



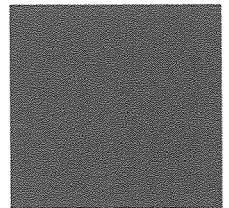
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Proposal for Civil Engineering and  
Surveying Design Services for City of  
Garden Grove Water Improvements -  
Orangewood & Dale

Project No. CP 1286000

May 20, 2021

PREPARED FOR THE CITY OF GARDEN GROVE





Stantec Consulting Services Inc.  
38 Technology Drive, Irvine CA 92618-5312

May 20, 2021  
File: 184081220

**Attention: Rebecca Li, PE**  
City of Garden Grove  
13802 Newhope Street  
Garden Grove, CA 92843

Dear Rebecca,

**Reference: Proposal for Civil Engineering and Surveying Design Services for City of Garden Grove Water Improvements – Orangewood & Dale (Project No. CP 1286000)**

In the continuous effort to maintain the condition and reliability of the existing water system, the City of Garden Grove (City) is seeking professional engineering services to implement water main improvements to address the fire flow deficiencies in the Orangewood Avenue and Dale Street area. The proposed improvements consist of replacing the existing 6-inch AC water mains with 8-inch and 12-inch PVC water mains. To ensure a successful completion of this project within the proposed schedule and budget, we believe that the City requires a local team that is experienced, flexible, and has the specific expertise needed. Stantec Consulting Services Inc. (Stantec) provides that team.

**What we can do for you.** We specialize in designing, planning, analyzing, and managing all conveyance and pipeline systems for water, recycled water, and sanitary sewer infrastructure. Specific to your project, our pipeline experience includes feasibility studies, preliminary and final designs, as well as construction support services. Having completed similar projects in recent years, our proposed team is familiar with the scope of this project. Because of this, we can confidently meet your expectations.

**About our Team.** Our team of proven and respected professionals can easily focus on and achieve your engineering design goals. We have put together a comprehensive team of experienced professionals to best meet the needs of this project. With over 27 years of experience in project management and design of water infrastructure, Jeff Dunn, PE, works closely with team members to provide precise, thorough, and detailed reports and construction documents. Jeff will lead a team of experts with combined experience designing over 150 miles of pipelines ranging in size from 4-inch to 48-inch and all pipe materials.

**Cost control methods.** Cost control begins during the preliminary design phase. Our alternatives are designed to be affordable, constructible, operationally cost-efficient, and sustainable for long-term use. We will work with you to select alternatives that best meets these criteria, as well as any other requirements set forth.

We have reviewed your proposed RFP/contract terms and believe that should we be selected for this assignment; we will be able to conclude a mutually satisfactory contract with you.

As we are all aware, we are working in unprecedented times as a result of the COVID-19 pandemic. The situation is fluid. Our proposal is based on our understanding of performing these services in current conditions. As the nature and extent of the impacts due to this outbreak cannot be fully identified or quantified at this time, we feel it would be prudent to submit this proposal based on current conditions, without accounting for possible worsening impacts that might occur as the outbreak develops further, and to discuss with you once we are able to evaluate the impacts and to work collaboratively with you on a path forward. We would be pleased to have a further discussion with you to share our respective plans and efforts to help mitigate the impact of this evolving situation on your proposed project.

May 20, 2021  
Rebecca Li, PE  
Page 2 of 2

**Reference: Proposal for Civil Engineering and Surveying Design Services for City of Garden Grove Water Improvements – Orangewood & Dale (Project No. CP 1286000)**

Using our local experience, technical qualifications, and full-service team, we look forward to working with you on this project.


Regards,

Stantec Consulting Services Inc.



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Jeff Dunn PE  
Senior Associate  
Phone: 949 923 6104  
Fax: 949 923 6121  
Jeff.Dunn@stantec.com



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Tama Snow PE  
Senior Principal  
Phone: 858 633 4231  
Fax: 949 923 6121  
Tama.Snow@stantec.com

## ADDENDUM NO. 1

May 14, 2021

Dear Potential Proposer,

**Subject:** REQUEST FOR PROPOSAL FOR CIVIL ENGINEERING AND SURVEYING DESIGN SERVICES FOR CITY OF GARDEN GROVE WATER IMPROVEMENTS – ORANGEWOOD & DALE ~ PROJECT NO. CP 1286000

NOTICE IS HEREBY GIVEN to the proposers to modify the previously issued RFP documents and/or given for informational purposes, and is hereby made a part of the RFP documents. Please attach this addendum to the documents in your possession. Per the RFP, the proposer shall acknowledge receipt of any and all addenda, if any, listing the Addenda by number(s) and date(s) in their Letter of Interest.

Any purple text color is new language that has been added to the RFP. Any strike through text is language that is being taken out of the RFP and no longer used.

- 
1. Does the scope of work include replacing the water main at Poes Street?  
RESPONSE: Yes, the existing 6-inch AC water main along Poes Street is to be replaced.
  2. Must all sewer and storm drain facilities be "dipped" and rim elevations shot at each manhole within the project limits?  
RESPONSE: No, only sewer and storm drain facilities that are in conflict with the proposed water alignment and services shall be "dipped" and rim elevations shot.
  3. How many hours/days should be considered needed for Inspection Services?  
RESPONSE: Inspection services if needed would be required for the entire length of the project. Inspector must be on site at all times while Contractor is completing work. Assume 100 working days.

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Should you have any questions regarding Addendum No. 1, please contact me at (714) 741-5349.

Sincerely,

Jessica Polidori  
Associate Engineer

Enclosures: 1. Acknowledgment for Addendum No. 1

# ACKNOWLEDGMENT FOR ADDENDUM NO. 1

**REQUEST FOR PROPOSAL FOR CIVIL ENGINEERING AND SURVEYING  
DESIGN SERVICES FOR CITY OF GARDEN GROVE WATER  
IMPROVEMENTS – ORANGEWOOD & DALE ~ PROJECT NO. CP 1286000**

STATEMENT:

I have received Addendum No. 1 for RFP for Civil Engineering Design Service and Construction Management/Inspection Services of Sewer System Rehabilitation Plan Phase I – Sewer Main Lining Project No. 3 and 4, in the Garden Grove Sanitary District. The requirements and/or information of Addendum No. 1 will be included and/or considered in my proposal.

Stantec

\_\_\_\_\_  
Company Name



\_\_\_\_\_  
By

Senior Associate

\_\_\_\_\_  
Title

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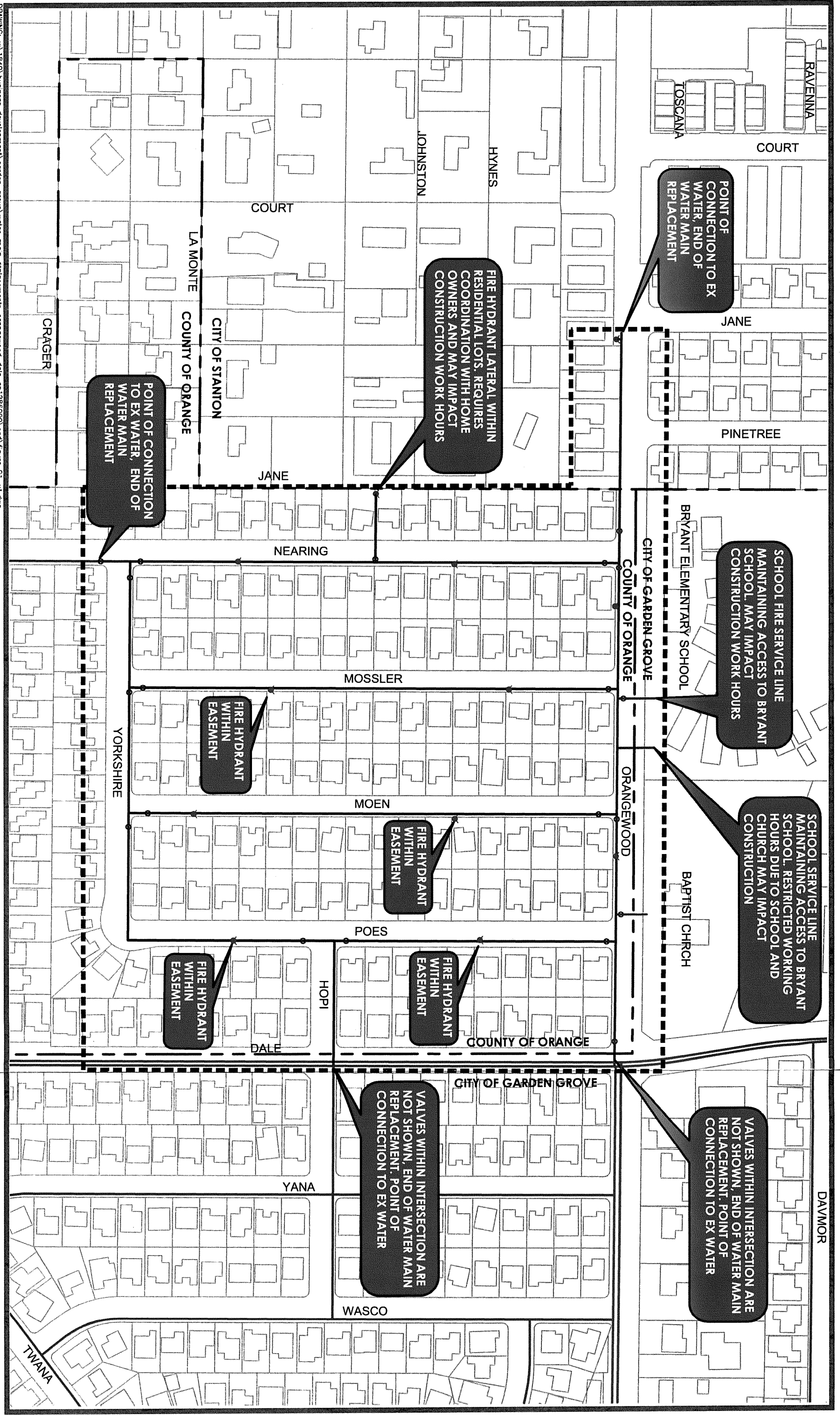
## SECTION 1 - PROJECT UNDERSTANDING

The City of Garden Grove plans to replace the existing AC water mains to improve fire flow capacity. The project area includes water main along Orangewood Blvd west of Dale Street and east of Jane Way, as well as the water mains in the residential streets of Nearing Drive, Mossler Street, Moen Street, Poes Street between Orangewood Avenue and Yorkshire Avenue, including Hopi Road between Poes Street and Dale Street and Yorkshire Avenue between Nearing Drive and Poes Street. See Figure 1 for the limits of the project area.

The project consists of replacing existing 6-inch AC water mains with new 12-inch and 8-inch PVC water mains. The overall length of this project is approximately 7,800 linear feet (LF) with 1,700 LF of 12-inch PVC and 6,100 LF of 8-inch. The project includes connections to existing water mains, and replacement/relocation of existing hydrants, service lines, meters, and appurtenances within the water main replacement limits.

Bryant Elementary School is adjacent to the project location and will require coordination during design and construction. Stantec is committed to community relations and understands outreach is a priority for this important project. The waterline improvements will have minimal impact as possible to the school and surrounding residents. The design team and construction support group will ensure a thorough quality control review is performed with mutual collaboration from the City.

As the project area is generally located in an unincorporated area of the County of Orange (County), the project will require permits and approvals from the County, and potentially from the City of Anaheim, in addition to the City of Garden Grove. We anticipate that encroachment permits and traffic control permits will be required. We will assist the City with submitting the required documents for permit application, but the selected contractor will pull the encroachment permits and traffic control permits. Having completed projects in the City of Anaheim and the County, we are familiar with and can help expedite the permitting process. We have permitting coordinators to assist our team with coordinating with the agencies.



POINT OF CONNECTION TO EX WATER, END OF WATER MAIN REPLACEMENT

FIRE HYDRANT LATERAL WITHIN RESIDENTIAL LOTS. REQUIRES COORDINATION WITH HOME OWNERS AND MAY IMPACT CONSTRUCTION WORK HOURS

POINT OF CONNECTION TO EX WATER, END OF WATER MAIN REPLACEMENT

SCHOOL FIRE SERVICE LINE MAINTAINING ACCESS TO BRYANT SCHOOL. MAY IMPACT CONSTRUCTION WORK HOURS

SCHOOL SERVICE LINE MAINTAINING ACCESS TO BRYANT SCHOOL. RESTRICTED WORKING HOURS DUE TO SCHOOL AND CHURCH MAY IMPACT CONSTRUCTION

FIRE HYDRANT WITHIN EASEMENT

FIRE HYDRANT WITHIN EASEMENT

FIRE HYDRANT WITHIN EASEMENT

FIRE HYDRANT WITHIN EASEMENT

VALVES WITHIN INTERSECTION ARE NOT SHOWN. END OF WATER MAIN REPLACEMENT. POINT OF CONNECTION TO EX WATER

VALVES WITHIN INTERSECTION ARE NOT SHOWN. END OF WATER MAIN REPLACEMENT. POINT OF CONNECTION TO EX WATER

- LEGEND**
- EXISTING DOMESTIC WATER TO BE ABANDONED
  - EXISTING DOMESTIC WATER TO BE PROTECTED IN PLACE
  - PROJECT LIMITS
  - CITY/COUNTY BOUNDARIES
  - EXISTING FIRE HYDRANT TO BE REMOVED AND REPLACED
  - EXISTING VALVE TO BE ABANDONED / REMOVED



## SECTION 2 - PROJECT METHODS AND APPROACH

We are committed to completing a quality design on schedule and within budget, and maintaining frequent communication. The following is a brief description of our general approach to this project to meet your goals and project objectives. Further description of the project management scope is detailed in Section 3 – Task 1.

### 2.1 Project Management Activities

We will provide the required project management activities, including the following:

- Activities per our Project Management Framework as outlined on the following page which includes establishing a project plan with the team, health and safety measures, document control and deliverables so the project can be executed and completed successfully
- Project Schedule which can be updated and provided with our regular project status reports
- Meetings with well thought-out agendas and thorough minutes
- Coordination with the City as well as our Stantec team to keep everyone informed of latest decisions and track progress and performance
- Status Reports which will not only keep the team informed of recent activities, but identify upcoming tasks to be performed focusing on those critical path items
- Submittal requirements, including performing our QA/QC for each deliverable prior to submitting

Jeff, our proposed project manager, will make sure the project management activities are completed successfully. He will do the following:

- Efficiently initiate the project and take a proactive role
- Coordinate all aspects of the work plan
- Provide deliverables on schedule
- Facilitate communications with you and other agencies

Jeff will be the point of contact for internal and external communication and facilitation, serving as a link between you and team members. He will appropriate, assign, and direct the required resources to complete the project.

### 2.2 QA/QC Procedures

We are committed to the improvement of project execution, product quality, and the reduction of quality related costs. ISO 9001 is an internationally recognized standard for quality management and has been adopted by Stantec to reduce the risk and consequences of design errors, improve productivity and efficiency, promote the quality and reliability of our services, improve the financial performance, increase client confidence, and support regulatory compliance. We obtained companywide ISO 9001 certification after undergoing an extensive internal and external scrutiny of established policies and practices. Part of our quality management system and project management

#### Stantec Project Management Framework



Initiate	0	Prepare a proposal that includes a preliminary Project Plan. Conduct and document an independent review of the final proposal.
	1	Obtain written instructions to proceed and execute an approved task order. Obtain written subconsultant agreements (if applicable).
Plan	2	Prepare a Project Plan to an appropriate level of detail. Conduct and document an independent review.
	3	Establish a hard copy and electronic project record directories and file project records accordingly.
	4	Complete a Healthy, Safety, and Environmental risk management assessment and documentation for all projects involving field work.
Control	5	Monitor the PM dashboard system on a regular basis. Follow best practices for managing project financials.
	6	Obtain clients written approval on scope of services changes.
	7	Conduct and document a quality review of all project deliverables prior to issue.
Closeout	8	Conduct and document an independent review of all final deliverables prior to issue.
	9	Prepare record documents, close out the project financials and files.

frameworks tools is to make sure our team of professionals meets appropriate standards of quality and expectations of our clients.

Stantec has developed office guidelines, practices, and procedures for quality control. Our project team members recognize that our primary purpose is to serve the needs of our clients while preserving the safety and welfare of the public.

The following general procedures and policies have been established with respect to Stantec's quality control program:

- Each team member must be committed to provide a quality service to our clients.
- Each member of our team is accountable for assigned responsibilities.
- Calculations, written documents and reports will be clear and concise, following the accepted standards of the profession.
- Established quality control procedures will be followed to make sure the accepted standards of the profession are met.
- All documents, analyses, and calculations will be checked by an independent reviewer (someone other than the originator) to identify any area of concern. Changes or modifications will be made as mutually agreed upon.

## 2.3 Understanding of Project's Key Considerations

### 2.3.1 Thoughtful Water Main Alignment

The potential alignment opportunities will be thoroughly evaluated during preliminary design. Initial alignments are illustrated for consideration. Understanding of the key constraints to the alignments will be necessary for this project to be effective, and will provide the City with the most cost efficient project and reduce impacts to the community. Community engagement is highly important at Stantec and will be beneficial to the City as we develop the project with considerations to the surrounding residents. Key alignment constraints and considerations that will be investigated include the following:

- Proposed connections to the existing main locations with priority directed toward specific areas with unique challenges
  - Primary connections at the Orangewood and Dale intersection valve structures
  - Residential connections and keeping the water services available
  - Bryant Elementary School needs evaluation for reestablishment of services with options of understanding class schedules and construction durations to optimize periods where children and traffic aren't impacted
- No traffic throughfare impacts along Orangewood Blvd, or neighborhood driveway access
- California Department of Public Health separation criteria with sewer facilities
- Potential utility conflicts and depths of crossings
- Adjacent pipeline trench impacts
- Construction schedule constraints and durations
- Impacts to community, businesses, and other activities in the project area
- Construction cost estimates conforming to the AACE international classification system
- Excavated sections of AC pipe are identified for replacement at the tie-in connections. Specifications will clearly identify SCAQMD Rule 1403 for disposal requirements. That includes proper ventilation and containment equipment.

The alignments of the new water mains will be offset to allow for abandonment of the existing AC waterlines. The new water main alignment and design will include restrained fittings and thrust blocks avoiding existing utilities with designed clearance allowances for fittings and bends. In tightly spaced areas where existing facilities are close, restrained joints are recommended as opposed to thrust blocks.

### **2.3.2 Utility Research**

One of the most critical issues for constructing pipeline facilities within existing streets is properly identifying the existing utilities and determining any potential conflicts with utility crossings. This issue is addressed by our approach to detail and thoroughness. We will perform a thorough record search utilizing the USA Dig Alert database and available record drawings. Using the USA Dig Alert database and our contacts with the various agencies, we will request all available as-built data, and request information on existing facilities and any future planned projects in the area that may potentially impact the proposed construction schedule.

Once the utility information is obtained, it will then be carefully calculated in the base AutoCAD drawing. As we have done on all of our past pipeline projects our design engineer will field walk the site, noting all above ground features, such as valve cans, manhole covers, appurtenances, and any repaired pavement trench limits. Stantec will also measure any USA markings requested ahead of time at the potholing stage. Field measurements are verified and adjusted to the locations accordingly on the drawings to show the exact locations based on the information to date.

Based on this task's importance and during the pipeline alignment analysis, our project engineer, Ryan will back check the utility data and record drawing information with the AutoCAD drawing files and construction plans. This back check procedure is intended to verify that the information from the record drawings and utility data is correctly translated onto the construction plans.

Our approach to this stage of the project is critical. We have a firm understanding of how important a proper and thorough search is, and what the impact that any missing or wrong information will have on the project's success and potential for contractor change orders. We will keep an active tracking log of all our requests and data received, when and what was received. We will catalog the data received according to utility location and type/size. Utility verification letters with plans sent back to the agencies are used to verify that no new conflicts will arise during construction. This provides an additional level of confirmation that construction operations will not be postponed and reduces change order potential.

### **2.3.3 Accurate Base Map Preparation**

An accurate base map will yield the best possible design and reduce contractor change orders. It is produced by doing the following:

- Having a thorough set of record data
- Interpreting the record data correctly
- Correctly translating the record data onto the base map
- Field verifying the information once the map is created and correcting any errors or omissions

Our approach to utilities research will enable us to provide an accurate base map. In addition to our QA/QC procedures and field visits to verify the information on the base map, the Stantec team will back check the AutoCAD drawings and base map information with utility and record data obtained.

### 2.3.4 Installation of New Fire Hydrants, Backflow Assemblies, Service Laterals and Water Meters

The new water main project will include the installation of new fire hydrants, backflow assemblies, service laterals and water meters. To improve the accuracy of the construction plans, we propose to walk the entire water main alignment with a set of the improvement plans. We will verify that the existing facilities are accurately portrayed on the plans, based on the above-grade facilities, such as meter boxes, valve cans, and fire hydrant barrels. Since the new facilities will be in close proximity to the existing facilities to be replaced, accurate locations for these facilities will be important to the success of the project. All the proposed new installations will be designed in accordance with the latest City standards, including the Series B-700 Water Standard Plans.

### 2.3.5 Minimize Customer Service Disruptions and Impacts

The project will minimize the number of disruptions to customers' water services as water main tie-ins are made and service meters are relocated to the new mains. The alignment of the pipeline and locations of tie-ins will be identified to ensure that all existing water services are maintained during construction and until the new main and services are constructed and accepted by the City. A construction sequencing and shutdown plan will be developed as part of the specifications.

The contractor's activity, pavement replacement, and traffic impacts within a single street should be kept to a minimum, a one-time approach if possible. Access to driveways will need to be maintained and coordinated with the residences. Existing service laterals and boxes will be replaced with approximately 5 to 10 service meters reconnected per day. This approach minimizes customer service outages and allows the streets to remain open at the water main for the contractor to activate the new services.

## SECTION 3 - SCOPE OF WORK

### Task I – Project Management, Meetings, and Coordination

Key Stantec staff will meet with the City bi-weekly initially during preliminary design. Final design meetings will be conducted for all reviews with design collaboration as necessary with the City staff. Additional meetings will be provided as needed during bidding and construction, to discuss the progress of the work including schedules, budgets, submittal reviews, and overall status of the project.

Meeting agenda will be prepared prior to calls or meetings. Jeff will be accompanied by our appropriate team members as necessary to attend the meetings with the City. We will prepare the agenda for each meeting, record the minutes of all meetings, and submit a copy of the minutes to the City for review within five (5) working days after each meeting and before distribution.

The scope of the project management responsibility will be distributed across all tasks further identified below. Project management will not be included as a separate task, as identified in the RFP.

- **Number of meetings that are anticipated include the following:**
  - Kickoff Meeting
  - Initial Design Coordination Meeting with City Staff
  - Intermediate Review Meeting (Pre-Submittal)
  - PDR Review Meeting
  - Monthly Meetings (6)
  - Agency Coordination Meetings (3)
  - 60% Design Review Meeting
  - 90% Design Review Meeting
  - 99% Design Review Meeting

- 100% Design Review Meeting – If necessary
  - Pre-Bid Construction Meeting
  - Construction Meetings are optional services if selected by the City
- **Note: Meetings will be combined as possible and performed virtually or in person.**

## Task II – Preliminary Investigation and Design Survey

### Utility Research

We will perform a thorough record search utilizing the USA Dig Alert database and available record drawings. Using the USA Dig Alert database and our contacts with the various agencies, we will request all available as-built data, and request information on existing facilities and any future planned projects in the area that may potentially impact the proposed construction schedule.

We will keep an active tracking log of all our requests and data received, when and what was received. We will catalog the data received according to utility location and type/size. Utility verification letters with plans sent back to the agencies are used to verify that no new conflicts will arise during construction. This provides an additional level of confirmation that construction operations will not be postponed and reduces change order potential.

### Surveying

#### **Existing Right-of-Way and Base-Map**

Monuments will be observed to retrace the centerlines and public rights-of-way within the project limits. The results will be incorporated into a base-map illustrating existing right of way conditions. Available agency research, prior surveys, and assessor parcel maps will be used to prepare the base-map. This will not be a full and complete boundary survey of the adjacent land parcels. Survey monuments located and indicated on the survey will be limited to existing, centerline monuments found along the streets, roads and avenues within the project area.

- **Deliverable will include a digital CAD file containing the resulting base-map data.**

#### **Topography (Photogrammetric Mapping)**

Current topography and existing planimetrics data will be obtained for the site through photogrammetric methods. The photography will be flown for use at a scale of 1" = 40', with contours compiled at 1-foot intervals. Spot elevations and existing site features identifiable from photography will also be compiled. In an effort to provide sufficient coverage for design, the aerial mapping limits will extend to cover the roads and rights-of-way within the project area (see proposed limits below). This line item includes the field work to set horizontal and vertical control required for the aerial effort. The horizontal control will be based on the California Coordinate System of 1983 (CCS83), Zone 6, 2017.50 Epoch. The vertical control will be based on City of Garden Grove Benchmark GG-107 (NAVD88, GG2012 ADJ).

A color digital ortho-photo will be prepared from the photography. The ortho-photo will be a rectified image so as to closely match the compiled topography, providing the capability to prepare accurate, color exhibits on subsequent efforts.

- **Deliverables will include:**
  - A digital CAD file containing the resulting data
  - Digital TIFF image(s) of the ortho-photography along with corresponding geo-referenced World files to allow for seamless integration of the photo into the compiled topography and other drawings.

## Proposed Aerial Topography Limits



### **Supplemental Topography**

As a supplement to the aerial effort, conventional ground survey will be used to spot verify the aerial topography and obtain additional detail in key areas. The supplemental data will be used in conjunction with the aerial mapping to create a single topographic map that will be used as the basis for design. We assume one day for our crew to perform the supplemental ground survey.

### **Manhole Dips**

Stantec will open manholes that are in conflict with the proposed alignments, and measure inverts, survey rim elevations, and document the direction of flow. We assume that up to 32 manholes will be surveyed. Resulting data will be noted and added into the CAD file.

### **Easement, Plat, and Legal Exhibits**

If it is determined that any existing easements requiring survey work to tie them to the centerline or right-of-way of the project are necessary, they can be included in this Scope of Services. There is potential for these services with the options for the School that will be further evaluated during design as requested. Topographic plat or map preparation are optional services available by Stantec.

### **Environmental Processing**

Our CEQA/Environmental expert will assist the City with the investigations and evaluations required to prepare the environmental checklist. We assume that all fees associated with CEQA compliance will be paid for by the City

## **Agency Permitting**

We will assist the City with identifying the local agencies having jurisdictions in the project area, and applying for any required permits and obtaining approvals from these identified agencies. We anticipate having to obtain approvals and permits from the County of Orange, and potentially the City of Anaheim at a minimum.

## **Task III – Preliminary Engineering**

At each preliminary or design submittal 10 sets of submittal prints will be submitted. Additional copies will be provided to the reviewing Agencies on the City's behalf.

Stantec will prepare the Preliminary Design Report (PDR) at the 25% design phase for this project that addresses the initial design aspects of the project outlining further completion for a successful waterline improvement project.

After the kickoff meeting, we will interview key personnel of the Engineering and Operations staff to incorporate design preferences and to fully understand the issues influencing the project. The project description has been well defined with the following major components to the project identified in the initial phase of work.

- Design criteria for the proposed pipelines, such as:
  - Illustrations indicating pipeline corridor alignment and depths
  - Easements
  - Acquisitions
  - Utility crossings and requirements
  - Pipe material PVC C900
  - Pressure class
  - Valve type and valve spacing
  - Air valves, blow-offs
  - Thrust restraint and fittings
  - Trenching and pavement requirements
  - Construction
- Utility Research
- CEQA requirements – Limited to initial investigation processing of the categorical statutory expecting a classification of Project Exemption or Negative Declaration
- Preliminary drawing list
- Construction recommendations
- Construction scheduling requirements to be included in the construction documents
- Project schedule including design, bidding, and construction activities
- Specifications Table of Contents
- Opinion of probable construction costs
- Other elements of the project, as required, to achieve the project objectives
- Permitting and requirements from other agencies
- **Deliverable:**
  - Ten (10) copies of the PDR will be submitted for the City's review and comments prior to finalizing and presenting the PDR in a workshop.

## Task IV – Final Engineering

### **60% Design Submittal**

Upon completion of the PDR, Stantec will proceed with the detailed design, compile all gathered information, and prepare the plan and profile design drawings. The 60% design will include the recommended alignment of the pipeline, including profiles and connections to existing services.

Along with the 60% construction plan submittal, the technical specifications will be submitted, including the City's front-end contract documents which will be tailored for the project. The City will provide the front-end document boiler plate and sample technical specifications. Cost estimates will also be prepared and submitted.

Stantec will provide the plan sheets at 1" = 40' for horizontal and 1" = 4' for vertical scale. Plans will be prepared using computer aided design software (AutoCAD) and will be printed on size 24x36 paper. The plan set will include title sheet, notes, and standard details.

Stantec will attend a review meeting with City staff to review and discuss the 60% plan-check comments and other City staff feedback. We will maintain a log of 60% plan review comments and responses.

- **Deliverables:**
  - Ten (10) sets of full size drawings, specifications, and cost estimates will be submitted for the City's review and comments. One (1) electronic copy of each in PDF format will also be submitted.

### **Potholing**

Stantec will contract the services of T2 Utility Engineers as the subconsultant to provide potholing excavation services for the project. Our surveying staff have worked with T2 Utility Engineers on numerous projects that will ensure great collaboration of efforts. It is anticipated that twenty-five (25) pothole locations will be necessary to confirm the position of existing underground utilities in the area of the proposed improvements. The Stantec team will provide the potholing plan for use to identify potholing locations prior to excavation using a combination of record drawings and USA preliminary mark outs. Stantec surveyors will obtain the final horizontal positions of each pothole based on the locations derived by T2 Utility Engineers. Resulting locations will be forwarded to the project engineer or client designee accordingly.

### **90% Design Submittal**

With 60% design review comments from the City and other entities, we will prepare detailed design plans, specifications, and engineer's estimate of probable construction costs (PS&E) for the proposed improvements. The 90% special provisions and technical specifications shall be prepared and submitted. The City will review the submitted PS&E, provide comments, and request revisions until it is in compliance with City standards and policies. We assume up to three iterations.

The 90% design submittal will include tie-in connections, and details for necessary appurtenances, including air/vacuum release valve assemblies, blow-off/manual drain assemblies, and fire hydrant assemblies. The plans will also illustrate and specify the dimensions, stationing, water main, type of material, sizes, restrained lengths, construction sequencing, and the quantity required for the water main improvement construction.

The potential list of drawings is as follows.



Potential List of Drawings		
1	G-1	Title Sheet and List of Drawings
2	G-2	General Notes, Legend, and Key Map
3	C-1	Orangewood Avenue - Plan and Profile
4	C-2	Orangewood Avenue - Plan and Profile
5	C-3	Orangewood Avenue - Plan and Profile
6	C-4	Nearing Drive - Plan and Profile
7	C-5	Nearing Drive - Plan and Profile
8	C-6	Mossler Street - Plan and Profile
9	C-7	Mossler Street - Plan and Profile
10	C-8	Moen Street - Plan and Profile
11	C-9	Moen Street - Plan and Profile
12	C-10	Poes Street - Plan and Profile
13	C-11	Poes Street - Plan and Profile
14	C-12	Yorkshire Avenue - Plan and Profile
15	C-13	Yorkshire Avenue - Plan and Profile
16	C-14	Hopi Road - Plan and Profile
17	C-15	Hopi Road - Plan and Profile
18	C-16	Abandonment Details
19	C-17	Connection Details
20	C-18	Connection Details
21	C-19	Connection Details
22	C-20	Connection Details
23	C-21	General Details

Stantec will attend a meeting with City staff to review and discuss the 90% plan-check comments and other City staff feedback. We will maintain a log of 90% plan review comments and responses.

- **Deliverable:**
  - Ten (10) sets of full size drawings, specifications, and cost estimates will be submitted for the City's review and comments. One (1) electronic copy of each in PDF format will also be submitted.

### **99% Design Submittal**

Upon approval of the 90% design PS&E by the City, Stantec will prepare the 99% submittal which is a complete set of construction documents prior to the 100% final documents submittal. The 99% submittal allows the City a prefinal review of construction documents prior to the final submittal.

- **Deliverable:**

### **Project Schedule Administration**

The Construction Manager will:

- Monitor the contractor's schedule providing timely communication to Contractor, City, and/or consultants identifying conflicts, construction problems, coordination issues, turnaround time requirements for submittals (shop drawings) and RFI's in order to meet the project schedule.
- Provide a document tracking system for submittals, RFI's, field orders, change orders, claim notices, inspection reports, test reports, etc. to effect timely turnaround and schedule adherence.
- Review the construction progress schedules and provide assessment of the progress to the City with recommendations to maintain or improve adherence to the approved project schedule.

### **Project Closeout**

- The Construction Manager will perform project closeout duties including final organization of project files and submit to the City for approval.

### **Inspection**

#### **City Representative**

Acting as the City of Garden Grove's assigned representative and construction field liaison for the Project, MWH will coordinate and communicate construction issues to the City Project Engineer and successful contractor.

#### **Project Document Review**

MWH inspection will review and become knowledgeable of the contract documents and Water Division's Standard Plans and Specifications. Prepare in conjunction with the Construction Manager pre-construction meeting agenda including pertinent requirements of the contract documents and co-host the preconstruction meetings with the Construction Manager.

#### **Pre-Construction Site Visit**

Stantec and MWH will visit the existing Project site and be knowledgeable of existing site and conditions.

#### **Full Time Inspection**

MWH will provide full-time daily construction inspection services of all work covered by the contract documents and approved change orders.

#### **Daily Inspection Reports**

MWH Inspectors will prepare and submit to the City daily inspection reports, due the following day, documenting the Contractor's workforce, material and equipment used, a summary, of construction activities, field problems, possible disputes or claims, resolutions of field issues and authorized directions given to the Contractor. Potential claims will be brought to the immediate attention of the City's Project Engineer.

#### **Material Documentation**

MWH Inspectors will maintain a material ticket folder for all materials delivered on site with an accompanying spreadsheet for analysis of materials when appropriate.

#### **Contractor Compliance with Construction Documents**

MWH Inspectors will verify before construction of any given task or approval of Contractor issued submittals, that the Contractor is working within the framework of the contract per Construction Contract Documents, City/Water Division Standard Plans and Specifications, current Caltrans Standard Specifications and the Garden Grove Municipal Code.

#### **Photo Journal**

MWH Inspectors will document the construction progress daily, all inspection progress, issues that occurs during construction and include in a Photo Journal. The journal will include Photos taken before construction begins, during construction and upon completion of the project. The journal shall comply with the following specifications:

- Color photographs stored on a minimum 32gb micro sd card or USB memory stick (name convention to include date picture was taken)
- Captions for each photo describing orientation and the reason the shot was taken.

#### **Construction Deficiency**

MWH Inspectors will include in the daily reports statements of work conforming to the Construction Documents. All construction deficiencies or unacceptable work will promptly be reported to the City's Project Engineer and the Contractor.

#### **Project Safety**

MWH staff will Monitor contractor's project work (traffic control, trench safety, hazardous conditions, etc.) including impacts to adjacent areas and the public for unsafe conditions. Inspection will promptly report these observations to the City and the Contractor's attention for resolution.

### **SWPPP Compliance**

MWH will oversee the implementation of the Contractor's approved Storm Water Pollution Prevention Plan (SWPPP). And review weekly in progress meetings.

### **Timely Project Execution**

MWH will review the project schedule and focus its project duties in a manner that promotes the cost-effective execution and progress of the work.

### **Quality Control/ Quality Assurance**

MWH Inspectors will confirm Contractor's utilized materials and workmanship meet the contract requirements and coordinate said confirmation with city project engineer and other authorized representative or regulatory authorities having jurisdiction, as required. MWH will provide and coordinate inspection for all trades involved in the project included in the Contract Documents including change order items.

### **Materials Testing**

MWH will coordinate with the Contractor compaction and materials testing requests using the City's geotechnical consultant. Compaction documentation including location, and reports will be maintained.

### **Survey / Construction Staking Coordination**

MWH will coordinate the Contractors survey requests using the City's survey consultant.

### **Daily Extra Work**

MWH Inspectors will verify and sign the Contractor's daily extra work reports documenting force account (time & materials) work.

### **Change Orders**

MWH staff will review and assist with contract change order negotiations with the Contractor in cooperation and consultation with the City. Note that the City's Project Engineer will be heavily involved with this task and will make final decisions.

### **Payment Requests**

MWH Inspectors will review Contractor's payment requests and verify quantities of completed work for progress payments to the Contractor followed by recommendations to the City's project engineer.

### **Construction Progress Meetings**

MWH Inspectors will attend scheduled construction progress meetings.

### **Field Orders/ Communications**

MWH Inspectors will issue all field orders, verbal instructions to the Contractor, including routine matters, verbal instructions, and directions from the City's Project Engineer in writing/email as required.

### **Project Closeout**

MWH Inspectors will:

- Prepare a written punch list documenting incomplete or corrective work.
- Conduct final inspection to verify that all items on the punch list have been completed or corrected and make recommendation to the City concerning acceptance of the project.
- Verify Contractor's progress on as-built plan preparation monthly.
- Verify that the as-built plans submitted by the Contractor are accurate.
- Confirm the reestablishment of survey monuments in keeping with Senate Bill 1563.

## **SECTION 4 - ASSUMPTIONS AND CLARIFICATIONS**

### **Assumptions**

This proposal was based on the following assumptions related to the proposed project:

- In performing its services, Stantec may receive information prepared or compiled by others, including plans, CAD files, and/or other information. Stantec is entitled to rely upon the accuracy and completeness of said information, without independent evaluation or verifications. Stantec will not be held liable for any errors or

omissions resulting from the use of plans or data provided by the client or client's agents in completing the scope of work.

- The separate deliverables related to Client's request represent the workflow of a single work effort and are not discretionary elements or phases to be chosen or eliminated. Our fee to execute the individual tasks will be a Time & Materials/Not to Exceed basis of the total dollar amount shown. The incremental portions of that overall fee are presented for informational purposes only and are not to be considered, or used as, separate independent budgets.
- Additional requirements may affect the proposed costs and items above.
- Stantec assumes that there is a sufficient amount of available record information to adequately determine the location of the rights-of-way within the project area. Additional work resulting from ambiguities or a lack of available records may require an additional work effort that is not covered within this Scope of Services.
- Sufficient site access will be provided by the client to access the limits of the project.
- One set of revisions will be included based on client comments. It is assumed that the comments will be received through a single point of contact designated by the client, and that said comments will be consistent with the original scope of work. Comments requiring additional services not covered by this scope of work will be handled under separate cover.
- The above fees are not contingent on the successful close of escrow, sale, transfer, or refinancing of the subject property or any other conditions not under the control of this company.
- If information depicted on the proposed survey should lead to further investigation by Stantec staff, additional fees may be incurred, and are not included within this Scope of Services. Stantec will handle requests of this nature under separate, written authorization.
- If information depicted on the proposed survey should lead to further investigation by persons not connected to this firm, Stantec will not be held liable for costs associated with or any delays caused by said efforts.

## **Exclusions**

Items not specifically identified in the scope of service sections of this proposal are to be excluded from this work effort and would be considered additional services. Such services would include, but are not limited to, the following:

- Additional exhibits or documents not specifically outlined herein
- Construction Staking Services
- New or Additional Boundary Monuments – Oversight for reestablishment of survey monuments during construction is included in the optional construction management work
- Revisions to work completed or underway due to a change in information or instruction provided to Stantec by the Client or Client's consultant(s)
- Subdivision Mapping / Lot Line Adjustments / Certificates of Compliance
- Geotechnical Investigation – Can be included if requested by the City
- Traffic Control Plans to be prepared by the Contractor – Initial traffic control evaluation is included in the preliminary investigation

## **City to Provide**

- Partial Boilerplate of contract documents of general articles with sample agreement, sample bonds, and insurance forms.
- AutoCAD Title sheet and design sheet border
- Assist with research of available City records (Including but not limited to: Utilities, Centerline Ties, Benchmarks, As-Built Drawings, etc.)
- Advertising and review of the construction bids and construction award, including required printing. (only if optional services are needed)
- Construction management and administration, inspection, and materials testing (**only if optional services are NOT needed**)
- Contact information with the Garden Grove Unified School District for site access coordination with the Garden Grove Unified School District

## SECTION 5 - SIMILAR RECENT PROJECTS AND REFERENCES

Below is a list of completed projects that are similar to the proposed scope of work. References are provided at the end of this section.

Project	Description	Value
<b>Lincoln Avenue 16-inch Water Main (From Beach Boulevard to 1,250 feet east of Dale Avenue)</b>  City of Anaheim Anaheim, California	Stantec provided engineering design and construction management services for installation of approximately 4,000 feet of 16-inch ductile iron domestic water pipe located in Anaheim, California. A portion of the pipeline is located with Caltrans right-of-way. Design included reconnection of services, distribution laterals, and fire hydrants.	\$137,000
<b>Loara Street 8-inch Water Main Replacement</b>  City of Anaheim Anaheim, California	Stantec designed approximately 1,325 feet of 8-inch PVC pipe to replace the existing 6-inch asbestos concrete pipe water main, and to help increase the pressures and the fire flow capacity in the service area. The project scope included replacement of service laterals, service meters, and fire hydrants. The scope also included the preparation of cost estimates and specifications. Stantec also provided bidding and construction support.	\$500,000 (construction)
<b>Downtown Anaheim Water Recycled Water Expansion Pipeline Extension</b>  City of Anaheim Anaheim, California	Stantec designed 2,400 feet of 4-inch and 6-inch PVC recycled water main to expand the City of Anaheim's recycled water system. Located in the heart of Downtown Anaheim, the project required an alignment study and evaluated several trenchless construction methods to minimize construction impacts. With numerous existing underground utilities in the project area, effective coordination and communication with key utility stakeholders was critical to the project's overall success.	\$103,000
<b>Miscellaneous Water Vault Rehabilitations</b>  City of Anaheim Anaheim, California	Stantec provided design services to rehabilitate, replace and/or abandon eleven potable water vaults throughout the City. This project included 20-inch to 36-inch valves. Stantec was also responsible for obtaining permit approvals from Caltrans.	\$312,000
<b>Cypress Water Transmission Main Replacement Project</b>  Azusa Light & Water Covina, California	Stantec designed approximately 7,100 feet of 8-inch, 10-inch, 18-inch, 20-inch, and 24-inch ductile iron pipe to replace the existing water main that was installed in 1913. The pipeline design included valves, fire hydrants, services, connections, abandonments, appurtenances, and pavement replacement. Stantec also prepared the preliminary design technical memorandum, cost estimates, and specifications for the project. Coordination with multiple agencies was required since the pipeline travels through several different jurisdictions.	\$170,000
<b>Orange Park Acres Fire Flow Improvements</b>  Irvine Ranch Water District Orange, California	Stantec prepared construction plans, specifications, and cost estimates for approximately 3,500 feet of 8-inch PVC pipeline to replace old, undersized existing pipelines within IRWD's Orange Park Acres distribution system. The improvements included design for new valve installations, fire hydrant reconnections, and service meter reconnections along the new pipeline improvements. Field investigations and visits were performed to verify hydrant and service meter locations to be shown on the plans. Due to varying pavement conditions, the plans also included a pavement replacement table on each sheet with pavement requirements described for each location.	\$225,000
<b>UCI Medical Center (UCIMC) Water Improvements</b>	Stantec provided civil engineering designs to address UCIMC's desire to control the water system within its medical campus separate from the City of Orange's water	\$100,000

Project	Description	Value
<p><b>City of Orange</b> <b>Orange, California</b></p>	<p>system. The project involved design of a new master water meter, approximately 900 feet of pipeline design near the intersection of The City Drive and Medical Center Drive, and the removal/replacement of existing master meters and fire hydrants. The scope also included the preparation of cost estimate and specifications.</p>	
<p><b>Bombero Street 6-inch Recycled Water Pipe</b>  <b>Irvine Company</b> <b>Newport Beach, California</b></p>	<p>Stantec prepared construction plans and specifications for a proposed pipeline in Bombero Street to supply the San Joaquin Apartments with recycled water for landscape irrigation. The 6-inch diameter PVC recycled water pipeline is approximately 500 feet and is located in the Fashion Island area of Newport Beach. The pipeline is an expansion of the OCWD GAP to serve a redevelopment apartment area. A pipeline alignment analysis was completed, which also required an easement and legal descriptions for the pipeline alignment through the Irvine Company property. We worked closely with OCWD and the City of Newport Beach to ensure designs were based on specific standards and criteria.</p>	<p>\$285,000 (construction)</p>
<p><b>Planning Area 6 Neighborhood 5B Domestic Water and Reclaimed Water Pipelines</b>  <b>Irvine Ranch Water District</b> <b>Irvine, California</b></p>	<p>Stantec designed approximately 1,000 feet of 10-inch PVC domestic water pipe and 8-inch PVC reclaimed water pipe to serve new residential developments in the City of Irvine. The scope of work included the design of a pressure reducing station, which consists of an 8-inch pressure reducing valve (PRV) and a 2-inch PRV. Prior to design, Stantec analyzed the forecasted water use demands, via hydraulic modeling, to determine the sizes and locations of the pipelines and PRVs. In addition to preparing design plans, Stantec also prepared the engineer's cost estimates for submittal to the local agencies.</p>	<p>\$230,000 (construction)</p>
<p><b>Planning Area 6 Neighborhood 4B Reclaimed Water Main</b>  <b>Irvine Ranch Water District</b> <b>Irvine, California</b></p>	<p>Stantec designed approximately 3,800 feet of 6-inch PVC reclaimed water main for a new residential development area in the City of Irvine. The proposed 6-inch pipe served as an extension from the existing 16-inch CML&amp;C steel reclaimed water main and required installations of blow-offs per local agency's standards. Stantec also produced engineering design plans for submittal to the local agencies. to ensure designs were based on specific standards and criteria.</p>	<p>\$330,000 (construction)</p>
<p><b>Lift Station No. 6 Force Main Replacement Project</b>  <b>South Coast Water District</b> <b>Dana Point, California</b></p>	<p>The existing 14-inch force main, approximately 2,400 feet in length, is routed in high-profile private communities of Monarch Beach in Dana Point and is currently aligned through a residential private property. An analysis identified impacts to existing gravity sewers and force main sizes for various types of pipe materials and routing alternatives with recommendations for pipeline replacement based on alternative constraints, such as bypass pumping requirements, traffic impacts to Pacific Coast Highway, impacts to residences, environmental concerns, hydraulic conditions, pipe material and size, and project costs.</p>	<p>\$230,000</p>
<p><b>Richfield Road Transmission Main</b>  <b>Yorba Linda Water District</b> <b>Yorba Linda, California</b></p>	<p>Stantec designed a steel pipe water main, approximately 2,145 feet, with diameter of 20 to 36 inches. The steel water main was installed to convey water from YLWD Well No. 21 to the nearby chlorination plant. Two chlorine injection vaults, with static mixers and chlorine analyzers, were installed along the alignment near the chlorine injection plant.</p>	<p>\$1.7 mil</p>

Project	Description	Value
<b>Jamboree Road Reclaimed Water Conversion</b>  <b>City of Newport Beach</b> <b>Newport Beach, California</b>	Stantec is working with the City of Newport Beach to convert an existing street median irrigation system from potable water to reclaimed water. Stantec is designing approximately 500 feet of 8-inch PVC pipe to connect to OCWD's GAP pipeline. The project scope includes the preparation of cost estimates and specifications, as well as agency permitting with OCWD, the Regional Board, and the Health Department.	\$260,000 (construction)
<b>Grand Avenue Well Equipping</b>  <b>Three Valleys Municipal Water District</b> <b>Claremont, California</b>	Stantec designed approximately 7,000 feet of 8-inch and 12-inch ductile iron pipe to convey water from TVNWD's Well No. 4 to the Miramar Water Treatment Plant. The project included civil site work and electrical upgrades at the existing well site. The scope also included a preliminary design report to study alignment alternatives, as well as the preparation of cost estimates and specifications. Stantec also provided bidding and construction support.	\$3.1 mil (construction)
<b>1050 Zone Secondary Feed Pump Station and Transmission Main</b>  <b>Moulton Niguel Water District</b> <b>Laguna Niguel, California</b>	Stantec is designing approximately 1,100 feet of 12-inch CML&C steel pipe as part of the proposed upgrades to one of MNWD's existing pump stations. The scope also includes a preliminary design technical memorandum, geotechnical investigations, CEQA documentation, agency permitting (including SCAQMD, OCFA, and SDG&E), as well as bidding and construction support services.	\$435,000
<b>930 Zone Chino Hills Recycled Water Reservoir and Pipeline</b>  <b>Inland Empire Utilities Agency</b> <b>Chino Hills, California</b>	Stantec prepared the pipeline layouts and design for approximately 12,500 feet of 30-inch diameter pipeline. The pipeline connects a new recycled water reservoir to the existing recycled water system. The alignment of the pipeline required several Caltrans and flood control channels, including several thousand feet within the access road of the channel. Coordination and permitting were required from the Army Corps.	\$1 mil

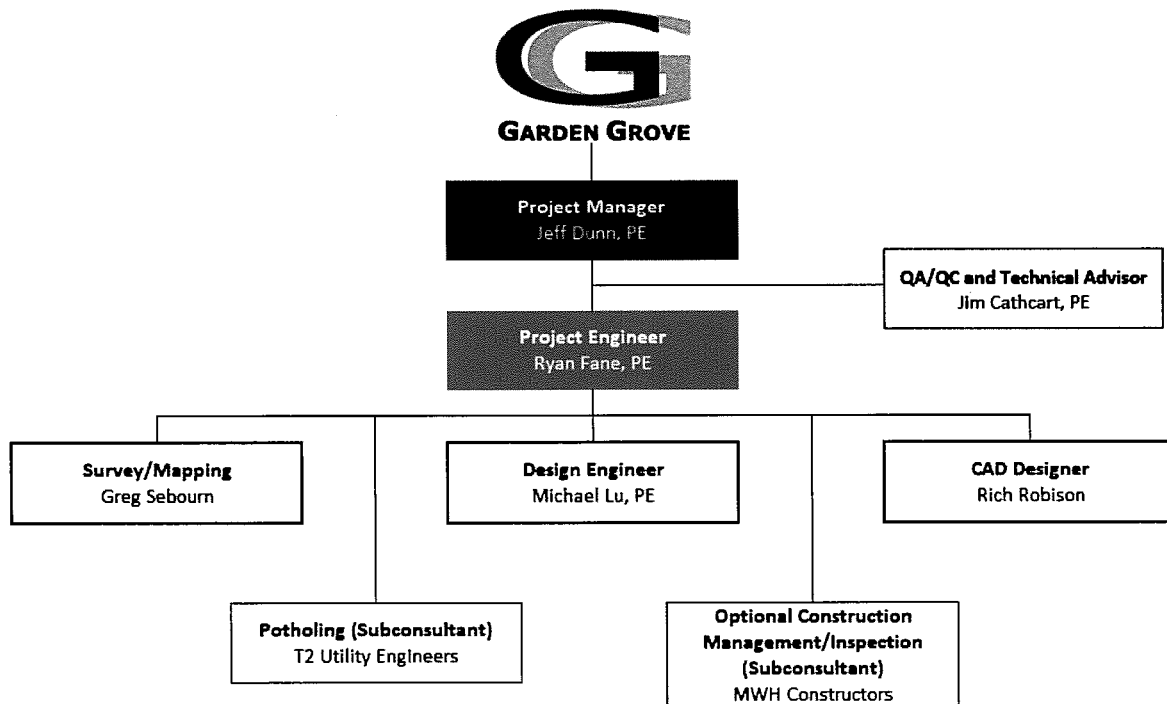
## REFERENCES

1. Sonny Tran, PE  
 Assistant Water Manager  
 City of Orange  
 (714) 288-2497  
[stran@cityoforange.org](mailto:stran@cityoforange.org)
2. Melissa Barboza, PE  
 Senior Water System Engineer  
 Azusa Light & Water  
 (626) 812-5173  
[mbarbosa@azusaca.gov](mailto:mbarbosa@azusaca.gov)
3. Dan Setty, PE  
 Associate Engineer  
 City of Anaheim, Public Utilities  
 (714) 765-4440  
[DSetty@anaheim.net](mailto:DSetty@anaheim.net)

## SECTION 6 - PROPOSED STAFFING

Our project team members have industry leading water resources experience and local leadership to successfully deliver your project. We are committed to you as a long-term partner and will provide the necessary resources to meet your technical and schedule requirements.

### Organization Chart



The following provides a description of each team member's responsibility for this project, with a brief description of each person's experience. The resumes of the key Stantec team members are provided in the Appendix.

**Jeff Dunn, PE – Project Manager** – Jeff will provide project management and work closely with the team to ensure that we provide precise, thorough, and detailed construction documents. Jeff will ensure that the objectives of the project are met within schedule and budget. Jeff has successfully completed over 42 miles of pipeline design projects during his 27- year career and will use the same hands-on approach in all aspects of the project to provide deliverables on schedule, facilitate communication with the City, and provide advisory services as needed. Jeff will lead and direct the project team and will be your primary point of contact. He will be responsible for appropriating, assigning, and directing the required resources to complete the project. He will be actively involved in the day-to-day management and progress of your project and will work with your staff to help ensure a shared vision for each project approach and the associated documentation.

**Jim Cathcart, PE – QA/QC, Technical Advisor** – Jim will provide quality assurance and control and will work closely with Jeff and the team to help ensure that we provide clear, concise, and accurate project information. Jim has been



overseeing all phases of our water resources projects and has over 44 years of experience working throughout Southern California.

**Ryan Fane, PE – Project Engineer** – Ryan will assist Jeff in managing and working with the design team. He will be responsible for overseeing all the design details and providing guidance on all aspects of design. Ryan has over 20 years of experience with the design of water systems, including pipelines, pump stations, reservoirs, treatment facilities, recycled water, disinfection facilities, flow metering installations, booster pump stations, and pressure reducing stations. He has designed over 15 miles of pipelines in various materials and diameters.

**Michael Lu, PE – Design Engineer** – Michael will assist Ryan and Jeff in providing hands-on design and preparing the preliminary design and final construction documents, including cost estimates, specifications, and design drawings. He will be responsible for utility research and will ensure the accuracy of the utility base map, which is especially crucial in pipeline design. Michael has over 11 years of experience in designing water, wastewater, and recycled water facilities and pipelines. He has designed over 10 miles of pipelines in various materials and diameters.

**Rich Robison – CAD Designer** – Rich will be responsible for the CAD design for the project. Rich has 26 years of experience in preparing detailed design for water, wastewater, and recycled water pipelines, as well as reservoirs and pump facilities.

# SECTION 7 - ESTIMATED WORK HOURS

Below are our estimated work hours based on the proposed tasks.

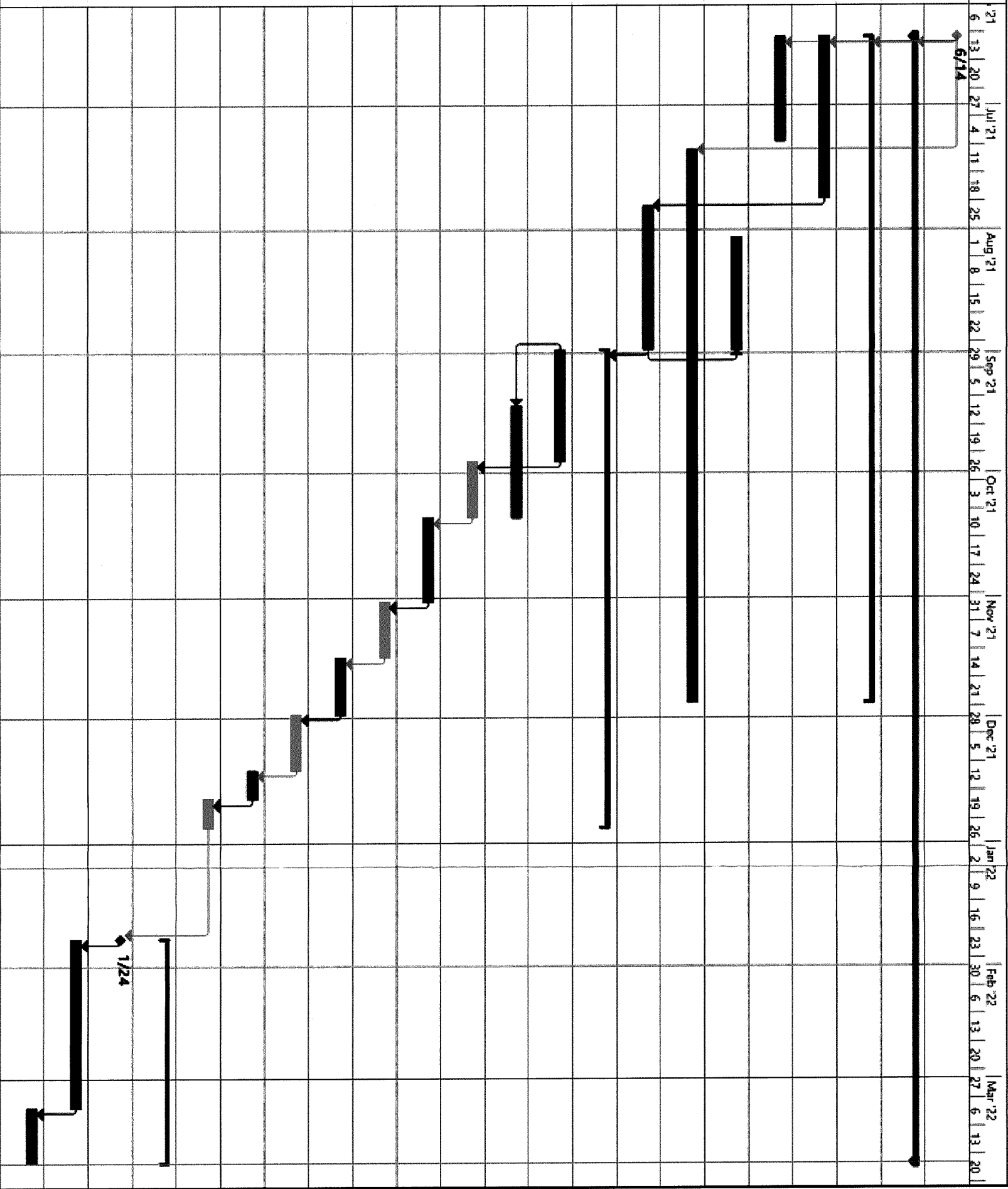
## Labor Hours - City of Garden Grove Water Improvements - Orangerwood & Dale (Project No. CP 1286000)

Name	Project Manager	QA/QC - Technical Advisor	Project Engineer	Design Engineer	CADD Designer	Environmental Processing	Survey Manager	Survey Analyst
Dunn, Jeff								
Calhoun, Jim								
Fane, Ryan								
Lu, Michael								
Robison, Richard								
Garber, Sarah								
Seaborn, Greg								
Nelson, Joe								
2-Person Survey Crew								

Task	Task Name	Startee Labor Hours								Total	
I	Project Management, Meetings, Coordination	<b>DISTRIBUTED AMONG THE TASKS BELOW</b>									
II	Preliminary Investigation and Design Survey	5	18	32	24	7	40	64	190		
	Utility Research	2	2	24					28		
	Survey		4				7	40	115		
	Environmental Processing	1	6		24				31		
	Agency Permitting	2	6	8					16		
III	Preliminary Engineering (Preliminary Design Report)	4	2	10	26	80			122		
IV	Final Engineering	14	10	24	101	148	2	8	315		
	60% Submittal	6	4	10	32	70			122		
	Potholing				1	2		8	21		
	90% Submittal	4	2	6	40	40	2		92		
	99% Submittal	2	2	6	20	24			54		
	100% Submittal	2	2	2	8	12			26		
V	Bid Support		2	8	16				26		
	OPTIONAL Construction Management/Inspection Services	4	8						12		
	<b>TOTAL STANTEC LABOR HOURS</b>	<b>27</b>	<b>12</b>	<b>62</b>	<b>167</b>	<b>244</b>	<b>24</b>	<b>9</b>	<b>48</b>	<b>72</b>	<b>665</b>

City of Garden Grove  
Water Improvements - Orangewood & Dale (Project No. CP 1286000)  
Proposed Project Schedule

ID	Task Name	Start	Finish
1	Notice to Proceed	Mon 6/14/21	Mon 6/14/21
2	Project Management and Meetings	Mon 6/14/21	Mon 3/21/22
3	Preliminary Investigation and Design Survey	Mon 6/14/21	Fri 11/26/21
4	Utility Research	Mon 6/14/21	Fri 7/23/21
5	Survey	Mon 6/14/21	Fri 7/9/21
6	Environmental Processing	Tue 8/3/21	Mon 8/30/21
7	Agency Permitting	Mon 7/12/21	Fri 11/26/21
8	Preliminary Engineering (PEIR)	Mon 7/26/21	Mon 8/30/21
9	Final Engineering	Tue 8/31/21	Mon 12/27/21
10	60% Submittal	Tue 8/31/21	Mon 9/27/21
11	Potholing	Tue 9/14/21	Mon 10/11/21
12	City Review of 60% Submittal	Tue 9/28/21	Mon 10/11/21
13	90% Submittal	Tue 10/12/21	Mon 11/1/21
14	City Review of 90% Submittal	Tue 11/2/21	Mon 11/15/21
15	99% Submittal	Tue 11/16/21	Mon 11/29/21
16	City Review of 99% Submittal	Tue 11/30/21	Mon 12/13/21
17	100% Submittal	Tue 12/14/21	Mon 12/20/21
18	City Review of 100% Submittal	Tue 12/21/21	Mon 12/27/21
19	Bid Support	Mon 1/24/22	Mon 3/21/22
20	Pre-Bid Conference	Mon 1/24/22	Mon 1/24/22
21	Miscellaneous Bid Phase Services	Tue 1/25/22	Mon 3/7/22
22	Conformed Documents	Tue 3/8/22	Mon 3/21/22





June 11, 2021  
File: 184081220

**Attention: Rebecca Li, PE**  
City of Garden Grove  
13802 Newhope Street  
Garden Grove, CA 92843

Dear Rebecca,

**Reference: FEE PROPOSAL for Civil Engineering and Surveying Design Services for City of Garden Grove Water Improvements – Orangewood & Dale (Project No. CP 1286000)**

Per your RFP, we are providing our fee separately from our proposal. At Stantec, we strongly believe that the measurement of value is partially referenced from pricing, but also from credentials and capabilities. Our rates were created with an understanding of this balance.

Please find attached our rate schedule, as well as a table of fees broken down by staff labor hours and tasks. This fee proposal is a firm offer for a 90-day period. Below is a summary of our proposed, not-to-exceed, fees by task.

The optional construction management/inspection services task has been reduced to reflect the assumed 100 days of full-time inspection services in addition to the construction management services, including pre-construction and post-construction tasks in accordance with our scope of services.

	<i>Spread Among the Tasks</i>
Task 1 – Project Management, Meetings, Coordination	
Task 2 – Preliminary Investigation and Design Survey	\$50,749
Task 3 – Preliminary Engineering	\$23,176
Task 4 – Final Engineering	\$105,822
Task 5 – Bid Support	\$4,872
<i>Subtotal</i>	<b>\$184,619</b>
<b>Total Base Fees, including 15% Contingency</b>	<b>\$212,312</b>
OPTIONAL Task – Construction Management/Inspection Services	\$185,668
<b>Total Optional Task, including 15% Contingency</b>	<b>\$213,518</b>
<b>Total Fees including Optional Task and 15% Contingency</b>	<b>\$425,830</b>

June 11, 2021  
Rebecca Li, PE  
Page 2 of 2

Reference: FEE PROPOSAL for Civil Engineering and Surveying Design Services for City of Garden Grove Water Improvements –  
Orangewood & Dale (Project No. CP 1286000)

If you have any questions or wish to discuss the information presented in our proposal, please feel free to contact our project manager, Jeff Dunn, at the number below. We are ready to get started. Together, we are confident that a successful project is just around the corner.

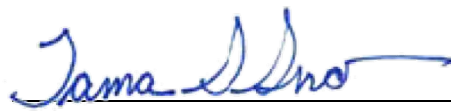
Regards,

**Stantec Consulting Services Inc.**



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**Jeff Dunn** PE  
Senior Associate  
Phone: 949 923 6104  
Jeff.Dunn@stantec.com



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**Tama Snow** PE  
Senior Principal  
Phone: 858 633 4231  
Tama.Snow@stantec.com

**FEE ESTIMATE - City of Garden Grove Water Improvements - Orangewood & Dale (Project No. CP 1286000)**

	Project Manager	QA/QC - Technical Advisor	Project Engineer	Design Engineer	CADD Designer	Environmental Processing	Survey Manager	Survey Analyst		Other Direct Costs	Potholing - T2 Utility Engineers	Aerial Topography - GPS	Construction Management/Inspection - MWH Constructors
<b>Name</b>	Dunn, Jeff	Cathcart, Jim	Fane, Ryan	Lu, Michael	Robison, Richard	Garber, Sarah	Sebourn, Greg	Nelson, Joe	2-Person Survey Crew				OPTIONAL
<b>Project Billing Rate</b>	\$243.00	\$252.00	\$212.00	\$190.00	\$183.00	\$243.00	\$243.00	\$190.00	\$290.00				
<b>Total Units (T&amp;M)</b>	27	12	62	167	244	24	9	48	72				
<b>Total Fee (T&amp;M)</b>	\$6,561.00	\$3,024.00	\$13,144.00	\$31,730.00	\$44,652.00	\$5,832.00	\$2,187.00	\$9,120.00	\$20,880.00	\$5,750.00	\$38,962.00	\$5,445.00	\$183,000.00

Task	Task Name	Hours								Sub Fees	Total Hours	Labor	Expense	Subs	Total			
<b>I</b>	<b>Project Management, Meetings, Coordination</b>	<b>DISTRIBUTED AMONG THE TASKS BELOW</b>																
<b>II</b>	<b>Preliminary Investigation and Design Survey</b>										<b>190</b>	<b>\$44,804.00</b>	<b>\$500.00</b>	<b>\$5,445.00</b>	<b>\$50,749.00</b>			
	Utility Research	2		2	24					\$400				28	\$5,470.00	\$400.00	\$0.00	\$5,870.00
	Survey			4				7	40			\$5,445		115	\$28,709.00	\$0.00	\$5,445.00	\$34,154.00
	Environmental Processing	1		6			24							31	\$7,347.00	\$0.00	\$0.00	\$7,347.00
	Agency Permitting	2		6	8					\$100				16	\$3,278.00	\$100.00	\$0.00	\$3,378.00
<b>III</b>	<b>Preliminary Engineering (Preliminary Design Report)</b>	<b>4</b>	<b>2</b>	<b>10</b>	<b>26</b>	<b>80</b>								<b>122</b>	<b>\$23,176.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$23,176.00</b>
<b>IV</b>	<b>Final Engineering</b>										<b>315</b>	<b>\$61,610.00</b>	<b>\$5,250.00</b>	<b>\$38,962.00</b>	<b>\$105,822.00</b>			
	60% Submittal	6	4	10	32	70				\$750				122	\$23,476.00	\$750.00	\$0.00	\$24,226.00
	Potholing				1	2		2	8		\$38,962			21	\$4,882.00	\$0.00	\$38,962.00	\$43,844.00
	90% Submittal	4	2	6	40	40				\$1,500				92	\$17,668.00	\$1,500.00	\$0.00	\$19,168.00
	99% Submittal	2	2	6	20	24				\$1,500				54	\$10,454.00	\$1,500.00	\$0.00	\$11,954.00
	100% Submittal	2	2	2	8	12				\$1,500				26	\$5,130.00	\$1,500.00	\$0.00	\$6,630.00
<b>V</b>	<b>Bid Support</b>			<b>2</b>	<b>8</b>	<b>16</b>								<b>26</b>	<b>\$4,872.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$4,872.00</b>
<b>SUBTOTAL BASE FEE (EXCLUDING OPTIONAL TASK)</b>										<b>653</b>	<b>\$134,462.00</b>	<b>\$5,750.00</b>	<b>\$44,407.00</b>	<b>\$184,619.00</b>				
<b>TOTAL BASE FEE (EXCLUDING OPTIONAL TASK), INCLUDING 15% CONTINGENCY</b>										<b>653</b>	<b>\$154,631.30</b>	<b>\$6,612.50</b>	<b>\$51,068.05</b>	<b>\$212,311.85</b>				
	<b>OPTIONAL Construction Management/Inspection Services</b>	<b>4</b>		<b>8</b>										<b>12</b>	<b>\$2,668.00</b>	<b>\$0.00</b>	<b>\$183,000.00</b>	<b>\$185,668.00</b>
<b>SUBTOTAL OPTIONAL TASK</b>										<b>12</b>	<b>\$2,668.00</b>	<b>\$0.00</b>	<b>\$183,000.00</b>	<b>\$185,668.00</b>				
<b>TOTAL OPTIONAL TASK, INCLUDING 15% CONTINGENCY</b>										<b>12</b>	<b>\$3,068.20</b>	<b>\$0.00</b>	<b>\$210,450.00</b>	<b>\$213,518.20</b>				



Appendix  
**Extended  
Resumes**

# Ryan Fane PE, PMP, QSD

Project Engineer  
20 years of experience

## PIPELINE EXPERIENCE

Pressure Reducing Stations for Wildrose Business Park\* | Lee Lake Water District | Corona, CA | Design Engineer

Ryan provided the design of two 12" steel pipe pressure-reducing stations with 4" low-flow bypass to control service pressure from a 16" steel water transmission main. This main provides potable water to the Wildrose Business Park in Lee Lake Water District's service area.

Waterline and Valve Replacement Project (CW08A)\* | San Dieguito Water District | Encinitas, CA | Project Manager

Ryan managed the preparation of plans, specifications, and cost estimate on seven different waterline and valve replacements throughout Encinitas. Pipes ranged in size from 16-inch to 6-inch PVC C900 and increased the fire flow capacity within existing residential neighborhoods. The combined total length of installed pipe is 3,340 linear feet.

Highline Transmission Main | City of Redlands | Redlands, CA | Project Engineer

Ryan provided design drawings, specifications, and cost estimate for two miles of 24-inch CMLC steel pipeline in the City of Redlands. The design included a six-inch CMLC steel pipeline, 12-inch PVC pipe, several connection points, and pressure reducing stations. The design included an alternate bid for using ductile iron pipe to reduce construction costs.

Waterline Replacement and 30" Transmission Main Abandonment Project (CW09A)\* | San Dieguito Water District | Encinitas, CA | Engineer

Ryan provided design drawings, specifications, and cost estimate on fourteen different waterline and valve replacements throughout Encinitas. Pipes ranged in size from 16-inch to 6-inch PVC C900 to replace aging infrastructure. The combined total length of installed pipe is 3,340 linear feet. The project included decommissioning 3,600 feet of a 30-inch RCP transmission main using cellular concrete.

Siphon Rehabilitation (2-68)\* | Orange County Sanitation District | Orange County, CA | Lead Engineer

Ryan was the lead engineer for a research and design odor control project for 17 sewer siphons selected by Orange County Sanitation District. Preliminary design included field investigations and sampling to develop design criteria to adequately size air jumpers around the sewer siphons. A series of technical memoranda were prepared to assess sewer siphon ventilation adequacy. Personally developed and implemented a detailed scientific approach to air jumper sizing based on hydraulic conditions. Guidelines were established to assess and resize air jumpers, improving ventilation in the siphons and eliminating odors. Complicated air piping configurations were designed to convey air across the siphon manholes. The design included hanging air piping on the sides of bridges in Huntington Beach, Fullerton, and Westminster. Where box culverts were constructed at grade, air manifolds were designed to transition from a single large-diameter pipe to several small-diameter pipes with very little cover. As field crew leader and surveyor, supervised excavation and traffic control teams, for potholing numerous utilities in several busy intersections across Orange County. Construction assistance was provided for validation testing of the air jumpers for the rehabilitated siphons. The project was featured at the national wastewater conference for WEFTEC 2006 and WEFTEC 2008.

Recycled Water Pipelines\* | Lee Lake Water District | Corona, CA | Design Engineer

Ryan supported the design and construction management (CM) of 2,500 feet of 16 inch pipe and 6,700 feet of 12-inch pipe to serve as the recycled water main for the surrounding community. The pipeline alignment crosses beneath I-15 Freeway and required approval from Caltrans to use jack and bore trenchless technology to go under the freeway. The pipeline feeds a 5-acre irrigation lake for the Retreat golf course from the recycled water pump station at the wastewater treatment plant.

Alder Canal 20" Waterline\* | City of El Centro | El Centro, CA | Engineer of Record

Ryan was the engineer of record for the design for 5,500 lf of 20" PVC C905 DR18 domestic water pipeline. The project included a jack and bore crossing of Interstate 8 utilizing a 32" steel casing for 300 feet. Interstate 8 crossing required development of a Caltrans encroachment permit and Water Pollution Control Plan (WPCP). One section of pipe utilized a 30" HDPE casing for the Alder Canal crossing. Complete design included connection details, traffic control plans, and pipeline appurtenances.



# Michael Lu PE

Design Engineer  
11 years of experience

## PIPELINE EXPERIENCE

Lincoln Ave 16-inch Water Main (From Beach Boulevard to 1,250' E/O Dale Avenue) | Anaheim, California | Design Engineer

Michael provided designs to install approximately 4,500 feet of new 16-inch ductile iron pipe (DIP) in Lincoln Avenue between Beach Boulevard and 1,250 feet east of Dale Avenue. The project also required installation of water main laterals in Beach Boulevard to the north and south to join the City's existing water mains.

Loara Street 8-inch Water Main Replacement from Orangewood Avenue to the City Limit | Anaheim Public Utilities | Anaheim, California | Design Engineer

Michael designed approximately 1,325 feet of 8-inch ductile iron pipe to replace the existing 6-inch asbestos concrete pipe water main. In addition to providing the vertical and horizontal design of the proposed pipeline, Michael was also conducted utility research, coordinated with the City to obtain field survey information, and performed a job walk to identify potential construction issues. The proposed pipeline will help improve system reliability and hydraulic capacity, which will, in turn, provide better water pressures and fire flow capacities to the customers in the project area.

1960 Pressure Zone Domestic Water Transmission Main | Los Angeles, California | Design Engineer

Michael is designing approximately 5,500 feet of 16-inch CML&C steel pipe to transport water from the existing 1960 Pressure Zone Pump Station, owned and operated by the Los Angeles Department of Water and Power (LADWP), to a new hillside development in the City of Los Angeles. Since the proposed 16-inch steel pipe will be routed through residential areas, various alignments were studied and analyzed. The final alignment was selected to minimize disruption to local residents and access (i.e., street closure), and to keep estimated construction costs low. The project requires coordination with LADWP and close attention to existing utilities per available as-built drawings from the City of Los Angeles Bureau of Engineering and other utility companies.

Planning Area 6 Neighborhood 4B Reclaimed Water Main | Irvine, California | Design Engineer

Michael designed approximately 3,800 feet of 6-inch polyvinyl chloride (PVC) reclaimed water main for a new residential development area in the City of Irvine. The proposed 6-inch pipe served as an extension from the existing 16-inch CML&C steel reclaimed water main and required installations of blow-offs per local agency's standards. Michael also produced engineering design plans for submittal to the local agencies.

Planning Area 6 Neighborhood 5A Domestic Water and Reclaimed Water Pipelines | Irvine, California | Design Engineer

Michael designed approximately 1,000 feet of 10-inch polyvinyl (PVC) domestic water pipe and 8-inch PVC reclaimed water pipe to serve new residential developments in the City of Irvine. The scope of work included the design of a pressure reducing station, which consists of an 8-inch pressure reducing valve (PRV) and a 2-inch PRV. Prior to design, Michael analyzed the forecasted water use demands, via hydraulic modeling, to determine the sizes and locations of the pipelines and PRVs. In addition to preparing design plans, he also prepared the engineer's cost estimates for submittal to the local agencies.

Santiago Creek Pipeline Project | Orange County Water District | Orange, California | Design Engineer

Michael provided the engineering design for providing access to the existing 66-inch raw water transmission main. The existing conditions included an access manhole that is buried in the street. To maintain access to the buried manhole, the pipeline, and the associated pipe appurtenances, a 7-foot by 8-foot concrete vault was proposed to be constructed over the existing 66-inch pipeline. He also helped relocate one existing 3-inch air release valve and two existing 1½-inch electrical conduits connecting the 66-inch pipeline and the cathodic protection system, as well as replaced three existing 4-inch cement-mortar lined and coated (CML&C) steel pipes, and their associated appurtenances, connecting the 66-inch pipeline and the air release valve. Deliverables included plans, specifications, and engineer's estimate of probable construction costs for all pipelines and appurtenances.

1630 West Recycled Water Pump Station Check Valves Replacement | Inland Empire Utilities Agency | Ontario, California | Design Engineer

Michael provided engineering design services for the replacement of existing check valves, located in Inland Empire Utilities Agency's 1630 West Pump Station. The project included preparing construction plans, technical specifications, and cost estimate, as well as providing construction support services.

Richfield Road Transmission Main | Yorba Linda Water District | Anaheim and Placentia, California | Design Engineer

Michael designed approximately 2,145 feet of 20-, 24-, and 36-inch ductile iron and steel pipes. The new pipeline will be installed to convey water from Yorba Linda Water District (YLWD) Well No. 21 to the nearby chlorination plant and connects to the existing water distribution system. The project also involves the installation of chlorine injection vaults, static mixer, chlorine injection lines, and chlorine analyzer lines. Michael also prepared the construction specifications and cost estimates.

Bombero Street Pipeline | Irvine Company | Irvine, California | Project Engineer

Michael prepared construction plans and specifications for a proposed pipeline in Bombero Street to supply the San Joaquin Apartments with recycled water for landscape irrigation. The 6-inch diameter PVC recycled water pipeline is approximately 500 linear feet and is located in the Fashion Island area of Newport Beach. The pipeline is an expansion of the OCWD GAP to serve a redevelopment apartment area. A pipeline alignment analysis was completed, which also required an easement and legal descriptions for the pipeline alignment through the Irvine Company property. We worked closely with OCWD and the City of Newport Beach to ensure designs were based on specific standards and criteria.

Canyon Hills | Whitebird, Inc. | Los Angeles, California, United States

Michael designed approximately 5,400 feet of 16-inch CML&C steel water main to deliver water to a proposed hilltop residential development. The proposed pipe alignment traversed through crowded residential areas and crossed a County of Los Angeles flood control channel. The plans were prepared to the standards of Los Angeles Department Water and Power.

Downtown Anaheim Water Recycling Expansion Project | City of Anaheim | Anaheim, California

Michael assisted with the design of approximately 2,400 feet of 4-inch and 6-inch PVC recycled water main to expand City's recycled water system and to bring recycled water to Pearson Park. Due to the vast number of existing underground utilities in the project area, the project involved conducting extensive utility research and choosing the best alignment for the proposed pipeline.

Cypress Water Transmission Main Replacement Project | Azusa Light and Water | Covina, California

Michael designed approximately 7,100 feet of 8-inch, 10-inch, 18-inch, 20-inch, and 24-inch ductile iron pipe to replace the existing water main that was installed in 1913. The pipeline design included valves, fire hydrants, services, connections, abandonments, appurtenances, and pavement replacement. Michael also prepared the preliminary design technical memorandum, cost estimates, and specifications for the project.

UCI Medical Center (UCIMC) Water Improvements | City of Orange | Orange, California | Project Engineer

Michael is providing civil engineering designs to address UCIMC's desire to control the water system within its medical campus separate from the City of Orange's water system. The project involves design of a new master water meter and approximately 900 feet of pipeline design near the intersection of The City Drive and Medical Center Drive and the removal/replacement of two master meters along The City Drive with fire hydrants.

Long Beach Municipal Urban Stormwater Treatment | City of Long Beach | Long Beach, California | Project Engineer

Michael designed approximately 5 miles of 12-inch, 8-inch, 6-inch, and 4-inch PVC pipe to convey stormwater from various County of Los Angeles and City of Long Beach stormwater pump stations to the future treatment plant. Michael and the design team conducted a hydraulic analysis and an alignment study to determine the pipe diameters and the best alignments through existing streets. The project also included pump replacement at some of the existing pump stations, which required mechanical, electrical, and structural design. Michael is currently providing construction support for the project.

Jamboree Road Reclaimed Water Conversion | City of Newport Beach | Newport Beach, California | Project Engineer

Michael is providing civil engineering designs to address UCIMC's desire to control the water system within its medical campus separate from the City of Orange's water system. The project involves design of a new master water meter and approximately 900 feet of pipeline design near the intersection of The City Drive and Medical Center Drive and the removal/replacement of two master meters along The City Drive with fire hydrants.

Chino/Haven Pressure Reducing Station | Ontario Municipal Utilities Company | Ontario, California | Project Manager

Michael is providing civil engineering designs to address UCIMC's desire to control the water system within its medical campus separate from the City of Orange's water system. The project involves design of a new master water meter and approximately 900 feet of pipeline design near the intersection of The City Drive and Medical Center Drive and the removal/replacement of two master meters along The City Drive with fire hydrants.

# Jeffrey Dunn PE

Project Manager  
27 years of experience

## PIPELINE EXPERIENCE

Loara Street 8-inch Water Main Replacement from Orangewood Avenue to the City Limit | Anaheim Public Utilities | Anaheim, California | Project Manager

Jeff managed the design of approximately 1,325 feet of 8-inch ductile iron pipe to replace the existing 6-inch asbestos concrete pipe water main. The project involved vertical and horizontal pipeline design, utility research, and coordination with the City to obtain field survey information. The proposed pipeline would help improve system reliability and hydraulic capacity, which would, in turn, provide better water pressures and fire flow capacities to the customers in the project area.

Lincoln Avenue Water Main Replacement | Anaheim, California | Project Manager

Jeff was responsible for the design and preparation of construction plans, specifications, and cost estimates for the water main replacement project which included 1,300 linear feet of new 12-inch DIP water main in Lincoln Avenue, from East Street to La Plaza. The new pipeline was installed to parallel the existing 8-inch line, requiring connection details and fire hydrant connection details. Each hydrant required about 100 linear feet of new pipeline and the plans were to show sequencing details.

Inland Empire Utilities Agency (IEUA) 930 Zone Chino Hills Recycled Water Reservoir and Pipeline | Inland Empire Utilities Agency | Chino Hills, California | Project Manager

Jeff prepared the pipeline layouts and design for approximately 12,500 linear feet of 30-inch diameter pipeline. The pipeline connects a new recycled water reservoir to the existing recycled water system. The alignment of the pipeline required several Caltrans and flood control channels, including several thousand feet within the access road of the channel. Coordination and permitting was required from the Army Corps.

UCI Medical Center (UCIMC) Water Improvements | City of Orange | Orange, California, United States | Project Manager

Jeff managed civil engineering designs to address UCIMC's desire to control the water system within its medical campus separate from the City of Orange's water system. The project involved design of a new master water meter and approximately 900 feet of pipeline design near the intersection of The City Drive and Medical Center Drive and the removal/replacement of two master meters along The City Drive with fire hydrants.

Bombero Street Pipeline | Irvine Company | Irvine, California | Project Manager

Jeff managed the preparation of construction plans and specifications for a proposed pipeline in Bombero Street to supply the San Joaquin Apartments with recycled water for landscape irrigation. The 6-inch diameter PVC recycled water pipeline is approximately 500 linear feet and is located in the Fashion Island area of Newport Beach. The pipeline is an expansion of the OCWD GAP to serve a redevelopment apartment area. A pipeline alignment analysis was completed, which also required an easement and legal descriptions for the pipeline alignment through the Irvine Company property. We worked closely with OCWD and the City of Newport Beach to ensure designs were based on specific standards and criteria.

Orange Park Acres Transmission Main Replacement/Fire Flow Improvements | Irvine Ranch Water District | Irvine, California | Project Manager

Jeff managed design and construction support services for a new transmission main that transports well water supplies to the Orange Park Acres (OPA) service, as well as the future East Orange development area east of Jamboree Road. Stantec analyzed and recommended a new alignment and pipeline diameter for the proposed Zone 5 OPA Transmission Main. Stantec prepared construction plans, specifications, and cost estimates for approximately 3,500 linear feet of 8-inch PVC pipeline to replace old, undersized existing pipelines within their Orange Park Acres distribution system. The improvements included design for new valve installations, fire hydrant reconnections, and service meter reconnections along the new pipeline improvements. The project also involved field investigations and visits to verify hydrant and service meter locations to be shown on the plans. Due to varying pavement conditions, the plans also included a pavement replacement table on each sheet with pavement requirements described for each location.

**Irvine Boulevard/Portola Parkway IRWD Capital Facilities | Irvine, California | Project Manager**

Jeff managed the improvements project which involved preparing the preliminary design report and final design for the domestic water, reclaimed water, and sewer pipelines in Irvine Boulevard and Portola Parkway within the City of Irvine. The project involved the design of nearly 20,000 linear feet of 36-inch domestic pipeline; 6,802 linear feet of 12-inch domestic water pipeline; 12,700 linear feet of 16-inch reclaimed water pipeline; 7,073 linear feet of 20-inch reclaimed water pipeline; and approximately 2,800 linear feet of 12-inch sewer pipe. The plans were prepared with multiple pipe material alternates including PVC, ductile iron, and steel pipe. In addition to the coordination of other utilities and connection points of existing pipes, the design involved crossing large concrete drainage boxes and underpasses. These crossings required the design for jack-and-bore construction within steel casings. The project was ultimately divided into four separate bid packages for construction.

**Bastanchury Road Zone 3, 4 and 5 Pipelines | Yorba Linda, California | Project Manager**

Preliminary design report and final design of approximately 1,650 linear feet of 36-inch CML&C steel pipe; 3,954 linear feet of 18-inch CML&C steel pipe; and 4,980 linear feet of 12-inch Zone 5 ductile iron pipe. The design also included a Zone 5 to 4 pressure-reducing station located in an underground vault complete with telemetry equipment. A Preliminary Design Report was prepared prior to the preparation of the plans and specifications which established the design criteria and horizontal alignments. Additional tasks included coordination with the client and other consultants, as well as preparing bidding documents including special provisions, technical specifications, and bid forms with an engineer's cost opinion.

**Irvine Boulevard/Lambert Road Sewer Capital Facilities | Irvine, California | Project Manager**

Preliminary design report and final design of the sewer pipelines in Irvine Boulevard and Lambert Road within the city of Irvine. The project included the design of 2,751 linear feet of 12-inch PVC sewer pipe and 3,646 linear feet of 15-inch PVC sewer pipe. Due to the nature of traffic on Irvine Boulevard, the alignments were carefully studied to not only avoid other utilities, but to consider traffic control during construction and maintain the most number of travel lanes open as possible. The project involved coordination with several other consultants to ensure all design requirements and pipe clearances were met.

**Boisseranc Park Wellhead Pipeline Facilities | Buena Park, California**

Alignment and design of the discharge pipeline from the wellhead facilities. The pipeline alignment consisted of approximately 3,500 linear feet of 16-inch ductile iron pipe through an existing park and city streets to the connection point. Mr Dunn's tasks included research of existing utilities, base map preparation, field walks, plan and profile of pipeline, connection details to existing facilities, and construction notes.

**Water Main Replacements | Tustin, California**

Plans for 12- and 16-inch ductile-iron pipes to replace the existing water mains. Jeff's tasks included research of utilities and reference plans, field walk of the job site to verify and locate surface conditions for the base map, pipeline alignment, and profile details for the design of a pipeline crossing underneath the El Modena-Irvine flood-control channel.

**Vellano Domestic Water Pipelines | Chino Hills, California**

Planning and design of 7,600 linear feet of 16-inch ductile iron transmission main pipe and over 25,500 linear feet of eight-inch PVC distribution mains. The scope of services included design calculations for sizing of the air-release valves and blow-off valves. The pipeline plans also included designs for two pressure-regulating stations in underground vaults. The 16-inch ductile-iron transmission main utilized restrained joints for thrust restraint.

**Schedule 2 Reclaimed Water Distribution System | Escondido, California**

Design of approximately 55,000 linear feet of reclaimed water pipelines ranging in size from four- to 18-inch diameter using PVC and CML&C steel pipe. In addition, part of the design was an underground pressure-regulating station. Jeff's responsibilities included design, preparation of plans and specifications, bidding documents, and construction cost estimates

**Island Wells Pipeline | Lake Elsinore, California**

Preparing plans and specifications for construction and installation of approximately 5,420 linear feet of 16-inch domestic water pipeline located along the Eastern Shore of Lake Elsinore. Due to groundwater conditions near the lake, the project included a geotechnical investigation and report for recommendations for a dewatering program and construction method. The bidding documents were prepared so the project could be bid separately for ductile iron and PVC piping materials. Coordination with the water chlorination consulting engineer was required to include the necessary connection points and static mixer in the pipeline plans.

**Middle Enterprise Pipelines | Aliso Viejo, California**

Construction plans and specifications for construction of a new domestic water, non-domestic water, and sewer pipelines in Enterprise Road. The design consisted of over 2,000 linear feet of 16-inch ductile iron pipe; 3,000 linear feet of 12-inch PVC water pipe; and 1,500 linear feet of eight-inch PVC sewer pipe. The scope of services included plan and profile designs, coordination with the developer's engineer, and preparation of specifications and bidding documents with an engineer's estimate of probable construction costs.

**Ladera Ranch Development | Ladera Ranch, California**

Pipeline plans and profile designs of over 10,000 linear feet of 16-inch PVC domestic water pipeline; 9,000 linear feet of 16-inch recycled water pipeline; and 9,000 linear feet of sewer lines. The plans also were separated according to District and developer-funded facilities. Additional tasks included a hydraulic sewer analysis to verify appropriate sewer pipe diameters and the engineer's estimate of probable costs.

# James Cathcart PE

QA/QC – Technical Advisor  
44 years of experience

## PROJECT EXPERIENCE

3-62 Westminster Force Main Relocation | Orange County Sanitation District | Orange County, California | 2018-Present | Technical Advisor

During preliminary design, Jim provided technical review and editing of an initial pump station rehabilitation PDR, and later worked with the management team to rescope the project to include final force main design. The 2.7 mile long dual force main required coordination with the US Navy along the Seal Beach Naval Weapons Station, and Cities of Seal Beach and Westminster. He provided technical review during design that included 9,800 feet of dual 36" HDPE force mains in a common trench, 4,600 feet of 36" HDPE in a single trench, and 4,600 feet of 36" HDPE sliplined in an existing 42" pipe. Design also included one flood control channel overcrossing and rehabilitating a dual barrel inverted siphon under another channel. Construction sequencing was critical to maintain one force main in service throughout construction. He also participated in all design submittal reviews, and is providing technical oversight of engineering services during construction.

Culver Drive Domestic Water Relocation | Irvine Ranch Water District | Irvine, California | Project Manager

Due to a road widening project, Jim managed an accelerated design to relocate a portion of a 12-inch domestic waterline from the parkway to the street and bore and jack under a major storm channel. The plan was to prepare contract documents and a cost opinion for the relocation within a 2.5-month schedule coinciding with year-end holidays in order to have plans ready for bidding to accommodate the planned road repaving schedule. Original contract documents were completed on schedule. However, the project start was delayed due to paving contractor delays.

Industrial Way Water Transmission Main Replacement\* | City of Newport Beach | Newport Beach, California | Quality Control

Jim provided project oversight and quality control design reviews for replacement of a 14- and a 30-inch-diameter water main with a single 36-inch-diameter water main within the Industrial Way public street right-of-way.

Southeast Water Reliability\* | Central Basin Municipal Water District | Carson, California | Principal-in-Charge

Jim provided client liaison and design review for the preliminary and final design of approximately 11.4 miles of 42-inch-diameter recycled water transmission pipeline from the City of Vernon to the City of Pico Rivera. The project also included new pumping facilities consisting of three 7,350-gpm, 900-hp pumps in a new pump station; and three 4,900-gpm, 600-hp pumps in the existing Rio Hondo Pump Station. After final design, the project was scaled back and the pipeline was redesigned as a 3.9-mile, 30-inch-diameter pipeline. The project also included adding a variable-speed 3,700-gpm pump and replacing the sodium hypochlorite disinfection system at the Rio Hondo Pump Station, a major supply source for the system. Piping alignment challenges included dealing with private oil and gas pipelines located throughout the project alignment through the City of Montebello, and Beverly Boulevard bridge installation over the Rio Hondo River.

Santiago Creek Recharge Turnout Design\* | Orange County Water District | Orange County, California | Principal-in-Charge

Jim provided overall project direction and QC review for design of a connection to the 66-inch-diameter Santiago Pipeline consisting of a 42-inch-diameter turnout with isolation/control valves, flow meter, and outlet structure for adding recharge water to Santiago Creek during non-rain periods.

Miscellaneous Waterline Replacements\* | City of Oceanside | Oceanside, California | Principal-in-Charge/Project Manager

Jim was responsible for leading the design and preparation of construction documents for over 5,600 feet of PVC and DI water lines. Line sizes varied between 6, 8 and 24-inch-diameter. The project involved construction in residential and commercial areas and included geotechnical and survey coordination, preliminary and final design, and office engineering during construction.

Oak View Pipeline Design\* | Moulton Niguel Water District | Laguna Niguel, California | Principal-in-Charge

Jim provided project overview and quality control review for the design of approximately 8,400 feet of 8-inch potable and reclaimed water pipelines for a new development in Aliso Viejo, California.

Paseo de Colinas Recycled Water Pipeline Design\* | Moulton Niguel Water District | Laguna Niguel, California | Principal-in-Charge

Jim provided project overview and quality control review for the design of approximately 30,000 feet of pipeline ranging from 6- to 16-inch-diameter. The project included pressure reducing valves, utilities search, locating irrigation meters and service connections to meter vaults.

Ortega Highway Pipeline\* | City of San Juan Capistrano | San Juan Capistrano, California | Project Reviewer

Jim reviewed design of 5,500 feet of 12-inch-diameter steel pipeline and one pressure-reducing structure along Ortega Highway in conjunction with an ongoing road project.

090G Groundwater Development (GWD) Project\* | Southern Nevada Water Authority | Barclay, California | QA/QC Manager

Jim managed all QA/QC activities, and conducted quality assurance reviews on all technical memoranda and a preliminary hydraulics report for this preliminary design. The project preliminary design consisted of approximately 202 miles of welded steel raw water pipeline, between 72 and 90 inches in diameter; one pumping station: six regulating tanks ranging between 7 and 10 MG in capacity; a 40-MG buried water storage reservoir; and two hydroturbine energy recovery facilities.

P-1045 New Potable Water Conveyance\* | Naval Facilities Engineering Command | Oceanside, California | Project Manager/Design QC Manager

Jim oversaw the final design of 28 miles of 12 and 20-inch HDPE water transmission mains, three pump stations (up to 5 MGD capacity) and a 3-MG prestressed concrete reservoir. The project was for NAVFAC at MCB Camp Pendleton as part of a \$54 million design/build contract with a Filanc/Orion JV. The project included horizontal directional drilling under four creeks plus one horizontal directional drill under the I-5 Freeway and NCTD railway.

Recycled Water Near-Term Facilities Design\* | Rowland Water District | Rowland Heights, California | Principal-in-Charge

Jim provided overview of design and construction support for portions of Rowland Water District's near-term recycled water pipelines. Project tasks included construction support and record drawing preparation for the Arenth Avenue pipeline (Phase 1), and design and construction support for more than 42,000 feet of pipelines ranging from 8 to 24-inch-diameter included in Phases 2 and 3.

Treatment Alternatives Analysis\* | Park Water Company | Downey, California | Principal-in-Charge

Jim oversaw a treatment alternatives analysis and preliminary capital and O&M cost analysis for removing radon and arsenic from Park Water Company groundwater wells as part of the response to USEPA's revised proposed Radon and Arsenic Rules. Similar assessments were made for lead and fluoride concentrations in response to required California reporting for constituents that exceed state public health goals

Groundwater Treatment Plant\* | Nuevo Water Company | San Bernardino County, California | Principal-in-Charge

Jim was responsible for designing a groundwater production well treatment system for H2S contamination. The treatment system consisted of an air stripping tower and chemical feed systems for raising and lowering pH.

Yucaipa Valley Regional Water Filtration Facility Design and Construction\* | Yucaipa Valley Water District | Yucaipa, California | QA/QC

Jim provided QA/QC during design of the new \$37.4 million Yucaipa Valley Regional Water Filtration Facility, a microfiltration facility (with provisions to add nanofiltration equipment) located on a 32-acre site, with an initial capacity of 12 MGD and an ultimate capacity of 36 MGD. The facility includes microfiltration using Pall membranes, nanofiltration and blending facilities, residuals handling facilities, disinfection using sodium hypochlorite, a 6-MG partially buried prestressed concrete finished water storage tank, 5,000 feet of 4- to 48-inch-diameter finished water pipeline to convey treated water to the city's distribution system, influent flow control, security features, and slope protection for the adjacent flood control channel.

Citywide Sewer Pump Station Upgrade\* | City of San Diego | San Diego, California | Technical Advisor

Jim provided technical input during design and construction of \$10 million in improvements to renovate 22 sewage pump stations ranging from 0.2 MGD to 3.0 MGD in capacity. The work included performing and reviewing pump hydraulic analysis and evaluations, force main additions, pump and piping replacements, site improvements, standby generator unit additions, odor control unit installations, and emergency storage tank additions. Most of the stations were on very small sites, requiring significant attention to construction phasing and constructability factors.

# Richard Robison

CADD Designer  
26 years of experience

## PROJECT EXPERIENCE

Old Town Sewer Force Main\* | City of Temecula | Temecula, CA | CAD Designer

As CAD designer, Rich's prepared a civil plan and profile plans and details as well as traffic control plans for installation of a sewer force main. The goal of the project was to maintain a minimal impact on city streets and the area businesses, achieved by using multiple trenching and design techniques. Some examples were trenchless installations by directional drilling and jack-and-bore. Traditional trenching was used as well on existing roadways.

City Walk Storm Drain\* | City of Imperial Beach | Imperial Beach, CA | CAD Designer

As CAD designer, Rich prepared civil, landscape and irrigation, and traffic control plans for a beautification project to help create a focal point for beachgoers to enjoy accessing the City's public beach. The project included street-end improvements of sewer, storm drain, hardscape, landscape, and an art wall to the City's beach access point.

Pressure Reducing Stations\* | Padre Dam Water District | Santee, CA | Senior Designer

Design of nine pressure-reducing stations. In which two stations were of new construction. Rich's work included the evaluation of existing facilities to determine use of existing appurtenances, locations of new and existing facilities, and construction impact of existing areas.

Mangular Avenue Sewer Force Main\* | City of Corona | Corona, CA | CAD Designer

Rich prepared a civil plan and profile plans for this project that included 2,500 linear feet of 12-inch force main and contained interconnections.

Alvarado Trunk Sewer\* | City of San Diego | San Diego, CA | Production Manager

Rich served as the production manager responsible for the replacement of approximately 3.5 miles of existing trunk sewer with diameters ranging from 30 inches to 42 inches. Project locations included Alvarado Road, Warning Road, and Mission Gorge Road. His responsibilities also included the preparation of civil plans and profile plans for the 30% design submittal.

Potable Water Transmission Pipeline\* | United States Marine Corps Base Camp Pendleton, Naval Facilities Engineering Command (NAVFAC) Southwest | Camp Pendleton, CA | CAD Designer

As CAD Designer, Rich's helped with the preparation of civil plans and profile plans on a project with key components that included 26 miles of 30-inch force main through highly sensitive wildlife habitats. The goal of the project was to maintain a minimal impact to the environment while providing the military safe, clean potable water, achieved by using multiple trenching and design techniques. Some examples were trenchless installations by directional drilling and jack-and-bore. Traditional trenching was used as well on existing roadways.

Morena Pipeline\* | City of San Diego | San Diego, CA | Production Manager

Rich served as the production manager for work that includes replacing approximately 2.5 miles of existing 16-inch water distribution pipeline and placing a new 48-inch water transmission pipeline. The project is located at Morena Boulevard. His responsibilities involved the preparation of civil plans and profile plans for the 60% and 90% design submittals.

P-101 Tunnel 29 Upgrades\* | Orange County Sanitation District | Orange, CA | CAD Designer

Rich served as CAD designer for preparing civil, mechanical; heating, ventilation, and air-conditioning (HVAC); and process plans for OCSD's implementation of a \$2.4 billion program to provide full secondary treatment at Plants No. 1 and No. 2. Specific responsibilities also included providing 3D rendering and modeling of the project in a BIM environment. A key component of the program is the construction of new thickening and dewatering facilities at Plant No. 1. The project includes design and construction support services for replacement of the existing sludge-dewatering systems with a new system.

# Greg Sebourn PLS, MASCE

Sr. Project Manager, Survey/Geomatics  
22 years of experience

## PROJECT EXPERIENCE

Interim City Surveyor of Huntington Beach | Stantec | Huntington Beach, California | USD 50K | 2019-Present | Principal In Charge

Greg serves the City of Huntington Beach as the acting interim City Surveyor while the City conducts an extensive recruitment effort. Greg is in responsible charge of map checking, quality control, construction staking, and all land surveying and mapping activities conducted by the City's surveying and mapping staff. Working closely with the City's senior staff, Greg provides consulting services as needed.

Lakewood Boulevard Improvements, Project Phase 3B and 3C, Downey and Pico Rivera\* | Downey and Pico Rivera, California, United States | 08/2017 | Survey and Mapping Task Leader

This project involved comprehensive professional services associated with the design and construction of street improvements and enhancements along Lakewood Boulevard from Florence Avenue to Telegraph Road. The project was divided into two segments: Lakewood Boulevard between Florence Avenue and Gallatin Road (approximately 2,800 feet); and Lakewood Boulevard between Gallatin Road and Telegraph Road (approximately 2,700 feet). This project constructed new raised medians, including new landscaping and irrigation improvements. The Phase 3B and 3C improvements included widening of the roadway. The minimum half-section of the improved roadway provides a 14-foot median and three continuous through lanes in each direction throughout the project limits. Within the Phase 3C segment, between the I-5 southbound and northbound on-ramps, a northbound auxiliary lane was provided. Greg led terrestrial design survey services and control for aerial mapping services.

Oso Parkway Roadway Widening Improvements\* | City of Mission Viejo | Mission Viejo, California, United States | 2015 | Project Surveyor

Greg provided surveying services for widening improvements on Oso Parkway between the I-5 freeway and Country Club Drive. A traffic capacity and operation analysis was prepared for the widening alternatives; the results recommended adding one lane in each direction on Oso Parkway and modifying signals at Country Club and Montanoso Drives. The widening improvements will require the acquisition of additional right of way on both sides of the street and multiple utility relocations along the existing sidewalks. The box culvert for Oso Creek will be lengthened to accommodate the new lanes in each direction. The roadway widening requires new retaining walls along the eastbound side of Oso Parkway between the new retail development at the northbound off ramp and Country Club Drive. Surveying services included survey control; construction certifications; verifying bridges, drainage systems and structures, roads, pipelines, and rights of way; as-built surveying and mapping; as-staked staking verification; utility crossings; and construction staking.

On-Call Services, City of Anaheim Santa Ana Canyon Road Rehabilitation and Realignment\* | City of Anaheim | Anaheim, California | 2010 | Survey Manager

Santa Ana Canyon Road serves as a major transportation artery for North Orange County. With more than 20,000 commuters each day relying on this corridor for access to regional services, surveying activities were carefully managed to provide the greatest free-flow of traffic, while expediting the delivery of meaningful data to city design staff. The project took the survey team through nearly 100 years of legal records and engineering notes to re-establish the historic dual alignments. Dozens of monuments and ties were found, reset, and re-established to perpetuate survey evidence and comply with state laws. Greg's noninvasive approach was appreciated by commuters and city staff alike. This project was completed in February 2010.

Jeffrey/Alton Intersection Improvements\* | City of Irvine | Irvine, California | 2015 | Survey and Mapping Task Leader

Greg was the survey and mapping task leader for horizontal and vertical control, photogrammetric surveying, and ground based topographic surveying associated with engineering design services for the Jeffrey Road and Alton Parkway Widening in the City of Irvine.

\* denotes projects completed with other firms



On-Call Surveying and Mapping, MWD of Southern California | County of Riverside, California | Survey and Mapping Task Leader

Greg led the effort to conduct boundary and topographic surveys over portions of MWD pipeline easements and related properties. The project included several miles of pipeline, as well as dozens of properties and easements. The boundary covered several Public Land Survey System Sections, as well as rancho boundaries. His deliverables included CADD files, point files, GIS .SHP files, and a Record of Survey map filed with the Riverside County Surveyor.

Topographic and Right of Way Mapping - Cerritos Reclaimed Water Line Network Extension\* | Cerritos, California | 2015 | Project Surveyor

Greg was the project surveyor for the Cerritos Reclaimed Water Line Network extension, which provided the surveying team with unique challenges that were overcome throughout the project. The 2-mile extension crossed through three cities (Cerritos, Lakewood, and Cypress), two counties (Los Angeles and Orange Counties), and multiple special districts. The survey required re-establishing key Section Corners, street intersections, and county boundaries as well as city boundaries. The topographic component required setting 13 aerial targets to collect data suitable for 40-scale mapping with 1-foot contour interval. The project required filing multiple Corner Records for centerline monuments reset in the field, one of which also served as the boundary monument for the cities of Lakewood and Cerritos. The survey data was delivered on time and on budget in January 2015.

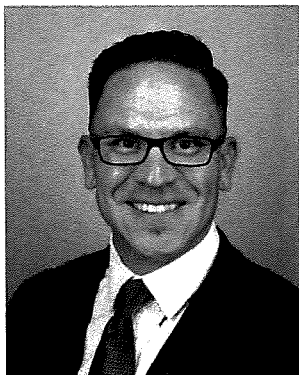
On-Call Services, City of Anaheim Subdivision, and Parcel Consolidation of Anaheim Stadium Properties\* | City of Anaheim | Anaheim, California | 2008 | Senior Survey Project Manager

Greg worked closely with city staff at all management levels to subdivide and consolidate the properties comprising the Anaheim Stadium complex. This major project involved numerous agencies and municipalities. It required reviewing more than 25,000 pages of various legal records to determine their affect, if any, on the project and client goals. Through due diligence, several potential liabilities were addressed before they could cause harm to property title. After resolving all title issues, the project involved conducting boundary and topographic surveys, encroachment analysis, and writing new legal descriptions. A parcel map was filed and recorded. This project was completed in 2008 at a cost of approximately \$160,000.

IDIQ Contract for Surveying and Mapping Boundary and ROW Acquisition, PF225 Border Fence, Los Angeles District, U.S. Army Corps of Engineers\* | U.S. Army Corps of Engineers | San Diego County and Imperial County, California | 2012 | Survey Manager

This project consisted of boundary and cadastral surveying for right of way acquisitions along the US/Mexico International Border. Specifically, the acquisitions involved existing roads currently used by Customs and Border Protection (CBP), as well as roads and staging areas that were utilized in the construction of the new border fence. Many of these roads have been utilized by CBP for years; however, no legal right existed to allow such use. As such, numerous properties had to be surveyed, along with said roads and staging areas, to compile legal descriptions to facilitate acquisitions and/or condemnations. This project involved a total of 29 separate owners and 31 individual parcels from west of Tecate in San Diego County to west of Calexico in Imperial County. The projects cover approximately 13 fractional townships along the border, requiring extensive cadastral retracement throughout the area. Survey and mapping tasks were completed in October 2012.

# Jeffrey Martinez, CPII | Senior Inspector



Jeffrey is an experienced Inspector with over 20 years of experience in the water, wastewater, and environmental industries. He holds an APWA CPII and ACI certifications. His experience includes pre-construction duties, contract administration, materials testing, pipeline inspection and concrete inspection. Jeffrey is a motivated professional with valuable public and private experience and knowledge. He is flexible and versatile and able to maintain a professional mindset under pressure. Jeffrey is poised and competent with demonstrated ability to easily communicate with all project stakeholders.

## Industry Experience ▾

Total	MWH
<b>20</b>	<b>6</b>

## Education ▾

Bishop Mora Salesian High School

## Training / Certifications ▾

- APWA Certified Public Infrastructure Inspector
- Nuclear Density Gauge
- Grade I: American Concrete Institute (ACI)
- American Safety Certified
- High/low Voltage with Arc Flash Awareness Certificate
- Basic Helicopter Training - TRTP
- Basic Fire Prevention - TRTP
- Environmental Training - TRTP
- OSHA 30-hour
- CPR with AED, First-Aid

## Project Experience ▾

**Brine Pipeline Project, City of Beaumont, Beaumont, CA, Senior Inspector, \$2.8M, December 2019 – Present**  
 Initial Lead Inspector for the City of Beaumont Brine Pipeline Project Reach 1 and Reach 2. Became Sole Lead Inspector of Reach 2 in February 2020. The project consists of 22+ Miles of 12" HDPE Fusion Welded Pipe from the City of Beaumont in Riverside County to San Bernardino through the City of Beaumont, City of Redlands, City of Loma Linda, City of San Bernardino and will eventually connect to an existing SAWPA Manhole after a Monitoring Manhole is constructed. Included in the Project is a Steel Casing that will be hung below the E St Bridge in the City of San Bernardino on Pipe Supports anchored below the bridge and through (8) open Bays (Already provided). The Project is ongoing with an updated End Date of June 2020. Overseeing all aspects of the Project while coordinating with all mentioned Municipalities, Army Corp of Engineers and Environmental Agencies. On site duties include Traffic Control cooperation, Installation of the Brine Main, Monitoring Manholes, Maintenance Manholes and Conductivity Wire Stations as per the City of Beaumont Standards and Specifications while abiding by the City of Redlands, City of Loma Linda and City of San Bernardino Specifications. Furthermore, is the Paving Operations (Base Paving and Grind and Cap Operations), overseeing (4) Jack and Bore Operations along with (2) Directional Drilling Operations. Completes Daily Inspection Reports and Photo Logging which are recorded on EADOC.

**Hi-Desert Wastewater Reclamation Project Collection System, Hi-Desert Water District (HDWD), Yucca Valley, CA, Senior Inspector, \$150M, December 2017 – February 2018**

The Project is comprised of a wastewater treatment and reclamation facility, a collection system, and private property connections that will help property owners comply with the State's mandated septic dis-charge prohibition dates. It will take approximately four years to complete Phase 1 of the Sewer Project, with Phase 2 and 3 to follow in subsequent years. The collection System includes over 77 miles of pipeline in Phase One, with more to come in Phases 2 and 3. These pipes will

transport wastewater that is collected from homes to the wastewater treatment facility. Existing streets where pipelines are installed will be removed and replaced with new roads. The system will be predominantly gravity fed, reducing energy costs, with three lift stations helping move wastewater uphill where necessary. Pipes ranging from 8 inches to 24 inches in diameter will provide service up to the property line of homes, businesses, and vacant land. The Private Property Connections process includes abandoning existing septic tanks and connecting each property to the pipes in the street that make up the collection system. Jeff also served as Night Shift Inspector while 8" Sewer Main and 6" Sewer Force Main was being installed.

**Requa Inceptor, Valley Sanitation District (VSD), Indio, CA, Senior Inspector, \$9.5M, May 2016 – December 2017**  
 The VSD added sewer capacity to the City of Indio required construction management services for the construction of approximately 4.2 miles of sewer pipes with sizes ranging from 10 to 30-inches. A 10-inch sewer line will run from Shields

Road, on Avenue 46 to the East, up to Indian River Road. The longest sewer line will run from Highway 111 and Madison Street intersection towards the North-East to the VSD Wastewater Treatment Plant. This project includes 64 sewer manholes. The sewer line route will take place on Madison St, Avenue 46, Aladdin St, Shadow Palm Ave, Requa Ave, Indio Blvd, Citrus Ave, Private land, and Van Buren St. The project construction duration is 19 months (580 CD) for an estimated value of \$12M. The pipeline alignment will majorly travel through residential neighborhoods, as well as industrial area, crossing the All-American Canal, the Union Pacific railroad tracks, and open areas by the Golf Center Parkway. Served as Lead Senior Inspector. Key Elements included work within existing public Right-of-Way (ROW); complex and changing environment including residential, commercial and industrial uses; 24-hour operation requirements; jack and bore methodology; canal crossing requirements; railroad crossing requirements; city events coordination; and tie-ins at Highway 111 and at WWTP. The project was accepted by the District and was awarded CWEA Engineering Project of the year.

**On-Call Biennial Inspection Various Projects, Coachella Valley Water District (CVWD), Palm Desert, CA, Senior Inspector, April 2017 – May 2017**

Served as on call services Inspector covering various project for the CVWD. Duties included materials verification, installation of Sewer and Water piping, grade checking, Sewer Air and Video Testing, Water Hydrostatic Testing and Project Close Outs.

**Hollywood Park Recycled Water Improvement, West Basin Municipal Water District, Inglewood, CA, Senior Inspector, April 2016 – June 2016**

Served as Senior Inspector for the Recycled Water Services to the future Los Angeles Rams Stadium. Worked directly with WBMWD Engineer, Justin Pickard, and oversaw the new construction of (2) 16" CML/CMC Recycled Water Lines from staking to excavation to installation to testing.

**Well 41 Wellhead Treatment Project, Ontario Municipal Utilities Company (OMUC), City of Ontario, CA, Senior Inspector, \$3.5M, January 2016 – February 2016**

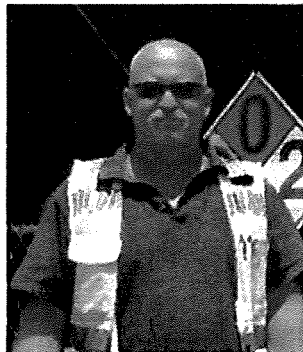
Assisted in field inspection for the Ontario Municipal Utilities Company at the Well 41 Wellhead Treatment Project. The project included a new \$3.45M Ion Exchange water treatment facility, which includes new filters, Ion Exchange vessels, chemical building and relocating of the existing Miox system and electrical controls. New water main and storm drain facilities were also included in this project.

**Capital Improvement Projects (CIP) and On-Call Services, Elsinore Valley Municipal Water District (EVMWD), Lake Elsinore, CA, Senior Inspector, 2014 – January 2016**

Served as Senior Inspector for the Elsinore Valley Municipal Water District. Responsibilities included verifying materials and survey staking, verifying the installation of water and sewer pipelines while meeting standards and specifications for the District, field inspection for the construction of a 2.5mg welded steel tank, conducting testing of water and sewer pipeline through hydrostatic testing, infiltration and exfiltration testing, air testing and bacteria sampling. Ensured final acceptance of projects and facilitates daily report writing. Has worked on the following District projects:

- County Water Company - temporary HDPE water installation
- Waite Street 1467 Zone - 2.5mg Reservoir Project
- Meeks and Daily Agricultural Pipeline Project - HDPE corrugated pipeline installation
- Fogarty Sub-Station - water installation
- Arroyo Del Toro Channel - water installation
- 1934 Zone Reservoir Gap Repair - tank retrofit
- Tract 36115, 36116, 36117, 36118 - Pardee Homes water and sewer installation
- Tract 31920-1, 2, 3, 7 & 8 - Ryland Home water and sewer installation

# Don Isom, QSP, CPII, ACI | Senior Inspector



Don is an experienced inspector with 35 years of diversified experience in multiple phases of multi-million dollar commercial and residential construction projects. He holds the following certifications: QSP, CPII and ACI. His trade proficiencies include mechanical; plumbing, storm drain and sewer; installation of underground utilities and appurtenances; concrete structures; asphalt roadways; sidewalks; curb and gutters; and ADA requirements. Don's project responsibilities have included: plan and specification reading; daily project documentation including photographs; City relations and customer service; project planning and scheduling; problem-solving and crisis management; and ensuring compliance with building and site requirements.

## Industry Experience ▾

Total	MWH
35	2

## Education ▾

San Bernardino Unified School

## Registrations / Licenses ▾

Certified Erosion Sediment & Storm Water Inspector (CESSWI # 5522)

Concrete Field-Testing Technician Grade 1, ACI

Qualified SWPPP Practitioner CASQA #21254

National Association of Sewer Companies (NASSCO), Inspector Training & Certificate Program (ITCP) for inspection of Cured-in-Place – Pipe (CIPP) Installations

C – 34 Contractors License

## Training / Certifications ▾

OSHA-30 Hour

Confined Space

Fall Protection

Trench Safety

## Project Experience ▾

**Brine Line Reach I, City of Beaumont, Beaumont, CA, Inspector, \$10.M, Feb 2019 – Present**

The Project consists of 61,253 lf of 12" HDPE DR-17, DR-14 pipe wrapped in mirafi fabric with tracer wire Per the City of Beaumont National Pollutant Discharge Elimination System (NPDES) permit. Work includes de-watering of work area, (3) jack & bore with 24" casing, (1) 18" Horizontal Directional Drill approx. 800 Ft., installation of (36) manholes, (13) maintenance monitoring manholes with mission control equipment, (61) wire test stations, (3) 4" Bottom flush drain assemblies, trench bedding & backfill per City of Redlands, Beaumont & County of Riverside Requirements. Site restoration included base paving of trench line and grind & overlay of approx. 713,700sq ft. of roadway. As Lead Inspector, Don oversees daily operations, daily photo documentation, quality control, quantity control, traffic control, dust control, BMP'S, Confined Space, submittal review, attends weekly meetings and provides response for any emergencies. Also generates daily Inspection reports, punch lists, and project completion reports to maintain consistent project documentation.

## Project Experience Prior to MWH ▾

**Relocation of the Sewer in San Joaquin Drive West, EVMWD, Lake Elsinore, CA, Construction Inspector, \$1M, 2018**

The project installed a temporary bypass system for sewer diversion while construction activities took place with the installation of 210 lf of 8" DR14 C900 PVC pipeline and 238 lf of 6" C900 PVC in the City of Canyon Lake. Work also included installation of (3) new 60" precast drop sewer manholes, modification to an existing 48" manhole, connection of (5) 6" sewer laterals and abandonment of approximately 240 lf of existing 8" sewer pipeline and 6" laterals. Responsibilities included the daily inspection reports, quality controls, quantity counts, progress payments, and submittals.

**County Water Company of Riverside Final Water Systems Improvements Project, EVMWD, Lake Elsinore, CA, Construction Inspector, \$750,000, 2018**

The project consisted of approximately 140 of Horizontal Directional Drilling of 8" HDPE under the creek crossing on Club Ave, installation of (7) air vacuum relief valves, and removal and abandonment of approximately 3,600 lf of temporary above ground HDPE highline located along Bundy Canyon. This project was located within a rural area of Wildomar making project access, as well as compliance with environmental sensitivity, a challenge. There was also a substantial amount of ground surface erosion causing additional challenges in

handling the existing AC pipeline with heavy construction equipment. Was responsible for the daily inspection reports, quality controls, quantity counts, progress payments, and submittals.

**On-Call Construction Management and Inspection Support Services, Moulton Niguel Water District, Laguna Niguel, CA, Inspector, \$6M, 2017**

Served as VC&A Inspector for MNWD providing as-needed staff augmentation, construction management and special inspection of electrical work, startup and commissioning, linings & coatings, structural work, welding, and other general overflow inspections. Provided services on the following task orders:

- San Juan Creek ETM Pipeline Removal – Removal of existing concrete encased abandoned piping in the San Juan Creek. Maintained County encroachment permit compliance, coordinated preconstruction meetings and final inspection/permit sign off with County.
- El Dorado Reservoir – Structural and coating inspection of reservoir improvement in conjunction with Harper & Associates Engineering.
- Forbes Road Phase II – New sewer and water improvements, removing and upsizing existing sewer and water improvements to accommodate future development in the area.
- Paseo de Valencia Lift Station – Monitored dewatering and cleaning of existing wet well. Inspected condition of wet well and lining for potential rehab. Responsible for visual inspection, holiday testing, adhesion testing of coating during rehabilitation and reports.
- Aliso Hills Reservoir – Structural and coating inspection of reservoir improvement in conjunction with Harper & Associates Engineering.
- Warranty Inspection Mathis and Bear Brand – Provided structural and coating inspections prior to end of warranty period in conjunction with Harper & Associates Engineering.

**On-Call Inspection Services, Elsinore Valley Municipal Water District, CA, Construction Inspector, \$2M, 2015-2016**

Provided construction inspection services for various development infrastructure installation projects throughout Lake Elsinore, Wildomar and Murrieta. Each project was inspected at various stages of construction to ensure that the work was completed in compliance with the contract documents. These documents included the development contract drawings and specifications, special provisions, local jurisdiction requirements and EVMWD standards drawings.

**On-Call Construction Management/Engineering Support/Testing and Inspection, City of Cypress, CA, Construction Inspector, \$2M, 2012**

Worked on the VC&A team providing services on over eighty (80) separate task orders encompassing Capital Improvement Program (CIP) as well as several permits or Non-CIP projects. Typical projects included sidewalks, curb & gutter, driveway and handicap ramp replacements, tree removal and replacement, slurry seal type 1 & 2, sewer replacement and lining, street widening, relocations of utilities, asphalt grind and overlay, storm drains, new median construction and traffic signal replacement. Provided public outreach, and inspection for various encroachment permit projects that included new development, utilities, and SWPPP.

**On-Call Services, California Department of Water Resources, Statewide, CA, Construction Inspector, \$2M, 2015-2017**

Provided encroachment permit inspection services for construction projects in various locations throughout California within the Department of Water Resources (DWR) Right-of-Way as well as inspections on Agreement Construction Projects currently with the Los Angeles Department of Water and Power. Duties included verification of all construction methods and results that were following the approved permits filed with DWR's main office in Sacramento, CA. Verified the DWR Right-of-Way was always protected during construction and that areas affected were returned to their original condition. Responsibilities included preparation of daily inspection reports, photographs on each encroachment permit project and agreement project inspected within the DWR Right-of-Way. Also attended preconstruction meetings prior to work commenced on each project assigned and attended progress meetings. Upon completion of the construction work, scheduled and conducted final project inspections and developed punch lists as necessary with the DWR Field Supervisor, Department of Engineering Supervisors and Operation and Maintenance (O&M) Supervisors.

**Mentone Pipeline, California Department of Water Resources, Statewide, CA, Construction Inspector, \$38.6M, 2015**

Served as a construction inspector on approximately 5.5 miles of new pipeline connecting the Foothill Pumping Plant to the Citrus Reservoir as well as pipeline connecting the Citrus Pump Station to the Crafton Hills Pumping Plant. The project installed two sections (south and east) of cement mortar-lined steel pipes with a cold tar enamel coating in trench depths from 15 ft. to 55 ft.; two miles of 72-inch, buried steel pipe from the Foothill Pumping Plant to the Citrus Reservoir; approximately 3.5 miles of 66-inch buried steel pipe from the Citrus Pump Station to the Crafton Hills Pumping Plant; and installation of valves, access structures, pipe fittings, flow meters, and cathodic protection.

**Groundwater Production Restoration and Transmission Main, Castaic Lake Water Agency, Santa Clarita, CA, Construction Inspector, \$14M, 2006-2007**

This project included the installation of approximately 2,320 ft. of 42", 200 ft. of 36", 4,780 ft. of 30", 6,880 ft. of 18", 5,230 ft. of 16", and 675 ft. of 10" cement mortar lined and coated steel pipe; 2,500 ft. of 16" ductile iron pipe complete with air vacuum/release valves and appurtenances; pipeline testing, disinfection and water sampling; two bridge crossings; restoration of the existing site; concrete curbs and gutters; and manway vaults and cathodic test stations. Verified that the proper procedures for trenching, excavation, shoring, tree protection and disposal of excavated material were followed. Treatment and restoration of the project consisted of the rehabilitation of Saugus 1 & 2 Wells. Construction of a Booster Pump Station included three pumps complete with piping, electrical and instrumentation. Construction of a perchlorate treatment plant included bag filters, ion exchange vessels, treated water tanks, three treated water pumps, and outdoor chemical storage and feed systems.

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