



**ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA**  
**TRABUCO CANYON WATER DISTRICT**  
**32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA**  
**ADMINISTRATION FACILITY, BOARDROOM**  
**JUNE 2, 2021 AT 7:00 AM**

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**COMMITTEE MEMBERS**

Edward Mandich, Committee Chair  
Stephen Dopudja, Committee Member  
Michael Safranski, Committee Member Alternate

**DISTRICT STAFF**

Fernando Paludi, General Manager  
Michael Perea, District Secretary  
Lorrie Lausten, District Engineer  
Gary Kessler, Water System Superintendent  
Jason Stroud, Maintenance Superintendent

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**AGENDA NOTE:**

*Due to the spread of COVID-19 and as authorized by the Governor's Executive Order, Trabuco Canyon Water District will be holding this Engineering/Operational Committee Meeting by video broadcast (**Zoom**), and will be available by either video conference or telephone audio as follows:*

**Video Conferencing:** You can join the meeting from your computer, tablet, or smartphone by clicking on the following link: <https://zoom.us/j/97375627682>

**Telephone Audio:** 1 (669) 900-6833  
**Access Code:** 973-7562-7682

Persons desiring to monitor the Committee meeting agenda items may download the agenda and documents on the internet at [www.tcwd.ca.gov](http://www.tcwd.ca.gov).

You may submit public comments by email to the Committee at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). In order to be part of the record, emailed comments on meeting agenda items must be received by the District, at the referenced e-mail address, not later than 7:00 a.m. (PDT) on the day of the meeting.

**CALL MEETING TO ORDER**

**VISITOR PARTICIPATION**

Members of the public wishing to address the Committee regarding a particular item on the agenda are requested to submit public comments by email to the Committee at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decisions on matters. The Committee makes recommendations only to the Board of Directors. Members of the public will be given the opportunity to speak to the Committee prior to making a recommendation on the matter. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

**ORAL COMMUNICATION**

Members of the public who wish to make comment on matters not appearing on the agenda are requested to submit oral communication by email to the Committee at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). Under the requirements of State Law, Directors cannot take action on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For

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*persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

**COMMITTEE MEMBER COMMENTS**

**REPORT FROM THE GENERAL MANAGER**

**ADMINISTRATIVE MATTERS**

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**PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER  
MICHAEL PEREA, DISTRICT SECRETARY**

**ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP**

**RECOMMENDED ACTION:**

*Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar).*

1. May 5, 2021

**ENGINEERING MATTERS**

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**PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER  
MICHAEL PEREA, ASSISTANT GENERAL MANAGER  
LORRIE LAUSTEN, DISTRICT ENGINEER**

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT**

**RECOMMENDED ACTION:**

*Committee to receive information at the time of the Committee Meeting.*

**ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING HERITAGE SEWER LIFT STATION IMPROVEMENTS**

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors authorize the General Manager to ratify a Contract with JIG Consultants for Engineering Services for Heritage Lift Station Bypass and Piping Improvements in the amount of \$43,440.*

**ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING GOLF CLUB SEWER LIFT STATION IMPROVEMENTS**

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors authorize the General Manager to ratify a Contract with Hydrotech Electric for Golf Club Lift Station Motor Control Center Replacement in the amount of \$279,340 with a contingency of \$27,934, for a total not-to-exceed amount of \$307,274.*



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**ITEM 5: PUBLIC HEARING AND ADOPTION OF TRABUCO CANYON WATER DISTRICT'S 2020 URBAN WATER MANAGEMENT PLAN (UWMP) UPDATE, WATER SHORTAGE CONTINGENCY PLAN, AND 2015 UWMP ADDENDUM**

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors take the following actions at the June 16, 2021 Regular Board Meeting (Action Calendar):*

- 1. Conduct a Public Hearing to receive public comments related to the approval and adoption of the 2020 Urban Water Management Plan (UWMP) Update, Water Shortage Contingency Plan (WSCP), and 2015 UWMP Addendum*
- 2. Adopt Resolution No. 2021- 1290 - Resolution of the Board of Directors of Trabuco Canyon Water District Adopting the District's Addendum to the 2015 UWMP to Add Appendix C – Reduced Delta Reliance Reporting*
- 3. Adopt Resolution No. 2021-1291 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's Revised WSCP*
- 4. Adopt Resolution No. 2021-1292 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's 2020 UWMP Update*

**ITEM 6: PURCHASE OF A CUMMINS EMERGENCY PORTABLE 275KW DIESEL GENERATOR**

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors ratify the purchase of one Cummins Emergency Portable 275KW Diesel Generator for equipment for \$173,981 plus approximately 10% as contingency for a total not-to-exceed amount of \$190,000.*

**ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES**

1. SCADA Project Update
2. Other Projects

**RECOMMENDED ACTION:**

*Committee to receive project status updates at time of the Committee Meeting.*

**OPERATIONAL MATTERS**

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**PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT  
MICHAEL PEREA, ASSISTANT GENERAL MANAGER  
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT**

**ITEM 8: WATER SYSTEM UPDATES**

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*

**ITEM 9: WASTEWATER SYSTEM UPDATES**

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*



**TRABUCO CANYON WATER DISTRICT  
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**ITEM 10: MAINTENANCE DEPARTMENT UPDATES**

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*

**REGULATORY AND OTHER MATTERS**

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**ITEM 11: OTHER MATTERS/REPORTS**

**RECOMMENDED ACTION:**

*Hear Other Matters/Reports that may have arisen after the posting of the agenda.*

**ADJOURNMENT**

**AVAILABILITY OF AGENDA MATERIALS**

*Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the Trabuco Canyon Water District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Administrative Facility) or will be posted online on the District's website located at [www.tcwd.ca.gov](http://www.tcwd.ca.gov). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available online at [www.tcwd.ca.gov](http://www.tcwd.ca.gov) at the same time as they are distributed to the Board Members, except that, if such writings are distributed immediately prior to or during the meeting, they will be posted online on the District's website located at [www.tcwd.ca.gov](http://www.tcwd.ca.gov).*

**COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2**

*In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277, at least 48 hours in advance of the scheduled Board meeting. Notification at least 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The Board Meeting Room is wheelchair accessible.*

*The District may conduct future meetings electronically (via teleconferencing) during the current ongoing emergency situation.*



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ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ADMINISTRATIVE MATTERS**

**ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP**

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**RECOMMENDED ACTION:**

*Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar):*

1. *May 5, 2021*

**CONTACTS (staff responsible): PALUDI/PEREA**



## **TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 5, 2021**

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### **DIRECTORS PRESENT**

Ed Mandich, Committee Chair  
Stephen Dopudja, Committee Member

### **STAFF PRESENT**

Fernando Paludi, General Manager  
Michael Perea, Assistant General Manager  
Lorrie Lausten, District Engineer  
Karen Warner, Principal Accountant  
Gary Kessler, Water Department Superintendent  
Jason Stroud, Maintenance Superintendent  
Lisa Marie Sangi, Executive Assistant

### **PUBLIC PRESENT VIA CONFERNECE CALL**

None

### **CALL MEETING TO ORDER**

Director Mandich called the May 5, 2021 Engineering/Operational Committee Meeting to order at 7:05 AM. Public access to the meeting was made available by video broadcast.

### **VISITOR PARTICIPATION**

No comments were received.

### **ORAL COMMUNICATION**

No comments were received.

### **COMMITTEE MEMBER COMMENTS**

No comments were received.

### **REPORT FROM THE GENERAL MANAGER**

No comments were received.

### **ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP**

Mr. Paludi presented the Engineering/Operational Committee Meeting Recap for Committee review in accordance with the agenda.

### **RECOMMENDED ACTION**

The Committee recommended that the Engineering/Operational Committee Meeting Recap(s) be forwarded to the Board of Directors for approval (Consent Calendar).

Director Dopudja and Mr. Perea recommended the Special Engineering Committee Recap to be forwarded the Board of Directors for approval (Consent Calendar).

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 5, 2021**

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT**

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Ms. Lausten provided a project status to the Committee, and she reported that the project tentative completion date is July 5, 2021. Ms. Lausten added that certain project-related items have been delayed due to schedule delays by Southern California Edison (SCE) outside of District control. Ms. Lausten reported that GMU Geotechnical had completed the onsite vibration monitoring and reported no adverse impacts. Discussion occurred concerning the project timeline for completion. Ms. Lausten reported that two of the three new pumps were damaged in transit, and that District staff is meeting with the pump vendor to discuss a plan to remediate the damages.

**RECOMMENDED ACTION:**

The Committee received the status update.

**ITEM 3: OTHER ENGINEERING AND OPERATIONS PROJECTS**

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**1. 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) Update**

Mr. Paludi introduced this matter for Committee consideration, and he reported that a Special Board Meeting has been scheduled to review the 2020 Urban Water Management Plan (UWMP) Update and the Water Shortage Contingency Plan (WSCP) requirement. Mr. Paludi added that District General Legal Counsel has been involved in the preparation of the WSCP and will attend the Special Board Meeting. Ms. Lausten provided a brief review of UWMP update requirements in comparison to the 2015 UWMP, and she reviewed the public notification and adoption schedule.

**2. Saddle Crest Development**

Ms. Lausten provided an update on this matter to the Committee, she reported that developer has advised the District that a portion of the parcels have been sold to another developer for construction. Mr. Paludi provided an update on his recent discussion with the developer. Discussion occurred concerning certain terms of the Settlement Agreement and future development needs

**3. Other Projects**

Ms. Lausten provided a brief project update on the District SCADA upgrade project for following fiscal year.

**RECOMMENDED ACTION**

The Committee received the status update. There was no action taken.

**ITEM 4: WATER SYSTEM UPDATES**

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Mr. Kessler reviewed the projects and repairs for April 2021, and he provided the additional highlights:

1. Water Operations staff assisted Ferreira Construction with the completion of the 16- inch leak repair on the El Toro Bike Trail, which was caused by the County of Orange personnel.
2. Water Operations staff assisted Ferreira Construction with the install of the 16-inch isolation valve, main distribution line on the El Toro Bike Trail.
3. Water Operations staff converted the three (3) Dry Barrel Hydrants to Wet Barrel Hydrants in the Robinson Ranch Community, Hamilton Trail and O'Neil Park Shopping Center in the Canyon Community.
4. Water Operations staff replaced two Air Vacs at Regency Park in Lake Forest, and the Upper Falcon Zone in the Canyon Community.
5. Water Operations staff repaired a 6-inch hydrant valve on Morningside Drive in the Trabuco Highlands Community.

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6. Water Operations staff conducted seven (7) fire flow test for the Developer on Hamilton Trail in the Canyon Community.

Mr. Kessler reviewed the Monthly Water System Operations Summary with the Committee. Discussion occurred concerning dry barrel hydrant replacement in the District's service area.

**RECOMMENDED ACTION**

The Committee received the status update. There was no action taken.

**ITEM 5: WASTEWATER SYSTEM UPDATES**

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Mr. Perea reviewed the projects and repairs for April 2021, and he reported that Wastewater Operations staff had completed the following tasks:

1. Performed routine maintenance on the Robinson Ranch Wastewater Treatment Plant (WWTP) Filtration System by replenishing the anthracite coal media and cleaned the filter backwash tank.
2. Worked with Maintenance Department staff to clean the WWTP Chlorine Contact Chamber.
3. Prepared the spare filter tank at the WWTP for removal and disposal.
4. Worked with Maintenance Department staff to add a new Equalization Basin sump pump panel.
5. Hosted a tour of the WWTP for a local Robinson Ranch Girl Scout Troop on Friday, April 30<sup>th</sup>.

Mr. Perea reviewed the Monthly Wastewater System Operations Summary with the Committee, and he reported that non-domestic water demand has increased by approximately five percent from the same month in the prior year.

**RECOMMENDED ACTION**

The Committee received the status update. There was no action taken.

**ITEM: 6 MAINTENANCE DEPARTMENT UPDATES**

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Mr. Stroud reviewed the projects and repairs for April 2021, and he provided the additional highlights:

1. Maintenance Department staff began assembly for the newly purchased vehicles for District Operations staff.
2. Maintenance Department staff installed a new pump/motor for the Tick Creek Dry Season Recovery Booster Station.
3. Maintenance Department staff continued the electrical upgrades and repairs at the Robinson Ranch Wastewater Treatment Plant.
4. Maintenance Department staff worked with Sanitation Operations to re-pack multimedia filters at the Robinson Ranch Wastewater Treatment Plant.
5. Maintenance Department staff has completed the EMASS program with TESCO Controls.

**RECOMMENDED ACTION**

The Committee received the status update. There was no action taken.

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 5, 2021**

**ITEM 7: OTHER MATTERS/REPORTS**

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Discussion occurred concerning the potential impacts of Senate Bill (SB) 9.

**RECOMMENDED ACTION**

There was no action taken.

**ADJOURNMENT**

Director Mandich adjourned the May 5, 2021 Engineering/Operational Committee Meeting at 7:25AM.

DRAFT

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT**

Trabuco Canyon Water District (District) owns and operates the Bell Canyon Lift Station (Station) in the Dove Canyon community. The station was built in the late 1980's as part of the Dove Canyon Development and is located at the end of Bell Canyon Drive. The station lifts sewage from 130 homes via a 4" PVC force main, 4500 LF to a manhole at the intersection of Willowglade and Golf Ridge Dr., which then gravity flows to Golf Club Lift Station.

The station footprint is 30'x15' and includes a wet well with two sets of submersible pumps working in series, a dry pit/valve vault, electrical/MCC panel, a chlorine tank and a backup diesel generator. On September 2, 2019, a complete failure of the station occurred and required Wastewater Operations and Maintenance Staff to install an emergency bypass system to prevent a Sanitary Sewer Overflow (SSO). Two days later, operations were able to restore service to one set of pumps, removed the bypass system and installed a temporary pumping system to back up the operational pumps.

District staff, along with JIG Consultants, identified areas that required rehabilitation and replacement, and completed a bid package for this work in April 2020. At the May 20, 2020 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Ferreira Construction for the Bell Canyon Lift Station Rehabilitation in the amount of \$1,496,228, with a \$75,000 contingency, for a not to exceed amount of \$1,571,228. At the June 15, 2020 Regular Board Meeting, the Board of Directors authorized the General Manager to execute a contract with Butier Engineering, Inc. for Construction Management Services in the amount of \$180,830. The construction completion date is July 9, 2021.

The following is the budget for the project:

<b>BELL CANYON LIFT STATION REHABILITATION PROJECT COSTS-UPDATED</b>		
<b>ITEM</b>	<b>TASK DESCRIPTION</b>	<b>BUDGET</b>
1	Construction Contract – Ferreira Construction (Includes \$75,000 for Field Orders and \$75,000 Contingency)	<b>\$1,571,228.00</b>
	Field Orders (\$75,000)	
	<ul style="list-style-type: none"> <li>• Temporary Fence Revision</li> <li>• Wet Well-2' Deeper</li> <li>• Surge Tank By-Pass POC</li> <li>• Credit for Wet Well Rehab</li> <li>• South Retaining Wall &amp; Irrigation Wiring Conflicts.</li> <li>• Temporary Odor Control</li> <li>• Sewer By-Pass Riser Conflicts</li> <li>• Extension of Subdrain Line for Walls</li> <li>• Credit for Paving</li> <li>• Demo of Exist Wet Well and Construct New Wet Well (Alt Bid Item)</li> <li>• Sump Termination Panel</li> </ul>	<ul style="list-style-type: none"> <li>\$12,468.00</li> <li>\$10,852.93</li> <li>\$5,369.67</li> <li>(\$29,500.00)</li> <li>\$6,599.53</li> <li>\$11,341.97</li> <li>\$5,911.62</li> <li>\$2,066.14</li> <li>(\$28,340.00)</li> <li>\$71,600.00</li> <li>\$3,489.83</li> </ul>
	<i>Total:</i>	<i>\$71,859.83</i>
2	Geotechnical Site Investigation, Vibration Monitoring, Video Survey, Additional Boring - GMU Geotechnical	<b>*\$17,300.00</b>
3	Engineering Design/Services During Construction – JIG Consultants	<b>\$129,625.00</b>
4	Construction Management/Inspection-Butier	<b>\$180,830.00</b>
5	Design Site Survey/Construction Monitoring – DMc Engineering	<b>*\$8,280.00</b>
6	Easement Procurement - DMc Engineering/CPSI Right-of-Way Services	<b>*\$4,000.00</b>
7	Service/Meter Plan/Arc Flash Study - SCE	<b>*\$3,000.00</b>
	<b>Total:</b>	<b>\$1,914,263.00</b>

**TRABUCO CANYON WATER DISTRICT  
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**FUNDING SOURCE:**

Emergency Reserves

**FISCAL IMPACT:**

*\$1,915,000.00 (FY19-20 & FY20-21)*

**ENVIRONMENTAL COMPLIANCE:**

Notice of Exemption was filed with the County of Orange on June 16, 2020

**RECOMMENDED ACTION:**

*Committee to receive information at the time of the Committee Meeting.*

**EXHIBIT(S):**

1. Construction Report- May 2021

**CONTACTS (staff responsible): PALUDI/LAUSTEN**

# Bell Canyon Lift Station Rehabilitation Project TCWD Project No. 1920-022

Construction Report  
May 2021



**I. GENERAL PROJECT INFORMATION**

<b><i>Contract</i></b>	Bell Canyon Lift Station Rehabilitation Project
<b><i>Contractor</i></b>	FERREIRA Construction
<b><i>Contract Time</i></b>	
Original Calendar Days:	180 Calendar Days from Notice to Proceed
Notice of Award:	June 15, 2019
Notice to Proceed:	June 29, 2020
Original Contract Completion Date:	December 26, 2020
Allowed Calendar Days via Change Orders:	<i>187 Days (Pending)</i>
Revised Completion Date via Change Orders:	<i>July 9, 2021 (Pending)</i>
Weather-Related Delay Days:	5 Days
<b><i>Contract Price</i></b>	
Original Contract Amount:	\$1,496,228.00
Approved Change Order Amount:	\$0.00
Revised Contract Amount:	\$1,496,228.00

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## II. CONSTRUCTION MANAGER SUMMARY

This report provides a summary of activities for the month of May 2021 for the Bell Canyon Lift Station Project.

Within May 2021, FERREIRA Construction (FERREIRA) continued and completed efforts to install the mechanical piping. Most of the mechanical piping was installed within the new Dry Well Vault. Pressure testing was performed and monitored by BUTIER Field Engineer, and upon acceptance, FERREIRA wrapped any piping to be direct buried, and continued to backfill the site, i.e. Wet Well and Dry Well Vault.

FERREIRA and their electrical subcontractor, Halcyon Electrical (Halcyon), started delivery and installation of electrical conduits. A separate Southern California Edison (SCE) conduit was installed by Halcyon and inspected by an SCE Inspector. This inspection was required in preparation for the wiring to energize the Lift Station at a later date. Coring for the electrical penetrations into the Wet Well and Dry Well Vault were performed. Halcyon continued placement of the electrical conduits and terminated the ends at future Control Panels and fixtures, upon completion, concrete encasement was formed and poured. FERREIRA backfilled the electrical concrete encasement. GMU inspected delivered concrete materials, and inspected and accepted bottoms of excavations and backfilled materials.

FERREIRA and their concrete subcontractor, CMC, and masonry wall subcontractor, Granstrom, continued with site improvements, such as form and pour of concrete Equipment Pads, and stucco wall finishes. The Generator Pad, Motor Control Center (MCC) Pad, and Sump Termination Panel Pad, were poured. The new and existing walls were finished with stucco, and colored to match pre-existing conditions. A Rolled (or Mountable) Curb was formed and poured along the opening of the Lift Station. Also, a backflow preventer and protective cage was installed to replace the former backflow preventer, and an extension of a water service for a future Eye Wash Station.

The new Generator was eventually delivered to the Lift Station, and was installed the new, concrete Generator Pad. AT&T personnel was requested to be on site to assist in extending the new phone line into the new, MCC Panels. The AT&T dedicated service line is the communication source between the Lift Station and TCWD's Communication hub.

Through the end of May, FERREIRA continues install new equipment, such as, Surge Tank, Chemical Feed Tank, and other components.

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**III. CONSTRUCTION ACTIVITIES FOR THIS REPORTING PERIOD**

The following work activities were performed during this reporting period:

- Completed and backfilled Mechanical Piping
- Electrical conduit installation
- SCE Inspection of extended conduit from Transformer to MCC Panel
- AT&T wire installation and extension from existing Pull Box to new MCC Panel
- Complete installation and pour of Equipment Pads, Rolled Curb, and Stucco Walls
- Continued with Site Improvements, i.e. Equipment Pads, Domestic Water service
- Delivery and set new Generator

**IV. ANTICIPATED CONSTRUCTION ACTIVITIES – NEXT REPORTING PERIOD**

The following work activities are anticipated to occur during the next reporting period:

- Connect and complete and electrical wiring for all Equipment
- Delivery and install Surge Tank, Chemical Feed Tank, and Sump Termination Panel
- Delivery and install Submersible Pumps
- Delivery and install Wrought Iron Fencing and Gates
- SCE to deliver replacement Transformer, and energize the Lift Station
- Prepare for Start-Up and Commissioning of Lift Station

**V. CONTRACTOR SUBMITTALS**

Through the end of the reporting period, the following submittals have been received:

	Lift Station
Prior Submittals	59
Submittals Received This Period	4
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TOTAL SUBMITTALS	63

**VI. CONTRACTOR REQUEST FOR INFORMATION (RFIs)**

Through the end of the reporting period, the following RFIs have been received:

	Lift Station
Prior RFIs	25
RFIs Received This Period	10
<b>TOTAL RFIs</b>	<b>35</b>

**VII. CHANGE ORDERS**

No approved change orders were issued to FERREIRA during this reporting period. However, it is anticipated that a separate Change Order Request for the extension of the Contract Completion Date will be issued. This is due to the procurement and fabrication delays of materials, and the scheduled time for power Switch Over controlled by SCE. The new Contract Completion Date of July 9, 2021.

**VIII. SCHEDULE**

As currently scheduled the Completion Date for the Lift Station is July 9, 2021. See Appendix A.

**IX. PHOTOS**

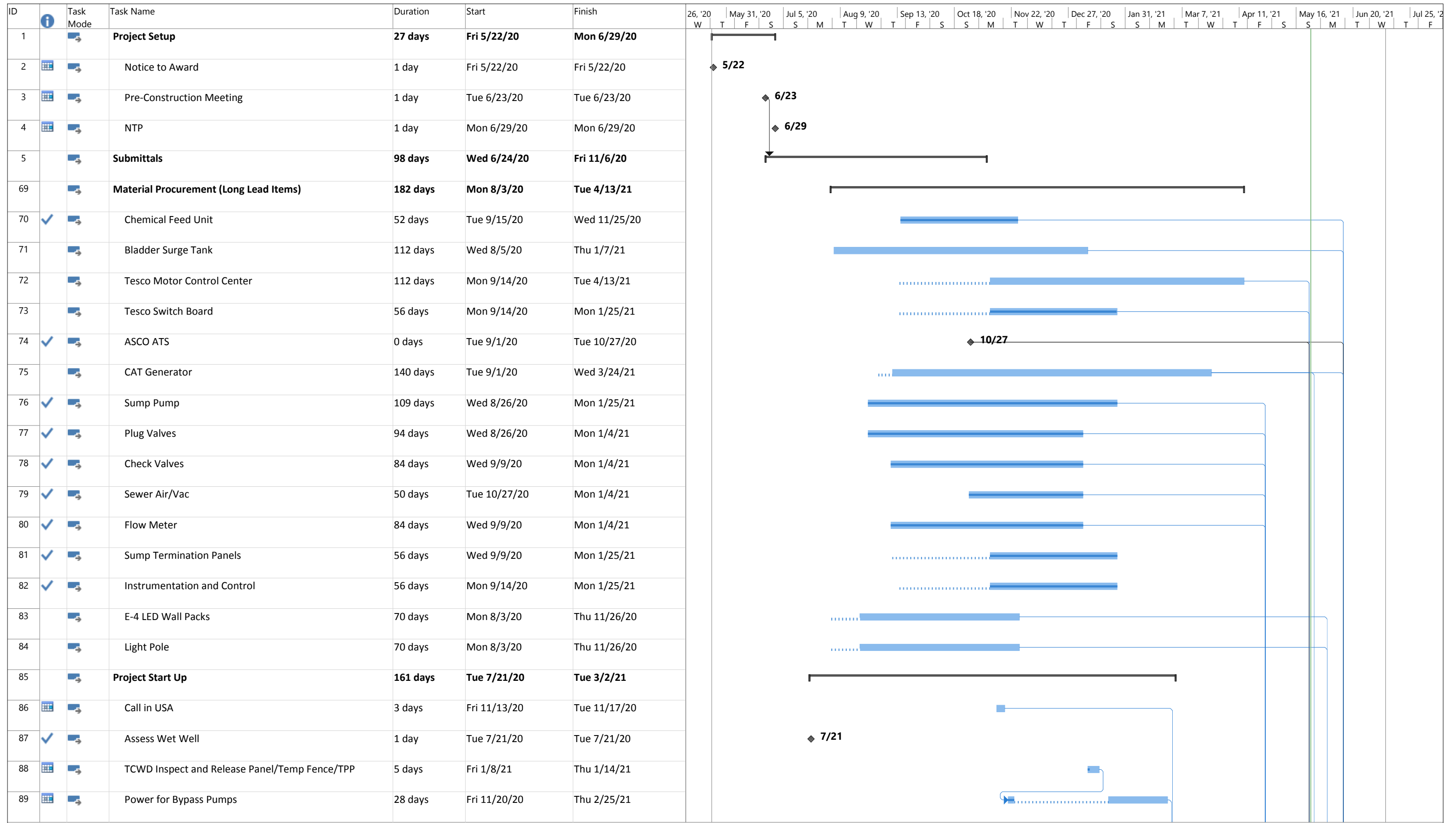
Construction photos documenting the FERREIRA’s activities and progress during this reporting period are provided in Appendix B.

**X. BELL CANYON MONITORING**

Monitoring field surveys are being performed by DMC Engineering on a periodic basis through the duration of the Project. Monitoring surveys were performed on February 26<sup>th</sup>-, March 10<sup>th</sup>-, March 17<sup>th</sup>-, April 14<sup>th</sup>-, and April 23<sup>rd</sup>-2021. The results between these dated Surveys reflected between +0.03-foot and -0.02-foot on established points, and a Monitoring Survey Exhibit is provided in Appendix C.

## APPENDIX A

### Schedule



Project: FCC5342 - TCWD Bell C  
Date: Tue 5/25/21

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

ID	Task Mode	Task Name	Duration	Start	Finish	26, '20	May 31, '20	Jul 5, '20	Aug 9, '20	Sep 13, '20	Oct 18, '20	Nov 22, '20	Dec 27, '20	Jan 31, '21	Mar 7, '21	Apr 11, '21	May 16, '21	Jun 20, '21	Jul 25, '21
90		Setup Bypass	3 days	Fri 2/26/21	Tue 3/2/21														
91		<b>Project Demo and Installation</b>	<b>95 days</b>	<b>Mon 3/1/21</b>	<b>Fri 7/9/21</b>														
92		Surveying	3 days	Wed 3/3/21	Fri 3/5/21														
93		Demo of Above Ground Structures, Gates, Wall	6 days	Mon 3/1/21	Mon 3/8/21														
94		Shoring, Footings and Wall	12 days	Tue 3/9/21	Wed 3/24/21														
95		Wall Cure/Waterproofing	7 days	Thu 3/25/21	Fri 4/2/21														
96		Pull Shoring, Backfill Wall, Demo and Install Wet Well	10 days	Mon 4/5/21	Fri 4/16/21														
97		Demo and Install Dry Well with CIP Slab	7 days	Mon 4/19/21	Tue 4/27/21														
98		Install Piping	3 days	Tue 4/27/21	Fri 4/30/21														
99		Trench for Electrical Conduits	1 day	Mon 5/3/21	Mon 5/3/21														
100		Site Underground Conduit System	7 days	Thu 5/6/21	Fri 5/14/21														
101		Level Transducer/Floats at Well, Cond. Inst at Vault	5 days	Mon 6/28/21	Fri 7/2/21														
102		Form & Pour Concrete Slabs	3 days	Wed 5/19/21	Fri 5/21/21														
103		Install MCC & Generator	3 days	Mon 5/24/21	Wed 5/26/21														
104		Wet Well (Elect. Prep/Epoxy/Pipe & Pumps)	3 days	Wed 6/2/21	Fri 6/4/21														
105		Concrete Sub	1 day	Fri 6/4/21	Fri 6/4/21														
106		Electrical (Wet Well/Sub Panel/Light Pole) & Paint Pipe and Wall	6 days	Fri 6/4/21	Fri 6/11/21														
107		Chemical Feed & Surge Tank	5 days	Mon 6/14/21	Fri 6/18/21														
108		Conduit Connection at Generator & Dry Well)	2 days	Thu 5/27/21	Fri 5/28/21														
109		Ornamental Fence	4 days	Tue 7/6/21	Fri 7/9/21														
110		SCE Metering/Cable Install for Power to Switchboard	22 days	Thu 5/27/21	Fri 6/25/21														
111		Testing & Remove Bypass	5 days	Mon 6/28/21	Fri 7/2/21														
112		Substantial Completion	1 day	Fri 7/9/21	Fri 7/9/21														
113		Punch List	4 days	Tue 7/6/21	Fri 7/9/21														
114		Project Complete	1 day	Fri 7/9/21	Fri 7/9/21														

Project: FCC5342 - TCWD Bell C  
Date: Tue 5/25/21

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

## **APPENDIX B**

### **Construction Photos**



**Mechanical Piping in Dry Well Vault**



**Wrapping Mechanical Piping for direct burial during backfill**



**Submersible Pump joints at bottom of Wet Well**



**Backfill of Mechanical Piping**



**GMU inspecting backfill placement**



**Placement and extension of new, 3-inch SCE Conduit**



**SCE Inspection of new and extended SCE conduit**



**Upon completion of SCE Inspection, SCE conduit backfilled**



Placement of electrical conduits



Placement of electrical conduits



**Coring into Wet Well for electrical penetrations**



**Setting Wet Well**



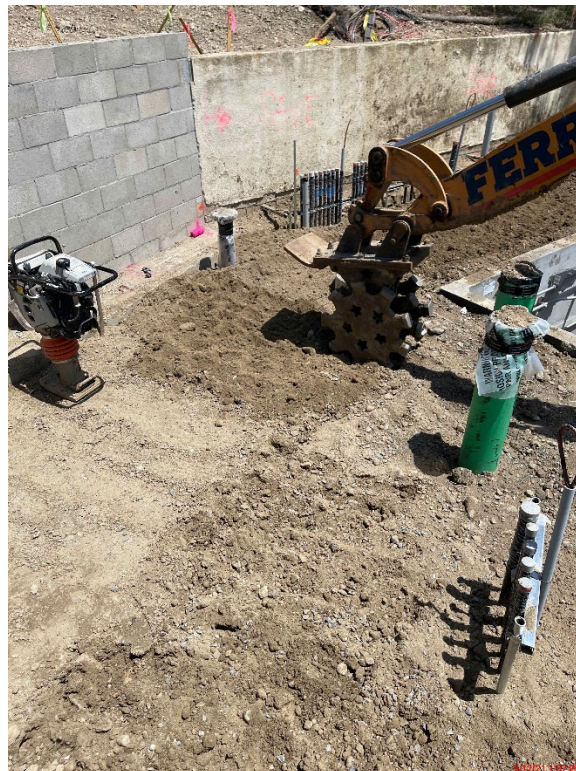
Forms for electrical duct bank



Pour concrete for electrical duct bank



**Pour concrete for electrical duct bank**



**Backfill electrical duct bank**



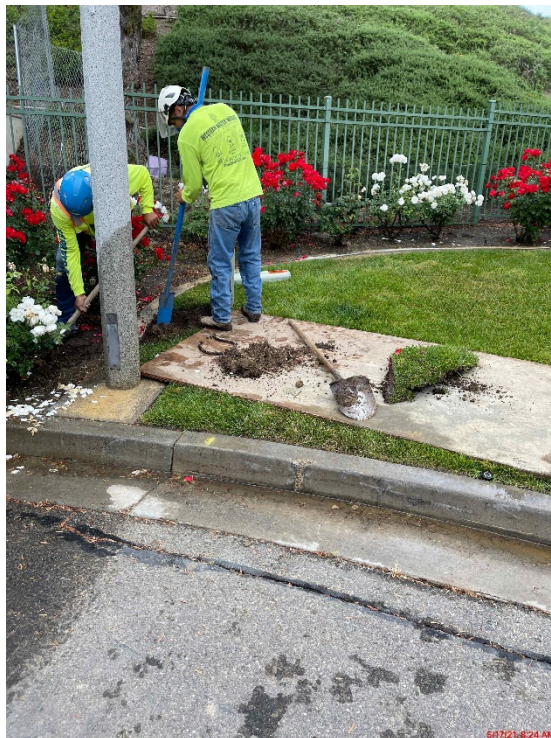
**Backfill electrical duct bank**



**Removal driveway for new Rolled (or Mountable) Curb**



**Generator arrival**



**AT&T conduit extension from existing Pull Box**



AT&T representative extending wire and restoring service to new MCC Panel



Installed new backflow device and cage



**Form MCC Panel Pad**



**Form Generator Pad**



**Pour MCC Panel Pad**



**GMU obtaining concrete samples**



**Form Sump Termination Pad**



**Poured Sump Termination Pad**



**Form and pour Rolled (or Mountable) Curb**



**Poured Rolled (or Mountable) Curb**



**Stucco preparation of new and existing Walls**



**Stucco color and finish of new and existing Walls; and Wrought Iron fence post installation**



Generator placement



Generator placement

## **APPENDIX C**

### **Monitoring Survey Exhibit**

# EXHIBIT "A"

## BELL CANYON MONITORING POINTS

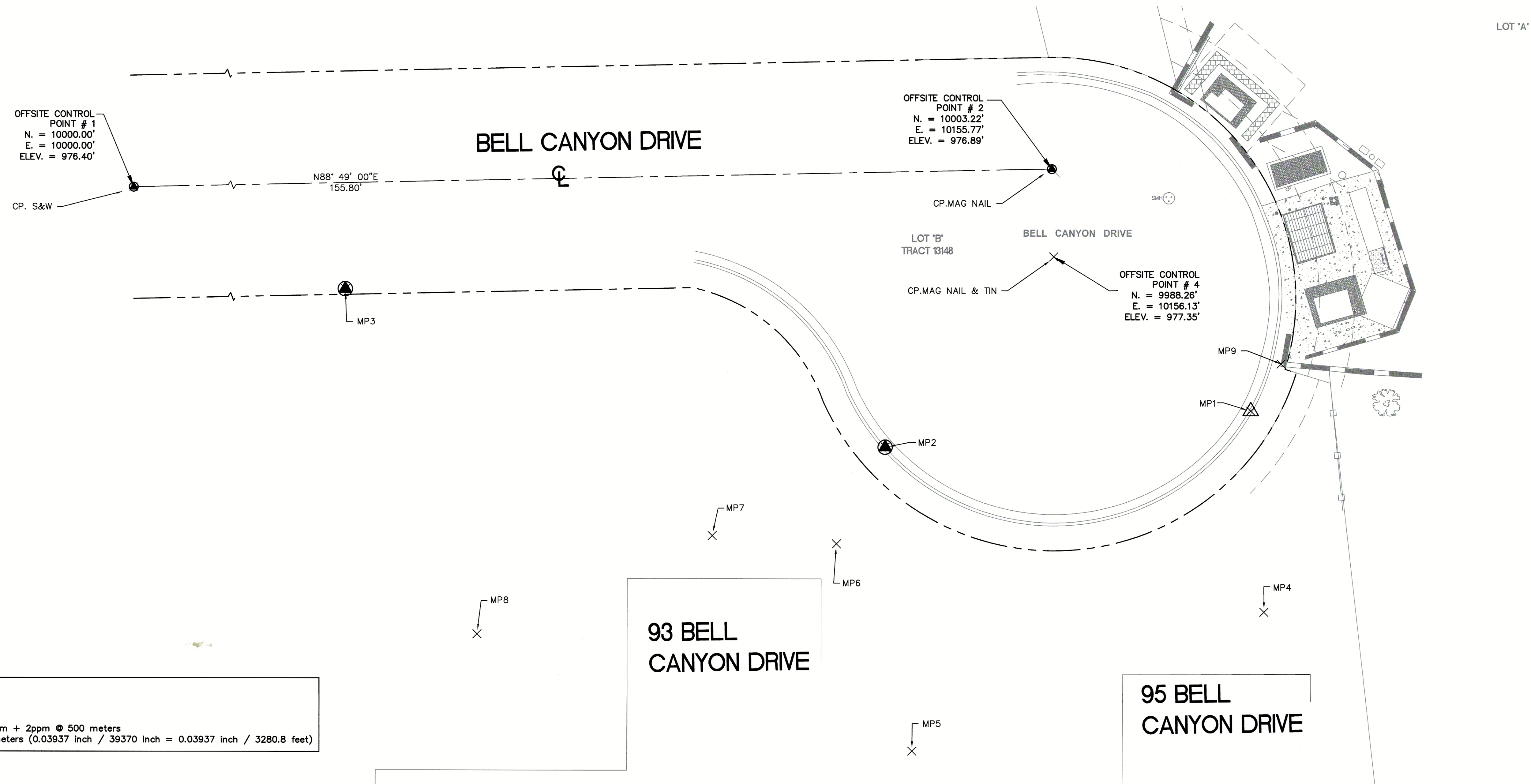
PREPARED FOR:

## TRABUCO CANYON WATER DISTRICT

32003 DOVE CANYON DRIVE  
TRABUCO CANYON, CA 92679

PHONE: (949) 858-0277

FAX: (949) 858-3025



**SURVEY INSTRUMENT USED:**  
LEICA TCIP 1203T R400  
SERIAL NO. 269046  
ACCURACY - std. dev. ISO 17123-4:2mm + 2ppm @ 500 meters  
ppm = parts per million = mm/1000 meters (0.03937 inch / 39370 inch = 0.03937 inch / 3280.8 feet)

MONITORING POINTS SUMMARY										
POINT #	DESCRIPTION	INITIAL SURVEY DATE: 02.26.2021	SECOND SURVEY DATE: 03.10.2021	DIFF. +/-	THIRD SURVEY DATE: 03.17.2021	DIFF. +/-	FORTH SURVEY DATE: 04.14.2021	DIFF. +/-	FIFTH SURVEY DATE: 04.23.2021	DIFF. +/-
MP1	SCRIBED "X" IN TC	N. = 9962.05' E. = 10189.60' ELEV. = 977.27'	N. = 9962.05' E. = 10189.60' ELEV. = 977.28'	0.00 0.00 +0.01	N. = 9962.05' E. = 10189.59' ELEV. = 977.28'	0.00 -0.01 +0.01	N. = 9962.05' E. = 10189.59' ELEV. = 977.28'	0.00 -0.01 +0.01	N. = 9962.05' E. = 10189.60' ELEV. = 977.27'	0.00 0.00 0.00
MP2	FD "X" IN TC	N. = 9955.84' E. = 10127.56' ELEV. = 976.82'	N. = 9955.84' E. = 10127.57' ELEV. = 976.82'	0.00 +0.01 0.00	N. = 9955.84' E. = 10127.57' ELEV. = 976.81'	0.00 +0.01 -0.01	N. = 9955.84' E. = 10127.56' ELEV. = 976.82'	0.00 0.00 0.00	N. = 9955.84' E. = 10127.57' ELEV. = 976.81'	0.00 +0.01 -0.01
MP3	FD "X" IN TC	N. = 9982.69' E. = 10035.89' ELEV. = 975.74'	N. = 9982.70' E. = 10035.89' ELEV. = 975.74'	+0.01 0.00 0.00	N. = 9982.69' E. = 10035.89' ELEV. = 975.74'	0.00 0.00 0.00	N. = 9982.72' E. = 10035.89' ELEV. = 975.74'	+0.03 0.00 0.00	N. = 9982.69' E. = 10035.89' ELEV. = 975.73'	0.00 0.00 -0.01
MP4	CORNER OF PILASTER AT NE CORNER OF THE RESIDENCE OF 95 BELL CANYON DR.	N. = 9927.81' E. = 10191.89' ELEV. = 985.19'	N. = 9927.81' E. = 10191.88' ELEV. = 985.19'	0.00 -0.01 0.00	N. = 9927.81' E. = 10191.89' ELEV. = 985.19'	0.00 0.00 0.00	N. = 9927.80' E. = 10191.87' ELEV. = 985.18'	-0.01 -0.02 -0.01	N. = 9927.81' E. = 10191.89' ELEV. = 985.18'	0.00 0.00 -0.01
MP5	CORNER OF PILASTER AT NW CORNER OF THE RESIDENCE OF 95 BELL CANYON DR.	N. = 9904.09' E. = 10132.17' ELEV. = 985.92'	N. = 9904.09' E. = 10132.18' ELEV. = 985.92'	0.00 +0.01 0.00	N. = 9904.09' E. = 10132.17' ELEV. = 985.92'	0.00 0.00 0.00	N. = 9904.10' E. = 10132.15' ELEV. = 985.92'	+0.01 -0.02 0.00	N. = 9904.09' E. = 10132.17' ELEV. = 985.92'	0.00 0.00 0.00
MP6	STICK ON SURVEY TARGET (BY OTHERS) ON NLY BRICK WORK 93 BELL CANYON DR.	N. = 9939.36' E. = 10119.31' ELEV. = 985.08'	N. = 9939.35' E. = 10119.31' ELEV. = 985.08'	-0.01 0.00 0.00	N. = 9939.35' E. = 10119.31' ELEV. = 985.07'	-0.01 0.00 -0.01	N. = 9939.37' E. = 10119.30' ELEV. = 985.08'	+0.01 -0.01 0.00	N. = 9939.35' E. = 10119.31' ELEV. = 985.07'	-0.01 0.00 -0.01
MP7	TOP RIGHT CORNER OF EXTERIOR DOOR FRAME 1 IN SIDE OF RESIDENCE	N. = 9940.75' E. = 10098.25' ELEV. = 985.06'	N. = 9940.74' E. = 10098.25' ELEV. = 985.06'	-0.01 0.00 0.00	N. = 9940.74' E. = 10098.25' ELEV. = 985.06'	-0.01 0.00 0.00	N. = 9940.76' E. = 10098.24' ELEV. = 985.06'	+0.01 -0.01 0.00	N. = 9940.74' E. = 10098.25' ELEV. = 985.06'	-0.01 0.00 0.00
MP8	TOP RIGHT CORNER OF EXTERIOR WINDOW FRAME 1 IN SIDE OF RESIDENCE	N. = 9923.98' E. = 10058.30' ELEV. = 983.31'	N. = XXXX' E. = XXXX' ELEV. = XXXX'	XXX XXX XXX	N. = 9923.96' E. = 10058.31' ELEV. = 983.31'	-0.02 +0.01 0.00	N. = 9923.99' E. = 10058.31' ELEV. = 983.31'	+0.01 +0.01 0.00	N. = 9923.96' E. = 10058.31' ELEV. = 983.30'	-0.02 +0.01 -0.01
MP9	SET MAG NAIL AT TOP WLY FACE OF PILASTER	N. = 9970.10' E. = 10194.72' ELEV. = 983.83'	INITIAL SURVEY N. = XXXX' E. = XXXX' ELEV. = XXXX'	XXX XXX XXX	N. = 9970.10' E. = 10194.72' ELEV. = 983.83'	0.00 0.00 0.00	SURVEY MONITORING POINT WAS COMPROMISED BY SITE CONSTRUCTION			

**LEGEND**

**SYMBOLS**  
 SCRIBED "X" IN TC  
 FD "X" IN TC

**LINE TYPES**  
 PROPERTY LINE  
 CENTERLINE

**ABBREVIATIONS**  
 N. NORTHING  
 E. EASTING  
 ELEV. ELEVATION  
 DIFF. DIFFERENCE  
 CN. CONCRETE NAIL



PREPARED BY:

**DMC ENGINEERING**  
 CIVIL • SURVEYING • PLANNING • CONSTRUCTION  
 18 Technology Drive, Suite 100, Irvine, CA 92618  
 E-Mail: dmc@dmcceng.com (949) 753-9393

05.25.21  
04.27.21  
04.16.21  
03.15.21  
03.01.21

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING HERITAGE SEWER LIFT STATION IMPROVEMENTS**

Trabuco Canyon Water District (District) owns and operates the Heritage Sewer Lift Station (Heritage SLS) is located on Heritage Drive between Robinson Ranch Road and Silvertree Lane in the Trabuco Highlands Community (Exhibit 1). The Heritage SLS is a critical pump station that conveys pumped wastewater flows from a portion of the lower Dove Canyon community, Rancho Cielo community (from Via Allegre SLS), Walden Homes, Trabuco Marketplace, Dahlia Court community, and lower Robinson Ranch (from Plano Trabuco SLS) via a sewer force main. The facility also receives gravity sewer flows from the upper Robinson Ranch community and Trabuco Highlands community, and serves as the final pump station of the sanitary sewer system before the Robinson Ranch Wastewater Treatment Plant (WWTP).

For Fiscal Year 2020-2021, Heritage SLS is budgeted for a site and security upgrade project which includes a block wall, drainage repairs, paving and a new gate; however, during the design, staff re-evaluated the station due to ground subsidence around an existing manhole/sewer pipeline and operations request of the installation of a sewer by-pass valve assembly for emergency and maintenance work. Working with DMc Engineering, the District has completed the site and security design. Staff proposes contracting with JIG Consultants for the remaining work due to immediate need to make these repairs and the responsiveness of the Consultant on other projects (Exhibit 2).

**FUNDING SOURCE:**

General Fund.

**FISCAL IMPACT:**

*\$420,000 (FY20-21 & FY21-22).*

**ENVIRONMENTAL COMPLIANCE:**

Notice of Exemption.

**RECOMMENDED ACTION:**

*Recommend that the Board of Directors authorize the General Manager to ratify a Contract with JIG Consultants for Engineering Services for Heritage Lift Station Bypass and Piping Improvements in the amount of \$43,440.*

**EXHIBIT(S):**

1. Project Site Map and Site Photos
2. JIG Proposal - Engineering Design Services for Heritage Lift Station Improvements

**CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN**

# HERITAGE SEWER LIFT STATION REPAIRS & IMPROVEMENTS

Trabuco Canyon Water District  
June 2, 2021 E&O Committee





**Project Location**



**Location Map**

 Area of Work

**Heritage Sewer Lift Station**

Address: 21494 Plano Trabuco Road  
Trabuco Canyon CA 92679

**Existing Site**



**Sewer Pipeline Sag**

# Manhole and Valves Undermined





May 17, 2021

**Lorrie Lausten**  
**Trabuco Canyon Water District**  
32003 Dove Canyon Drive  
Trabuco Canyon, CA 92679

**Subject: Proposal for Engineering Design Services**  
**Heritage Lift Station Bypass Structure Improvements**

Dear Lorrie:

As a follow up to our meeting with DMc Engineering on April 16, 2021 regarding the proposed improvements at the Heritage Lift Station, JIG Consultants (JIG) prepared this proposal for improvements related to the lift station's bypass structure. As discussed, the design and construction plans resulting from this assignment will be coordinated with and incorporated into DMc Engineering's construction plan set for Miscellaneous Improvements at the Heritage Lift Station.

The following is our understanding of the required improvements at the lift station to bypass the existing wet well.

1. Evident from available CCTV information, the existing 8-inch influent sewer pipe has settled at multiple locations with excessive sags. The District intends to replace this sewer reach in its entirety, from the existing manhole on Heritage Avenue to the existing wet well. The approximate length of the subject sewer reach is 120 lineal feet.

In order to construct the proposed 8-inch influent sewer, a temporary bypass will be constructed from the subject manhole to the existing wet well. The bypass will include an outlet pipe plug and a temporary underground gravity pipe from the manhole to the lift station.

2. The existing circular wet well adjacent to the lift station has settled and is out of plumb. Further, the circular wet well is unlined with no protection for hydrogen sulfide that would develop from sewage gas. The inlet and outlet sewers to the circular wet well are not in their ideal configuration with gate valves for inlet and outlet sewage control. The District intends to upgrade the circular wet well to allow a trailer mounted bypass pump to take suction from the structure. Alternatives for consideration are as follows:

- A. Construct a new manhole on the proposed 8-inch influent sewer with dual outlet pipes. The first outlet pipe will discharge to the existing lift station wet well. The second outlet pipe will be set at a higher invert elevation and will discharge to a bypass structure. A normally closed sluice gate will be installed inside the bypass structure to control the flow of sewage. The depth of the bypass structure will be based on the lift station capacity and operating conditions.

In order to bypass the lift station wet well, the District will open the sluice gate and install a temporary plug on the proposed manhole's first outlet pipe.

With this alternative, the existing circular wet well may be salvaged and reused, provided it is stable and is lined with Raven 405 (polyurethane lining). If the existing circular wet well is compromised, a new bypass structure will be constructed.

- B. Demolish the existing circular wet well. Construct a new bypass structure on the proposed 8-inch influent sewer. The depth of the bypass structure will be based on the lift station capacity and operating conditions. The bypass structure will have an outlet pipe set at its invert which will discharge to the lift station wet

318 W. Katella Avenue, Suite A  
Orange, CA 92867

Office (714) 978.4407  
Fax (714) 908.4654  
[www.jigconsultants.com](http://www.jigconsultants.com)

well. A normally open sluice gate will be installed on the outlet pipe inside the bypass structure.

In order to bypass the lift station wet well, the District will only need to close the sluice gate.

3. The Heritage Lift Station’s Pump #3 was retrofitted by District staff to accept sewage from the existing circular wet well. Unfortunately, the resulting pipe and pump configuration introduces air into the pump volute which will ultimately result in its cavitation.

With the improvements previously described, the piping inside the dry well will be removed and the existing Pump #3 will be salvaged.

It is our understanding that all other improvements at the Heritage Lift Station will be designed by DMC Engineering. This includes paving, grading, perimeter and retaining walls, and miscellaneous site improvements. This also includes modifications to the existing force main for the temporary bypass piping assembly.

## SCOPE OF WORK

### 1. Project Management, Administration and Meeting

Perform project administration and management throughout the project duration. Attend one project meeting to discuss project status and collect District comments.

### 2. Site Visit and Collect Information

Attend one site visit to collect information and validate the recommended bypass improvements. Take measurements and photos inside the dry well and the circular wet well. Confirm the amount of sewage discharging to the Heritage Lift Station from the manhole at Heritage Avenue.

### 3. Flow Monitoring for Existing Manhole

Subcontract with Utility Systems (US<sup>3</sup>) to perform 7 day sewer flow monitoring of the existing manhole on Heritage Drive. See attached proposal from US<sup>3</sup>. Summarize results of the flow monitoring and submit to the District.

### 4. Review Design of Bypass Piping Assembly

Coordinate with DMC Engineering for design of the Bypass Piping Assembly. Provide comments and recommend modifications to its construction plans.

### 5. Preparation of Bid Documents

Complete engineering design of the proposed improvements as previously described. Submit full sized pdf digital copies of the 75% milestone submittal including construction plans, technical specifications, and cost estimate.

The construction plan set will include the following sheets:

<u>Sheet No.</u>	<u>Description</u>
C-1	Site Demolition Plan and Temporary Bypass Plan
C-2	Plan and Profile of 8-inch Influent Sewer
C-3	Mechanical Improvements at Dry Pit
C-4	Bypass Structure Plan and Sections
C-5	Miscellaneous Civil and Mechanical Details
C-6	Miscellaneous Civil and Mechanical Details

Construction plans will be prepared using the latest version of AutoCAD. DMC Engineering will provide AutoCAD drawings of the topographic survey and title block.

Submit full sized pdf copies of the 100% milestone submittal. The 100% milestone plans will incorporate District comments received from the 75% milestone submittal. The 100% milestone submittal will include the technical specifications and an engineer's estimate of probable construction costs.

Submit stamped and signed bond set of plans and technical specifications for District signatures. The final AutoCAD electronic files and full-sized PDF files shall be submitted to District on USB drive.

### **ASSUMPTIONS AND EXCLUSIONS**

The following are assumptions and exclusions to this proposal.

- A. The District will provide sewer flow information from the subject manhole at Heritage Avenue.
- B. The District will provide as-builts of the lift station including pump operating conditions.
- C. DMc Engineering will provide topographic base map of the project site including record drawings for existing utilities.
- D. The bypass structure will be a precast concrete structure and will not require structural design.
- E. The bypass structure will not have level or flow instruments. Electrical and instrumentation design is not included.
- F. This proposal is limited to civil and mechanical engineering design of the work described.
- G. Potholing of existing utilities is not included.
- H. Geotechnical investigations of subsurface conditions are not included.
- I. Bid phase services are not included.
- J. Construction administration services are not included.


### **FEE SUMMARY**

JIG will complete the above Scope of Work for a total consultant fee of **\$43,440**. A breakdown of the fee is presented in the attached Fee Proposal.

We appreciate this opportunity to continue our excellent relationship with the District. If you have questions regarding this proposal, please do not hesitate to contact our office.

Sincerely,

**JIG** CONSULTANTS



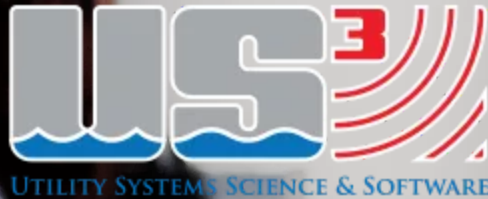
Joseph Gutierrez, PE, PMP  
President / Senior Project Manager

Enc.

**TRABUCO CANYON WATER DISTRICT**  
 Engineering Design Services - Heritage Lift Station Bypass Structure Improvements

**Fee Proposal**

Task	Description	Project Mgr.		Project Engineer		CAD Designer		Admin		Subtotal	Direct Costs	Sub.	Total Fee
		Hrly Rate	\$160	Hrly Rate	\$140	Hrly Rate	\$105	Hrly Rate	\$50				
		Hours	Fee	Hours	Fee	Hours	Fee	Hours	Fee			US3	
1	Project Management, Administration and Meeting	16	\$2,560	0	\$0	0	\$0	0	\$0	\$2,560	\$0	\$0	\$2,560
2	Site Visit and Collect Information	8	\$1,280	8	\$1,120	0	\$0	0	\$0	\$2,400	\$70	\$0	\$2,470
3	Flow Monitoring of Existing Manhole	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	\$3,590	\$3,590
4	Review Design of Bypass Piping Assembly	8	\$1,280	0	\$0	0	\$0	0	\$0	\$1,280	\$0	\$0	\$1,280
5	Preparation of Bid Documents	22	\$3,520	104	\$14,560	142	\$14,910	8	\$400	\$33,390	\$150	\$0	\$33,540
<b>TOTAL</b>		<b>54</b>	<b>\$8,640</b>	<b>112</b>	<b>\$15,680</b>	<b>142</b>	<b>\$14,910</b>	<b>8</b>	<b>\$400</b>	<b>\$39,630</b>	<b>\$220</b>	<b>\$3,590</b>	<b>\$43,440</b>



# Temporary Sewer Flow Monitoring Proposal

For Jig Consultants  
JIG\_051321

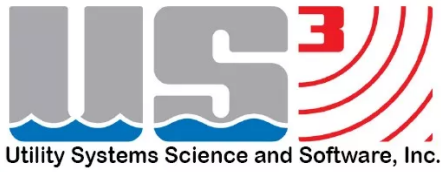
Utility Systems, Science & Software, Inc.  
601 Parkcenter Drive, Ste 209  
Santa Ana, CA 92705  
[www.uscubed.com](http://www.uscubed.com)  
Toll Free: 1-855-872-8233  
Office: 714-564-3494

**Created by:**

Sheila Trisnojoyo  
Utility Systems Science & Software, Inc.  
[sheila.trisnojoyo@uscubed.com](mailto:sheila.trisnojoyo@uscubed.com)

**Prepared for:**

Joseph Gutierrez  
Jig Consultants  
[JGutierrez@jigconsultants.com](mailto:JGutierrez@jigconsultants.com)



May 13, 2021

Jig Consultants  
318 West Katella Avenue Suite A  
Orange, California 92867

Attention: Joseph Gutierrez

Subject: Temporary Sewer Flow Monitoring

Hello Joseph,

Per our conversation and your email, attached you will find Utility Systems Science & Software (US3) response to your request. US3 is providing 1 sensor(s) for a period of 7 days.

This project will be monitored with the State of the Art Hach Flo-Dar Flow Meters.

- Review and provide input to the identified site,
- Validate site for suitability and traffic control,
- Calibrate and Install flow monitoring equipment,
- Validate preliminary data,
- Modify system to further support the monitoring requirements.
- Provide On-Site Training for Web-Based Viewing & Reporting of Sewer Monitoring Data.

Note: All data will be provided in a **Secure Web-Based Environment**.

Sincerely,

*Sheila Trisnojoyo*

Sheila Trisnojoyo  
Utility Systems Science & Software, Inc.

# Technical Approach

## Site Assessment

US3 will perform detailed site investigations/assessments of the potential monitoring site, assuring it is hydraulically suitable for accurate flow monitoring measurements. The site documentation shall include, at a minimum, a location map with address, digital photographs of the site, pipe size, channel condition, flow characteristics, site drawings, and pictures of surrounding area. The Site assessments will also identify traffic control and safety issues, and will be performed only by trained US3 staff.

## Equipment Installation, Site Maintenance, Equipment Removal

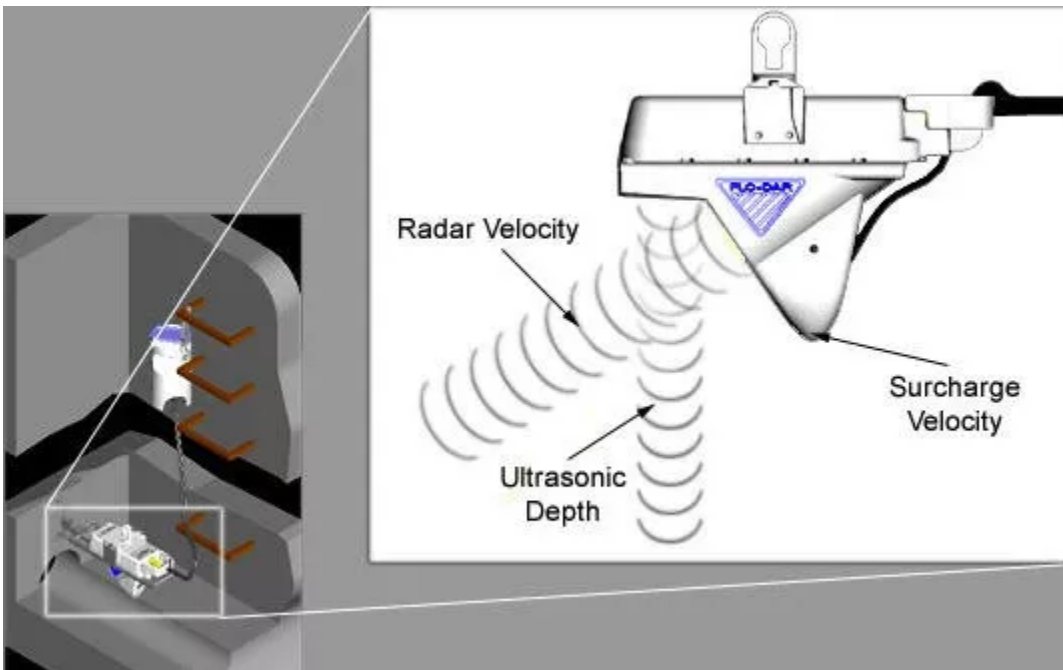
US3 staff will install all equipment in accordance manufacture recommendations and the associated Project Plan. Each sensor shall be calibrated by US3 before installation.

## Installation

In general, US3 will follow the Methods & Procedures (Attached) to install the Hach Sewer Flow Monitoring equipment. US3 will coordinate with the City prior to performing field work within the collection system, including confined space entry, traffic control as required.

## Site Maintenance

US3 staff will maintain all equipment, meeting reliability requirements. Where US3 guarantees 95% uptime or greater. General maintenance includes the recommended manufacturer maintenance procedures, field verifications, cleaning of sensors and diagnostics.



**Figure 1:** Flo-Dar - Flow Meter for Sewers & Open Channels

## Perfect solution for Difficult Flow Conditions:

- Flows with High Solids Content
- High Temperature Flows
- Caustic Flows
- Large Man-Made Channel
- High Velocities
- Shallow Flows

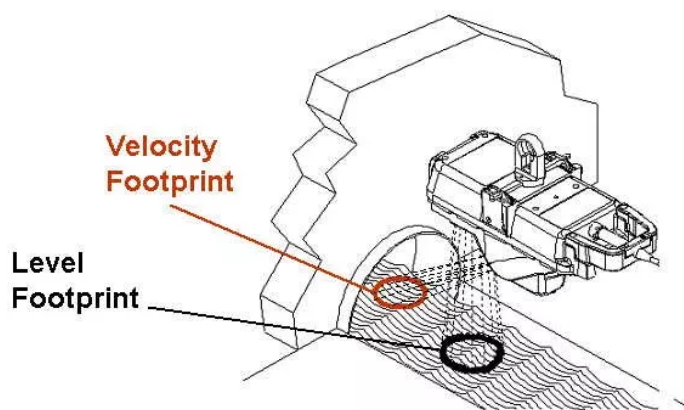


## Here's How It Works

Flo-Dar transmits a digital Doppler radar beam that interacts with the fluid and reflects back signals at a different frequency than that which was transmitted. These reflected signals are compared with the transmitted frequency. The resulting frequency shift provides an accurate measure of the velocity and the direction of the flow. Level is detected by ultrasonic pulse echo. Flow is then calculated based on the Continuity

Equation:

$Q = V \times A$ , Where  $Q = \text{Flow}$ ,  $V = \text{Average Velocity}$  and  $A = \text{Area}$ .



## Accurate Flow Measurements

Flo-Dar provides the user with highly accurate flow measurements under a wide range of flows and site conditions.

By measuring the velocity of the fluid from above, Flo-Dar eliminates accuracy problems inherent with submerged sensors including sensor disturbances, high solids content and distribution of reflectors.



# US3\_MH\_87942

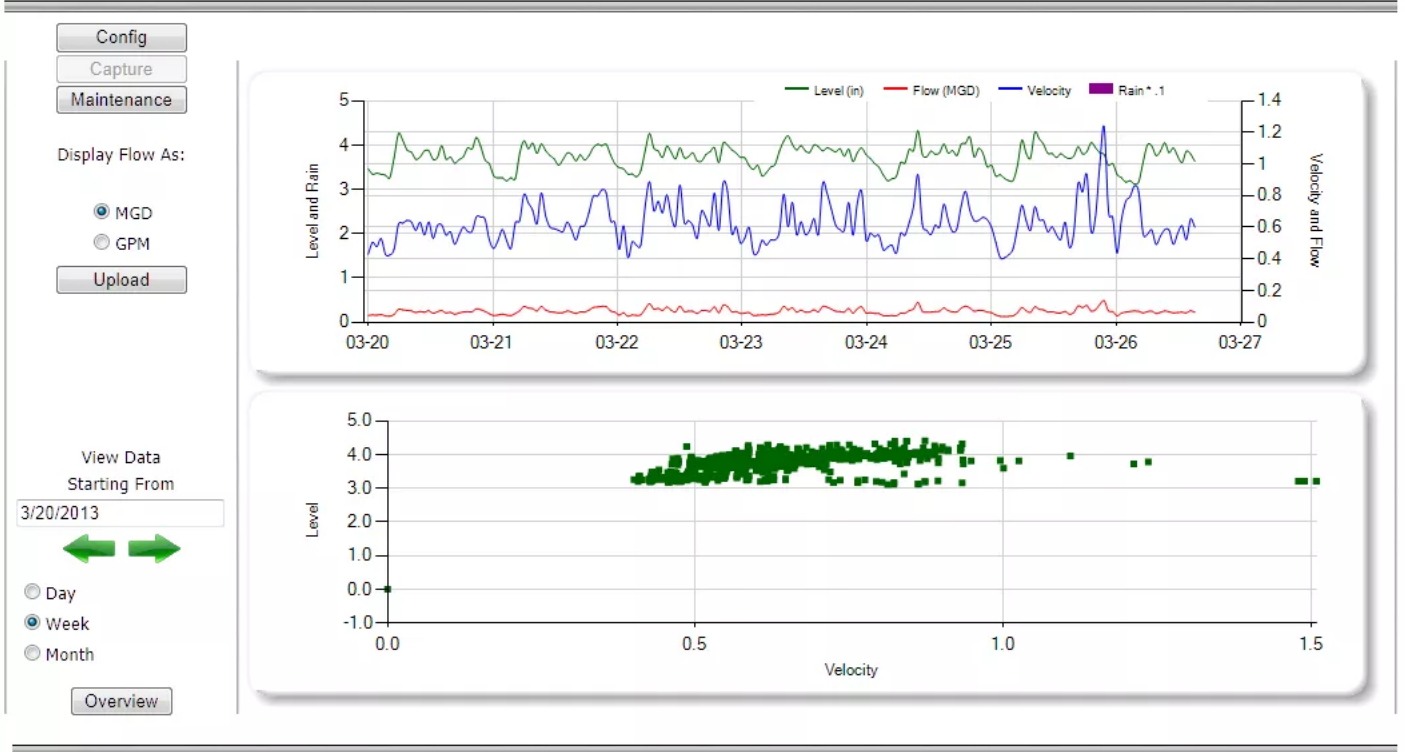


Figure 2: Standard Sewer Flow Monitoring Graph with the Scatter Plot.

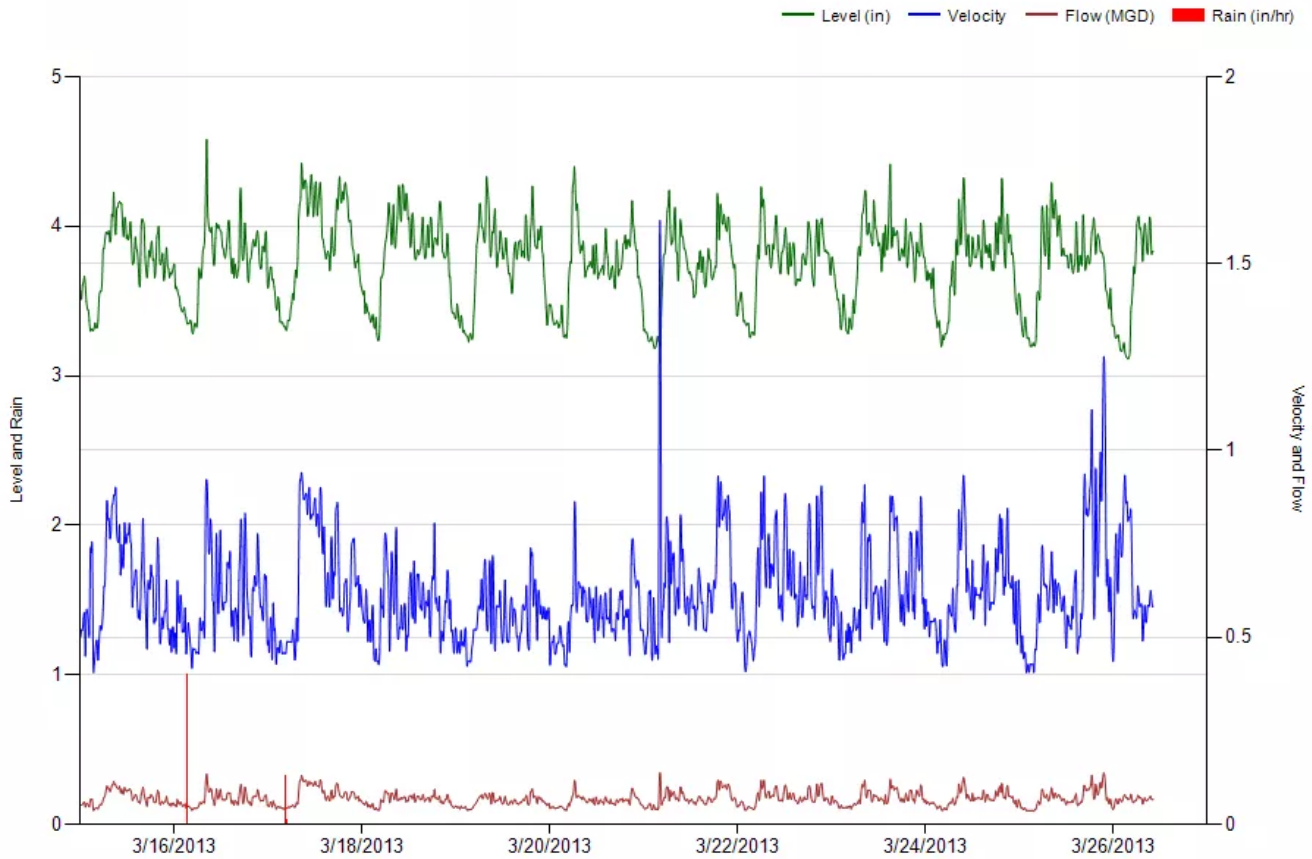


Figure 3: Expanded Graphs Report.

# Project Management & Staffing

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The fundamental objective is to provide city with the high quality services by utilizing advance-metering technologies factory certified from Hach Co. All services will be completed per an agreed schedule. The Installations, Calibrations, Maintenance Services will be performed by US3 and Utility Systems Science and Software personnel and is designed to provide United with complete coverage with hardware, software and engineering. Thus, the Implementation Plan includes:

- Verify equipment installation/operation.
- Gather information as a prelude to software/hardware maintenance.
- Examine system following with the designed format forms.
- Provide engineering/technical on-site support as needed to support the system.
- Provide with 24 hrs on-call response support.

## Key Personnel

US3 possess all material, office and technical resources required to successfully maintain the system and provide skilled enhancements for United. Primary in support of this effort will be the following personnel:

- **Mark Serres** Vice President-Operations
- **Tom Williams** Engineering & Installation Manager
- **Darlene Szczublewski, P.E.**: Senior Civil Engineer

## Key Personnel Assigned

US3 possess all material, office and technical resources required to successfully monitor the system and provide skilled enhancements for United. With over 90 engineers and technicians, US3 can easily provide the necessary resources to fully implement this project. Primary in support of this effort will be the following personnel:

**Mr. Mark Serres:** Mr. Serres is a degreed electrical engineer with over 25 years systems Fresh/Waste water systems, project management and systems Integration experience in relation to complex industrial systems, this includes experience in industrial automation and water/waste water industries. Mr. Serres will be the primary point of contact for all technical issues for City. Mr. Serres will also be responsible for assuring client satisfaction and will marshal the required resources to meet the project requirements.

**Mr. Thomas Williams:** Mr. Williams will be the City Project Manager with over 15 years of complex systems development for wastewater monitoring system experience. This experience includes hydraulic compatibility, instrumentation, communications and analysis.

**Darlene Szczublewski, P.E.:** Mrs. Szczublewski has over ten years of engineering experience in flow monitoring related projects. She assisted in the review of flow meter data and the completion of several SSES and Capacity Analysis projects to meet Consent Decrees. Mrs. Szczublewski has completed numerous I/I-related studies for other clients as well. Mrs. Szczublewski has developed numerous flow data analysis techniques to present a clear informative picture of flow responses to storm events. Her work also includes the development of training programs for clients describing I/I and capacity analysis methodologies.



The Flo-Dar Family of flowmeters provide a revolutionary approach to open channel and sewer flow monitoring. Flo-Dar combines digital doppler radar velocity sensing technology with ultrasonic pulse echo level sensing to remotely measure open channel flows. Flo-Dar's unique non-contact measuring technology means trouble-free sewer flow monitoring. It even won the Water Environment Federation's Innovative Technology Award!

Like all Marsh-McBirney products, Flo-Dar sets the standard for ease-of-use, accuracy, and reliability. Flo-Dar accuracy has been independently confirmed by Alden Labs as well as the satisfaction of thousands of Flo-Dar users.



**Proposal #:** JIG\_051321

**Date:** May 13, 2021

Prepared for	Created by
Joseph Gutierrez Jig Consultants 318 West Katella Avenue, Orange, CA 92867 JGutierrez@jigconsultants.com (949) 396-2430	Sheila Trisnojoyo Utility Systems Science & Software, Inc. 601 N. Parkcenter Drive, Ste 209 Santa Ana, CA 92705 sheila.trisnojoyo@uscubed.com (714) 564-3494

## Proposal Cost

Description	Price	QTY	Subtotal
<b>Temporary Sewer Flow Monitoring - Rancho Santa Margarita</b>			
Sewer Flow Meter	\$950.00	1	\$950.00
Permit (not included)	\$0.00	1	\$0.00
Installation Materials	\$85.00	1	\$85.00
Flow Meter Installation	\$1,540.00	1	\$1,540.00
Removal Meter	\$840.00	1	\$840.00
			<b>\$3,415.00</b>

Subtotal	<b>\$3,415.00</b>
15% Discount on Installation	<b>-\$154.00</b>
<b>Total</b>	<b>\$3,261.00</b>

**Deposit Required: \$1,141.35**

**Notes:**

- Payment terms net 30 days
- Certified Installation & Calibration
- 95% Data Uptime Guarantee
- Secure Server
- Pre-packaged data in XLS, PDF and MS Word
- Maintenance & Repair Included
- Should extensive additional traffic control be required, it will be quoted separately.
- Permit may or may not be required. Should permit be required, it will be quoted separately.

# Sign here to approve

I hereby acknowledge I am authorized to enter into this contract and that I have read and approve this Proposal and understand and agree to the terms and conditions.

Joseph  
\_\_\_\_\_  
First Name

318 West Katella Avenue, Suite A  
Orange, CA 2867

Gutierrez  
\_\_\_\_\_  
Last Name

\_\_\_\_\_  
Billing Address

jgutierrez@jigconsultants.com  
\_\_\_\_\_  
Email

*Joseph Gutierrez*

05 / 17 / 2021

\_\_\_\_\_  
PO # (if applicable)

Signed by

Date of acceptance

## Payment terms & instruction

Payment terms net 30 days. Deposit/Mobilization fee is due after signature or the approval of the proposal.

### Pay by check

Company	Utility Systems, Science & Software, Inc.
Address	601 N. Parkcenter Dr, Ste 209, Santa Ana, CA 92705

### Pay by wire



Bank name	California Bank & Trust
Bank address	17752 E. 17th Street, Tustin, CA 92780
Wire ABA/Routing #	122232109
ACH Routing #	122003396
Swift Code	ZFNBUS55
Account name	Utility Systems, Science & Software, Inc.
Account address	601 N. Parkcenter Dr, Ste 209, Santa Ana, CA 92705
Account number	3210163671

If you have any question regarding the proposal please contact sheila.trisnojoyo@uscubed.com or mark.serres@uscubed.com, you can also call at 714-564-3494.

# Signature Certificate

Document Ref.: SDEEZ-4NHFN-VWAGA-EGSS2

Document signed by:

	<p><b>Joseph Gutierrez</b> E-mail: jgutierrez@jigconsultants.com Signed via link</p> <p>IP: 23.241.236.121      Date: 17 May 2021 20:28:39 UTC</p>	 
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Document completed by all parties on:  
17 May 2021 20:28:39 UTC

Page 1 of 1



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**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING GOLF CLUB SEWER LIFT STATION IMPROVEMENTS**

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Trabuco Canyon Water District (District) owns and operates the Golf Club Sewer Lift Station in the Dove Canyon community adjacent to the golf club driving range (Exhibit 1). This station receives wastewater flows from the majority of the community by way of Bell Canyon and Barneburg Sewer Lift Stations and gravity sewer flows, and then conveys the wastewater to the Robinson Ranch Wastewater Treatment Plant via a sewer force main on Hillrise. The station was constructed in the early 1990s and has undergone minor improvements since that time, but there are a series of critical repairs and improvements that Wastewater Operations and Maintenance Department (O/M) staff have identified for the station, some of which has been completed. The station will be fully evaluated during the upcoming condition assessment, and the anticipated improvements include a station Bypass Valve Assembly, Dry Pit and Wet Well Improvements and Piping/Valve Replacements.

The most critical item of concern is the Motor Control Center (MCC) Panel. Some of the components in the MCC Panel have been replaced due to failure, but there are many other system components that have reached the end of life. District staff has contracted with Hydrotech Electrical for much of this work to keep the station operating, but Hydrotech recommends an overhaul of the MCC Panel and many of the components due to low availability and technological advancement (Exhibit 2).

**FUNDING SOURCE:**

Emergency Reserves.

**FISCAL IMPACT:**

\$308,000.

**ENVIRONMENTAL COMPLIANCE:**

Notice of Exemption.

**RECOMMENDED ACTION:**

*Recommend that the Board of Directors authorize the General Manager to ratify a Contract with Hydrotech Electric for Golf Club Lift Station Motor Control Center Replacement in the amount of \$279,340 with a contingency of \$27,934, for a total not-to-exceed amount of \$307,274.*

**EXHIBIT(S):**

1. Project Site Map and Site Photos
2. Hydrotech Electric Proposal – Golf Club MCC Replacement

**CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN**

# GOLF CLUB SEWER LIFT STATION REPAIRS & IMPROVEMENTS

Trabuco Canyon Water District  
June 2, 2021 E&O Committee





**Project Location**



**Location Map**

 Area of Work

**Golf Club Sewer Lift Station**

Address: 22881 Golf Club Drive      Trabuco  
Canyon CA 92679



Motor Control Center

# Wet Well Condition

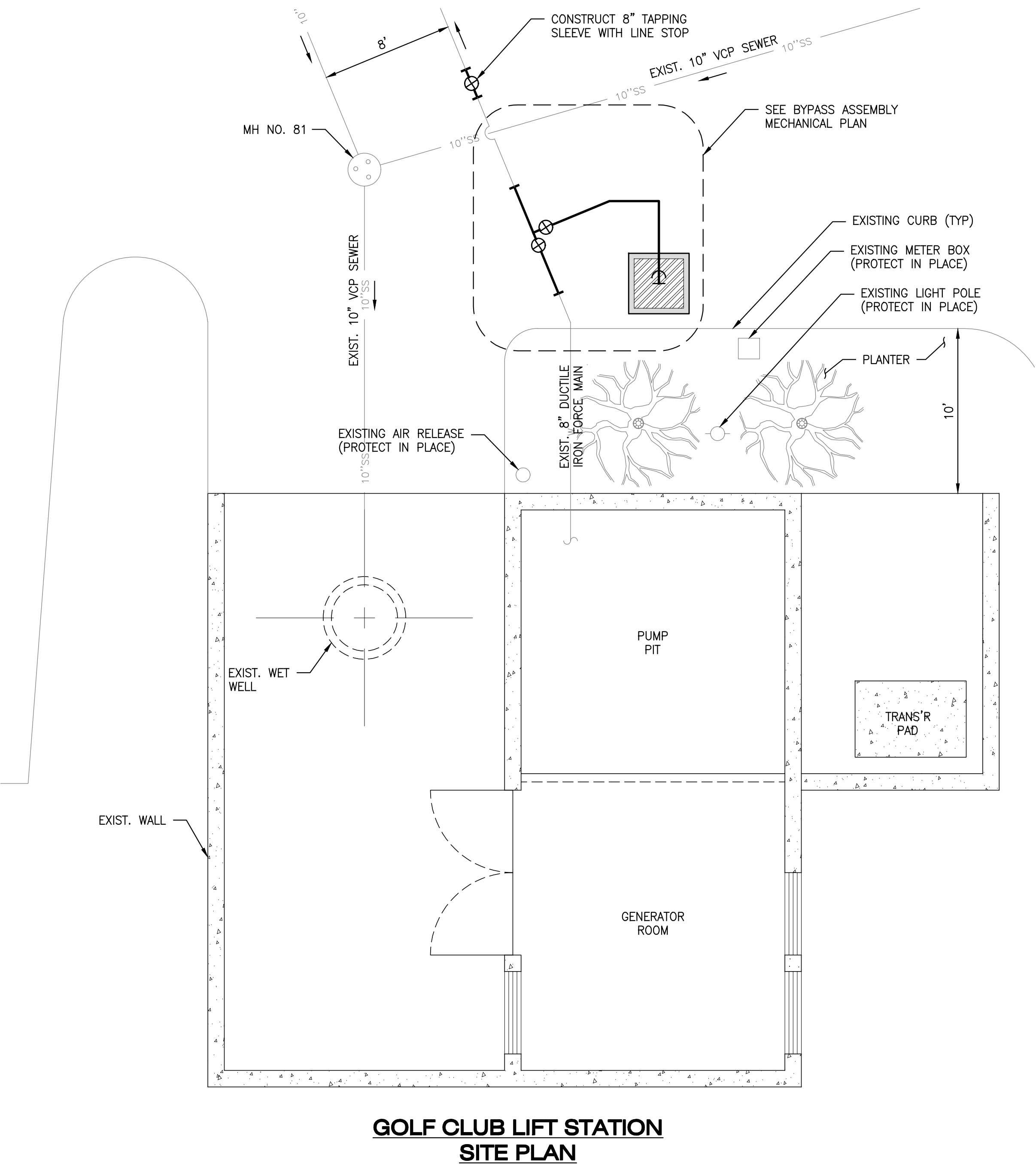


# Dry Pit-Surge Tank, Piping and Valves

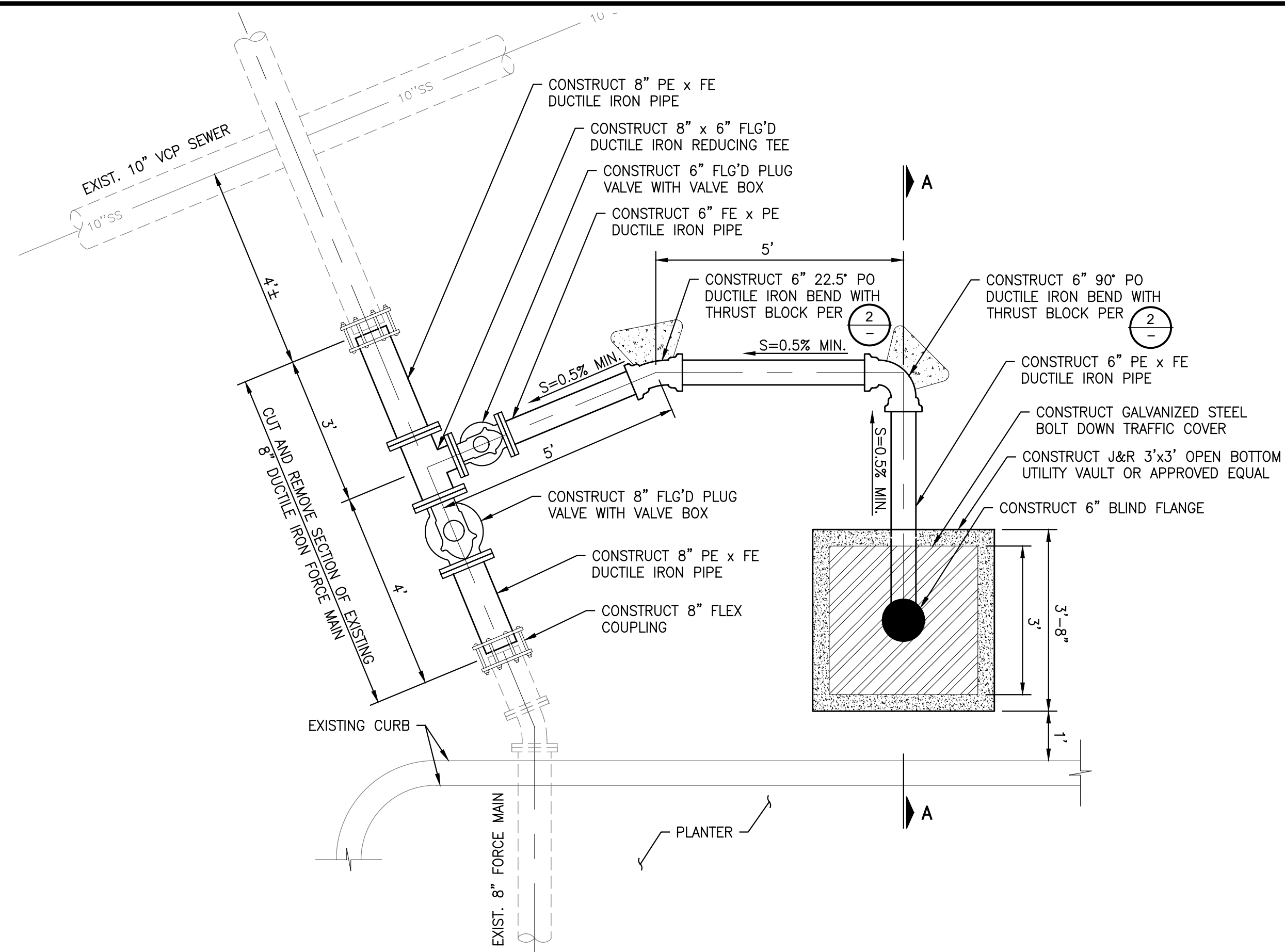
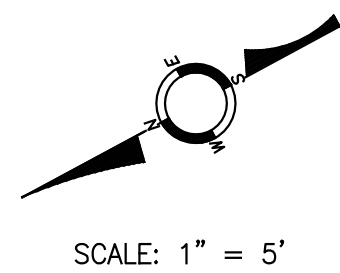


**NOTES:**

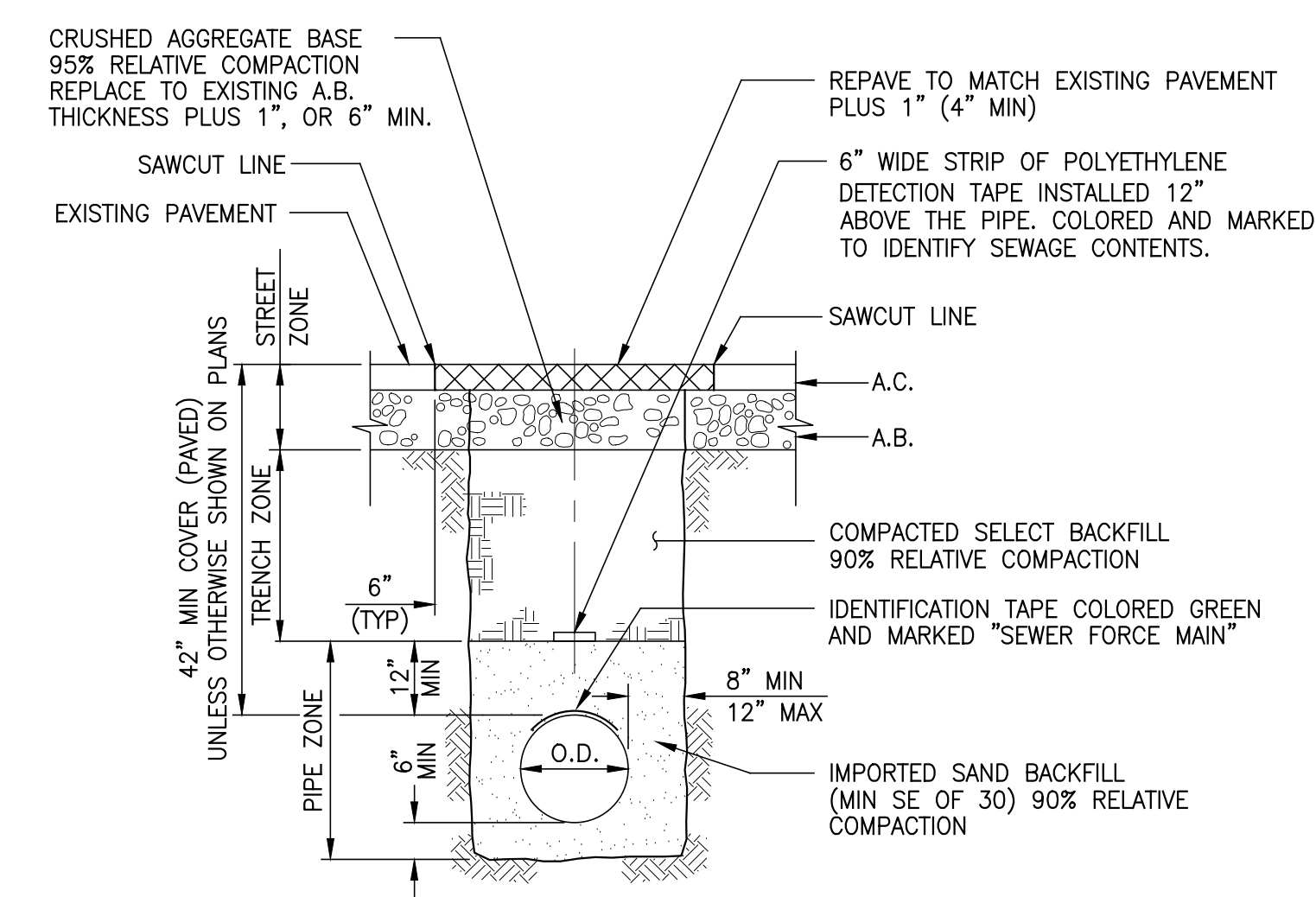
1. CONTRACTOR TO CONSTRUCT 8" DUCTILE IRON PIPE TO MATCH SLOPE OF EXISTING FORCE MAIN.
2. CONTRACTOR TO CONSTRUCT 8" LINE STOP AND DRAIN CONTENTS OF ISOLATED FORCE MAIN PRIOR TO CONSTRUCTING BYPASS PIPING ASSEMBLY.
3. DUCTILE IRON PIPE SHALL BE CLASS 50 WALL THICKNESS WITH FUSION BONDED OR CERAMIC EPOXY LINING, 1 MIL ASPHALTIC COATING, ENCASED IN TWO LAYERS OF POLYETHYLENE BAGS.
4. ALL PLUG VALVES SHALL BE ECCENTRIC WITH 100% PORT SIZE.
5. ALL NUTS, BOLTS, AND FASTENERS SHALL BE TYPE 316 STAINLESS STEEL.



**GOLF CLUB LIFT STATION  
SITE PLAN**



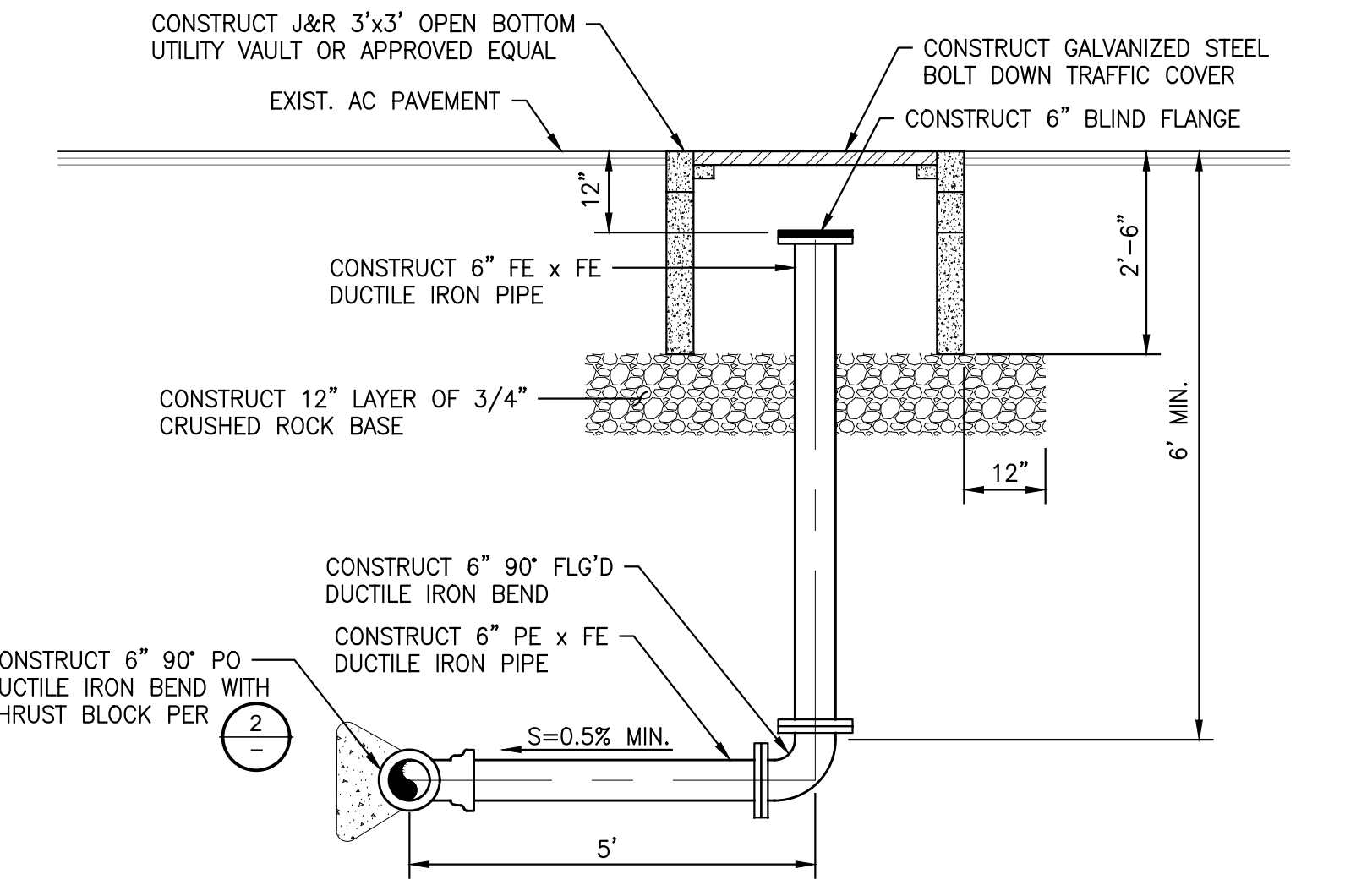
**BYPASS ASSEMBLY  
MECHANICAL PLAN**  
SCALE: 1/2"=1'-0"



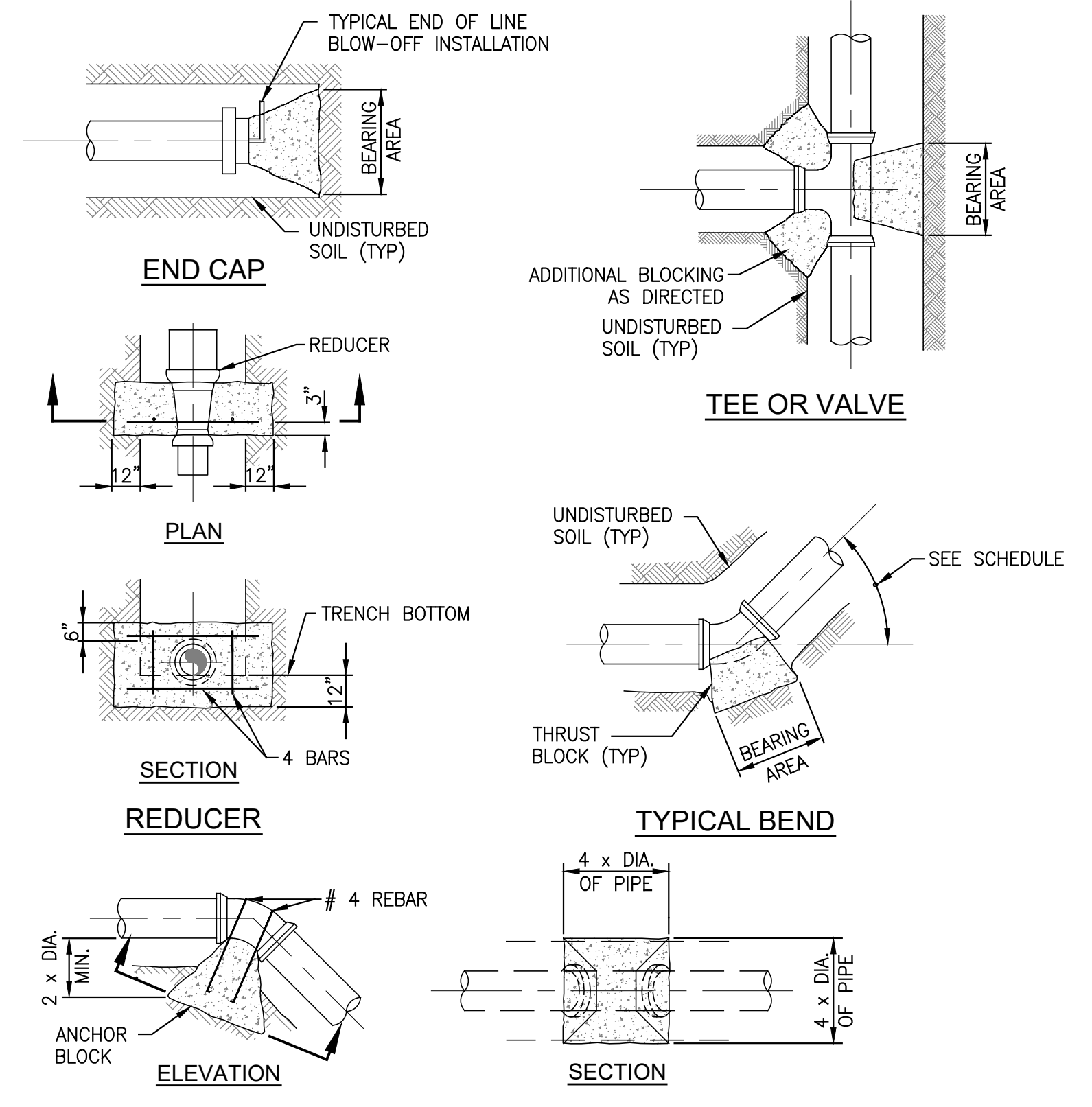
**NOTES:**

1. CONTRACTOR SHALL REPLACE AC TO THE LIMITS SHOWN ON THE TYPICAL TRENCH SECTION SHOWN ABOVE AND TO THE THICKNESS PLUS 1" OF THE EXISTING AC UNLESS OTHERWISE DIRECTED ON THE PLANS.
2. ALL PAVEMENT AND SIDEWALK REMOVAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE SAWCUT PRIOR TO REMOVAL. THE OWNER SHALL BE REQUESTED BY CONTRACTOR TO APPROVE EXTENT OF PAVEMENT AND SIDEWALK REMOVAL PRIOR TO STARTING WORK. DISPOSAL OF REMOVED A.C. PAVEMENT AND CONCRETE SHALL BE AT AN APPROVED OFF-SITE DUMP SITE.

**TYPICAL TRENCH SECTION**  
NOT TO SCALE



**SECTION A-A**  
SCALE: 1/2"=1'-0"



**VERTICAL BEND**

PIPE SIZE	MINIMUM THRUST BLOCK AND ANCHOR BLOCK SIZE				
	11 1/4" BEND	22 1/2" BEND	45" BEND	90" BEND	
	HORIZ. L <sub>1</sub> X L <sub>2</sub>	VERT. C.Y.	HORIZ. L <sub>1</sub> X L <sub>2</sub>	VERT. C.Y.	
6"	22" X 4"	0.04	22" X 8"	0.08	22" X 15"
				0.16	20" X 20"
				0.28	22" X 19"
					DEAD ENDS & TEES
					HORIZ. L <sub>1</sub> X L <sub>2</sub>
					VERT. C.Y.

**NOTES:**

1. THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 1500 psf AND 150 psi LINE PRESSURE. FOR BEARING = 1000 psf, 1.5 x AREA SHOWN. FOR BEARING = 500 psf, 3.0 x AREA SHOWN.
2. ALL THRUST BLOCKS SHALL BE CLASS "B" CONCRETE AND PLACED AGAINST UNDISTURBED SOIL. DESIGN ENGINEER SHALL DETERMINE SIZES NOT SHOWN.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A15 AND A305 INTERMEDIATE GRADE.
4. CONCRETE SHALL NOT EXTEND ONTO FLANGE OR ADJOINING PIPE.

**THRUST BLOCK**  
NOT TO SCALE

**DIGALERT** CALL TOLL FREE 811  
TWO WORKING DAYS BEFORE YOU DIG  
Underground Service Alert

CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.

**JIG CONSULTANTS**  
318 W KATELLA AVE, SUITE A  
ORANGE, CA 92867  
(714) 978-4407  
www.jigconsultants.com

REGISTERED PROFESSIONAL ENGINEER  
JOSEPH I. GUTIERREZ  
No. C 55604  
Exp. 12/31/22  
CIVIL  
STATE OF CALIFORNIA

NO.	DATE	REVISIONS

DESIGN: MM  
DRAWN: MM  
CHECKED: JG

**TRABUCO CANYON WATER DISTRICT**

DATE: \_\_\_\_\_  
ENGINEER: JOSEPH I. GUTIERREZ RCE 55604  
PRINCIPAL ENGINEER: LORRIE LAUSTEN RCE 67027

**TRABUCO CANYON WATER DISTRICT**  
**GOLF CLUB LIFT STATION BYPASS IMPROVEMENTS**  
**PROJECT NO. XXXX-XX**

**SITE PLAN / MECHANICAL PLAN AND SECTION**



**PROPOSAL**  
TCWD  
GOLF CLUB LIFT STATION MCC REPLACEMENT

Addendum: None Noted

DIR REG # 1000001266

5-18-21 Pg 1 of 2

Specifications: TCWD Construction Standards

Proposal to furnish and install the following per plans and specs:

1. Selective electrical demolition including the removal and disposal of existing MCC.
2. Extension of existing concrete housekeeping pad as required to accommodate new MCC.
3. ***1- NEMA 12 400A 480V 3P3W Motor Control Center including:***
  - A) 1- 400A 480V Automatic Transfer Switch.
  - B) 1- 480V 400AT Main Circuit Breaker.
  - C) 1- Surge protection device and Phase Monitor Relay.
  - D) 4- 480V 125A MCP Circuit Breakers.
  - E) 4- 50HP Eaton S811+ RVSS Pump Starter Control Panel sections with all required appurtenances and controls.
  - F) 1- 15KVA 480-120/240V Transformer.
  - G) 1- 120/240V 1 phase 18 circuit panel.
  - H) 1- Surge Tank Control Panel with NEMA size 1 Starter including all required appurtenances and controls.
  - I) 1- Section for new PLC Panel.
4. Conduit, boxes, and wiring as required to install new Motor Control Center.
5. ***1- 100A 120/240V Temporary Power Panel for construction power connected to SCE Transformer.***
6. 2- NEMA 4X Stainless Steel 480V 100A Disconnects for submersible pumps.
7. 2- NEMA 4X Stainless Steel Sump Pump Termination Enclosures.
8. 2- New PVC Coated Rigid conduit, hubs, and explosion proof EYS seal offs for submersible pumps.
9. Grounding system as required by N.E.C.
10. ***Instrumentation and Controls Package including:***
  - A) ***1- Modicon M340 PLC Panel with all required I/O Modules including:***
    - B) 1- 1500VA UPS.
    - C) 1- 24V Power Supply.
    - D) 1- 8 Port Ethernet Switch
    - E) 2- Panel Fans with filtered louvers.
    - F) Panel condensation heater with T-stat.
    - G) Relays, indicator lights, terminal blocks, and all required appurtenances.
    - H) 2- 900 GHZ Radios and Yagi Antennas, cabling, and mounting as required.
    - I) 1- Magelis 10" Touch Screen HMI.
    - J) Incorporation of existing Bubbler System & Level Instrumentation.
    - K) ***PLC, HMI, and SCADA Programming as required for integration into SCADA system.***
    - L) 4- Wet Well Floats (LSHH, LSH, LSL, and LSLL).



**PROPOSAL**  
TCWD  
GOLF CLUB LIFT STATION MCC REPLACEMENT

PG 2 OF 2

- 11. Professional Services: Engineered shop drawings and submittals, control schematics, and As Built Drawings.
- 12. Start up & Commissioning, Field testing, configuration, calibration, and device signal spanning as required.
- 13. Onsite Training and O&M Manuals.

**Excluded from Scope:**

- 1. *Temporary Power Requirements for Lift Station pump operation or by-pass equipment.*
- 2. Building Permits, Utility charges, Bonds and Associated Fees.
- 3. Mechanical Equipment: Emergency Generator, Pumps, Exhaust Fans, Motorized gates, M.O.V.'s, Etc.
- 4. Any Instrumentation devices, Control Panels or Electrical panels not listed in the above scope of work

**Total Bid Price.....\$279,340.00**

**The removal and installation of the MCC will require a 10 working day shutdown of the Facility.**

**Lead time for fabrication of the MCC is 12-16 weeks.**

**Price Valid for 60 Days**

**If you have any questions or comments please call me,  
Sincerely,  
Ken Cloud.**

**37707 Green Knolls Road  
Winchester Ca. 92596  
909 948-1908**

**DIR# 100001266  
CLSB #977838  
WBE Certified**

**Ken Cloud 909 270-0430**

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 5: PUBLIC HEARING AND ADOPTION OF TRABUCO CANYON WATER DISTRICT'S 2020 URBAN WATER MANAGEMENT PLAN (UWMP), WATER SHORTAGE CONTINGENCY PLAN, AND 2015 UWMP ADDENDUM**

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The Urban Water Management Plan (WMP) is a long-term planning document required by the State of California to be prepared by water suppliers every five years with the 2020 submittal due July 1, 2021. For this latest update to the UWMP, Trabuco Canyon Water District (District) will involve four separate actions:

1. Adopt the 2020 UWMP by Resolution
2. Adopt an Addendum to the 2015 UWMP by Resolution
3. Adopt a Water Shortage Contingency Plan by Resolution
4. Update the District's Water Conservation Ordinance (this will be adopted separately from the first three actions, in July or August 2021)

The purpose of the Addendum to TCWD's 2015 UWMP is to demonstrate consistency with the Delta Plan Policy WR P1 to "Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance". Adoption of the Addendum is being encouraged by the California Department of Water Resources and Delta Stewardship Council pursuant to Sacramento-San Joaquin Delta Reform Act, the Delta Plan, and Water Code Section 85021, which declares that the State's policy is to "reduce reliance on the Delta in meeting California's future water needs through a statewide strategy of investing in imported regional supplies, conservation, and water use efficiency."

The Water Shortage Contingency Plan (WSCP) has been a required component within the UWMP for decades but pursuant to recently adopted legislation AB 1668 and SB 606, commonly referred to as "Making Water Conservation a California Way of Life", the WSCP is required to be a stand-alone document created separately but that can also be reference in the UWMP.

The purpose of the WSCP document is to serve as a roadmap for suppliers to follow when water shortages occur due to natural disasters such as drought or earthquakes, system failures, or regulatory actions. Unlike the UWMP, the WSCP is a short-term planning tool to be revisited annually to account for changing conditions. Historically, Trabuco Canyon Water District (TCWD) used its Conservation Ordinance as the water shortage planning document. To comply with the new requirements, the District will now adopt the WSCP and revise its Conservation Ordinance to be consistent with, and provide the means to enforce, the actions within the WSCP.

The WSCP applies to potable or domestic water and recycled or non-domestic water as determined by the District in the event of shortage or emergency. Uniform application of the requirements is not required. For example, in the event of a drought impacting domestic water, the District will likely not implement the contingencies on recycled water use. One significant change to note in the WSCP is the District revising the number of water shortage stages from four (4) in the existing ordinance to six (6) in the WSCP. The State has established six (6) stages of water shortage that progressively escalate in ten percent increments (10, 20, 30, 40, 50, and >50% supply shortages). The District's proposed increase to six water shortage states is to align with the State's requirement while establishing regional consistency and messaging with Metropolitan Water District and Municipal Water District of Orange County.

The WSCP also establishes locally appropriate "shortage response actions" for each shortage level, with a corresponding estimate of the extent the action will address the gap between supplies and demands. The District's response actions comply with the State's requirements that mandate water suppliers demonstrate categories of response actions, along with their estimated savings potential, that either reduce demand, augment supplies, demonstrate operational changes, or invoke additional mandatory prohibitions on specific water uses. The District's actions are summarized in the attached response matrix which provides an overview of the proposed strategic approach on how the District can mitigate a given water supply shortage condition.

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

Drafts of the proposed 2020 UWMP, WSCP, and Addendum to the 2015 UWMP will be available for review prior to the Committee meeting.

**FUNDING SOURCE:**

Not applicable.

**FISCAL IMPACT:**

None.

**ENVIRONMENTAL COMPLIANCE:**

Not applicable.

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors take the following actions at the June 16, 2021 Regular Board Meeting (Action Calendar):*

- 1. Conduct a Public Hearing to receive public comments related to the approval and adoption of the 2020 Urban Water Management Plan (UWMP) Update, Water Shortage Contingency Plan (WSCP), and 2015 UWMP Addendum*
- 2. Adopt Resolution No. 2021- 1290 - Resolution of the Board of Directors of Trabuco Canyon Water District Adopting the District's Addendum to the 2015 UWMP to Add Appendix C – Reduced Delta Reliance Reporting*
- 3. Adopt Resolution No. 2021-1291 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's Revised WSCP*
- 4. Adopt Resolution No. 2021-1292 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's 2020 UWMP Update*

**EXHIBIT(S):**

- 1. Summary of Shortage Response Actions*
- 2. DRAFT Resolution No. 2021- 1290 - Resolution of the Board of Directors of Trabuco Canyon Water District Adopting the District's Addendum to the 2015 UWMP to Add Appendix C – Reduced Delta Reliance Reporting*
- 3. DRAFT Resolution No. 2021-1291 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's Revised WSCP*
- 4. DRAFT Resolution No. 2021-1292 – Resolution of the Board of Directors of the Trabuco Canyon Water District Adopting the District's 2020 UWMP Update*

**CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN**

**TCWD Water Shortage Contingency Plan  
Summary of Shortage Response Actions**

<b>Water Shortage Stage</b>	<b>Shortage Response Actions</b>	<b>Response Action Type</b>	<b>% Gap Reduced</b>
<b>Stage 1:</b> Up to 10% Shortage	Increase public awareness of water supply situation	DR	3%
	Encourage voluntary outdoor water use efficiency	DR	3%
	Promote Rebates for Indoor and Outdoor Water Use Efficiency	DR	2%
	Require customers to fix leaks within 72 hours	MP	1%
	Reinforce permanent conservation measures	MP	1%
<b>Stage 2:</b> Up to 20% Shortage	Expand public awareness of shortage situation and leverage regional outreach and marketing efforts by MWDOC and MET	DR	5%
	Targeted outreach to dedicated irrigation customers using drinking water	DR	2%
	Voluntary limits to landscape watering with drinking water: 3 days per week April through October and 1 day per week November through March; allowances for Fuel Modification Zones (FMZ)	DR	3%
	Require customers to fix leaks within 48 hours	MP	1%
	Targeted Outreach to Commercial Agriculture and Nurseries	DR	1%
	Encourage customers with recreational water features to implement BMPs for pools and spas	DR	1%
	Water at restaurants only upon request	DR	1%
<b>Stage 3:</b> Up to 30% Shortage	Targeted outreach and assistance to high use customers	DR	5%
	Enhanced water conservation activities, marketing, and incentives	DR	2%
	Limit landscape watering with drinking water to 3 days per week April through October and 1 day per week November through March; allowances for FMZs	MP	5%
	Limit commercial nurseries using drinking water for irrigation by 30% monthly based on 5-yr average use	DR	3%
	Requirement for customers to fix leaks within 24 hours	MP	1%
	Limits on use of potable water for construction	OC	1%
	Limit street sweeping to use of recycled water only	OC	1%
	Reduce frequency of line cleaning and flushing	OC	1%
<b>Stage 4:</b> Up to 40% Shortage	Limit landscape watering with drinking water to 2 days per week April through October and 1 day per week November through March; allowances for FMZs	MP	5%
	Limit commercial nurseries using drinking water for irrigation by 40% monthly based on 5-yr average use	DR	2%
	Prohibition on filling and refilling of decorative water features	MP	1%
	No new potable water services except under certain circumstances	OC	2%

## TCWD Water Shortage Contingency Plan Summary of Shortage Response Actions

<b>Stage 5:</b> Up to 50% Shortage	Expand enforcement and outreach to high water users	DR	5%
	Require installation of flow restrictors on high water users that are non-responsive to outreach	DR	1%
	Prohibit all irrigation of turf with drinking water, except for school and HOA-owned sports fields as required to stay alive	MP	2%
	Limit non-turf landscape watering with drinking water to 1 day per week all months; allowances for FMZs	MP	3%
	Limit commercial nurseries using drinking water for irrigation by 50% monthly based on 5-yr average use	MP	2%
	Prohibit filling of all recreational water features, such as pools and spas, that do not follow BMPs	MP	2%
<b>Stage 6:</b> Over 50% Shortage	Conduct emergency public outreach	DR	5%
	Allocate water supply as deemed necessary under an emergency supply condition	DR	As necessary
	Prohibit all landscape watering with drinking water; allowances for FMZs	MP	3%
	Prohibit commercial nurseries from all irrigation using drinking water	MP	5%
	Prohibit all vehicle washing, including commercial car washes	MP	1%
	Other water response shortage actions, as needed	MP	5%

DR = Demand Reduction  
MP = Mandatory Prohibition  
OC = Operational Change

**RESOLUTION NO. 2021-1290**  
**RESOLUTION OF THE BOARD OF DIRECTORS**  
**OF TRABUCO CANYON WATER DISTRICT**  
**ADOPTING THE DISTRICT’S ADDENDUM TO THE 2015 UWMP**  
**TO ADD APPENDIX C – REDUCED DELTA RELIANCE REPORTING**

---

**WHEREAS**, Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act (Act) require every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet (AF) of water annually to prepare, adopt, and file with the Department of Water Resources(DWR) every five years in the years ending in zero and five;

**WHEREAS**, the District submitted the 2015 Urban Water Management Plan to DWR by July 1, 2015;

**WHEREAS**, Delta Plan Policy WR P1 is one of fourteen regulatory policies in the Delta Plan;

**WHEREAS**, The Delta Plan was adopted in 2013 by the Delta Stewardship Council;

**WHEREAS**, Delta Plan Policy WR P1 identifies UWMPs as the tool to demonstrate consistency with state policy to reduce reliance on the Delta for a Supplier that anticipates receiving water supply benefits from the Delta;

**WHEREAS**, WR P1 states that commencing in 2015, Suppliers that have (A) completed an UWMP, (B) implemented the efficiency measures in that plan, and (C) shown a measurable reduction in Delta reliance and improvement in regional self-reliance in the plan, are contributing to reduced reliance on the Delta and consistent with WR P1;

**WHEREAS**, There was no mentioning of the Delta Plan Policy in the 2015 UWMP Guidebook;

**WHEREAS**, DWR 2020 UWMP Guidebook (Appendix C) recommends that Suppliers prepare and submit this information as an appendix to their UWMP.

**NOW, THEREFORE, BE IT RESOLVED**, that the Trabuco Canyon Water District hereby adopts its Addendum to the 2015 Urban Water Management Plan to add Appendix C – Reduced Delta Reliance Reporting which is attached hereto, marked Exhibit “A”, and by this reference is incorporated herein as though set forth in full.

**ADOPTED, SIGNED AND APPROVED this 16<sup>th</sup> day of June, 2021.**

**TRABUCO CANYON WATER DISTRICT**

By: \_\_\_\_\_  
President/Vice President

By: \_\_\_\_\_  
District Secretary

STATE OF CALIFORNIA            )  
  ) ss.  
COUNTY OF ORANGE            )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing resolution was duly adopted by the Board of said District at a regular meeting of such Board held on the 16<sup>th</sup> day of June, 2021 of which meeting all of the members of the Board had due notice and at which a quorum thereof were present and acting throughout and for which notice and an agenda was prepared and posted as required by law and that at said meeting such resolution was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
District Secretary,  
Trabuco Canyon Water District

DRAFT

STATE OF CALIFORNIA        )  
  ) ss.  
COUNTY OF ORANGE        )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing is a full, true, and correct copy of Resolution No. 2021-1290 of such Board and that the same has not been amended, rescinded or repealed.

Dated this 16<sup>th</sup> day of June, 2021.

\_\_\_\_\_  
District Secretary,  
Trabuco Canyon Water District

DRAFT

**RESOLUTION NO. 2021-1291**  
**RESOLUTION OF THE BOARD OF DIRECTORS**  
**OF THE TRABUCO CANYON WATER DISTRICT**  
**ADOPTING THE DISTRICT'S REVISED WATER SHORTAGE CONTINGENCY PLAN**

---

**WHEREAS**, the Trabuco Canyon Water District ("District" or "TCWD") is a county water district organized and operating pursuant to Water Code of the State of California ("Water Code") Sections 30000, and following; and

**WHEREAS**, pursuant to Section 31000 *et seq.* of the Water Code, the District has the authority to adopt rules and regulations necessary to furnish sufficient water for any present or future beneficial use; and

**WHEREAS**, pursuant to statutory authority, the Board of Directors ("Board") of TCWD has previously adopted Ordinance No. 2008-18 ("Ordinance No. 2008-18") on December 18, 2008, adopting and enacting a Water Conservation and Water Supply Shortage Program ("Program"); and

**WHEREAS**, Section 375 *et seq.* of the Water Code permits public entities which supply water at retail or wholesale to adopt and enforce a water conservation program to reduce the quantity of water used by the people therein for the purpose of conserving the water supplies of such public entity; and

**WHEREAS**, Section 350 *et seq.* of the Water Code permits the governing body of a distributor of a public water supply to declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent there would be insufficient water for human consumption, sanitation, and fire protection; and

**NOW, THEREFORE, BE IT RESOLVED**, that the Trabuco Canyon Water District hereby adopts the Revised Water Shortage Contingency Plan, which is attached hereto, marked Exhibit "A", and by this reference is incorporated herein as though set forth in full.

**ADOPTED, SIGNED AND APPROVED** this 16<sup>th</sup> day of June, 2021.

**TRABUCO CANYON WATER DISTRICT**

By: \_\_\_\_\_  
President/Vice President

By: \_\_\_\_\_  
District Secretary

STATE OF CALIFORNIA        )  
  ) ss.  
COUNTY OF ORANGE        )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing resolution was duly adopted by the Board of said District at a regular meeting of such Board held on the 16<sup>th</sup> day of June, 2021 of which meeting all of the members of the Board had due notice and at which a quorum thereof were present and acting throughout and for which notice and an agenda was prepared and posted as required by law and that at said meeting such resolution was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
District Secretary,  
Trabuco Canyon Water District

DRAFT

STATE OF CALIFORNIA        )  
  ) ss.  
COUNTY OF ORANGE        )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing is a full, true, and correct copy of Resolution No. 2021-1291 of such Board and that the same has not been amended, rescinded or repealed.

Dated this 16<sup>th</sup> day of June, 2021.

\_\_\_\_\_  
District Secretary,  
Trabuco Canyon Water District

DRAFT

**RESOLUTION NO. 2021-1292**  
**RESOLUTION OF THE BOARD OF DIRECTORS**  
**OF THE TRABUCO CANYON WATER DISTRICT**  
**ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN UPDATE**

---

**WHEREAS**, the California Legislature enacted Assembly Bill 797 during the 1983-84 Regular Session of the California Legislature (enacting California Water Code Sections 10610, *et. seq.*, and as amended subsequently, known as the “Urban Water Management Planning Act” hereinafter the “Act”), which mandates that every supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet of water annually, prepare an Urban Water Management Plan (“Plan”), the primary objective of which is to plan for the conservation and efficient use of water; and

**WHEREAS**, the Trabuco Canyon Water District ("District") is a county water district organized and operating pursuant to the provisions of California Water Code Sections 30000 and following; and

**WHEREAS**, the District is an urban supplier of water which is subject to the provisions and requirements of the Act; and

**WHEREAS**, the District previously adopted its Plan and 2015 Urban Water Management Plan Update; and

**WHEREAS**, the Act requires that an urban water suppliers Plan be periodically reviewed at least once every five years and that the urban water supplier shall make any amendments or changes to its Plan which are indicated by such review(s); and

**WHEREAS**, the District has caused to be prepared that District’s 2020 Urban Water Management Plan Update (“2020 UWMP”); and

**WHEREAS**, the 2020 UWMP must be adopted by the Board of Directors (“Board”) of the District by July 1, 2021, following public review and completion of a public hearing, and thereafter filed with the California Department of Water Resources (“DWR”) within thirty (30) days following its adoption; and

**WHEREAS**, the District has therefore, prepared and circulated for public review a draft of the 2020 UWMP for public review and comment; and

**WHEREAS**, the District has properly noticed a public hearing regarding the consideration of the 2020 UWMP, which was conducted by this Board on June 16, 2021, and a full and fair hearing was held; and

**WHEREAS**, the Board, having considered the District’s Plan and the 2020 UWMP thereto, desires to approve of the 2020 UWMP and direct its filing with the DWR.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF TRABUCO CANYON WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:**

**Section 1.** The foregoing recitals are true and correct and are incorporated herein by this reference.

**Section 2.** The 2020 UWMP, attached hereto and incorporated herein by this reference, is hereby adopted as the 2020 Urban Water Management Plan Update of the District pursuant to the requirements of the Act.

**Section 3.** The Secretary of the District is authorized and directed to file copies of the 2020 UWMP with the DWR and the California State Library pursuant to Water Code Section 10644 within thirty (30) days after adoption of this Resolution.

**Section 4.** The General Manager, the District Secretary, and the District's staff and consultants are authorized to take any and all actions necessary to implement the directives and intention of this Resolution.

ADOPTED, SIGNED AND APPROVED this 16<sup>th</sup> day of June, 2021.

**TRABUCO CANYON WATER DISTRICT**

By: \_\_\_\_\_  
President/Vice President

By: \_\_\_\_\_  
District Secretary

STATE OF CALIFORNIA            )  
  ) ss.  
COUNTY OF ORANGE            )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing resolution was duly adopted by the Board of said District at a regular meeting of such Board held on the 16<sup>th</sup> day of June, 2021 of which meeting all of the members of the Board had due notice and at which a quorum thereof were present and acting throughout and for which notice and an agenda was prepared and posted as required by law and that at said meeting such resolution was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
District Secretary,  
Trabuco Canyon Water District

DRAFT

STATE OF CALIFORNIA            )  
  ) ss.  
COUNTY OF ORANGE            )

I, Michael Perea, District Secretary of the Trabuco Canyon Water District, do hereby certify that the foregoing is a full, true, and correct copy of Resolution No. 2021-1292 of such Board and that the same has not been amended, rescinded or repealed.

Dated this 16<sup>th</sup> day of June, 2021.

---

District Secretary,  
Trabuco Canyon Water District

DRAFT

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 6: PURCHASE OF A CUMMINS EMERGENCY PORTABLE 275KW DIESEL GENERATOR**

---

Trabuco Canyon Water District (District) faces the heightened threat of wildfires in and immediately adjacent to our service area and the new reality of Public Safety Power Shutoffs (PSPS) called by Southern California Edison during high wind events on a nearly year-round basis. Power interruptions or longer-term outages can severely impact water and sewer operations with customer service and regulatory consequences. Adequately sized trailer-mounted portable generators would help mitigate this power outage risk, particularly for lift stations and other facilities that do not currently have on-site emergency backup power generators.

The District currently owns a small trailer-mounted generator parked at the Administration Facility, however this generator is only adequate for running a portion of that building, primarily the IT servers. District staff has researched various manufacturers and specifications in identifying a towable generator that can run every water and sewer lift station and yet be transported with District equipment. The District's larger facilities including the water treatment plant and wastewater treatment plant would require a generator too large to effectively transport.

The unit that staff recommends is a portable trailer-mounted Cummins 275kw diesel generator, available from Duthie Power Services for \$173,981 including delivery, onsite startup, and sales tax. The quote from Duthie Power Services is included as an Exhibit. The District was awarded a grant earlier this year for \$99,750 from CalOES for community power resiliency which will be applied towards the generator purchase. The estimated delivery time is 15-18 weeks. Given that staff would like to have the generator functional by this Fall 2021, the recommendation is for the Committee to approve and the Board ratify the purchase.

The ability to quickly connect the portable generator to a station will require improvements to most District lift stations by a combination of operations staff and electrical contractor services. Staff will produce a scope and budget to retrofit the highest priority stations – primarily those without existing onsite backup power – during the delivery phase and seek separate approval for those services.

**FUNDING SOURCE:**

Total funding request includes purchase price of \$173,981 plus approximately 10% contingency for a total not to exceed amount of \$190,000. Funding sources include \$99,750 from the CalOES grant award and \$90,250 from the General Fund.

**FISCAL IMPACT:**

This equipment purchase is over 57% funded with grant proceeds.

**ENVIRONMENTAL COMPLIANCE:**

The emergency generator is emissions compliant (EPA Tier 4 Final Certified)

**RECOMMENDED ACTION:**

*Committee to recommend that the Board of Directors ratify the purchase of one Cummins Emergency Portable 275KW Diesel Generator for equipment for \$173,981 plus approximately 10% as contingency for a total not-to-exceed amount of \$190,000.*

**EXHIBIT(S):**

1. Quote from Duthie Power Services.

**CONTACTS (staff responsible): PALUDI/PEREA/STROUD**



The Generator Experts • 24 Hour Service • License #708125

**Date: 4/27/2021**

**To:** Trabuco Canyon Water

**Attn:** Jason Stroud

**Reference: Emergency portable trailer mounted 275 kw Cummins Diesel generator.**

Thank you for your inquiry. We are pleased to offer the following quote for the above project

1. C275D2RE, Diesel Genset, 50/60 HZ, 275KW, Standby-Rental portable
  - a. U.S. EPA, Non road (Portable) Application
  - b. C275D2RE, Diesel Genset, 50/60 JZ. 275KW, Standby-Rental portable
  - c. Duty Rating – Prime Power (PRP)
  - d. Emissions-Compliance EPA Tier 4 Final Certified
  - e. Voltage 208 - 480 Variable
  - f. Alt-60Hz, 208/416-240/480 Volt, 125/80C (S/P)
  - g. Electric Brake Trailer
  - h. HITCH, PINTLE
  - i. UN31A Certified Fuel Tank
  - j. Generator Set Control - PowerCommand 3.3, Paralleling with MLD
  - k. Distribution Panel-Rental Bus Bar Connection
  - l. Packaging - Cummins Power Generation
  - m. Genset Warranty - Industrial Mobile Base, Prime 3 years / 3000 hours
  - n. Battery Charger - Rental
  - o. Engine Coolant - 60% Antifreeze, 40% Water mixture
  - p. Quick Fit Kit
  - q. Auxiliary DEF Connections
  - r. Paralleling Harness

<b>275 KW Genset:</b>	<b>\$158,767.20</b>
<b>Delivery to Site:</b>	<b>\$ 1,200.00</b>
<b>Onsite Start-up:</b>	<b><u>\$ 1,500.00</u></b>
<b>Total as listed</b>	<b>\$ 161,467.20</b>

**Notes**

**SALES TAX IS NOT INCLUDED**

**DIESEL FUEL NOT INCLUDED**

Estimated Delivery: **15-18 weeks** after the receipt of a purchase order and approved submittal

Prices valid for 90 days from above date

FOB: Jobsite. Offloading, craning, setting, anchoring is by others. All deliveries are Monday through Friday 7:00 a.m. to 4:00 p.m. Deliveries outside the normal business hours will be invoiced as necessary. Jobsite installation inspection, initial startup, and initiation of warranty, by a Duthie Power field technician is during normal working hours Monday through Friday 7:00 a.m. to 3:30 p.m. Testing will utilize building load unless the specification states otherwise. Fuel for testing is excluded. Any jobsite orientation and training of operating personnel to be done at the time of startup. Warranty is invalid without factory start



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up. Additional charges will be applied to start ups requested on weekends or off normal business hours. The startup cannot be performed until all permits are secured.

**The above quotation is based off of verbal request only, no written specifications or drawings provided. This package may or may not fit the owner's application. Pricing subject to change. Only items listed on quotation are included. Exception is taken to anything that is not included in this proposal**

**The above quotation is for the sale of equipment only. Installation, wiring, permits, plan check, engineering, plumbing, concrete pad, DPF System and fuel are not included.**

Permit and license costs (Air Pollution/Quality, Fire, Building, etc.) are not included in this quote. Duthie Power does not assume any responsibility for obtaining any permits or licenses that may be required. Duthie is not responsible for informing the owner/buyer of any equipment requirements. *All permits must be obtained prior to installation of the equipment.*

#### **Acceptance of Quote**

Prior to ordering equipment or services, please sign and return as a confirmation of the below terms and conditions

#### **Terms and Conditions**

**Scope:** DUTHIE POWER SERVICES is pleased to offer the above quotation for your use on the referenced project.

**Delivery: Delivery is to the jobsite with offloading by others.** All efforts will be made to have all equipment at the jobsite with one delivery during normal weekday working hours of 7:00am to 4:00pm. Delivery or other services occurring at any other time is subject to additional charges. Special job conditions may dictate that one item or more may be needed prior to the balance of the equipment. In that event, payment for the item(s) shipped in advance is due and payable at time of advance shipment. Our invoice for the item(s) shipped in advance may include additional freight charges as a separate item of billing. The total of all invoices will be higher than the original proposal as additional freight costs will be incurred on split shipments.

**\*If delivery is to DUTHIE POWER SERVICES prior to the jobsite, the purchase terms may change and DUTHIE POWER SERVICES may charge a storage fee for any equipment stored over 30 days after arrival from the manufacturer.**

**Lead-times: Current lead time is 10-12 weeks after receipt of purchase order and approved submittals.** The Seller is not liable for any delay or failure to deliver any or all of the goods regardless of cause. Seller shall not be liable for incidental or consequential damages in the event of breach or repudiation of this agreement.

**Engineering:** All project or jobsite specific engineering is by others. DUTHIE POWER will assist in design or engineering by providing spec sheets and drawings only. Seismic Calculations are available (at additional costs) by others.

**Submittals:** Submittals will be provided within ten (10) working days from receipt of written purchase order.



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**Permits:** It is the customer or end users responsibility to file and secure all permits, fees and licenses pertaining to the Air Quality Management District or the local ruling agency for the installation and operation of this equipment. All permits must be secured prior to installation.

DUTHIE POWER SERVICES assumes no responsibility for equipment ordered that does not comply with local codes or regulations.

Per SCAQMD Rule 1470, if the diesel generator is rated at or over 50HP and is placed within 100 meters of a K-12 school, a Particulate Trap (PM trap) is required. If the diesel generator is rated over 175HP and is within 50 meters of a sensitive receptor, it must meet the interim Tier 4 emission requirements. For natural gas and liquified propane gas generators, add-on emission control device applicability is based on currently effective Best Available Control Technology policy. For the other air districts outside of the South Coast Air Basin, the emission control requirement is determined on a case by case basis, predicated on the outcome of a site specific health risk assessment. A PM Filter or other add-on emission control device is not included in the above quote unless otherwise noted.

**Installation:** DUTHIE POWER SERVICES is a supplier of equipment and does not include installation, fuel, or piping whatsoever.

**Start-up Testing:** Upon completion of installation by others, a start and test will be performed by DUTHIE POWER SERVICES. It is strongly recommended that the start and test be performed within six months of delivery from the factory. If maintenance or service is required to bring the equipment up to new conditions as a result of the equipment being idle for more than six months, all maintenance, parts, labor and other associated costs will be the responsibility of the owner/buyer. The start and test will be performed during regular business hours, Monday thru Friday 7:00am to 3:30pm. (A start and test performed outside normal business hours will be an additional cost) **Fuel for testing is NOT included.** A building load test will be performed at no charge if it is performed at the time of the start and test. A load bank test with a resistive or reactive load bank is NOT included unless noted in the BOM. If the startup is not completed within 90 days of delivery, Duthie Power will require the job to be paid in full.

**Escalation:** Prices are firm for delivery for 30 days, subject to acceptance of our quotation.

**Venting:** Fuel tank venting as required on a local basis is **not** in our proposal, due to local practices and agencies. If details are available we may provide a quotation.

**Lugging:** Lugs on transfer switches, switchgear, and circuit breakers will be per manufacturer standard. No credit is allowed for unused lugs, unless we propose (in writing) to furnish special lugs at a price.

**Credit:** Credit is subject to DUTHIE POWER'S approval in its sole discretion. This quote in no way constitutes approval of credit.

**Terms/Invoicing:** Payment schedule is to be determined after acceptance of credit app and/or purchase order. If no further arrangements are made- the normal payment schedule is 40/30/20/10. 40% due at time of order; 30% due at time of delivery to Duthie Power Services; 20% due at time of delivery to job site; 10% due upon completion (startup). If equipment is at Duthie Power Services longer than two weeks after delivery the 20% will be billed. If equipment is delivered to jobsite- the normal payment schedule is 20/70/10. 20% due at time of order; 70% due at time of delivery to jobsite; 10% upon completion (startup). Seller reserves the right to require accelerated payment terms including cash payment in full advance of ordering any product or material.

**LOCAL CODE REQUIRED FUEL TANK FEATURES:** Increasingly, local fire code enforcement entities are requiring fuel tank options over and above that which is required by National Fire Protection Association (NFPA) or

California Fire Code (CFC), such as fuel fill spill containment basins and automatic fuel fill shut-off solenoids. Other requirements may apply to your specific project. We recommend that you contact the fire



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enforcement entity, having jurisdiction over your project, to determine their specific requirements. *This quote excludes these options unless otherwise noted.*

**Taxes are not included in any quotes given unless otherwise noted.** DUTHIE POWER is a supplier of equipment, not a subcontractor, and as such, does not allow or accept retentions.

- If required by buyer, 3<sup>rd</sup> party Insurance Verification (i.e. Compliance Depot) and vendor registration fees are additional.

**Cancellations:** Circumstances may require cancellation of some or all of equipment ordered. In that event, cancellation charges will be levied based on actual decisions and costs imposed by manufacturer.

**Liens and others:** We follow all state and federal laws. Company policy requires that we file preliminary notices. We will also file stop notices or the prerequisite notice on payment bonds if payment for items purchased is not paid according to the terms or before the expiration of time allowed by California Civil Code. This proposal is subject to the terms and conditions stated herein and on the attached page

**Indemnification Clause:** Customer is aware that DUTHIE POWER SERVICES will provide the equipment based on customer's specifications. Equipment provided will be purchased from the manufacturer identified in DUTHIE POWER SERVICES' quote and/or customer's purchase order. DUTHIE POWER will transfer to customer the standard warranty policy offered by the manufacturer, and it will not be responsible for product alteration, misuse, abuse by customer, or late delivery due to manufacturer lead time. Customer shall indemnify, defend, and hold harmless DUTHIE POWER SERVICES from any and all claims, demands, costs, expenses, liabilities, damages, injury or death of any person directly or indirectly arising out of or related to this purchase of equipment from DUTHIE POWER; provided, however, that no Indemnified Party shall be entitled to indemnification for any Claim found by a court of competent jurisdiction to have been caused by the sole negligence or willful misconduct of such Indemnified Party.

**ATTORNEY'S FEES:** If either parties to this Agreement should bring suit against the other with respect to this Agreement, then all costs and expenses incurred by the prevailing party therein shall be paid by the other party.

**Acceptance:** Purchase order for order implies acceptance of above terms and conditions unless otherwise stated on purchase order. This quote MUST also be signed below before a purchase order can be accepted.

**By signing below you are agreeing to the above quotation and terms:**

**Mike Goodman**  
**mikeg@duthiepower.com**  
**Sales Engineer**  
**Duthie Power Services**  
**562-790-1772**

**Accepted By:**  
**Company Name**  
**Purchaser**  
**Signature**

**Date**

**PO#**

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**ENGINEERING MATTERS**

**ITEM 7: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES**

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1. SCADA Project Update
2. Other Projects

**RECOMMENDED ACTION:**

*Committee to receive project status updates at time of the Committee Meeting.*

**EXHIBIT(S):**

None.

**CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN**

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**OPERATIONAL MATTERS**

**ITEM 8: WATER SYSTEM UPDATES**

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The following is a brief report of the water system for **May 2021**.

**Projects and Repairs**

1. Water Operations staff worked with DMc Engineering to locate and map all water lines at the intersection of El Toro Road and Ridgeline Road leading to the OC Rescue Mission Double R Ranch.
2. Water Operations staff worked with Water System Optimization, to conduct volumetric testing at the Dimension Water Treatment Plant.
3. Water Operations staff replaced a waste valve on Filter #1 at the Dimension Water Treatment Plant.
4. Water Operations staff replaced a six-inch check valve on the 2 CFS pump at the Plano Trabuco Pump Station.
5. Gary, Lisa, and Karen worked together to finish the State Water Resources Control Board, Electronic Annual Report for 2020.

**Monthly Water System Operations Summary**

The Monthly Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*

**EXHIBITS**

1. Monthly Water System Operations Summary

**CONTACTS (staff responsible): PALUDI/KESSLER**

**TRABUCO CANYON WATER DISTRICT  
MONTHLY WATER SYSTEM OPERATIONS SUMMARY**

<b>2021</b>													
<b>DIMENSION WTP</b>													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
SAC METER AC/FT	160	125	75	176									
BACKWASH AC/FT	4	4	2.0	6									
FLUSHWATER AC/FT	7	6	3.0	9									
WTP EFFLUENT AC/FT	175	124	83	176									
<b>Wells</b>													
TRABUCO CREEK GWTF	0	0	0	0									
US WELL AC/FT	0	0	0	0									
<b>AMP WATER</b>													
SMWD AC/FT	0.12	2	8	0									
IRWD AC/FT	0	12.4	53.4	10									
<b>TOTAL SUPPLY</b>													
AC/FT	175	138	145	186									
CFS DAILY AVERAGE	2.8	2.5	2.3	3.1									
AC/FT PER DAY	5.6	5.0	4.6	6.2									
<b>OPERATIONS in GAL.</b>													
WTP DOMESTIC	32,239	27,377	29,845	35,380									
WWTP DOM	17,354	18,176	8,751	7,629									
<b>OPERATIONS (AF)</b>													
SUPPLEMENT TO RW	0	0	0	0									
<b>LOSSES in GAL.</b>													
FLUSHING (gal.)	0	0	0	0									
SEWER CLEANING (gal.)	5,000	5,000	5,000	5,000									
LINE BREAKS (gal.)	100,000	24,000	200,000	50,000									
<b>SYSTEM DEMAND **</b>													
CFS DAILY AVERAGE	2.8	2.5	2.3	3.0									
AC/FT PER DAY	5.6	5.0	4.6	6.2									
<b>RESERVOIR STORAGE</b>													
MONTHLY AVG (MG)	9.0	8.8	8.4	8.1									
DAYS OF STORAGE	4	3	3	3									
<b>ZONES (AF)</b>													
RIDGELINE PS	127	107	73	127									
EL TORO P.S.	18	20	53	10									
TOPANGA	2	2	2	3									
FALCON	0.3	0.2	2.4	0.7									
ROSE PRV/ OAKS	1	1	1	Inop.									
CANYON CREEK	0.1	0.2	0.2	0.3									
ROSE P.S.	0.3	0.3	0.2	0.2									
ROBINSON RANCH	31	31	34	53									
DOVE CANYON	61	54	62	75									
PORTOLA HILLS	11	10	10	11									

\* Usage estimated new meter installed

\*\* Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**OPERATIONAL MATTERS**

**ITEM 9: WASTEWATER SYSTEM UPDATES**

The following is a brief report of the wastewater system for **May 2021**.

**Projects and Repairs**

Wastewater Operations staff performed and/or completed the following tasks and projects:

1. Drained and cleaned the Influent Equalization Basin (NEQ) at the Robinson Ranch Wastewater Treatment Plant (WWTP).
2. Drained, cleaned, and performed aeration system repairs on the WWTP East Sequencing Batch Reactor (SBR).
3. Installed a new polymer pump for the Sludge Dewatering Belt Press at the WWTP.
4. Cleaned and removed an old unused filter tank with the assistance of third-party crane company.
5. Assisted Water Operations with V-Ditch cleaning at Dimension Water Treatment Plant.
6. Worked with SS Mechanical on the Barneburg Sewer Lift Station rehabilitation project.
7. Met with the Division of Dam Safety for the annual inspection of the Trabuco Dam/Dove Lake Dam, including emergency drain valve exercise.

**Sewer System Management Plan (SSMP) Report**

*The purpose of the program is to communicate on a regular basis with the public on the development, implementation, and performance of TCWD's SSMP. Status updates on the work and type of work performed on the sewer system will be provided, including sewer line and manhole cleaning, system repairs, lift station cleaning, and updates from satellite facilities:*

<b>Sewer System Management Plan (SSMP) Monthly Update</b>	
Total Sewer Line, Feet*	210,495
<b>Total Sewer Line Cleaned (Ft) – Month</b>	<b>15,389</b>
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	149,926
Cleaning Cycle Period (Mos.)	15
<b>Total Sewer Line Cleaned, %</b>	<b>71%</b>
The Oaks at Trabuco – Pumping Frequency for the Month	9
O'Neill Park Sewer System Status	Ok
O'Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	June 2021
SSMP Program Audit – <i>Next Audit Report**</i>	January 2022

*\*This amount includes the OC Parks-owned O'Neill Park sewer system the District is contracted to clean.*

*\*\*Periodic internal audits shall be conducted, at a minimum every two years, with reports kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and TCWD's compliance with the mandatory elements of TCWD's SSMP:*

**Monthly Recycled Water System Operations Summary**

The Monthly Recycled Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*

**EXHIBITS**

1. Monthly Recycled Water System Operations Summary
2. Barneburg Sewer Lift Station Rehabilitation Project Photos

**CONTACTS (staff responsible): PALUDI/PEREA**

**TRABUCO CANYON WATER DISTRICT | NON-DOMESTIC WATER SYSTEM SUMMARY - 2021**

<b>RECYCLED WATER SUPPLY</b>															
	MAX	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	50.6	43.9	52.8	42.8									190.1	550.04
Reclaimed Reservoir Level, FT	1274.5	1,266.0	1,268.5	1,270.8	1,268.9									-	-
Reclaimed Reservoir Free Board, FT	25.5	8.5	6.0	3.7	5.6									-	-
Reclaimed Reservoir Storage, AF	145.5	96.4	112.5	125.2	115.4									-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0									0.0	72.88

<b>RECYCLED WATER SYSTEM DEMAND</b>															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.2	0.2	0.2	0.3									1.0	12%
Dove Canyon Golf Course	106.7	6.6	7.1	10.6	25.6									49.8	47%
Dove Canyon Master Association	279.3	5.5	5.7	7.1	16.1									34.4	12%
Robinson Ranch	80.2	0.9	1.3	1.3	2.4									5.8	7%
Trabuco Highlands	159.7	3.7	3.0	2.1	6.6									15.4	10%
City of RSM	0.1	0.0	0.0	0.0	0.3									0.3	228%
Construction Water	N/A	0.0	0.0	0.0	0.0									0.0	N/A
Sakaida Nursery	1.1	0.0	0.0	0.0	0.0									0.0	0%
SMWD	N/A	0.0	0.0	0.0	6.6									6.6	N/A
TY Nursery	17.9	0.0	5.8	4.0	6.2									16.1	90%
<b>TOTAL, AF</b>	<b>653.2</b>	<b>16.8</b>	<b>23.1</b>	<b>25.3</b>	<b>64.1</b>									<b>129.3</b>	<b>20%</b>
<b>PERCENTAGE OF NDW ALLOCATION/YEAR</b>		<b>3%</b>	<b>6%</b>	<b>10%</b>	<b>20%</b>										
<b>TOTAL ANNUAL AVG. NDW AVAILABLE**</b>	<b>774.36</b>														

<b>URBAN RUNOFF CAPTURE AND REUSE</b>															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.0	0.0	0.1	0.0									0.1	21.2
Dove   Tick Creek Production*	<i>Dry Season</i>	0.0	0.0	0.0	7.0									7.0	102.7
	TCWD Portion	0.0	0.0	0.0	3.5									3.5	-
	SMWD Portion	0.0	0.0	0.0	3.5									3.5	-
Dove Lake Water Pumped		0.0	0.0	0.0	11.3									11.3	201.7
Dove Lake Free Board, Ft		5.6	5.3	3.2	4.1									-	-
Dove Lake Storage		128.0	131.5	166.4	158.1									-	-
Total Rainfall, In.		1.7	0.0	1.2	0.0									2.9	14.5

\* SMWD share of Dove/Tick Pump Station Dry Season Water is 50% of production.

\*\* Based on 5-Year Average Reclaimed Water Reservoir Base Supply & Recycled Water Production



# BARNEBURG SEWER LIFT STATION REHABILITATION PROJECT PHOTOS

June 2, 2021 Engineering/Operational Committee Meeting



***Piping & Valve Improvements***

SS Mechanical removed the surge tank to complete the piping & valve improvements

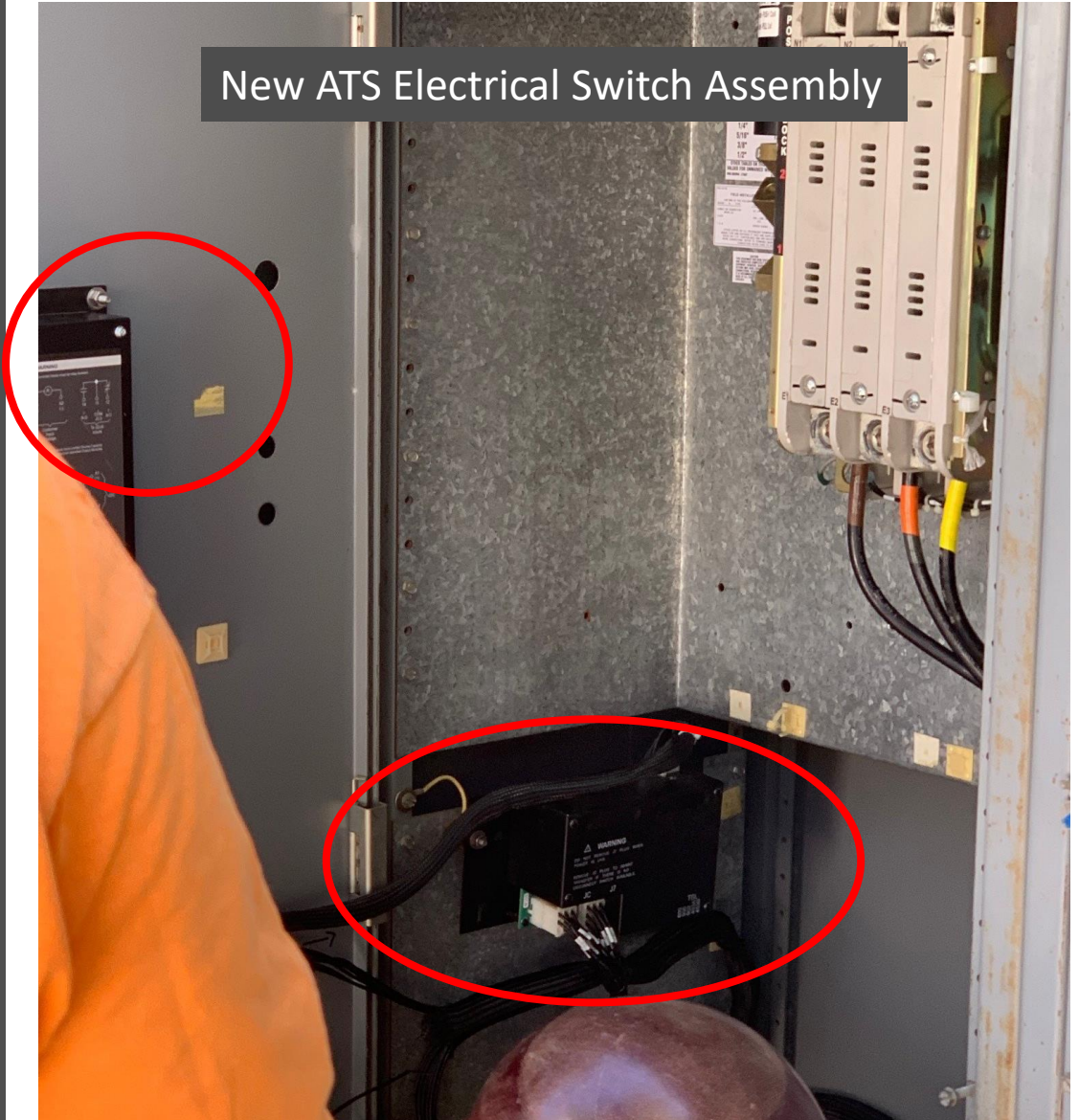


***Two Projects in One***

Operations & Maintenance used this project as an opportunity to make electrical improvements to the Automatic Transfer Switch (ATS)



Original ATS Electrical Switch



New ATS Electrical Switch Assembly

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**OPERATIONAL MATTERS**

**ITEM 10: MAINTENANCE DEPARTMENT UPDATES**

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The following is a brief report of the wastewater system for **May 2021**.

**Projects and Repairs**

1. Maintenance Department staff worked with Hydrotech Electric on the electrical improvements at the Robinson Ranch Wastewater Treatment Plant.
2. Maintenance Department staff conducted weed abatement at Robinson Ranch Wastewater Treatment Plant and Porter Ranch property.
3. Maintenance Department staff installed new plumbing and a polymer pump for the Filter Belt Press at the Robinson Ranch Wastewater Treatment Plant.
4. Maintenance Department staff finished the upgrade with the Water Operations new District fleet vehicle, Ford F250.
5. Maintenance Department staff assisted Flo-Services with the electric install on the north side of the El Toro Sewer Lift Station, which is now 90% complete.
6. Maintenance Department staff has completed the EMASS program with TESCO Controls.
7. Maintenance Department staff participated in the Interview process for new CMMS program for Asset Management and a GIS program.
8. Maintenance Department staff assisted with office remodel at the Districts Administration Facility.
9. Maintenance Department staff worked with AT&T to repair a damaged phone line at the Falcon Booster/Santiago Lift Station.
10. Maintenance Department staff worked with Hydrotech Electric on the preparations for the upcoming SCADA improvements.

**RECOMMENDED ACTION:**

*Committee to receive system status updates. No action required.*

**EXHIBITS**

None

**CONTACTS (staff responsible): PALUDI/STROUD**

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 2, 2021**

**REGULATORY AND OTHER MATTERS  
ITEM 11: OTHER MATTERS/REPORTS**

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Other Matters/Reports from the General Manager and/or District staff may be provided at the time of the Engineering/Operational Committee Meeting.

**RECOMMENDED ACTION:**

*Hear Other Matters/Reports that may have arisen after the posting of the agenda.*

**EXHIBITS**

None

**CONTACTS (staff responsible): PALUDI**