA
- TGS Irvine Data, Irvine, CA



Anthony Notaro, PE

Associate, Biggs Cardosa Associates, Inc.

Anthony Notaro joined Biggs Cardosa in 1991, after serving with the U.S. Army Corps of Engineers. He has nearly 30 years of experience in structural engineering with an emphasis on transportation and infrastructure projects. He has been a Project Manager on numerous projects including new construction, rehabilitation and/or seismic retrofit of various pedestrian, vehicular, and rail bridge structures, retaining wall and soundwall structures, and various hydraulic structures including tanks, pump stations, trash capture devices, junction boxes, floodwalls, drainage channels and creek trail facilities.

REGISTRATION

Professional Engineer
(Civil), CA C51739

EDUCATION

B.S. Architectural
Engineering, California
Polytechnic State
University, San Luis
Obispo, CA

Engineer Officers Basic
Course, United States
Army Corps of Engineers

Years with BCA: 26

Total Years of Experience:
29

RELEVANT PROJECT EXPERIENCE

Storm Water Collection and Flood Control

San Jose Trash Capture Device Installation Project, San Jose, CA: Project Manager for the design and construction of below ground reinforced concrete trash capture facility for the collection and removal of trash from storm water. [The Project received a 2019 APWA Silicon Valley Chapter Honor Award and a Commendation Award at the 2019 ACEC Engineering Excellence Awards.](#)

Citywide Trash Capture Project Phase 1, Mountain View, CA: Project Manager for existing storm drainage system modifications to accommodate a new trash capture device. [Project received a 2019 APWA Silicon Valley Chapter Honor Award](#)

Baylands Pump Station No. 2 Rehabilitation, Sunnyvale, CA: Project Manager for structural assessment and rehabilitation of storm water pump station facilities including a masonry mechanical/electrical building, multiple shaft below grade wet well, inlet and outlet structures and site retaining walls. [Project received a 2019 APWA Silicon Valley Chapter Honor Award.](#)

San Francisquito Storm Water Pump Station, Palo Alto, CA: Project Manager for a new 300 cfs capacity storm water pump station facility including pump house, wet well, creek outfall and storm diversion/bypass structures.

Chrysler Storm Water Pump Station Improvements, Menlo Park, CA: Project Manager for design of a new reinforced concrete underground wet well structure. The project also includes the design of a reinforced concrete Pump/Motor building supported by the wet well structure and a reinforced concrete Electrical building located adjacent to the wet well.

Marsten Pump Station Upgrade, Burlingame, CA: Engineering Manager for replacement of existing pump station facilities including Marsten wet well and discharge box, Easton Creek wet well and discharge box, maintenance bridge, underground junction structure, electrical building, site retaining walls and generator slab.

Coyote Point and Poplar Avenue Pump Stations, San Mateo, CA: Project Manager for rehabilitation and reconfiguration of two storm water pump station facilities at Coyote Point.

Hillsdale Boulevard Overcrossing Pumping Plant, San Mateo, CA: Engineering Manager for modification of the existing underground pump station facility and construction of site retaining walls to accommodate widening of the adjacent roadway.

Nelo Victor Pump Station, Santa Clara, CA: Engineering Manager for replacement of the existing substandard wet well and modification to the existing masonry and timber pump station building.



City of South San Francisco
Consulting Services for Oyster Point Sanitary Sewer Pump Station Relocation, SS2202
 Design Schedule/Cost Estimate
 11/29/2022

Task	TASK DESCRIPTION	PRINCIPAL ENGINEER		SUPERVISING ENGR/SRVR		ENGINEER 2		SR SURVEY TECH		SENIOR DESIGNER		2 PERSON SURVEY CREW		VEHICLE MATERIALS OTHER \$	S&W SUB-CONSULTANTS	LANGAN SUB-CONSULTANTS	TJCAA SUB-CONSULTANTS	BCA SUB-CONSULTANTS	AGS SUB-CONSULTANTS	REIM-BURSABLE EXPENSES	TOTAL LABOR \$	TOTAL ALL \$	TOTAL WH LABOR HOURS
		\$297	HRS	\$267	HRS	\$213	HRS	\$198	HRS	\$187	HRS	\$307	HRS										
1.	Project Management																						
1	Kick-off Meeting and site visit	0		1,602	6	1,278	6	0		0		0			5,060	0	6,872	0			2,880	14,812	12
2	Project Coordination	0		5,340	20	0		0		0		0			5,589	0	11,923	0			5,340	22,852	20
3	Quality Control Reviews and Revisions	1,188	4	4,272	16	2,556	12	0		3,740	20	0			8,487	0	12,931	0			11,756	33,174	52
4	Develop & Monitoring Schedule, Monitor Budget	0		6,408	24	0		0		0		0			2,530	0	4,802	0			6,408	13,740	24
5	Sub-consultant Coord	0		4,272	16	0		0		0		0			0	17,699	0	0			4,272	21,971	16
6	Coord with City of SSF	0		5,340	20	1,704	8	0		0		0			6,854	0	4,802	0			7,044	18,700	28
7	Identify & conduct outreach to stakeholders	0		3,204	12	852	4	0		0		0			0	0	0	0			4,056	4,056	16
8	Project Management for Sub-Consultants	0		0		0		0		0		0			2,530	0	0	0			0	2,530	0
9	Reimbursibles	0		0		0		0		0		0			0	0	759	0		50	0	809	0
	Subtotal	1,188	4	30,438	114	6,390	30	0	0	3,740	20	0	0	0	31,050	17,699	42,090	0	0	50	41,756	132,645	168
2.	Record Search and Site Investigation																						
1	Obtain Record Utility Information	0		267	1	1,278	6	0		748	4	0			3,059	0	0	0			2,293	5,352	11
2	Utility locating	0		534	2	426	2	792	4	1,496	8	7,368	24		0	0	0	0	6,900		10,616	17,516	40
3	Perform topographic field survey	0		267	1	426	2	792	4	1,122	6	4,912	16		0	0	0	0			7,519	7,519	29
4	Set up project base map	0		267	1	852	4	0		1,122	6	0			0	0	0	0			2,241	2,241	11
5	Perform site visit to review ex conditions, revise base maps	0		0		1,278	6	0		0		0			4,577	0	3,781	0			1,278	9,636	6
6	Review record data	0		267	1	852	4	0		0		0			4,888	3,565	6,362	0			1,119	15,933	5
7	Reimbursibles	0		0		0		0		0		0			828	0	945	1,058		740	0	3,571	0
	Subtotal	0	0	1,602	6	5,112	24	1,584	8	4,488	24	12,280	40	0	13,352	3,565	11,088	1,058	6,900	740	25,066	61,769	102
3.	Conceptual Design and Basis of Design																						
1	Prepare conceptual Pump Station Plans	0		534	2	1,704	8	0		1,496	8	0			16,008	11,621	0	0			3,734	31,363	18
2	Prepare conceptual Electrical Switchgear Relocation Plans	0		267	1	852	4	0		0		0			1,794	0	10,396	0			1,119	13,309	5
3	Prepare conceptual force main and sump pump plans	297	1	1,068	4	5,112	24	0		2,992	16	0			0	0	0	0			9,469	9,469	45
4	Prepare conceptual engineer's cost estimate	0		267	1	1,704	8	0		0		0			4,324	0	10,088	0			1,971	16,383	9
5	Prepare Basis of Design Memo	594	2	1,068	4	3,408	16	0		0		0			14,007	0	10,695	0			5,070	29,772	22
6	Meet with City to review BOD	0		534	2	426	2	0		0		0			1,081	0	3,781	0			960	5,822	4
7	Reimbursibles	0		0		0		0		0		0			0	0	0	0			0	0	0
	Subtotal	891	3	3,738	14	13,206	62	0	0	4,488	24	0	0	0	37,214	11,621	34,960	0	0	0	22,323	106,118	103
4.	Geotechnical and Environmental Services																						
1	Perform geotechnical Studies	0		0		0		0		0		0			0	0	0	0			0	0	0
2	Prepare geotechnical report	0		1,068	4	852	4	0		0		0			0	17,147	0	0			1,920	19,067	8
3	Prepare Postclosure Development Plan	0		534	2	1,704	8	0		1,496	8	0			0	19,780	0	0			3,734	23,514	18
4	Coordinate with regulatory agencies	0		1,068	4	0		0		0		0			0	8,366	0	0			1,068	9,434	4
5	Reimbursibles	0		0		0		0		0		0			0	0	0	0			0	0	0
	Subtotal	0	0	2,670	10	2,556	12	0	0	1,496	8	0	0	0	0	45,293	0	0	0	0	6,722	52,015	30

Subconsultant Name: Schaaf & Wheeler		PIC/PM		Design Engineer		CAD Technician		TOTAL Sub	TOTAL	TOTAL
Task	TASK DESCRIPTION	\$275	HRS	\$195	HRS	\$165	HRS	LABOR \$	ALL \$	WH LABOR HOURS
5	Contract Documents									
1	Prepare 60% Pump Station Plans	4,400	16	9,750	50	9,900	60	24,050	24,050	126
2	Prepare 60% Elec. Switchgear Relocation Plans	1,100	4	1,560	8	0		2,660	2,660	12
3	Prepare 60% Force Main and Sump Pump Plans	3,300	12	4,680	24	3,960	24	11,940	11,940	60
4	Prepare technical specifications	3,300	12	10,920	56	0		14,220	14,220	68
5	Update engineers cost estimate	1,100	4	3,120	16	0		4,220	4,220	20
6	Submit 60% PS&E package to City	0		1,560	8	0		1,560	1,560	8
7	Meet with City to review 60% PS&E package	550	2	390	2	0		940	940	4
7	Address City Comments on Plans, develop to 90%	3,300	12	4,680	24	5,280	32	13,260	13,260	68
8	Address City Comments on estimate, develop to 90%	1,100	4	780	4	0		1,880	1,880	8
9	Address City comments on tech specs, develop to 90%	1,100	4	3,120	16	0		4,220	4,220	20
11	Prepare contract book	0		0		0		0	0	0
12	Meet with City to review 90% PS&E package	550	2	390	2	0		940	940	4
13	Address City Comments on 90% PS&E, finalize 100% PS&E	2,200	8	3,120	16	16		5,336	5,336	24
14	Submit 100% PS&E to City for Bidding	1,100	4	1,560	8	0		2,660	2,660	12
17	Reimbursables	0		0		0		0	0	0
	Subtotal	23,100	84	45,630	234	19,156	116	87,886	87,886	434
6	Public Bidding/Construction Support Services									
1	Attend Pre-Bid Meeting	550	2	390	2			940	940	4
2	Respond to bidders questions	0		0		0		0	0	0
3	Issue up to two bid addenda	1,100	4	1,170	6	1,320	8	3,590	3,590	18
13	Reimbursables	0		0		0		0	0	0
	Subtotal	1,650	6	1,560	8	1,320	8	4,530	4,530	22
GRAND TOTAL		58,300	212	72,400	368	32,686	198	163,386	163,386	778

- Notes:**
1. The amounts may vary between tasks and individuals but the Grand Total amount will not be exceeded without approval of the Client.
 2. Total All\$ includes subconsultants and reimbursable costs.
 3. Hourly rates effective through December 31, 2023 and subject to revision annually thereafter.
 4. All positions may not be shown. If a position is not shown the Charge Rate Fee Schedule will govern.

Subconsultant Name: BCA		Principal		Associate		Engineering Manager		Assistant Engineer		Drafter		Admin		TOTAL Sub	TOTAL	TOTAL
Task	TASK DESCRIPTION	\$310	HRS	\$245	HRS	\$215	HRS	\$150	HRS	\$155	HRS	\$115	HRS	LABOR \$	ALL \$	WH LABOR HOURS
5	Contract Documents															
1	Prepare 60% Pump Station Plans	0		0		0		0		0		0		0	0	0
2	Prepare 60% Elec. Switchgear Relocation Plans	0		0		0		0		0		0		0	0	0
3	Prepare 60% Force Main and Sump Pump Plans	0		0		0		0		0		0		0	0	0
4	Prepare technical specifications	0		0		0		0		0		0		0	0	0
5	Update engineers cost estimate	0		0		0		0		0		0		0	0	0
6	Submit 60% PS&E package to City	0		0		0		0		0		0		0	0	0
7	Meet with City to review 60% PS&E package	0		0		0		0		0		0		0	0	0
7	Address City Comments on Plans,develop to 90%	1,240	4	1,470	6	24,080	112	0		12,400	80	0		39,190	39,190	202
8	Address City Comments on estimate, develop to 90%	0		0		0		0		0		0		0	0	0
9	Address City comments on tech specs, develop to 90%	0		0		20,640	96	0		0		345	3	20,985	20,985	99
11	Prepare contract book	0		0		0		0		0		0		0	0	0
12	Meet with City to review 90% PS&E package	0		0		0		0		0		0		0	0	0
13	Address City Comments on 90% PS&E, finalize 100% PS&E	0		0		0		0		0		0		0	0	0
14	Submit 100% PS&E to City for Bidding	0		1,470	6	13,760	64	0		1,240	8	230	2	16,700	16,700	80
15	Reimbursibles	0		0		0		0		0		0		0	0	0
	Subtotal	1,240	4	2,940	12	58,480	272	0	0	13,640	88	575	5	76,875	76,875	381
6	Public Bidding/Construction Support Services															
1	Attend Pre-Bid Meeting	0		0		0		0		0		0		0	0	0
2	Respond to bidders questions	0		490	2	860	4	0		0		0		1,350	1,350	6
3	Issue up to two bid addenda	0		0		0		0		0		0		0	0	0
	Subtotal	0	0	490	2	860	4	0	0	0	0	0	0	1,350	1,350	6
GRAND TOTAL		1,240	4	3,920	16	59,770	278	0	0	13,640	88	575	5	79,145	79,145	391

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City of South San Francisco
Consulting Services for Oyster Point Sanitary Sewer Pump Station Relocation, SS2202
 Design Schedule/Cost Estimate

11/29/2022

FILL IN CORRECT POSITION TITLE AND CORRECT HOURLY RATE/POSITION

Subconsultant Name: Langan		Senior Staff 1		Project Staff 2		Senior Project Staff 3		Senior Assoc. 4		Principal 5		Graphics/WP 6		TOTAL Sub LABOR \$	TOTAL ALL \$	TOTAL WH LABOR HOURS
Task	TASK DESCRIPTION	\$230	HRS	\$255	HRS	\$315	HRS	\$340	HRS	\$380	HRS	\$145	HRS			
1.	Project Management															
1	Kick-off Meeting and site visit	0		0		0		0		0		0		0	0	0
2	Project Coordination	0		0		0		0		0		0		0	0	0
3	Quality Control Reviews and Revisions	0		0		0		0		0		0		0	0	0
4	Develop & Monitoring Schedule, Monitor Budget	0		0		0		0		0		0		0	0	0
5	Sub-consultant Coord	0		6,885	27	8,505	27	0		0		0		15,390	15,390	54
6	Coord with City of SSF	0		0		0		0		0		0		0	0	0
7	Identify & conduct outreach to stakeholders	0		0		0		0		0		0		0	0	0
8	Project Management for Sub-Consultants	0		0		0		0		0		0		0	0	0
9	Reimbursibles	0		0		0		0		0		0		0	0	0
	Subtotal	0	0	6,885	27	8,505	27	0	0	0	0	0	0	15,390	15,390	54
2.	Record Search and Site Investigation															
1	Obtain Record Utility Information	0		0		0		0		0		0		0	0	0
2	Utility locating	0		0		0		0		0		0		0	0	0
3	Perform topographic field survey	0		0		0		0		0		0		0	0	0
4	Set up project base map	0		0		0		0		0		0		0	0	0
5	Perform site visit to review ex conditions, revise base maps	0		0		0		0		0		0		0	0	0
6	Review record data	1,840	8	0		1,260	4	0		0		0		3,100	3,100	12
	Subtotal	1,840	8	0	0	1,260	4	0	0	0	0	0	0	3,100	3,100	12
3.	Conceptual Design and Basis of Design															
1	Prepare conceptual Pump Station Plans	0		3,825	15	3,780	12	1,360	4	1,140	3	0		10,105	10,105	34
2	Prepare conceptual Electrical Switchgear Relocation Plans	0		0		0		0		0		0		0	0	0
3	Prepare conceptual force main and sump pump plans	0		0		0		0		0		0		0	0	0
4	Prepare conceptual engineer's cost estimate	0		0		0		0		0		0		0	0	0
5	Prepare Basis of Design Memo	0		0		0		0		0		0		0	0	0
6	Meet with City to review BOD	0		0		0		0		0		0		0	0	0
	Subtotal	0	0	3,825	15	3,780	12	1,360	4	1,140	3	0	0	10,105	10,105	34
4.	Geotechnical and Environmental Services															
1	Perform geotechnical Studies	0		0		0		0		0		0		0	0	0
2	Prepare geotechnical report	3,680	16	4,080	16	3,150	10	1,700	5	1,140	3	1,160	8	14,910	14,910	58
3	Prepare Postclosure Development Plan	9,200	40	0		6,300	20	1,700	5	0		0		17,200	17,200	65
4	Coordinate with regulatory agencies	3,450	15	3,825	15	0		0		0		0		7,275	7,275	30
	Subtotal	16,330	71	7,905	31	9,450	30	3,400	10	1,140	3	1,160	8	39,385	39,385	153

Subconsultant Name: Langan		Senior Staff 1		Project Staff 2		Senior Project Staff 3		Senior Assoc. 4		Principal 5		Graphics/WP 6		TOTAL Sub LABOR \$	TOTAL ALL \$	TOTAL WH LABOR HOURS
Task	TASK DESCRIPTION	\$230	HRS	\$255	HRS	\$315	HRS	\$340	HRS	\$380	HRS	\$145	HRS			
5	Contract Documents															
1	Prepare 60% Pump Station Plans	0		2,550	10	3,150	10	680	2	0		0		6,380	6,380	22
2	Prepare 60% Elec. Switchgear Relocation Plans	0		0		0		0		0		0		0	0	0
3	Prepare 60% Force Main and Sump Pump Plans	0		0		0		0		0		0		0	0	0
4	Prepare technical specifications	0		0		0		0		0		0		0	0	0
5	Update engineers cost estimate	0		0		0		0		0		0		0	0	0
6	Submit 60% PS&E package to City	0		0		0		0		0		0		0	0	0
7	Meet with City to review 60% PS&E package	0		0		0		0		0		0		0	0	0
7	Address City Comments on Plans, develop to 90%	0		0		0		0		0		0		0	0	0
8	Address City Comments on estimate, develop to 90%	0		0		0		0		0		0		0	0	0
9	Address City comments on tech specs, develop to 90%	0		0		0		0		0		0		0	0	0
10	Prepare contract book	0		0		0		0		0		0		0	0	0
11	Submit 100% PS&E ro City for Bidding	0		0		0		0		0		0		0	0	0
12	Meet with City to review 90% PS&E package	0		0		0		0		0		0		0	0	0
13	Address City Comments on 90% PS&E, finalize 100% PS&E	0		0		0		0		0		0		0	0	0
14	Submit 100% PS&E ro City for Bidding	0		0		0		0		0		0		0	0	0
15		0		0		0		0		0		0		0	0	0
16		0		0		0		0		0		0		0	0	0
17	Reimbursibles	0		0		0		0		0		0		0	0	0
	Subtotal	0	0	2,550	10	3,150	10	680	2	0	0	0	0	6,380	6,380	22
6	Public Bidding/Construction Support Services															
1	Attend Pre-Bid Meeting	0		0		0		0		0		0		0	0	0
2	Respond to bidders questions	0		2,550	10	3,150	10	680	2	0		0		6,380	6,380	22
3	Issue up to two bid addenda	0		0		0		0		0		0		0	0	0
	Subtotal	0	0	2,550	10	3,150	10	680	2	0	0	0	0	6,380	6,380	22
GRAND TOTAL		18,170	79	23,715	93	29,295	93	6,120	18	2,280	6	1,160	8	80,740	80,740	297

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Subconsultant Name: TJCAA		Principal in Charge		Project Manager		Design Engineer		CAD Technician		Administration		TOTAL Sub	TOTAL	TOTAL
Task	TASK DESCRIPTION	\$249	HRS	\$261	HRS	\$150	HRS	\$158	HRS	\$132	HRS	LABOR \$	ALL \$	WH LABOR HOURS
5	Contract Documents													
1	Prepare 60% Pump Station Plans	0		0		0		0		0		0	0	0
2	Prepare 60% Elec. Switchgear Relocation Plans	996	4	8,352	32	19,200	128	20,224	128	0		48,772	48,772	292
3	Prepare 60% Force Main and Sump Pump Plans	0		0		0		0		0		0	0	0
4	Prepare technical specifications	2,988	12	20,880	80	0		0		2,640	20	26,508	26,508	112
5	Update engineers cost estimate	0		0		0		0		0		0	0	0
6	Submit 60% PS&E package to City	0		0		0		0		0		0	0	0
7	Meet with City to review 60% PS&E package	0		0		0		0		0		0	0	0
7	Address City Comments on Plans, develop to 90%	249	1	522	2	600	4	0		0		1,371	1,371	7
8	Address City Comments on estimate, develop to 90%	249	1	522	2	600	4	0		0		1,371	1,371	7
9	Address City comments on tech specs, develop to 90%	498	2	1,044	4	2,400	16	0		0		3,942	3,942	22
11	Prepare contract book	0		0		0		0		0		0	0	0
12	Meet with City to review 90% PS&E package	0		1,044	4	0		0		0		1,044	1,044	4
13	Address City Comments on 90% PS&E, finalize 100% PS&E	0		3,132	12	0		0		0		3,132	3,132	12
14	Submit 100% PS&E to City for Bidding	0		2,088	8	0		0		0		2,088	2,088	8
15	Reimbursibles	0		0		0		0		0		0	0	0
	Subtotal	4,980	20	37,584	144	22,800	152	20,224	128	2,640	20	88,228	88,228	464
6	Public Bidding/Construction Support Services													
1	Attend Pre-Bid Meeting	0		1,044	4	900	6	0		0		1,944	1,944	10
2	Respond to bidders questions	0		0		0		0		0		0	0	0
3	Issue up to two bid addenda	996	4	3,132	12	0		0		0		4,128	4,128	16
	Subtotal	996	4	4,176	16	900	6	0	0	0	0	6,072	6,072	26
GRAND TOTAL		17,181	69	85,251	327	41,742	273	21,488	136	5,280	40	170,942	170,942	845

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