



ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
ADMINISTRATION FACILITY, BOARDROOM
AUGUST 3, 2022 AT 7:00 AM

COMMITTEE MEMBERS

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

DISTRICT STAFF

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

AGENDA NOTE:

Trabuco Canyon Water District (District) will make this Engineering/Operational Committee Meeting available by telephone audio as follows:

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. You may submit public comments by email to the Committee at 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. 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. 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 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

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | AUGUST 3, 2022

ENGINEERING MATTERS

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

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. July 6, 2022 Committee Meeting

ITEM 2: DISCUSSION CONCERNING THE DISTRICT'S 2021 SYSTEMWIDE MASTER PLAN AND CONDITION ASSESSMENT PROJECT

RECOMMENDED ACTION:

Committee to receive information at the time of the Committee meeting.

ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT (DWTP) TRAILER REPLACEMENT PROJECT

RECOMMENDED ACTION:

Committee to receive information at the time of the Committee meeting.

ITEM 4: TOPANGA BOOSTER PUMP STATION AUTOMATIC TRANSFER SWITCH (ATS) REPLACEMENT PROJECT

RECOMMENDED ACTION:

Approve and recommend the Board of Directors ratify the purchase of one new Automatic Transfer Switch and temporary rental equipment from Duthie Power Services for \$27,297, and related electrical services from Hydrotech Electric for \$15,957, with a 10% contingency for a total not to exceed amount of \$47,579.24 (Action Calendar).

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. South Orange County IRWM Grant Project
2. Other Projects

RECOMMENDED ACTION:

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



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | AUGUST 3, 2022**

OPERATIONAL MATTERS

**PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT
OSCAR ULLOA, WASTEWATER OPERATIONS SUPERINTENDENT
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT**

ITEM 6: WATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 7: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 9: 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. 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 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.

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.



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

ADMINISTRATIVE MATTERS

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. *July 6, 2022 Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA/SANGI



TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JULY 6, 2022

DIRECTORS PRESENT

Stephen Dopudja, Committee Chair
Mike Safranski, Committee Member

STAFF PRESENT

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

PUBLIC PRESENT

None

CALL MEETING TO ORDER

Director Dopudja called the July 6, 2022 Engineering/Operational Committee Meeting to order at 7:00 AM.

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).

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JULY 6, 2022**

ITEM 2: DESIGN SERVICES FOR GOLF CLUB SEWER LIFT STATION REPAIRS & IMPROVEMENTS

Mr. Paludi introduced this matter for Committee consideration. Ms. Lausten provided a brief review of staff efforts to date on the rehabilitation of this facility, and she presented a proposal from JIG Consultants for engineering design services. Discussion occurred concerning project costs to date and project schedule for completion. Ms. Lausten recommended the Board of Directors approve and authorize the General Manager to contract with JIG Consultants for the engineering design services.

RECOMMENDED ACTION:

The Committee recommended the Board of Directors authorize the General Manager to execute an agreement with JIG Consultants for design services for Golf Club Sewer Lift Station Improvements for \$87,000 with a contingency of \$8,700, for a not to exceed amount of \$95,700 (Action Calendar).

ITEM 3: SCADA UPGRADE PROJECT PHASE SIX AGREEMENT WITH TESCO CONTROLS

Mr. Paludi introduced this matter for Committee consideration, and he reported that this project phase will finalize the project systemwide. Ms. Lausten provided a review of the project phases completed to date, and she presented a proposal from TESCO Controls for upgrades at the remaining remote sites, the Robinson Ranch Wastewater Treatment Plant (WWTP), and SCADA/PLC Programming. Discussion occurred concerning project costs to date. Ms. Lausten recommended the Board of Directors approve and authorize the General Manager to contract with TESCO Controls for the SCADA system upgrades for Fiscal Year 2022-2023. Mr. Paludi reported that District staff will provide an updated fiscal impact report with costs outside of the original scope of work.

RECOMMENDED ACTION:

The Committee recommended the Board of Directors authorize the General Manager to execute a contract for the Fiscal Year 2022-2023 SCADA Upgrades to TESCO Controls, Inc. in the not to exceed amount of \$960,000 (Action Calendar).

ITEM 4: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING ROSE AND LANG WELLS

Mr. Paludi introduced this information item for Committee consideration. Ms. Lausten presented a technical memorandum prepared by Hazen and Sawyer which provided a condition assessment of the facility. Ms. Lausten provided a brief review of the proposed costs for cleaning the wells and perceived costs for well casing improvements. Discussion occurred concerning the long-term goals for the facility and a recommendation to perform an internal analysis water production and cost comparison with other water sources.

RECOMMENDED ACTION:

No action was taken.

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECTS

1. OC Rescue Mission Service relocation

Ms. Lausten provided a brief project status update, and she delivered a PowerPoint presentation which reviewed the work completed to date. Ms. Lausten provided background information related to this project work, and she mentioned that District staff is requesting a perpetual, non-exclusive grant of easement related to onsite pipelines and access. Discussion occurred concerning ongoing collaboration between the District and the property owner.

2. Master Plan and Condition Assessment Update

Ms. Lausten provided a project update for the Committee, and she mentioned that representatives from Hazen and Sawyer will deliver a project status update presentation at the following committee meeting.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JULY 6, 2022**

3. South Orange County IRWM Grant Project

Mr. Paludi reported that the South Orange County IRWM grant funding application period has ended and that District staff submitted an application for the expansion of the District's Dove Creek/Tick Creek Dry Season Recovery facilities. Ms. Lausten provided a brief review of the proposed project scope and the environmental factors and considerations. Discussion occurred concerning the District's recycled water production levels.

4. Other Projects

There were no other project updates.

RECOMMENDED ACTION

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

ITEM 6: WATER SYSTEM UPDATES

Mr. Kessler reviewed the projects and repairs for June 2022, and he reported that Water Operations staff has completed the following tasks:

1. Worked with Tesco Controls and Hydrotech Electric on the Dimension Water Treatment Plant SCADA upgrades.
2. Worked with GCI Construction to install a new water service line to the OC Rescue Mission.
3. Continued to work with Cartigraph on the new CMMS program and visited the Laguna Beach Water District to view its operation.
4. Performed maintenance on the Trabuco PRV, as well as the Rose Altitude Valve, which are located in the Canyon Community.
5. Performed weed abatement and general site cleanup at Dimension Water Treatment Plant, Trabuco Tanks and Robinson Ranch.

Mr. Kessler reviewed the Monthly Water System Operations Summary with the Committee.

RECOMMENDED ACTION

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

ITEM 7: WASTEWATER SYSTEM UPDATES

Mr. Ulloa reviewed the projects and repairs for June 2022, and he reported that Wastewater Operations staff had completed the following tasks:

1. Installed a temporary pump at Dove Lake to supplement the reclaim reservoir.
2. Adjusted wastewater plant operations to comply with Southern California Edison, Time of Use program.
3. Installed a low flow, circulating pump to maintain chlorine residual during time of use.
4. Cleaned the Bell Canyon Lift Station wet well, located in Dove Canyon Community.
5. Removed a 12-inch corroded section of pipe from the chlorine contact chamber Wastewater Treatment Plant.
6. Conducted the Fats, Oil, Grease (F.O.G.) interceptor inspections.

Mr. Ulloa reviewed the Monthly Non-Domestic Water System Summary report for June 2022. Mr. Paludi reported that the Rancho Cielo Community Association has requested a meeting with District staff to evaluate onsite irrigation system improvements and conversion to recycled water.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | JULY 6, 2022**

RECOMMENDED ACTION

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

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

Mr. Stroud reviewed the projects and repairs for June 2022, and he reported that Maintenance staff completed the following tasks:

1. Attended an Ignition Software tour at the City of Orange.
2. Swapped out a failed air blower at the Wastewater Treatment Plant blower room.
3. Worked with Flo-Services at the Dimension Water Treatment Plant on the backwash sump pump.
4. Quarterly Basic Inspection Terminals (BIT) inspections were performed.
5. Heritage Lift Station emergency generator cooling system replaced (water pump, radiator, coolant, hoses).
6. Worked with the Sanitation Department on the Xylem rental pump for Dove Lake.
7. Went to the City of Laguna Beach for Cartograph Software Tour.
8. Performed preventative maintenance on the F650 dump truck.

RECOMMENDED ACTION

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

ITEM 7: OTHER MATTERS/REPORTS

There were no other matters presented for consideration.

RECOMMENDED ACTION

There was no action taken.

ADJOURNMENT

Director Dopudja adjourned the July 6, 2022 Engineering/Operational Committee Meeting at 8:21 AM.

DRAFT

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

ENGINEERING MATTERS

ITEM 2: DISCUSSION CONCERNING THE DISTRICT’S 2021 SYSTEMWIDE MASTER PLAN AND CONDITION ASSESSMENT

In 1999, Trabuco Canyon Water District (District) approved the Water, Wastewater and Recycled Water Master Plan (Master Plan) developed by Montgomery Watson. Since that time, the District has evolved into a fully developed, and nearly a “built out” community. Several of the Capital Improvement Projects (CIP) and recommended actions identified in the 1999 Master Plan have been implemented. The District recognizes the need to update the 1999 Master Plan and develop the tools needed to assist in planning, operating, and maintaining District aging water, non-domestic water systems and sewer infrastructure. As the District’s infrastructure ages, it is crucial to identify the needed system improvements with particular attention to the condition and operation of existing reservoirs, pump stations, lift stations, and treatment facilities’ and allowing sufficient time to plan, finance, and construct the improvements.

The contract was awarded to Hazen in October 2021 for the Systemwide Master Plan and Condition Assessment (Project) and Staff has been working towards completing the Project by December 2022 (Exhibit 1). The following summarized the Project progress:

- Completed:
 - Field Assessments/comprehensive site visits
 - Hydraulic model software selection workshop
 - Collection of SCADA data
 - Fire hydrant flow testing at 18 locations with Staff
 - Sewer flows monitors placed at 8 sites for 3 weeks (ADS)
 - Hydraulic system schematics developed
 - Rose and Lang Wells Technical Memorandum completed
 - Building Hydraulic Models
 - Asset register, condition assessment analysis and recommendations
- In Progress:
 - Hydraulic Modeling Analysis
 - Master Plan Report/CIP Recommendations

A Hazen representative will deliver a presentation on the condition assessment results and review the Power BI dashboard software at the time of the meeting.

UNDING SOURCE:

General Fund

FISCAL IMPACT (PROJECT BUDGET):

Approved: \$591,520

Revised: \$658,300

ENVIRONMENTAL COMPLIANCE:

Not Applicable

RECOMMENDED ACTION:

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

EXHIBIT(S):

1. Project Schedule

CONTACTS (staff responsible): PALUDI/LAUSTEN

Trabuco Canyon Water District
Master Plan and Condition Assessment Study
Project Schedule

ID	Task Name	Duration	Start	Finish	Nov	Dec	Qtr 1, 2022			Qtr 2, 2022			Qtr 3, 2022			Qtr 4, 2022			Qtr 1, 2023
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		
1	NOTICE TO PROCEED	0 days	11/15/21	11/15/21	◆ 11/15														
2	DATA COLLECTION AND REVIEW	14 wks	11/22/21	2/25/22															
3	Data Collection	14 wks	11/22/21	2/25/22															
4	Data Review	12 wks	12/6/21	2/25/22															
5	FIELD WORK	25.2 wks	12/13/21	6/6/22															
6	Hydrant Tests	1 wk	3/28/22	4/1/22															
7	Flow Monitoring	4 wks	4/4/22	4/29/22															
8	Condition Assessments	25.2 wks	12/13/21	6/6/22															
9	Asset Register Update	14 wks	12/13/21	3/18/22															
10	Condition Assessments	1 wk	1/24/22	1/28/22															
11	WWTP Condition Assessment	14 wks	3/1/22	6/6/22															
12	HYDRAULIC MODELS	9 wks	4/4/22	6/3/22															
13	Build/Update Models	5 wks	4/4/22	5/6/22															
14	Model Calibration	4 wks	5/9/22	6/3/22															
15	MASTER PLAN UPDATE REPORT	28 wks	6/6/22	12/16/22															
16	Draft #1 Final Report	12 wks	6/6/22	8/26/22															
17	Analysis/Report Preparation	7 wks	6/6/22	7/22/22															
18	QC Report	2 wks	7/25/22	8/5/22															
19	Deliverable to TCWD	0 days	8/5/22	8/5/22															
20	TCWD Review	3 wks	8/8/22	8/26/22															
21	Draft #2 Final Report	11 wks	8/29/22	11/11/22															
22	Analysis/Report Preparation	6 wks	8/29/22	10/7/22															
23	QC Report	2 wks	10/10/22	10/21/22															
24	Deliverable to TCWD	0 days	10/21/22	10/21/22															
25	TCWD Review	3 wks	10/24/22	11/11/22															
26	Final Report	5 wks	11/14/22	12/16/22															
27	Report Preparation	4 wks	11/14/22	12/9/22															
28	QC Report	1 wk	12/12/22	12/16/22															
29	Deliverable to TCWD	0 days	12/16/22	12/16/22															

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

ENGINEERING MATTERS

ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT (DWTP) TRAILER REPLACEMENT PROJECT

Trabuco Canyon Water District (District) owns, operates, and maintains the Dimension Water Treatment Plant (WTP) in the City of Lake Forest. Water Operations Staff has been working out of a 12'x30' office trailer since approximately 2006. The office is in poor condition, is not ADA compliant, and is too small to accommodate five operators, a bathroom and kitchen area. Staff worked with JIG Consultants to design a new office and relocate it on-site. The new office is a 12'x60' modular building and includes a supervisor office, two cubicles, a kitchen area and an improved bathroom which includes a shower and locker facilities

Staff and JIG Consultants have completed the Performance Specification and is included for Committee's review.

FUNDING SOURCE:

General Fund

FISCAL IMPACT (Including Engineering, Inspection and Testing):

FY21/22 - \$50,000

FY22/23 - \$300,000

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption was filed with the County of Orange on February 24, 2022

RECOMMENDED ACTION:

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

EXHIBIT(S):

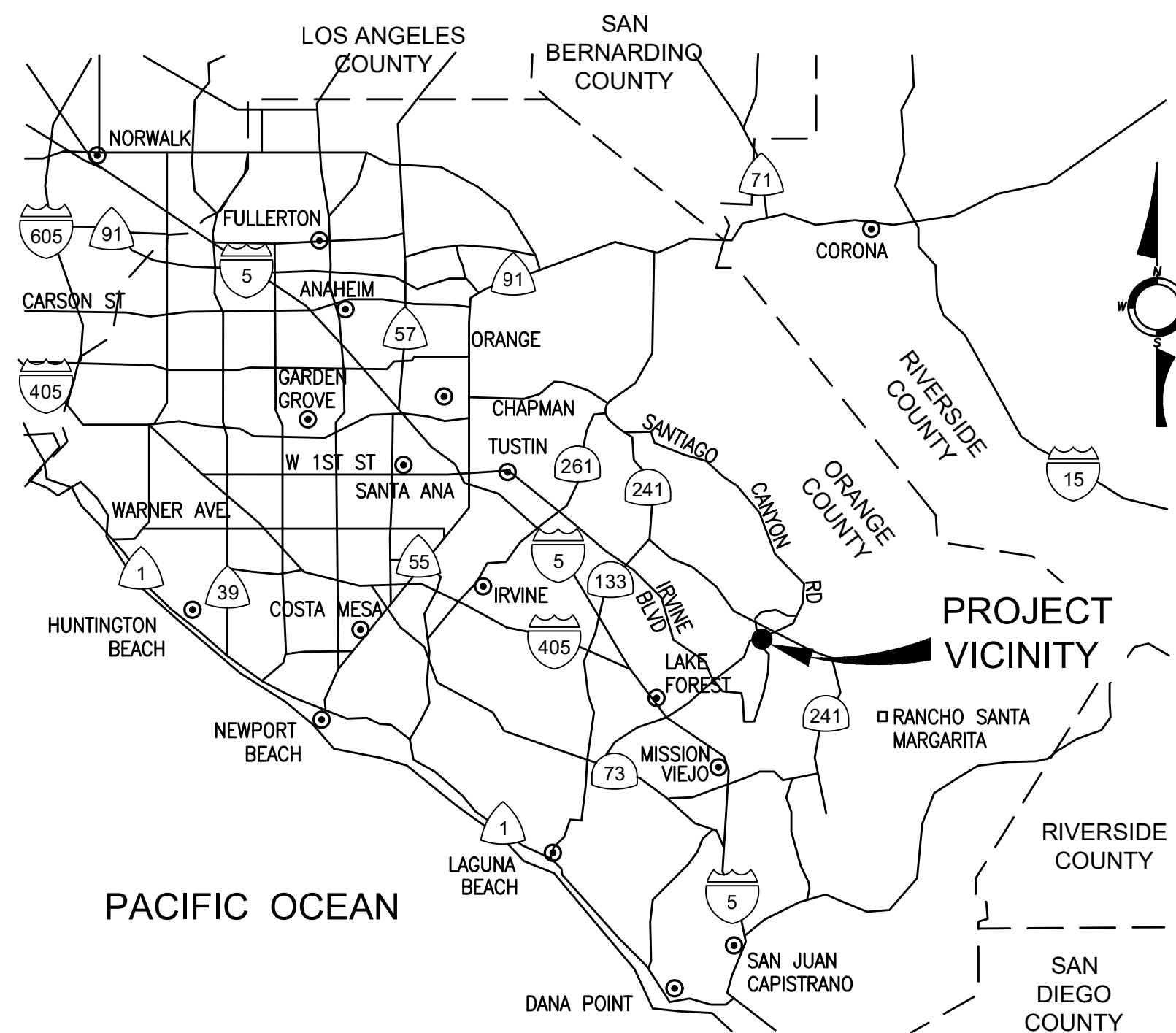
1. Performance Specification.

CONTACTS (staff responsible): PALUDI/LAUSTEN

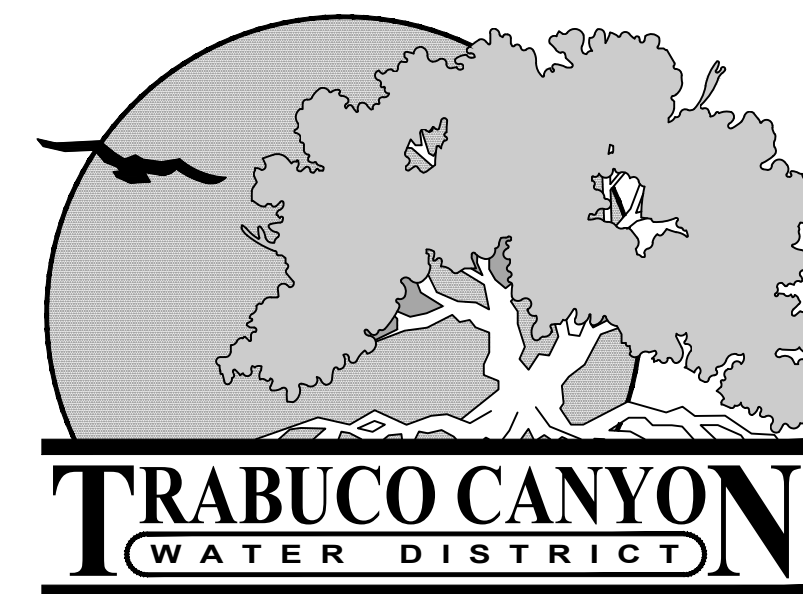
TRABUCO CANYON WATER DISTRICT

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

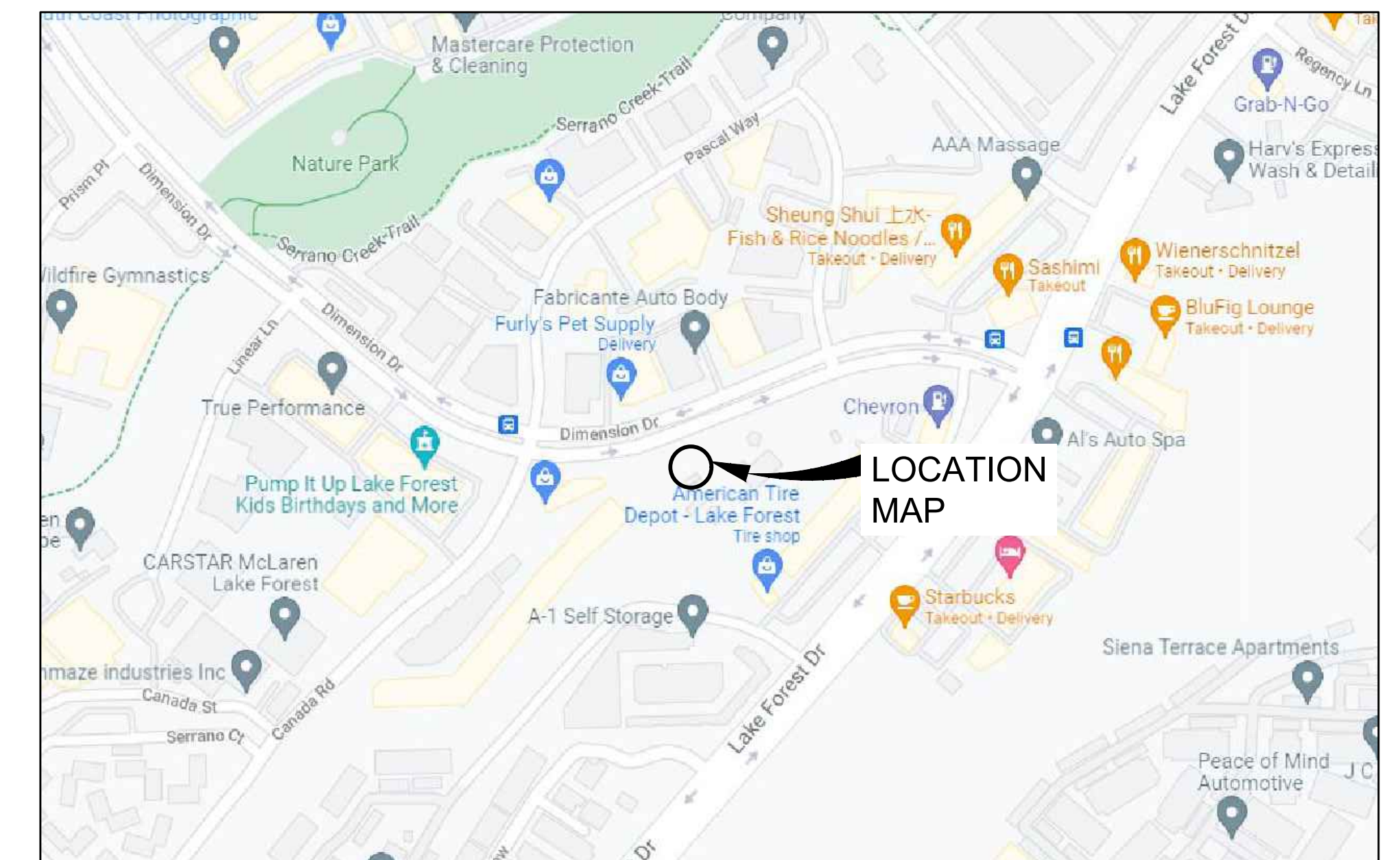
PROJECT NO. 2122-011



VICINITY MAP
NOT TO SCALE



AUGUST 2022



LOCATION MAP
NOT TO SCALE

SHEET INDEX

DWG. NO.	SHT. NO.	SHEET TITLE
G-01	1	TITLE SHEET, VICINITY AND LOCATION MAPS, AND SHEET INDEX
G-02	2	GENERAL NOTES, STANDARD SYMBOLS, AND ABBREVIATIONS
C-01	3	SITE AND DEMOLITION PLAN
C-02	4	OFFICE TRAILER INTERIOR FURNISHINGS
E-01	5	ELECTRICAL SYMBOLS AND NOTES
E-02	6	ELECTRICAL SITE PLAN
E-03	7	OFFICE TRAILER ELECTRICAL PLAN
E-04	8	SINGLE LINE DIAGRAM

APPROVED:
TRABUCO CANYON WATER DISTRICT

LORRAINE S. LAUSTEN R.C.E. 67027 DATE
DISTRICT ENGINEER

GENERAL NOTES

- NOTIFY TRABUCO CANYON WATER DISTRICT (DISTRICT) 714-858-0277 AT LEAST 48 HOURS BUT NOT MORE THAN 72 HOURS BEFORE STARTING WORK, OR AFTER ANY DELAY, BEFORE RESUMING WORK.
- THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 811 AT LEAST 48 HOURS PRIOR TO STARTING WORK.
- ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK) LATEST EDITION, AND THE DISTRICT'S STANDARD SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND THE SPECIFICATIONS AND THE STANDARD SPECIFICATIONS ON THE JOB AT ALL TIMES.
- CONCRETE WORK SHALL BE PER PLANS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
- PIPELINES SHALL BE PRESSURE TESTED TO 200 PSI.
- CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND NOISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY CLEANUP OF ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION. CONTRACTOR TO CLEAN STREET WITH SWEEPER OR EQUAL PRIOR TO END OF EACH WORK DAY AS A MINIMUM.
- ALL SURPLUS MATERIAL REMOVED, INCLUDING EXCAVATED MATERIALS WHICH ARE NOT SUITABLE FOR USE IN THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT LOCATION ACCEPTABLE TO ALL AFFECTED AGENCIES.
- THE CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING CROSSING UNDERGROUND UTILITIES AND POINTS OF CONNECTION TWO WEEKS, IN ADVANCE OF THE CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY ADDITIONAL COST REQUIRED IN THE EVENT THAT HE HAS NOT CORRECTLY LOCATED THE EXISTING UTILITIES.
- THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND BE RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. NEITHER THE DISTRICT NOR THE DISTRICT'S ENGINEER SHALL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY.
- THE SURROUNDING AREA SHALL BE RETURNED TO THE CONDITION ENCOUNTERED AT THE START OF CONSTRUCTION.
- CONTRACTOR SHALL CONTACT THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE FOR SCHEDULING OF ACCESS TO THE PROJECT SITE. CONTRACTOR SHALL ADHERE TO ALL DISTRICT REQUIREMENTS FOR SITE ACCESS AND MAINTAIN CONTINUAL COORDINATION WITH DISTRICT FOR THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT IN PLACE EXISTING SEWER, GAS, WATER LATERALS AND OTHER UTILITIES OR REPLACE IN KIND. LOCATIONS OF EXISTING UTILITIES AND SUBSTRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION IN THE AREA OF THE SPECIFIC SUB-STRUCTURE.
- CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POINTS OF CONNECTION PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES, PAVEMENT, CURB, STRUCTURE, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS AS A RESULT OF HIS OPERATIONS, AND WILL BE REQUIRED TO REPAIR OR REPLACE SAME TO THE SATISFACTORY OF, AND AS DIRECTED BY, THE DISTRICT REPRESENTATIVE OR IMPACTED UTILITY COMPANY.
- CONSTRUCTION SURVEYS FOR THIS PROJECT SHALL BE PROVIDED BY THE DISTRICT. SURVEY POINTS DESTROYED AS A RESULT OF THE CONTRACTORS NEGLIGENCE OR FAILURE TO PROVIDE PROPER PROTECTION, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL MAINTAIN AND PROVIDE THE DISTRICT WITH A "RECORD" SET OF AS BUILT DRAWINGS AT THE COMPLETION OF ALL WORK PER THE PLANS AND SPECIFICATIONS.
- TRENCH COMPACTION AND SUBGRADE COMPACTIONS TESTS SHALL BE PERFORMED BY A LABORATORY DESIGNATED BY THE DISTRICT, UTILIZING CALIFORNIA TEST METHOD NO. 216 AND 231. THE DISTRICT WILL FURNISH FIRST TESTS, WHEN REQUESTED, AT NO COST TO THE CONTRACTOR. ANY RE-TESTING REQUIRED DUE TO FIRST TEST FAILURES SHALL BE MADE AT LOCATIONS ORDERED BY THE ENGINEER, AND SHALL BE AT THE CONTRACTOR'S EXPENSE - COST OF WHICH WILL BE DEDUCTED FROM THE CONTRACTOR'S FINAL PAYMENT.
- LOOSE EXCAVATED MATERIAL SHALL NOT BE PLACED OR STORED IN WATERWAYS OR STORM DRAIN CHANNELS. ALL EXCESS EXCAVATED SOIL AND MATERIALS SHALL BE REMOVED AND DISPOSED OF IN A PROPER AND LEGAL MANNER BY THE CONTRACTOR. ALL DISTURBED SURFACE AREAS SHALL BE SHAPED TO FACILITATE DRAINAGE AND AVOID PONDING AND SHALL BE RESTORED TO NEAR NATURAL OR PRE-CONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL CONDUCT HIS CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT STORM OR OTHER WATERS MAY PROCEED UNINTERRUPTED ALONG THE STREET OR DRAINAGE COURSES.
- CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN UNANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE.

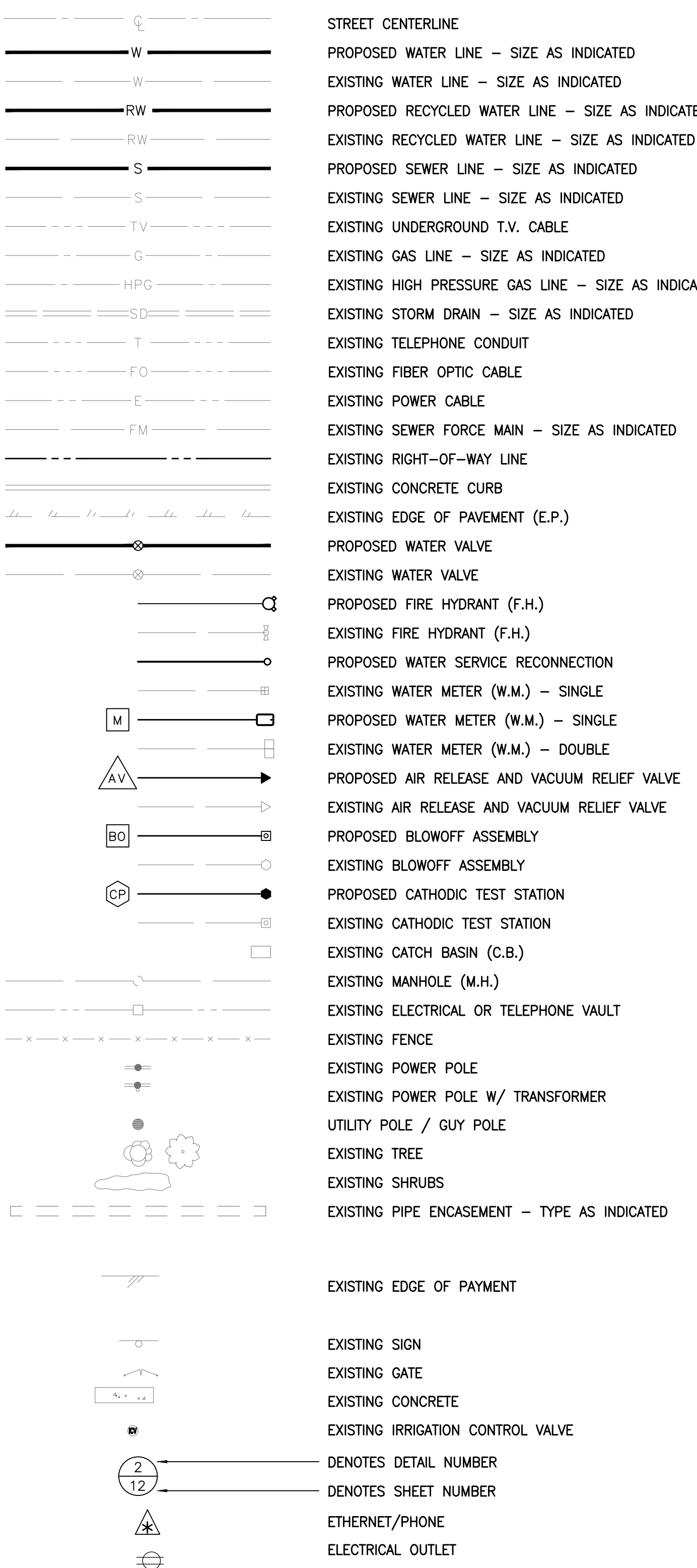
- CONTRACTOR SHALL DEMONSTRATE EXTREME CAUTION WHEN TRENCHING IN CLOSE PROXIMITY TO OTHER UTILITIES. ANY SIGN OF DEGRADATION OF THE TRENCH WALL OR STRUCTURE INTEGRITY WILL NOT BE TOLERATED AND WILL FORCE THE STOPPAGE OF WORK UNTIL THE TRENCH OR STRUCTURE INTEGRITY IS ADEQUATELY RESTORED.
- CONSTRUCTION WORK HOURS SHALL BE 8:00 AM TO 4:30 PM EXCLUSIVE OF SATURDAYS, SUNDAYS, OR HOLIDAYS, UNLESS OTHERWISE NOTED.
- BY ACCEPTING THIS CONTRACT, CONTRACTOR HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND, HOLD HARMLESS THE OWNER, TRABUCO CANYON WATER DISTRICT AND ITS REPRESENTATIVES, JIG CONSULTANTS (HEREINAFTER REFERRED TO AS ENGINEER) THEIR PARENT AND SUBSIDIARY COMPANIES, AGENTS, EMPLOYEES, CONSULTANTS AND REPRESENTATIVES FOR ANY AND ALL DAMAGE TO PERSONS OR PROPERTY OR WRONGFUL DEATH REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE, ACTIVE OR PASSIVE, OF OWNER, ENGINEER, THEIR PARENT AND SUBSIDIARY COMPANIES, AS WELL AS THEIR AGENTS AND EMPLOYEES, EXCEPTING ONLY THE SOLE NEGLIGENCE OF OWNER, ENGINEER THEIR PARENT OR SUBSIDIARY COMPANIES AND THEIR AGENTS AND EMPLOYEES TO THE FULLEST EXTENT PERMITTED BY LAW. SUCH INDEMNIFICATION SHALL EXTEND TO ALL CLAIMS, DEMANDS, ACTIONS, OR LIABILITY FOR INJURIES, DEATH OR DAMAGES OCCURRING AFTER COMPLETION OF THE PROJECT, AS WELL AS DURING THE WORK'S PROGRESS. CONTRACTOR FURTHER AGREES THAT IT SHALL ACCOMPLISH THE ABOVE AT ITS OWN COST, EXPENSE AND RISK EXCLUSIVE OF AND REGARDLESS OF ANY APPLICABLE INSURANCE COMPANY REGARDING COVERAGE.

SUCH "DISCHARGES" OF MATERIAL OTHER THAN STORM WATER ARE ALLOWED ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETIONS OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NOISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.

MATERIALS WHICH MAY HAVE EFFECTS OF POLLUTION INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING, AND SUPER CHLORINATED WATER LINE FLUSHINGS.

DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORM WATER RUN-OFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

STANDARD SYMBOLS



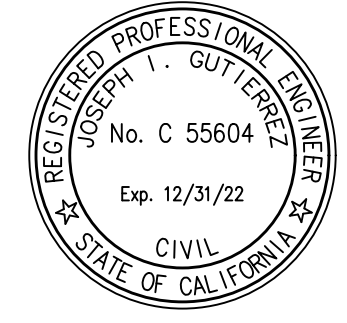
ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE OR ASBESTOS CEMENT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AV	AIR RELEASE & VACUUM RELIEF VALVE
AWG	AMERICAN WIRE GAUGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN CURVE
BFV	BUTTERFLY VALVE
BM	BENCHMARK
BO	MANUAL DRAIN AND BLOWOFF ASSEMBLY
CB	CATCH BASIN
CF	CURB FACE
CL	CLASS
CMB	CRUSHED MISCELLANEOUS BASE
CML&C	CEMENT-MORTAR LINED & COATED
CMP	CORRUGATED METAL PIPE
CMS	CHANGEABLE MESSAGE SIGNS
CMU	CONCRETE MASONRY UNIT
CP	CATHODIC PROTECTION
CSS	COASTAL SAGE SCRUB
CL(C)	CENTERLINE
DIA	DIAMETER
DI	DUCTILE IRON
DR OR SDR	RATIO OF PIPE DIAMETER
DWG	DRAWING
E	EAST
EC	END CURVE
EL	ELEVATION
EP	EDGE OF PAVEMENTS
EXIST (EX)	EXISTING
FL	FLOWLINE
F (FLG)	FLANGE
FG	FINISHED GRADE
FE	FLANGED END
FH	FIRE HYDRANT
FIP	FEMALE IRON PIPE THREAD
FM	FORCE MAIN
FS	FINISHED SURFACE
FT	FEET
FWY	FREEWAY
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GV	GATE VALVE
HP	HIGH POINT
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
INV	INVERT
IRWD	IRVINE RANCH WATER DISTRICT
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH
NE	NORTHEAST
NO	NUMBER
NW	NORTHWEST
NS	NATURAL SOIL
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PE	PLAIN END
PI	POINT OF INTERSECTION
P (PL)	PROPERTY LINE
PO	PUSH-ON
PH	POT HOLE
PSI	PRESSURE (POUNDS PER SQUARE INCH)
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
R (RAD)	RADIUS
REQD	REQUIRED
RT	RIGHT
RW	RECYCLED WATER
R/W	RIGHT-OF-WAY
RWW	RESILIENT WEDGE VALVE
S	SOUTH, SLOPE OR SEWER
SCE	SOUTHERN CALIFORNIA EDISON
SCH	SCHEDULE
SD	STORM DRAIN
SE	SAND EQUIVALENT OR SOUTH EAST
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STA	STATION
STL	STEEL
SW	SOUTHWEST
THK	THICK
TC	TOP OF CURB
TS	TRAFFIC SIGNAL (CONDUIT/CABLE)
TYP	TYPICAL
VERT	VERTICAL
W	WEST OR DOMESTIC WATER
WM	WATER METER
XING	CROSSING
∠	ANGLE

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



NO.	DATE	REVISIONS

DESIGN:	KN
DRAWN:	KN
CHECKED:	JG

DATE	
ENGINEER	JOSEPH I. GUTIERREZ RCE 55604
DISTRICT ENGINEER	LORRIE LAUSTEN RCE 67027

TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER
PROJECT NO. 2122-011

GENERAL NOTES, STANDARD SYMBOLS, AND ABBREVIATIONS

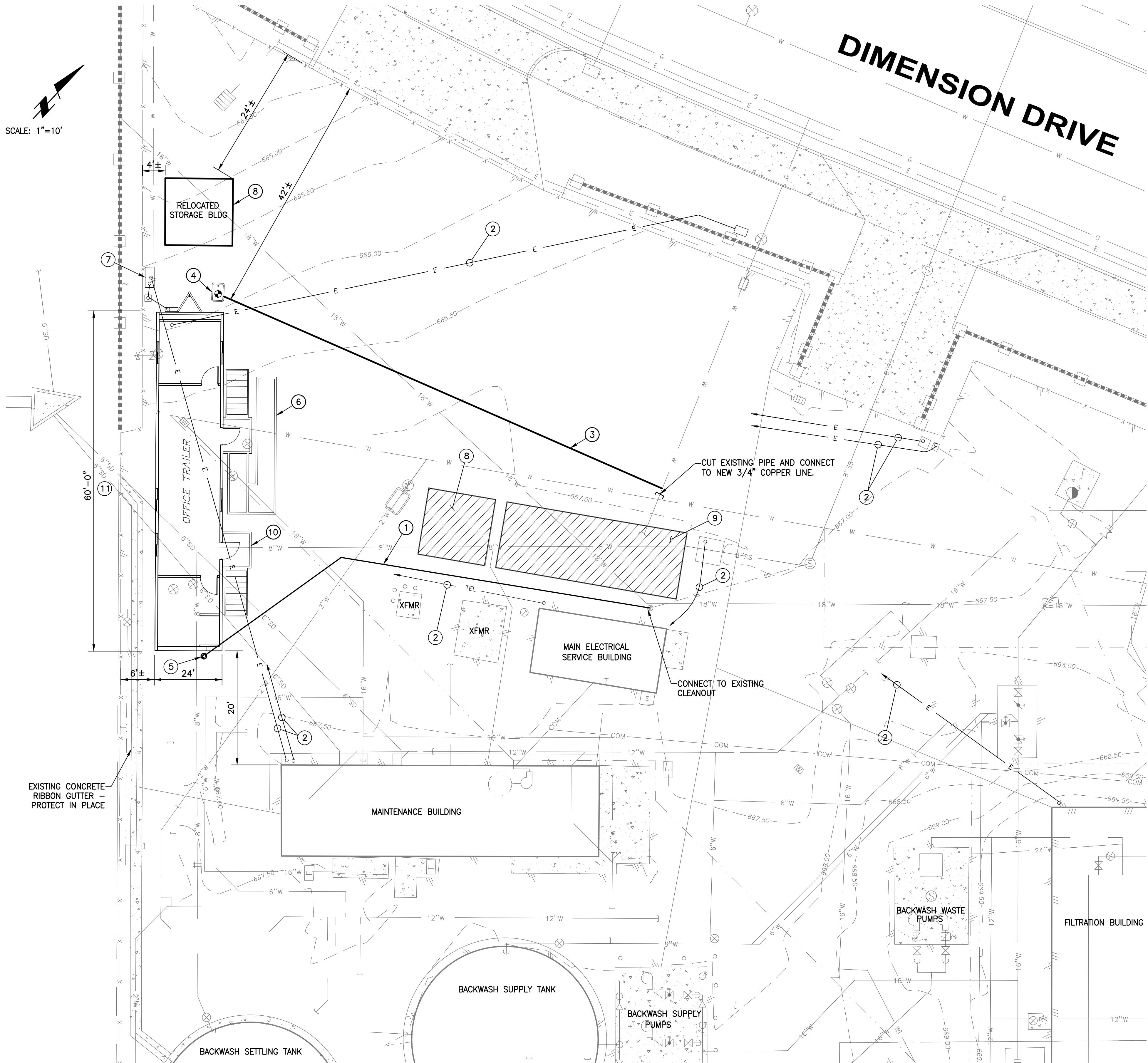
G-02
SHEET
2
OF
8



D:\Users\Public\Desktop\JIC_Consultants\Projects\2021\Task_Order_2_-_Dimension_Operations_Official\PROJECT\Drawings\DWG_Sheets\C-02.dwg Plotted on Jul 27, 2022 - 2:27pm by MatthewMcCombes

SCALE: 1"=10'

DIMENSION DRIVE



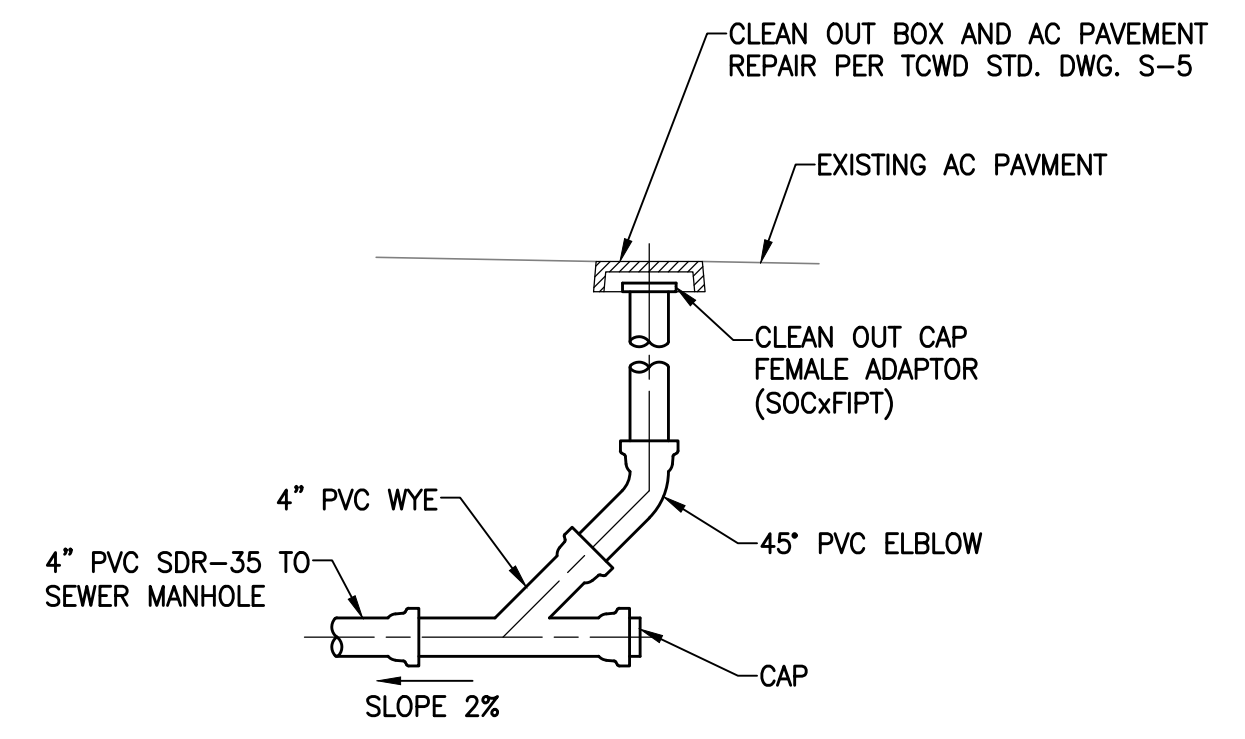
NOTES TO CONTRACTOR:

1. POTHOLE AND FIELD VERIFY ALL POINTS OF CONNECTION AND UTILITY CROSSINGS BEFORE ORDERING MATERIALS. REALIGN PROPOSED IMPROVEMENTS AS NEEDED TO MINIMIZE ALIGNMENT CONFLICTS.
2. RESTORE EXISTING SITE IMPROVEMENTS DAMAGED DURING CONSTRUCTION TO ORIGINAL CONDITION TO THE SATISFACTION OF THE DISTRICT.
3. PROTECT IN-PLACE EXISTING SIDEWALK, CURB, GUTTER, DRAIN PIPES, LANDSCAPING AND ALL EXISTING IMPROVEMENTS NOT SPECIFICALLY CALLED FOR REMOVAL. IF DAMAGED, CONTRACTOR SHALL RESTORE IN KIND TO THE OWNER'S SATISFACTION.
4. ALL BURIED PIPE AND CONDUIT SHALL HAVE 24" MIN. COVER, UNLESS OTHERWISE SPECIFIED ON PLANS.
5. CONTRACTOR TO COORDINATE WITH THE DISTRICT FOR TRANSITION SCHEDULE FROM EXISTING TO NEW TRAILER.

CONSTRUCTION NOTES

- ① CONSTRUCT 4" PVC SDR-35 SEWER WITH MINIMUM SLOPE OF 2%. REPAIR PAVEMENT PER TCWD STD. DWG S-6.
- ② CONSTRUCT ELECTRICAL AND COMMUNICATION CONDUITS AND WIRING PER ELECTRICAL PLANS.
- ③ CONSTRUCT 3/4" COPPER TYPE "K" TUBING (LENGTH AS REQUIRED) WITH MINIMUM 18" COVER. BACKFILL WITH SAND AND REPAIR PAVEMENT TO MATCH EXISTING PAVEMENT SECTION.
- ④ CONSTRUCT 3/4" BALL VALVE INSIDE POLYMER CONCRETE METER BOX WITH ONE PIECE LID. METER BOX TO BE PURCHASED FROM TCWD.
- ⑤ CONSTRUCT 4" CLEAN OUT PER DETAIL 2.
- ⑥ CONSTRUCT ADA RAMP, LANDING, STAIRS, AND SKIRTING TO ENTRANCE DOOR PER UBC CODE REQUIREMENTS. WALKING SURFACE SHALL BE STAMPED GALVANIZED.
- ⑦ CONSTRUCT NEMA 3R PANEL H FOR OPERATIONS TRAILER POWER PER ELECTRICAL PLANS.
- ⑧ RELOCATE EXISTING STORAGE BUILDING TO APPROXIMATE LOCATION SHOWN. CONTRACTOR TO COORDINATE FINAL LOCATION WITH DISTRICT OPERATIONS STAFF.
- ⑨ REMOVE AND DISPOSE OF EXISTING TRAILER OFFICE. EXISTING TRAILER SHALL REMAIN IN OPERATION UNTIL NEW TRAILER IS COMPLETE AND READY FOR OCCUPANCY.
- ⑩ CONSTRUCT LANDING, STAIRS, AND SKIRTING TO ENTRANCE DOOR PER UBC CODE REQUIREMENTS. WALKING SURFACE SHALL BE STAMPED GALVANIZED.
- ⑪ REMOVE EXISTING ASPHALT CONCRETE CURB AS NEEDED TO ALLOW CONSTRUCTION OF NEW TRAILER.

SITE PLAN 1
SCALE: 1" = 10'-0"



SEWER CLEAN OUT 2
NOT TO SCALE

D:\Users\Public\Dropbox\J.C. Consultants\Projects\2021\Task Order 2 - Dimension Operations Trailer\Task Order 2 - Dimension Operations Trailer\CD\Sheets\C-01.dwg Plotted on Jul 27, 2022 - 2:27pm by Matthew McCormick

DIGALERT CALL TOLL FREE 811
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



NO.	DATE	REVISIONS

DESIGN:	KN
DRAWN:	KN
CHECKED:	JG

JOSEPH I. GUTIERREZ	RCE 55604	ENGINEER
LORRIE LAUSTEN	RCE 67027	DISTRICT ENGINEER

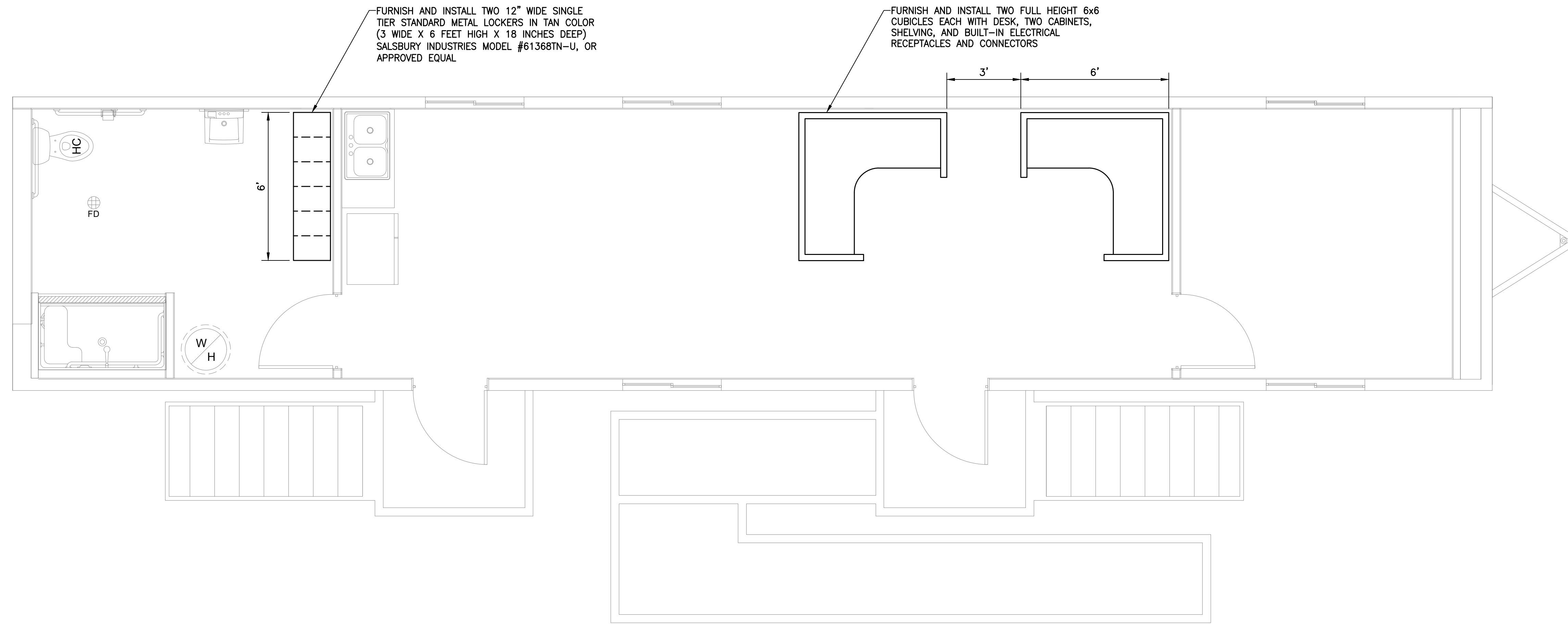
TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER
PROJECT NO. 2122-011

C-01
SHEET 3 OF 8
SITE AND DEMOLITION PLAN

DRAFT

NOTES TO CONTRACTOR:

1. THIS SHEET SPECIFIES INTERIOR FURNISHINGS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL OTHER INTERIOR FURNISHINGS WILL BE PROVIDED WITH PREPACKAGED MODULAR TRAILER.



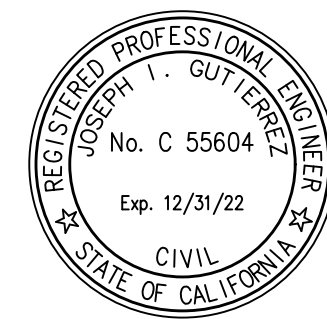
OFFICE INTERIOR FURNISHING 1
 SCALE: 3/8" = 1'-0"

D:\Users\Public\Dropbox\JIG Consultants\PROJECTS\2021\Task_Order_2 - Dimension Operations Office\PROJECT Design\DWG\Sheets\C-02.dwg Plotted on Jul 27, 2022 - 2:27pm by MatthewMcCombs

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.

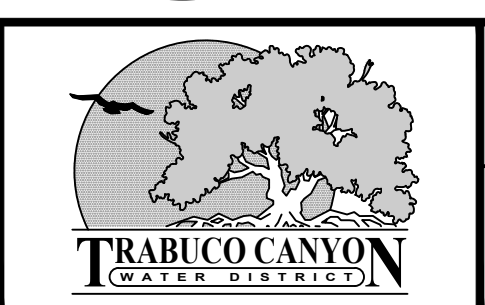
JIG CONSULTANTS
 318 W KATELLA AVE, SUITE A
 ORANGE, CA 92867
 (714) 978-4407
 www.jigconsultants.com



DRAFT

NO.	DATE	REVISIONS

DESIGN:	KN
DRAWN:	KN
CHECKED:	JG



JOSEPH I. GUTIERREZ	RCE 55604	ENGINEER
LORRIE LAUSTEN	RCE 67027	DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER
PROJECT NO. 2122-011

OFFICE TRAILER INTERIOR FURNISHINGS

C-02
SHEET
4
OF
8

GENERAL ELECTRICAL NOTES

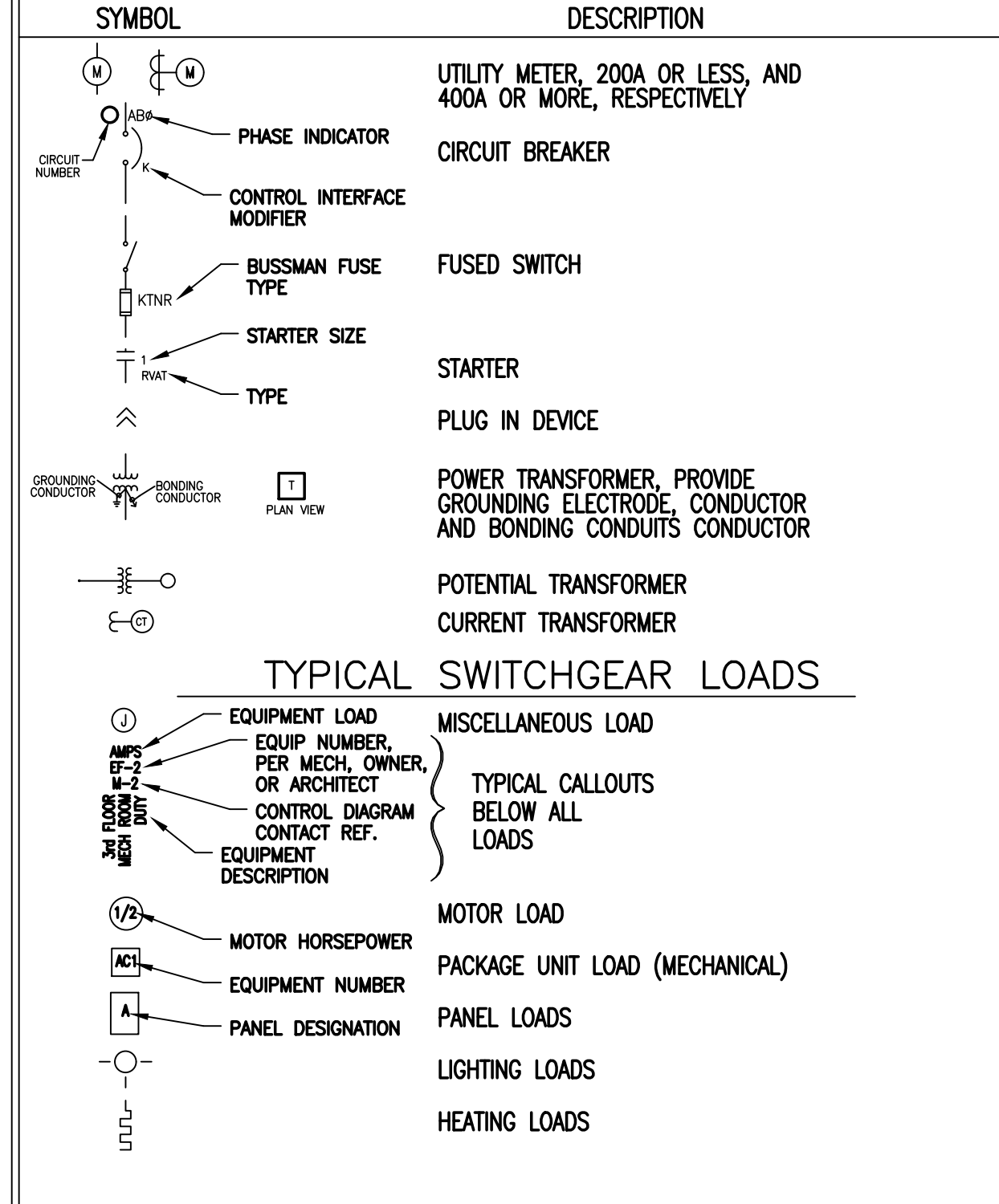
- THE INTENT OF THESE DRAWINGS IS TO DESCRIBE A COMPLETE AND OPERABLE SYSTEM. BRING ANY QUESTIONS TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.
- PROVIDE GROUND WIRE IN ALL CONDUITS.
- ALL INSTALLATIONS SHALL MEET FULLY WITH ALL THE REQUIREMENTS OF THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C.) MATERIAL SHALL BE U.L. LABELED OR LISTED.
- UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL CONDUIT SHALL BE PVC COATED RIG.
- ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS REQUIREMENTS. PREMISES SHALL BE CLEANED OF DIRT AND DEBRIS.
- SUBCONTRACTOR SHALL FURNISH FOR APPROVAL SHOP DRAWINGS OF ELECTRICAL EQUIPMENT, MOTOR STARTERS, LIGHTING FIXTURES, AND DEVICES PRIOR TO PURCHASE. ALL DIMENSIONS SHOWN ON ELECTRICAL DRAWINGS ARE PRELIMINARY BASED ON AVAILABLE INFORMATION AT BID TIME. FINAL DIMENSIONS MUST BE VERIFIED WITH ACTUAL EQUIPMENT SIZE AND FIELD VERIFIED DIMENSIONS OF EXISTING SITE/BUILDING CONDITIONS AND EQUIPMENT SIZES.
- ALL CONDUCTORS SHALL BE COPPER TYPE "THIN" BELOW GRADE AND TYPE "THIN/THIN" FOR EXPOSED AND ABOVE GRADE WORK.
- FURNISH AND PAY FOR ALL PERMITS, INCLUDING ELECTRICAL UTILITY CHARGES AND BUILDING DEPARTMENT PERMIT CHARGES.
- COORDINATE ELECTRICAL WORK WITH REQUIREMENTS OF OTHER TRADES.
- PROVIDE CONDUIT BETWEEN THERMOSTATS, AIR CONDITIONING CONTROL PANELS, MOTOR STARTERS, SOLENOID VALVES, AND AIR CONDITIONING UNITS. SEE MECHANICAL DRAWINGS FOR CONTROL WIRE SIZES OR SIZE PER N.E.C..
- IN ADDITION TO WIRING HERE INDICATED, CONTRACTOR SHALL REVIEW MECHANICAL AND OTHER DRAWINGS PRIOR TO BID AND INCLUDE ALL WIRING MATERIALS (INCLUDING RELAYS AND CONTROL DEVICES) INDICATED THEREON AS PART OF ELECTRICAL WORK.
- EACH SWITCH TO BE SEPARATE 2"x3" BOX OR 2"x3" SPACE IN GANG BOX.
- THE ELECTRICAL SUBCONTRACTOR MUST BE LICENSED BY THE STATE (C-10) AND MUST VISIT THE JOB SITE PRIOR TO BIDDING, EXAMINE EXISTING CONDITIONS, AND INCLUDE IN HIS BID ALL LABOR AND MATERIAL TO INTERFACE WITH OTHER SYSTEMS.
- ALL EXTERIOR LIGHTING CIRCUITS SHALL BE PROVIDED WITH A PHOTOCELL AND 7-DAY 24 HOUR DIGITAL TIMECLOCK LOCATED NEAR PANEL, WHETHER INDICATED ON PLANS OR NOT. CONTROL PANEL SHALL BE ENCLOSED WITH NUMBER OF TIME SWITCHES REQUIRED. CONTROL PANEL SHALL HAVE SPACE FOR TWO ADDITIONAL TIME SWITCHES. TIME SWITCHES SHALL HAVE SILVER CONTACTS 30 AMP MINIMUM RATING. FURNISH EQUAL NUMBER OF CONTACTS AS CIRCUITS CONTROLLED PLUS ONE SPARE POLE, TORK, INTERMATIC, AMF OR EQUAL.
- THE CONTRACTOR SHALL CONTACT THE ELECTRIC, TELEPHONE, AND CABLE T.V. COMPANIES AND OBTAIN FROM THEM THEIR REQUIREMENTS FOR CONDUITS, SUBSTRUCTURES, PANS, METERS, BACKBOARDS, PULL BOXES, ETC., AND INCLUDE COST OF FURNISHING AND INSTALLING THIS REQUIRED EQUIPMENT IN BID.
- OBTAIN MAXIMUM AVAILABLE FAULT CURRENT FROM THE POWER COMPANY PRIOR TO BID. EQUIPMENT, BUSES, AND CIRCUIT PROTECTIVE DEVICES SHALL HAVE INTERRUPTING RATING TO PROTECT THE ELECTRICAL SYSTEM AGAINST THE MAXIMUM AVAILABLE FAULT CURRENT.
- ALL UNDERGROUND RISERS AND SWEEPS TO BE PVC COATED RIGID STEEL GALVANIZED CONDUIT.
- CONTRACTOR IS TO SLEEVE BUILDING FOUNDATION FOR ALL UTILITY CONDUITS PER STRUCTURAL/ARCHITECTURAL DETAIL.
- TEMPORARY POWER FOR CONSTRUCTION, DEMOLITION, OR SYSTEM CHECKOUT IS TO BE PROVIDED BY THE CONTRACTOR AND SHALL BE PER N.E.C. AND CAL OSHA REQUIREMENTS.
- PULL BOXES NOT SPECIFICALLY SIZED ON THE DRAWINGS SHALL BE SIZED PER N.E.C. ARTICLE 370 AND FURNISHED WITH BOLT DOWN TRAFFIC RATED COVER. SET ON 12" PEA GRAVEL BASE.

- PRIOR TO DIGGING OR EXCAVATION, LOCATE U.G. UTILITIES BY CALLING 1-800-422-4133.
- PROVIDE PUBLIC STREET LIGHTING AND POWER TO TRAFFIC SIGNAL CONTROLLERS PER LOCAL REQUIREMENTS WHERE SHOWN ON CIVIL DRAWINGS. PROVIDE A PULL BOX PER FIXTURE AND 1-1/2"-3/8" BETWEEN FIXTURES AND SOURCE TO BE VERIFIED WITH ELECTRICAL UTILITY COMPANY.
- CIRCUIT BREAKERS USED AS SWITCHES SHALL BE LISTED FOR SWITCHING AND MARKED "SWD".
- NOTE: DANGER**
ALL CUSTOM CONTROL PANELS OR PLC'S MUST BE DESIGNED, CONSTRUCTED, PROGRAMMED AND TESTED BY A U.L. APPROVED PANEL SHOP. SUBMIT ALL FABRICATION DRAWINGS INCLUDING SCHEMATICS, WIRING DIAGRAMS WITH WIRE NUMBERS, BILL OF MATERIALS AND OPERATION MANUAL TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. ELECTRICAL CONTRACTORS (C-10'S) ARE NOT ACCEPTABLE FOR THIS WORK.
- ALL ELECTRICAL WORK TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AS DESCRIBED IN ANSI/NECA 1-2010 "STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION". SEE ALSO NEC 110-12.
- PROVIDE CONDUIT SEALS WITH DRAIN PLUG (EYSD) IN ALL CONDUITS ENTERING VAULTS TO PREVENT GROUND WATER OR WATER PONDS OR ANY WATER CONTAINMENT AREA FROM DRAINING WATER INTO ELECTRICAL EQUIPMENT IN BELOW GRADE VAULTS (NEC 230-8).
- THE CONTRACTOR SHALL ENGAGE AND PAY FOR THE SERVICES OF AN OUTSIDE PARTY, THIRD PARTY TESTING COMPANY TO SET AND TEST ALL TRIP SETTINGS ON ALL ADJUSTABLE CIRCUIT BREAKERS AND GROUND FAULT DEVICES AND PROVIDE TEST REPORT DATA SHEETS TO MULLEN AND ASSOCIATES, INC., ENGINEERS PRIOR TO ENERGIZING ANY NEW FEEDERS.
ALL TESTING SHALL COMPLY WITH NFPA N.E.C. 70E SAFETY REQUIREMENTS. USE ONE OF THE FOLLOWING TESTING CONTRACTORS OR AN APPROVED EQUIV:
1) ESEC, SAM FAZSAGET (562) 929-1871
2) ACCESSIBLE CONSULTING ENGINEERING, IRAN NASROUHI, (714) 544-6444
3) MONTGOMERY ENGINEERING SERVICES, INC., CARLOS NUNES, (562) 941-3763
4) TRANSFORMER, FRANK SHARAH, (949) 235-3215
5) OR SUBMIT EQUAL FOR APPROVAL.
- ARC-FLASH HAZARD:**
ALL ELECTRICAL EQUIPMENT WITH LIVE PARTS SUBJECT TO EXAMINATION OR MAINTENANCE SHALL BE LABELED IN A CLEARLY VISIBLE WAY TO WARN QUALIFIED PERSONNEL OF POTENTIAL ARC FLASH HAZARDS. PROVIDE STICK-ON LABELS FOR EACH OPERABLE ENCLOSURE DOOR. PER NEC 110.16, NFPA 70E-2009 AND ANSI Z535.4-1998. CONTRACTOR TO PROVIDE COORDINATION AND FAULT CURRENT ANALYSIS IN ORDER TO FILL DATA ON LABEL. ALL WORK ON ENERGIZED ELECTRICAL EQUIPMENT REQUIRES PERSONAL PROTECTION EQUIPMENT (PPE) PER NFPA 70E.
29. ALL SPLICES OR TAPS INSTALLED IN U.G. PULLBOXES SHALL BE LISTED FOR WET LOCATIONS PER N.E.C. - 300.5 (8).

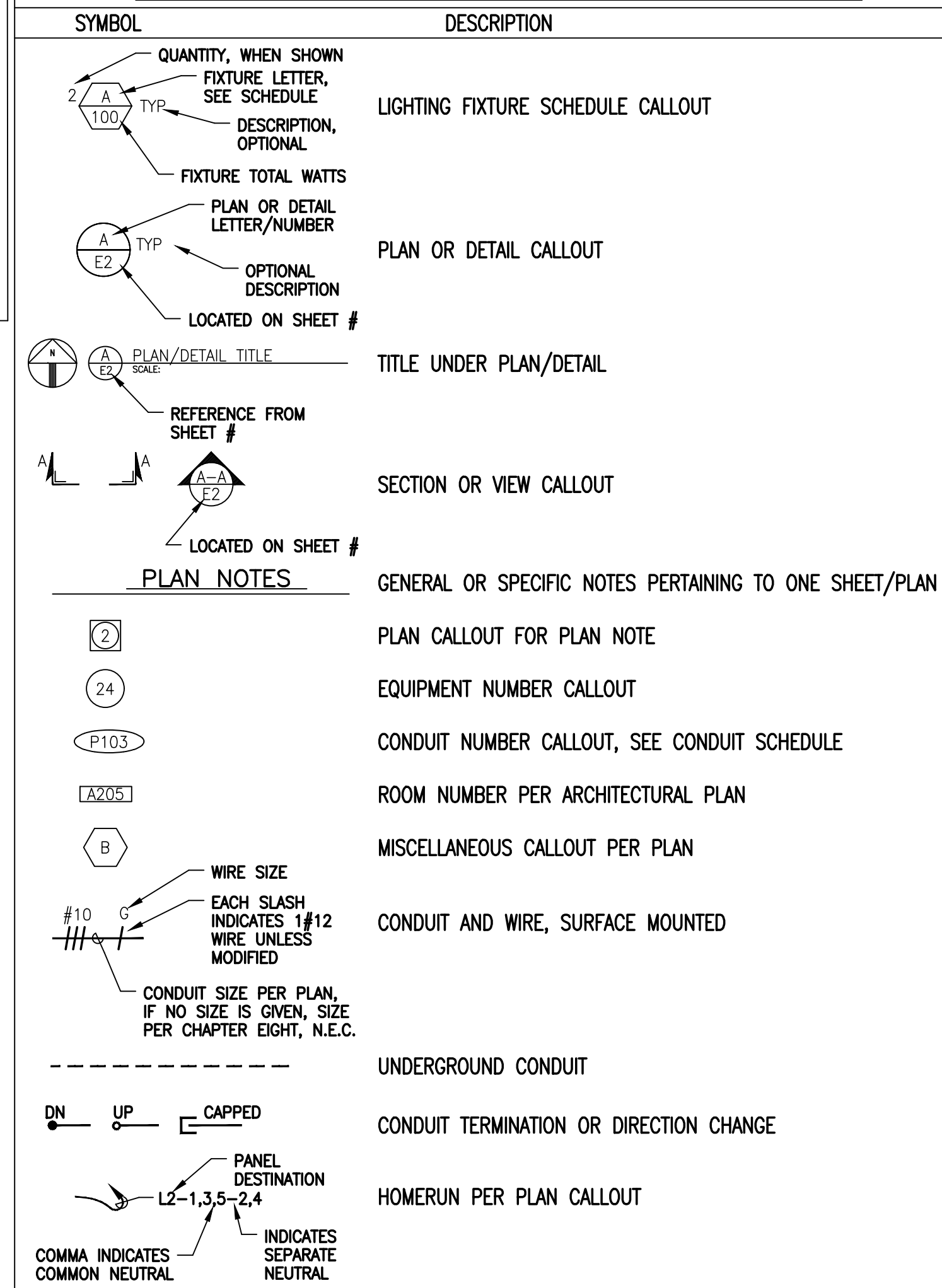
STANDARD SYMBOLS LIST -- ABBREVIATIONS

A	AMPS	J	J BOX	RM	ROOM
AIC	AVAILABLE INTERRUPTING CURRENT	LS	LIMIT SWITCH	RSG	RIGID STEEL GALVANIZED RIGHT OF WAY
ASC	AMPS SHORT CIRCUIT	LT	LIGHT	R/W	RIGHT OF WAY
BKBD	BACKBOARD	MAX	MAXIMUM	SCE	SOUTHERN CALIFORNIA EDISON
BKR	BREAKER	MCP	MASTER CONTROL PANEL	SDG&E	SAN DIEGO GAS & ELECTRIC
BLDG	BUILDING	MFR	MANUFACTURER	SEC	SECONDARY
		MH	MOUNTING HEIGHT	SIM	SIMILAR
		MIN	MINIMUM	SM	SURFACE MOUNTED
CAB	CABINET	MISC	MISCELLANEOUS	SQ	SQUARE
CB	CIRCUIT BREAKER	MSB	MAIN SWITCHBOARD	SQ FT	SQUARE FEET
CKT	CIRCUIT	N	NEUTRAL	SS	STAINLESS STEEL
CLF	CURRENT LIMITING FUSE	N.C.	NORMALLY CLOSED	SWG	SWITCHGEAR
CONN	CONNECTION	NEC	NATIONAL ELECTRICAL CODE		
CP1	CONTROL PANEL #	NEMA	NATIONAL ELECTRICAL MFGR'S ASSOC.	TC	TIMECLOCK
DIA	DIAMETER	NIC	NOT IN CONTRACT	TELE	TELEPHONE
DN	DOWN	N.O.	NORMALLY OPEN	TYP	TYPICAL
DWG	DRAWING	NTS	NOT TO SCALE	UG	UNDERGROUND
ELECT	ELECTRICAL	OH	OVERHEAD	UGPS	UNDERGROUND PULL SECTION
ENGR	ENGINEER	OL	OVERLOAD	UL	UNDERWRITERS LABORATORY
EQUIP	EQUIPMENT			UNO	UNLESS NOTED OTHERWISE
F	FLUSH	P	POLE	WP	WEATHERPROOF WRAPPED
FBO	FURNISHED BY OTHERS	PB	PULL BOX	WR	WRAPPED
FDN	FOUNDATION	PC	PHOTOCELL		
FUT	FUTURE	PNL	PANEL	XFMR	TRANSFORMER
G	GROUND	PP	PAY PHONE		
GFI	GROUND FAULT INTERRUPTER	PP#	POWER POLE #		
GND	GROUND	PRI	PRIMARY		
GRD	GRADE	PS	PRESSURE SWITCH		
HOA	HAND-OFF-AUTO	PT	PRESSURE TRANSMITTER		
HP	HORSEPOWER	QTY	QUANTITY		
HS	HOUSE SIDE SHIELD	R	RELAY		
IBC	INSTALLED BY CONTRACTOR	REL	RELAY		
IRR CONT	IRRIGATION CONTROLLER	RGS	RIGID GALVANIZED STEEL		

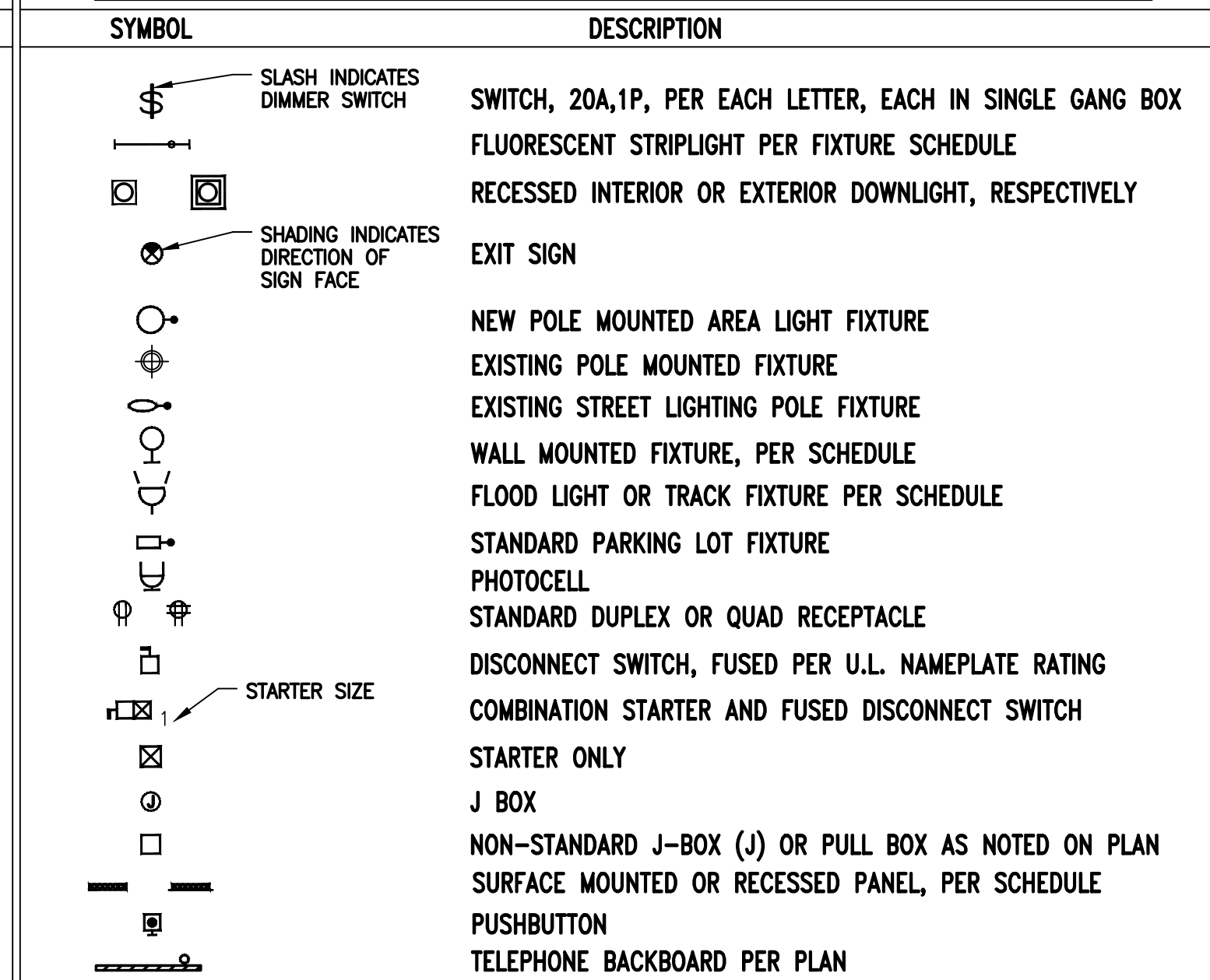
STANDARD SYMBOLS LIST -- SINGLE LINE DIAGRAMS



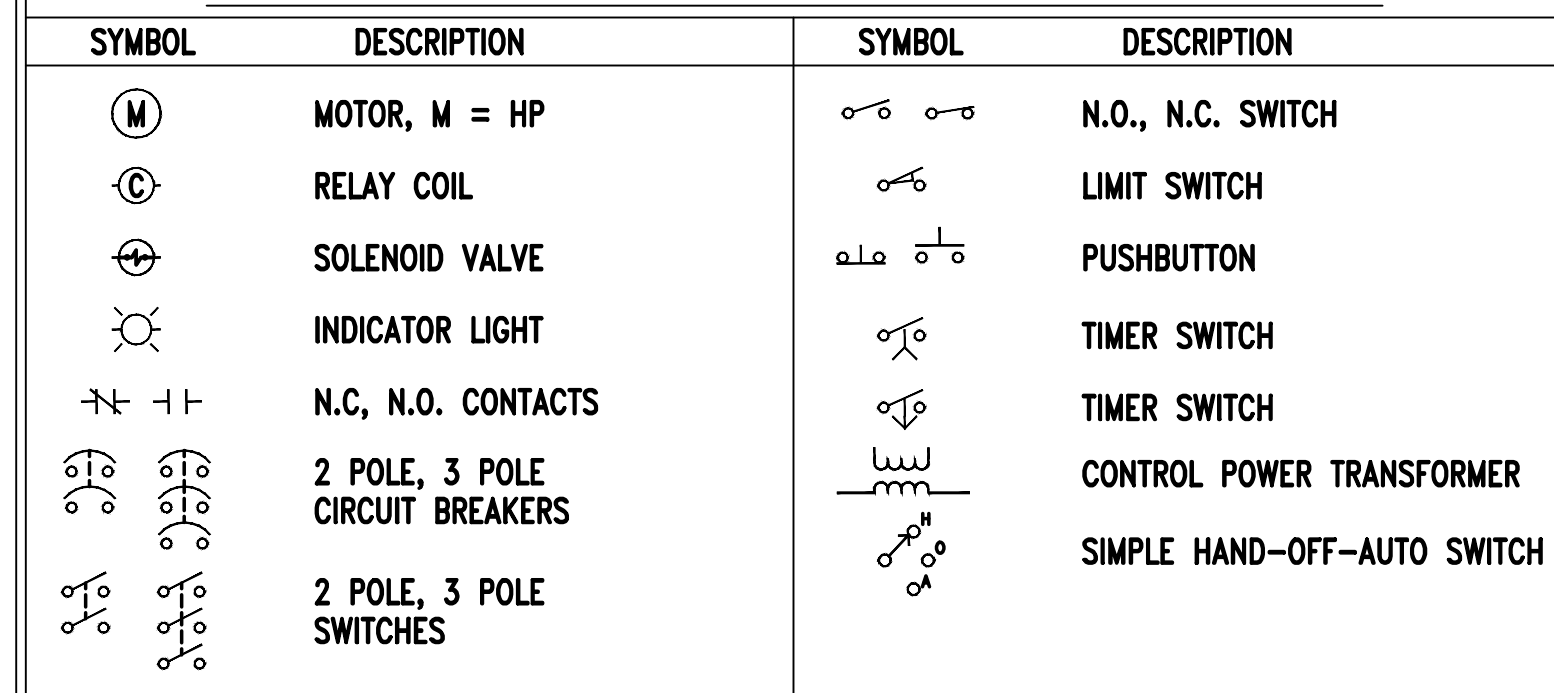
STANDARD SYMBOLS - GENERAL



STANDARD SYMBOLS - POWER & LIGHTING



STANDARD SYMBOLS - CONTROL



DIGALERT CALL TOLL FREE 811
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

M&A MULLEN & ASSOCIATES INCORPORATED
ELECTRICAL ENGINEERS
Project Number 2021014
1200 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714)632-8620

NO.	DATE	REVISIONS

DESIGN: CHC
DRAWN: CHC
CHECKED: LDM

ENGINEER: JOSEPH I. GUTIERREZ RCE 55604
DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

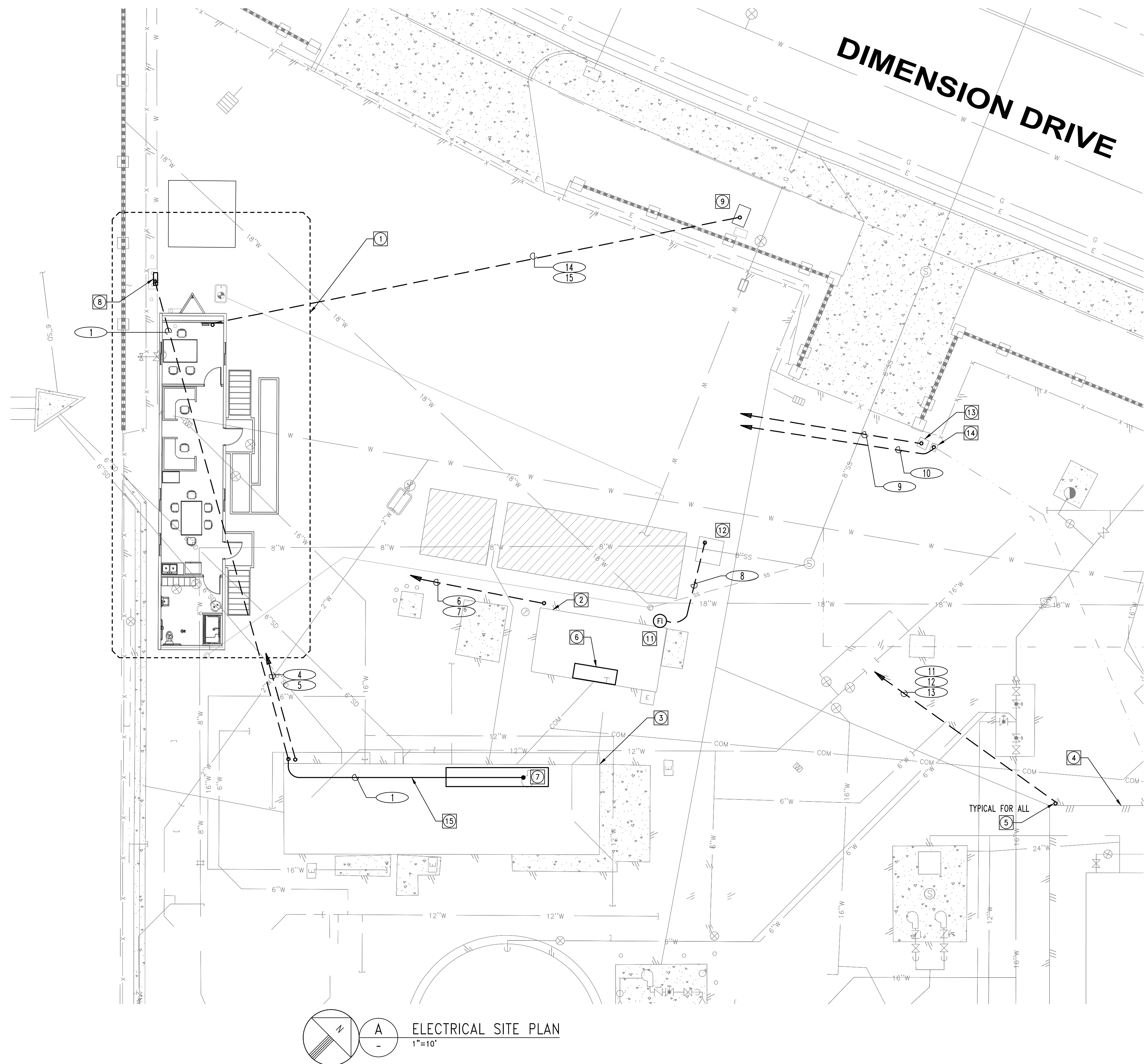
TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT OFFICE TRAILER
PROJECT NO. 2122-011

ELECTRICAL SYMBOLS AND NOTES

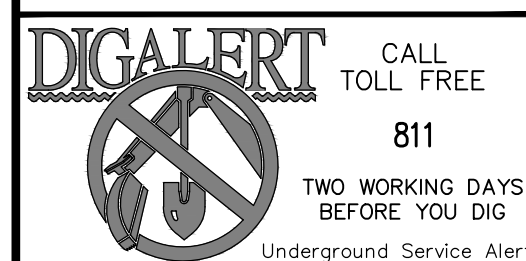


SHEET NOTES

- ① NEW TRAILER, SEE SHEET E-03
- ② EXISTING MAIN ELECTRICAL SERVICE BUILDING
- ③ EXISTING MAINTENANCE BUILDING
- ④ EXISTING FILTER BUILDING
- ⑤ CORE DRILL THRU EXISTING BUILDING, PROVIDE "LB" FITTING, EXTEND PER CONDUIT SCHEDULE
- ⑥ EXISTING MAIN SERVICE BOARD
- ⑦ EXISTING MOTOR CONTROL CENTER
- ⑧ NEW NEMA 3R PANEL H
- ⑨ EXISTING COX PULLBOX
- ⑩ NOT USED
- ⑪ RELOCATED FLOW INDICATOR, MOUNT ON EXTERIOR WALL OF EXISTING MAIN ELECTRICAL SERVICE BUILDING, +5' AFG.
- ⑫ EXISTING FLOWMETER VAULT
- ⑬ EXISTING SUMP PUMP, RECONNECT
- ⑭ EXISTING GATE CONTROL BOX, RECONNECT
- ⑮ ROUTE CONDUIT OVERHEAD, SUPPORT FROM CEILING



ELECTRICAL SITE PLAN
1"=10'



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



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



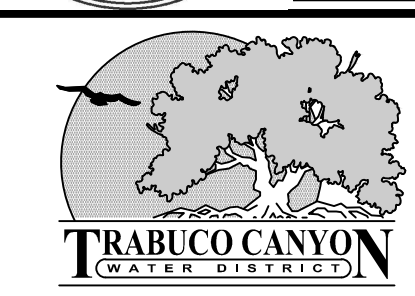
MULLEN & ASSOCIATES INCORPORATED
ELECTRICAL ENGINEERS
Project Number 2021014
1800 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714)832-0620

ONLY THE ARCHITECT/CLIENT FOR WHICH THESE ELECTRICAL DOCUMENTS WERE ORIGINALLY PREPARED IS AUTHORIZED TO USE THEM AND ONLY FOR THE PARTICULAR USE OR PURPOSE INTENDED FOR WHICH THEY WERE PREPARED. ANY RE-USE OF THESE DOCUMENTS IN PART OR IN WHOLE IS FORBIDDEN WITHOUT THE WRITTEN CONSENT OF MULLEN AND ASSOC., INC. ONLY WHEN THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS ARE SET OUT BY LARRY D. MULLEN, P.E., ARE THEY SUITABLE FOR CONSTRUCTION AND USE OF THESE DOCUMENTS IN ANY OTHER USE OR FOR ANY OTHER PURPOSE IS PROHIBITED BY LAW.

DRAFT

NO.	DATE	REVISIONS

DESIGN: CHC
DRAWN: CHC
CHECKED: LDM

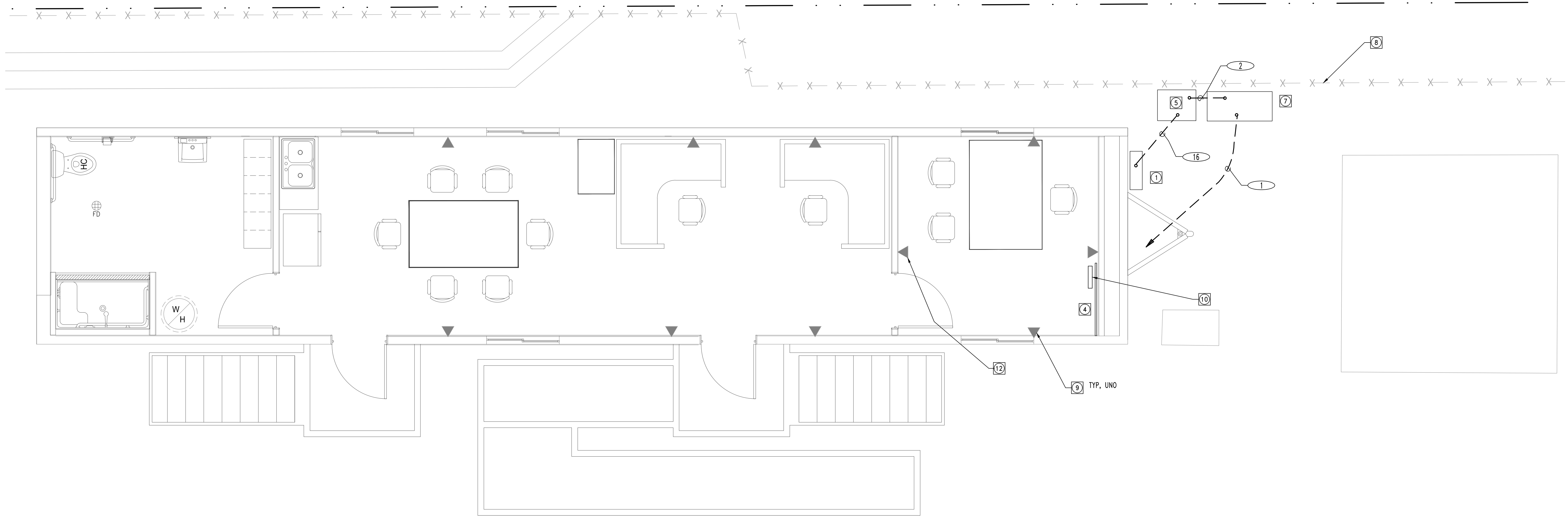


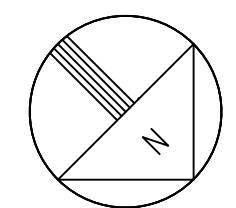
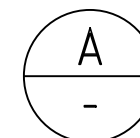
NAME	PROJECT NO.	ROLE	DATE
JOSEPH I. GUTIERREZ	RCE 55604	ENGINEER	
LORRIE LAUSTEN	RCE 67027	DISTRICT ENGINEER	

TRABUCO CANYON WATER DISTRICT
DIMENSION WATER TREATMENT PLANT OFFICE TRAILER
PROJECT NO. 2122-011

ELECTRICAL SITE PLAN

E-02
SHEET 6 OF 8





POWER PLAN
 SCALE: 3/8"=1'-0"

SHEET NOTES

- ① NEW PANEL "A"
- ② NOT USED
- ③ NOT USED
- ④ 4' X 8' PLYWOOD TELEPHONE BACKBOARD
- ⑤ NEMA 3R TRANSFORMER TA WITH 4" RAISED CONCRETE PAD
- ⑥ NOT USED
- ⑦ NEMA 3R PANEL H MOUNT ON UNISTRUT FRAME, SEE DETAIL 2, SHEET E-04
- ⑧ EXISTING WALL
- ⑨ INSTALL 2 - RJ45 JACKS ON TRAILER MFG. PROVIDED MUD RING, +18" AFF UNLESS NOTED OTHERWISE.
 RUN 1 - CAT 6 CABLE TO TELEPHONE BACKBOARD WITH 10' WHIP FOR TELEPHONE
 RUN 1 - CAT 6 CABLE TO ETHERNET SWITCH AND CONNECT
- ⑩ 16 PORT MANAGED GIGABIT ETHERNET SWITCH
 D-LINK #DGS-1100-16 OR EQUAL MOUNT ON PLYWOOD BACKBOARD.
- ⑪ NOT USED
- ⑫ INSTALL 2 - RJ45 JACKS ON TRAILER MFG. PROVIDED MUD RING, +48" AFF UNLESS NOTED OTHERWISE.
 RUN 1 - CAT 6 CABLE TO TELEPHONE BACKBOARD WITH 10' WHIP FOR TELEPHONE
 RUN 2 - CAT 6 CABLE TO ETHERNET SWITCH AND CONNECT



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



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

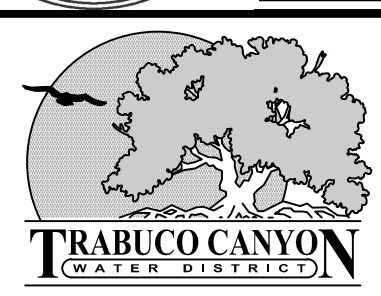


MULLEN & ASSOCIATES INCORPORATED
 ELECTRICAL ENGINEERS
 Project Number **2021014**
 1800 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714) 832-0620

ONLY THE ARCHITECT/ENGINEER FOR WHICH THESE ELECTRICAL DOCUMENTS WERE ORIGINALLY PREPARED IS AUTHORIZED TO USE THEM, AND ONLY FOR THE PARTICULAR USE, OR PORTION THEREOF, FOR WHICH THEY WERE PREPARED. ANY RE-USE OF THESE DOCUMENTS IN PART OR IN WHOLE IS FORBIDDEN WITHOUT THE WRITTEN CONSENT OF MULLEN & ASSOCIATES, INC. ONLY WHEN THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS ARE MET SHALL THEY BE CONSIDERED TO BE THE PROPERTY OF MULLEN & ASSOCIATES, INC. ANY USE OF THESE DOCUMENTS IN ANY OTHER USE OR FOR ANY OTHER PURPOSE IS PROHIBITED BY LAW.

NO.	DATE	REVISIONS

DESIGN: CHC
 DRAWN: CHC
 CHECKED: LDM



NAME	LICENSE NO.	TITLE
JOSEPH I. GUTIERREZ	RCE 55604	ENGINEER
LORRIE LAUSTEN	RCE 67027	DISTRICT ENGINEER

TRABUCO CANYON WATER DISTRICT
 DIMENSION WATER TREATMENT PLANT OFFICE TRAILER
 PROJECT NO. 2122-011

OFFICE TRAILER ELECTRICAL PLAN

E-03
 SHEET
 7
 OF
 8





TRABUCO CANYON WATER DISTRICT

CONTRACT DOCUMENTS

for

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

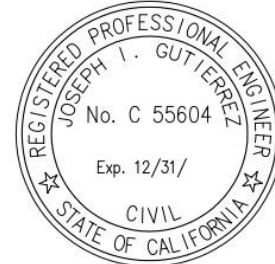
PROJECT NO. 2122-011

Prepared by:

Joseph Gutierrez, PE
JIG Consultants
318 West Katella Avenue, Suite A
Orange, CA 92867

Prepared Under Supervision of:

Lorrie Lausten, PE
District Engineer
32003 Dove Canyon Dr.
Trabuco Canyon, CA 92679



August 2022

CONTRACT DOCUMENTS

FOR

**DIMENSION WATER TREATMENT PLANT
OPERATIONS TRAILER**

Prepared By:

Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679
949-858-0277

August 2022

Project No. 2122-011

CONTRACT DOCUMENTS
TABLE OF CONTENTS

Bid Documents

- Notice Inviting Sealed Proposals (Bids)
- Bid Form
- Bid Bond

Agreement, Bonds and Insurance

- Agreement
- Supplemental Agreement
- Escrow Agreement
- Performance Bond
- Payment Bond
- Contractor's Certificate Regarding Worker's Compensation
- Certificates of Insurance and Endorsements

General Provisions

SECTION 1: DEFINITIONS, TERMS, AND ABBREVIATIONS

- 1-1. Definitions Section 1 – Page 1
- 1-2. Terms Section 1 – Page 2
- 1-3. Abbreviations..... Section 1 – Page 2

SECTION 2: PROPOSAL REQUIREMENTS AND CONDITIONS

- 2-1. Contract Documents..... Section 2 – Page 1
- 2-2. License and Classification of Bidder Section 2 – Page 1
- 2-3. Proposals..... Section 2 – Page 1
- 2-4. Withdrawal of Bid Section 2 – Page 2
- 2-5. Bidders Interested In More Than One Bid Section 2 – Page 2
- 2-6. Interpretation of Plans and Other Contract Documents..... Section 2 – Page 2
- 2-7. Addenda..... Section 2 – Page 2
- 2-8. Existing Conditions and Examination of Contract Documents Section 2 – Page 2

SECTION 3: AWARD AND EXECUTION OF CONTRACT

- 3-1. Award of Contract or Rejection of Bids Section 3 – Page 1
- 3-2. Execution of Contract Section 3 – Page 1
- 3-3. Bonds..... Section 3 – Page 1
- 3-4. Insurance Requirements..... Section 3 – Page 1
- 3-5. Failure to Execute Contract..... Section 3 – Page 2

SECTION 4: SCOPE OF WORK

4-1. Work to be Done..... Section 4 – Page 1
4-2. Changes in the Work..... Section 4 – Page 1
4-3. Obstructions Section 4 – Page 1
4-4. Utilities..... Section 4 – Page 1
4-5. Plans and Specifications Furnished by the Owner Section 4 – Page 2
4-6. Final Cleanup..... Section 4 – Page 3

SECTION 5: QUALITY OF THE WORK

5-1. Authority of the Owner’s Representative..... Section 5 – Page 1
5-2. Supplemental Drawings..... Section 5 – Page 1
5-3. Conformity with Contract Documents and Allowable Deviations Section 5 – Page 1
5-4. Manufacturer’s Instructions Section 5 – Page 1
5-5. Coordination of Plans and Specifications..... Section 5 – Page 1
5-6. Interpretation of Plans and Specifications Section 5 – Page 1
5-7. Errors or Discrepancies Noted by Contractor Section 5 – Page 2
5-8. Supervision and Superintendence..... Section 5 – Page 2
5-9. Shop Drawings Section 5 – Page 3
5-10. Quality and Safety of Materials and Equipment Section 5 – Page 4
5-11. Standards, Codes, Samples, and Tests Section 5 – Page 4
5-12. Observation of Work by Owner’s Representative Section 5 – Page 5
5-13. Removal of Defective and Unauthorized Work..... Section 5 – Page 5
5-14. One Year Guarantee..... Section 5 – Page 5

SECTION 6: PROSECUTION AND PROGRESS

6-1. Subcontracting..... Section 6 – Page 1
6-2. Assignment..... Section 6 – Page 1
6-3. Contractor’s Construction Schedule and Cost Breakdown Section 6 – Page 2
6-4. Time for Completion and Forfeiture Due to Delay..... Section 6 – Page 2
6-5. Extension of Time Section 6 – Page 3
6-6. Use of Completed Portions..... Section 6 – Page 4

SECTION 7: LEGAL RELATIONS AND RESPONSIBILITIES

7-1. Observing Laws and Ordinances Section 7 – Page 1
7-2. Permits and Licenses..... Section 7 – Page 1
7-3. Inventions, Patents, and Copyrights..... Section 7 – Page 1
7-4. Public Convenience and Safety..... Section 7 – Page 1
7-5. Responsibility for Loss, Damage, or Injuries..... Section 7 – Page 2
7-6. Contractor’s Responsibility for the Work Section 7 – Page 2
7-7. Preservation of Property Section 7 – Page 2

7-8. Excavation and/or Digging Trenches	Section 7 – Page 3
7-9. Safety	Section 7 – Page 4
7-10. Personal Liability	Section 7 – Page 4
7-11. Indemnity	Section 7 – Page 4
7-12. Hours of Labor	Section 7 – Page 5
7-13. Prevailing Wage	Section 7 – Page 5
7-14. Travel and Subsistence Payments.....	Section 7 – Page 7
7-15. Apprentices.....	Section 7 – Page 7
7-16. Warranty of Title	Section 7 – Page 9
7-17. Property Rights in Materials	Section 7 – Page 9
7-18. Mutual Responsibility of Contractors	Section 7 – Page 10
7-19. Termination for Breach.....	Section 7 – Page 10
7-20. Notice and Service Thereof	Section 7 – Page 11
7-21. Partial Invalidity	Section 7 – Page 12
7-22. Attorney’s Fees	Section 7 – Page 12
7-23. Lands and Right-Of-Way.....	Section 7 – Page 12
7-24. Waiver of Rights.....	Section 7 – Page 12
7-25. Taxes	Section 7 – Page 12
7-26. Assignment of Anti-Trust Actions.....	Section 7 – Page 12
7-27. Payroll Records	Section 7 – Page 13
7-28. State Review and Audit of Records.....	Section 7 – Page 13
SECTION 8: CONTRACTOR’S INSURANCE	
8-1. General	Section 8 – Page 1
8-2. Worker’s Compensation Insurance and Employer’s Liability Insurance.....	Section 8 – Page 1
8-3. Liability Insurance.....	Section 8 – Page 1
A. General Liability	Section 8 – Page 1
B. Automobile Liability	Section 8 – Page 2
8-4. Deductibles and Self-Insured Retentions	Section 8 – Page 2
8-5. Builders’ Risk “All Risk” Insurance	Section 8 – Page 2
8-6. Contractor’s Liability Not Limited by Insurance.....	Section 8 – Page 2
SECTION 9: ESTIMATES AND PAYMENTS	
9-1. Payments for Changes in the Work	Section 9 – Page 1
9-2. Progress Payments.....	Section 9 – Page 2
9-3. Final Estimate and Payment.....	Section 9 – Page 3
9-4. Owner’s Right to Withhold Certain Amounts and Make Application Thereof; Retention of Proceeds.....	Section 9 – Page 3

9-5. Substitution of Securities for Amounts Withheld Section 9 – Page 4
 9-6. Resolution of Construction Claims Section 9 – Page 5

SECTION 0 - SPECIAL PROVISIONS

<u>SECTION</u>	<u>DESCRIPTION</u>
00100	Bid Modifications
00110	Definitions, Standards and Drawings
00120	Contract Procedures and Modifications
00200	The Work
00220	Lands and Rights-of-Way
00400	Shop Drawings
00500	Construction Schedule
00800	Termination for Convenience of the District

SECTION 1 – TECHNICAL SPECIFICATIONS

SECTION 10: APPENDIX.....SECTION 10 – PAGE 1

BID DOCUMENTS

CONTENTS

Notice Inviting Sealed Proposals (Bids)

Bid Form

Bid Bond

NOTICE INVITING SEALED PROPOSALS (BIDS)

FOR THE

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

TRABUCO CANYON WATER DISTRICT

NOTICE IS HEREBY GIVEN that the Board of Directors of the Trabuco Canyon Water District ("DISTRICT" or "OWNER") invites, and will receive, sealed proposals ("Bids") up to the hour of **10:00 a.m. on** _____, **2022**, as given below, for the furnishing to DISTRICT all transportation, labor, materials, tools, equipment, services, permits, and other items necessary to construct the Work (defined below) for the DISTRICT, at which time the Bids will be publicly opened and read aloud at the office of

**TRABUCO CANYON WATER DISTRICT
32003 Dove Canyon Drive
Trabuco Canyon, California 92679.**

A mandatory pre-bid meeting will be held at the Dimension Water Treatment Plant, (between Canada Road and Laker Forest Drive), Lake Forest, CA 92630, at 2:00 p.m. on _____, **2022.**

Bids shall conform to, and be responsive to, all of the Contract Documents for the Work. Plans and Specifications will be provided at the mandatory pre-bid meeting at no cost. Bids are required for the entire "Work" (also identified as the "Project") as described below:

The Work includes furnishing products, labor, tools, transportation, and services to:

1. Design, submit for review, permit through the State, manufacture, and deliver a prepackaged fully functioning modular office trailer including interior furnishings as shown on the construction plans.
2. Design and submit for review structural foundation design to support the trailer on existing asphalt concrete pavement.
3. Construct ADA ramp and stairways for entrance and access to the office trailer.
4. Extend potable water line and provide service to new office trailer.
5. Extend sewer line and connect to new office trailer.
6. Construct miscellaneous site electrical work and provide power, internet, communication, and cable to the new office trailer.
7. Remove and relocate existing metal storage shed.
8. Demolish and dispose existing operations trailer.
9. Restore existing pavement after construction.

The Engineer's Estimate for the Project is **\$300,000**.

Each bid shall be submitted on a form furnished as part of the Contract Documents and must be accompanied by a cashier's check, a certified check, or a bidder's bond in an amount not less than 10% of the amount of the bid, made payable to the order of, or for the benefit of, DISTRICT. Each bid shall be labeled with the Project Name, Bidder's name, Date and time of the opening, sealed and delivered to

DISTRICT, at the location designated above, for the opening of bids at (or before) the time provided in this Notice.

The check or bond shall be given as guarantee that the bidder will enter into a Contract with DISTRICT and furnish the required Payment Bond, Performance Bond, Certificate of Insurance and Insurance Endorsement forms if awarded the Work, and will be forfeited or deemed forfeited if the bidder fails or refuses to enter into the Contract and furnish the required bonds and certificates of insurance and endorsements within fifteen (15) calendar days after Notice of Award by DISTRICT in writing. Forfeiture does not preclude DISTRICT from seeking all other remedies provided by law to recover losses sustained as a result of Bidder's failure to enter into the Contract or to furnish the required bonds, insurance certificates and endorsements.

PREVAILING WAGE/REGISTRATION REQUIREMENTS: The Project is a "public work" project that is subject, among other provisions, to Labor Code Sections 1720 through 1861, inclusive, including the duty to pay State prevailing wages per Section 1770 *et seq.* and the applicability of penalties for failure to pay prevailing wages and employment apprentices including forfeitures and debarment per Sections 1775 and 1777.7. Each contractor (including subcontractors) to perform work on the Project must be registered with the California Department of Industrial Relations ("DIR") in accordance with Labor Code Section 1725.5, and subject to the deadlines listed in Labor Code Section 1725.5(e). Bidders must provide evidence of registration for themselves and their subcontractors. Each worker on the Project must be paid not less than the applicable prevailing rates of per-diem wages in the locality in which the Work is to be performed for each craft or type of worker needed to execute the Work ("Prevailing Wages"). A copy of the prevailing wage rates can be found on-line with the State of California at <http://www.dir.ca.gov/dlsr/pwd>. A copy of such prevailing wage rates shall be posted on the jobsite by CONTRACTOR. The Project is subject to compliance monitoring and enforcement by the DIR. The successful bidder will be required to post all job-site notices required by DIR regulations and other applicable law.

LICENSING REQUIREMENTS: The Contractor to whom this project is awarded must possess a Class "A" contractor(s) license, issued by the State of California, which are current and full.

QUALIFICATIONS OF BIDDERS: All bidders must meet the bidder qualifications and procedures described herein. As a minimum, the prospective CONTRACTOR and/or Subcontractor shall have successfully constructed at least three projects in the past five (5) years, similar in size and nature to the one proposed. The CONTRACTOR and the CONTRACTOR's proposed job superintendent, required to be on-site during all construction activities, shall each have at least five (5) years of qualified experience in projects similar in size and nature to the one proposed. Included with BID PROPOSAL, CONTRACTOR shall provide descriptions of qualifying projects and references for said projects. Failure to submit this information along with the BID PROPOSAL shall render the BID PROPOSAL non-responsive.

SUBSTITUTION OF SECURITIES FOR AMOUNTS WITHHELD: Pursuant to Section 22300 of the California Public Contracts Code, the Contractor may substitute securities for any money withheld by the Owner to ensure performance under the Contract. At the request and expense of the Contractor, such substitution shall be subject to the provision of Section 9.5 of the General Provisions of the Agreement.

PROJECT ADMINISTRATION: All questions relating to this project shall be submitted by the hour of **10:00 a.m. on _____, 2022** and shall be directed to: Trabuco Canyon Water District, Attn: Lorrie Lausten, P.E., 32003 Dove Canyon Drive, Trabuco Canyon, CA 92679, Phone: 949-858-0277 x130 or via email Llausten@tcwd.ca.gov.

The Board of Directors of DISTRICT reserves the right to reject any and all bids, and to waive any and all irregularity in any bid.

BY THE ORDER OF THE BOARD OF DIRECTORS OF THE TRABUCO CANYON WATER DISTRICT

Date

Engineer

BID FORM
PROPOSAL TO
TRABUCO CANYON WATER DISTRICT
FOR THE
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

Name of Bidder: _____

Business Address: _____

Phone No. _____

**TO: THE BOARD OF DIRECTORS,
TRABUCO CANYON WATER DISTRICT (OWNER)**

Pursuant to, and in compliance with, your Notice Inviting Sealed Proposals ("Bid(s)") and the other documents relating thereto, the undersigned bidder, being fully familiar with the terms of the Contract Documents, local conditions affecting the performance of the Contract, the character, quality, quantities, and scope of the Work, and the cost of the Work at the place where the Work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, materials, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the Contract and complete, in a workmanlike manner, all of the Work required in connection with the construction of said Work all in strict conformity with the plans and specifications and other Contract Documents, including Addenda Nos. _____, _____, and _____, for the prices hereinafter set forth.

The undersigned, as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein and that this proposal is made without collusion with any person, firm, or corporation as set forth in more detail in the Non Collision Affidavit executed herewith. Further, the bidder proposes and agrees, if the proposal is accepted, that it will execute a Contract with the Owner in the form set forth in the Contract Documents and that bidder will accept in full payment thereof the following prices to wit:

SCHEDULE OF WORK ITEMS

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

ITEM NO.	ESTIMATED QUANTITY	UNIT	BID DESCRIPTION	Unit Cost	Total Cost
----------	--------------------	------	-----------------	-----------	------------

BASELINE BID ITEMS					
1	1	LS	Mobilization / Demobilization		
2	1	LS	Structural, Mechanical and Electrical Demolition		
3	1	LS	Design, Permit, Manufacture, Ship and Construct Prepackaged Modular Trailer		
4	1	LS	Extend Water Service and Connect to Trailer Water Pipe Stub		
5	1	LS	Extend Sewer Line and Connect to Trailer Sewer System		
6	1	LS	Construct Miscellaneous Electrical and Communication Improvements		
7	1	LS	All Other Work		
8	1	-	Allowance for Additional Trailer Interior Furnishings and Upgrades	\$ 10,000	\$ 10,000
BASELINE TOTAL (Bid Items 1 through 8)				\$ _____	

Signature of Bidder: _____

It is understood that the foregoing quantities are approximate only and are solely for the purpose of facilitating the comparison of bids, and that the Contractor's compensation will be computed upon the basis of the actual quantities in the completed Work whether they be more or less than those shown. Owner reserves the right to award the Work to the lowest responsible bidder based on any combination of bid items deemed by Owner in its sole discretion, to be in Owner's best interest.

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

(Public Contracts Code Section 7106)

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID**

STATE OF CALIFORNIA)

) ss

County of _____)

_____, being first duly sworn, deposes and says that he/she is _____ of _____, the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that or any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

BIDDER:

(Type full name of Bidder)

By:

(Print Name and Title)

STATE OF CALIFORNIA)

) ss

County of _____)

On _____ before me, _____
_____ (here insert name and title of the officer), personally appeared
_____, personally known to me (or proved to me on the basis of
satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and
acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and
that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the
person(s) acted, executed the instrument.

WITNESS my hand and official seal.

(Signature)

(SEAL)

STATEMENTS BY BIDDER

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

Bidder shall indicate opposite each item listed below the name of the manufacturer or supplier and location of plant proposed to be used under the Contract. Award of Contract under this proposal (bid) will not imply approval by Owner of a manufacturer or supplier listed by the bidder. However, if a manufacturer or supplier is acceptable to Owner, the successful bidder shall furnish the items from the manufacturer or supplier indicated. Any manufacturer or supplier listed in the Contract may be substituted, changed, or omitted by the successful bidder, subject to the approval of Owner, without subjecting Owner to any liability for the substitution, change or omission.

The listing of any manufacturer or supplier in the Agreement does not, and is not intended to; grant any right, title, or interest in the Contract for the benefit of the named manufacturer or supplier. Each bidder shall inform in writing each named manufacturer or supplier that the so named manufacturer or supplier is listed for information purposes only and they may be substituted, changed, or omitted by the successful bidder, subject to the approval of Owner, without subjecting Owner to any liability for the substitution, change or omission. The successful bidder shall reimburse Owner for any expenses incurred by Owner as a result of the successful bidder's failure to so notify each named manufacturer or supplier.

The listing of lead times for delivery is for informational purposes only and will not affect the Contract time(s) specified herein or entitle the successful bidder to an extension(s) of time. The successful bidder is responsible for obtaining delivery of all items at times that will ensure completion within the Contract time(s).

- A. The bidder intends to furnish materials supplied by the following manufacturers (bidder to list ONE manufacturer only for each item.) Lead time for delivery, from date of signing Contract, shall be as follows:

ITEM	MANUFACTURER	CALENDAR DAYS
Prepackaged Modular Trailer		

- B. The name and location of the place of business of each subcontractor who will perform work, labor or render service to the bidder in, or about, the construction of the Work, or improvements, in an amount in excess of one-half of one percent (0.5%) of the bidder's total Bid, and the portion of the Work which will be done by each subcontractor is set forth as follows:

NAME OF CONTRACTOR & License No./DIR Registration No.	ADDRESS OF OFFICE	DIVISION OF WORK OR TRADE TO BE SUBCONTRACTED
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	

- C. Except as hereinabove provided, bidder acknowledges and agrees that bidder will perform all required Work in accordance with Section 4106 of the Public Contracts Code.

- D. Person who inspected site of the proposed Work for your firm:

Name: _____ Date of Inspection: _____

Name: _____ Date of Inspection: _____

- E. It is agreed that, if requested by the Owner, the bidder shall furnish a notarized financial statement, audited financial statement, current tax return, references, and other information, sufficiently comprehensive to permit an appraisal of its current financial condition.

- F. The undersigned represents the bidder is licensed in accordance with the California State Contractor's License Law, as follows:

License: _____ Primary Class _____ License No. _____

DIR Registration No. _____

Supplemental Classification held, if any: _____

- G. Person to serve as Job Superintendent for your firm on the Project: _____

BID SECURITY DECLARATION

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

ACCOMPANYING THIS PROPOSAL IS

Insert the words "Bidders Bond," "Cashier's Check," or "Certified Check," as the case may be, in an amount which is equal to (at least) ten percent (10%) of the total amount of the Bid, payable in lawful money of the United States to the

TRABUCO CANYON WATER DISTRICT ("Owner")

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the Owner in case this proposal is accepted by the Owner and the undersigned fails to execute a Contract with the Owner as specified in the Contract Documents or fails to furnish the required payment and performance bonds with sureties satisfactory to Owner and required insurance certificates and endorsements. Should the Owner be required to engage the services of attorney(s) in connection with the enforcement of this Bid, bidder promises to pay Owner's reasonable attorneys' fees and costs, incurred with or without suit. The bidder's liability to Owner for failure to do any of the foregoing shall not be limited to the amount of the deposited security in the form set forth above.

The names of all persons interested in the foregoing proposals as principals are as follows: (NOTICE - If bidder or other interested person is a **corporation**, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a **general partnership**, state true name of firm, also names of all individual partners composing firm; if a **limited partnership**, the names of all general partners and limited partners; if bidder or other interested person is an **individual**, state first and last names in full; if the bidder is a **joint venture**, state the complete name of each venturer).

ADDENDA ACKNOWLEDGMENT

Bidder shall signify receipt of all addenda (if any) here:

Addenda Nos. _____

Respectfully Submitted:

Contractor or Authorized Representative

By: _____

Complete Business Address

Telephone Number

Contractor's License Number

Dated: _____, 20_____

NOTE: If bidder is a corporation, the legal name of the **corporation** shall be set forth above, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation and the corporate seal. If bidder is a **partnership**, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership. If the bidder is an **individual**, his signature shall be placed above. If the bidder is a joint venture, the name of the **joint venture** shall be set forth above with the signature of an authorized representative of each venturer.

CERTIFICATION OF BIDDER AND QUALIFICATIONS

The undersigned bidder certifies that bidder is, at the time of bidding, and shall be, throughout the period of the Contract, licensed by the State of California to do the type of Work required under the terms of the Contract Documents. Bidder further certifies that bidder is skilled and regularly engaged in the general class and type of Work called for in the Contract Documents.

The undersigned bidder certifies that it is not an ineligible contractor for the purposes of California Labor Code Section 1777.1 or 1777.7. The undersigned further certifies that no subcontractor to be used for the performance of the Work is an ineligible contractor for the purposes of Labor Code Section 1777.1 or 1777.7.

The bidder represents that bidder is competent, knowledgeable and has special skills regarding the nature, extent and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property.

Bidder expressly acknowledges that bidder is aware of such peculiar risks and that bidder has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction Work with respect to such hazards.

Furthermore, bidder hereby certifies to Owner that all representations, certifications, and statements made by bidder, as set forth in this bid, are true and correct and are made under penalty of perjury.

Signed this ____ day of _____, 20__

Name of Bidder

Contractor's License No.

License Expiration Date

Signature of Bidder

Title of Signatory

NOTICE: Pursuant to the requirements of California Business and Professions Code, Section 7028.15(e), a bid submitted to the Owner by a contractor who is not licensed pursuant to Chapter 9, of Division 3, of the Business and Professions Code, shall be considered nonresponsive and shall be rejected as provided for by law.

EXPERIENCE REQUIREMENTS OF CONTRACTOR AND/OR SUBCONTRACTOR
DIMENSION WATER TREATMENT PLAN OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

The licensed CONTRACTOR and/or SUBCONTRACTOR(S) submitting bids for this project shall be experienced in this type of construction. CONTRACTOR and/or SUBCONTRACTOR(S) shall have completed at least three projects within the past five years which demonstrate their competence in successfully completing trailer manufacturing and construction projects. Bidders without demonstrated experience will not be considered qualified for this project.

Each bidder (Contractor and/or Subcontractor(s)) shall provide documentation below with their bid:

Project No. 1

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____
(Telephone Number) _____

Approximate Project Cost: _____

Date Project Completed (Month/Year): _____

Project Description: _____

Project No. 2

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____
(Telephone Number) _____

Approximate Project Cost: _____

Date Project Completed (Month/Year): _____

Project Description: _____

Project No. 3

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____
(Telephone Number) _____

Approximate Project Cost: _____

Date Project Completed (Month/Year): _____

Project Description: _____

EXPERIENCE REQUIREMENTS OF CONTRACTOR'S JOB SUPERINTENDENT
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER NO. 2122-011

The licensed CONTRACTOR submitting bids for this project shall utilize a Job Superintendent with at least five (5) years of qualified experience in lift station projects similar in size and nature to the proposed project. CONTRACTOR shall identify below at least three projects within the past five years which demonstrate the competence of the Job Superintendent identified in the Bid Form in successfully completing lift station projects. Bidders without Job Superintendents with the required experience shall not be considered qualified for this project. The Job Superintendent shall not be changed or modified by Contractor without the express written consent of Owner. Each bidder shall provide documentation below with their bid:

Job Superintendent (Identified on Bid Form): _____

Project No. 1

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____

(Telephone Number) _____

Approximate Project Cost: _____ Date Project Completed (Month/Year): _____

Project Description: _____

Project No. 2

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____

(Telephone Number) _____

Approximate Project Cost: _____ Date Project Completed (Month/Year): _____

Project Description: _____

Project No. 3

Project Name: _____

Project Location (City and State): _____

Owner or Reference: (Contact Person) _____

(Telephone Number) _____

Approximate Project Cost: _____ Date Project Completed (Month/Year): _____

Project Description: _____

BID BOND

We, _____ as Principal,

And _____ as Surety,

jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein, to the

TRABUCO CANYON WATER DISTRICT

(herein called OWNER) for payment of the penal sum of

_____ Dollars
(\$ _____)

lawful money of the United States. Principal has submitted the accompanying bid for the construction of:

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

If the Principal shall not withdraw said Bid within the period of time set forth in the Contract Documents, and shall within fifteen (15) calendar days after the prescribed forms are presented to the Principal for signature enter into a written contract with Owner in accordance with the Bid as accepted, and if the Principal shall give the required bonds with good and sufficient sureties for the faithful performance and proper fulfillment of such contract, and for the protection of laborers and materialmen, or in the event of the withdrawal of the Bid within the period specified, or the failure to enter into the Agreement, and give such bonds within the time specified, if the Principal shall within sixty (60) days after request by Owner pay to Owner the difference between the amount specified in the Bid and the amount for which Owner may procure the required work, if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise if shall remain in full force and effect.

Forfeiture of this bond, or any deposit made in lieu thereof, shall not preclude the Owner from seeking all other remedies provided by law to cover losses sustained as a result of the Principal's failure to do any of the foregoing and this bond shall not be a limitation on Principals' liability therefore.

Principal and Surety agree that if the Owner is required to engage the services of an attorney(s) in connection with the enforcement of this bond, each shall pay Owner's costs and reasonable attorney fees incurred with or without suit.



Executed on _____, 20_____

Principal: _____

By: _____

Title: _____

(ATTACH NOTARY ACKNOWLEDGMENT OF AUTHORIZED REPRESENTATIVE OF PRINCIPAL)

Any claims under this bond may be addressed to:

_____ (Name and Address of Surety)

_____ (Name and Address of Surety's Agent or Representative in California if different than above)

_____ (Telephone Number of Surety's Agent in California)

Surety:

By: _____
(Attorney-in-Fact)

(ATTACH NOTARY ACKNOWLEDGMENT)

NOTICE:

No substitution or revision to this bond form will be accepted. Sureties must be authorized to do business, and have an agent for service of process, in California. A certified copy of Power of Attorney must be attached.

AGREEMENT, BONDS, AND INSURANCE
CONTENTS

Agreement

Supplemental Agreement

Escrow Agreement

Performance Bond

Payment Bond

Contractor's Certificate Regarding Worker's Compensation

Certificates of Insurance and Endorsements

AGREEMENT

THIS AGREEMENT, made and entered into by and between the TRABUCO CANYON WATER DISTRICT hereinafter referred to as "OWNER" and _____

_____, a corporation organized and existing under the laws of the State of

_____ ; a partnership consisting of

_____ ; a joint venture consisting of

_____ ; a limited liability company

consisting of _____ ; or an individual trading as

_____ ; in the City of _____, County

of _____, State of _____, hereinafter referred to as

"CONTRACTOR".

WITNESSETH: That OWNER and CONTRACTOR, for the consideration hereinafter named, agree as follows:

- 1. SCOPE OF WORK: CONTRACTOR will furnish all materials and will perform all of the work for the construction of:

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

in accordance with the Contract Documents therefor.

- 2. CONTRACT TIME:

2.1 The work shall be substantially completed within 240 calendar days from the date of the Notice to Proceed.

- 3. CONTRACT PRICE: OWNER will pay CONTRACTOR in accordance with the prices shown in the bid form.

- 4. PAYMENTS: Monthly progress payments and the final payment will be made in accordance with the General Provisions. The filing of the notice of completion by OWNER shall be preceded by final acceptance of the Work by OWNER.

5. LIQUIDATED DAMAGES:

5.1 Liquidated Damages shall be assessed at the rate of \$1,000.00 per calendar day, in accordance with the General Provisions.

6. COMPLIANCE WITH PUBLIC CONTRACTS LAW: OWNER is a public agency in the State of California and is subject to provisions of law relating to public contracts. It is agreed that all applicable provisions of law related to public contracts are a part of this Agreement to the same extent as though set forth herein and will be complied with by CONTRACTOR. CONTRACTOR shall likewise be required to comply with components of OWNER's adopted Rules and Regulations, as may be amended from time to time, as well as OWNER's adopted Conflict of Interest policies.

7. CONTRACT DOCUMENTS: The complete contract includes all the contract documents set forth herein, to wit: this Contract Agreement, General Provisions, Special Provisions, Notice Inviting Bids, Bid Proposal, Payment Bond, Performance Bond, Drawings, Addenda, and supplemental agreements.

IN WITNESS WHEREOF, this agreement is executed by the General Manager and the Secretary of OWNER pursuant to Minutes of the meeting of the Board of Directors held on _____, authorizing the same, and CONTRACTOR has caused this agreement to be executed.

Dated: _____

TRABUCO CANYON WATER DISTRICT
Owner

By _____
General Manager

ATTEST: _____
Secretary of the Board

(SEAL)

Dated: _____

Contractor

By _____

APPROVED

Title _____

Attorney for OWNER

(SEAL)

CORPORATE CERTIFICATE

I, _____, certify that I am the _____ Secretary of _____, a _____ corporation;

That said corporation executed the foregoing Agreement as (check only one):

- CONTRACTOR,
- venturer of the joint venture named as CONTRACTOR in the foregoing Agreement,
- partner of the partnership named as CONTRACTOR in the foregoing Agreement,
- manager or member of the limited liability company named as CONTRACTOR in the foregoing Agreement;

that _____, who signed said agreement on behalf of CONTRACTOR was then _____ of said corporation; and that said corporation is in good standing; and that said contract was duly signed for and in behalf of CONTRACTOR by said corporation by express authority of its governing body and is within the scope of its corporate powers; and that if CONTRACTOR is a joint venture, partnership or limited liability company that includes said corporation, said corporation is CONTRACTOR's duly authorized signatory.

BY _____

SUPPLEMENTAL
AGREEMENT FOR SECURITY DEPOSITS
IN LIEU OF RETENTION

THIS AGREEMENT is made and entered into this ____ day of _____, 20____, by and between the Trabuco Canyon Water District whose address is 32003 Dove Canyon Drive, Trabuco Canyon, California 92679 (hereinafter "OWNER"), and

_____ whose address is _____ (hereinafter "CONTRACTOR") and forms a part of the _____ Contract (the "Contract").

FOR THE CONSIDERATION hereinafter set forth, the OWNER and CONTRACTOR agree as follows:

1. Under the General Provisions of the Contract, the CONTRACTOR desires to deposit securities (hereinafter "Securities") with OWNER as a substitute for retention earnings required to be withheld by OWNER pursuant to the General Provisions of the Contract entered into between OWNER and CONTRACTOR for the _____ in the amount of \$_____ dated _____, _____. Eligible Securities shall be limited to those listed in Section 22300 of the California Public Contracts Code and Section 16430 of the California Government Code, or those Securities mutually agreed to by OWNER and CONTRACTOR. The market value of the Securities shall at all times be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between OWNER and CONTRACTOR including additional amounts for extra work. Securities shall be in the name of the Trabuco Canyon Water District, and the CONTRACTOR shall be designated the beneficial owner and shall receive any interest thereon. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the OWNER, or with a state or federally chartered bank in California as the Escrow Agent, who shall release such securities to the CONTRACTOR following the expiration of 35 days from the date of final acceptance of the Work and filing of a Notice of Completion of the Work by the OWNER.

2. Alternatively, the CONTRACTOR may request and the OWNER shall make payment of retentions earned directly to the Escrow Agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the payments into the securities and the CONTRACTOR shall receive the interest earned on the investments upon the same terms provided for in the paragraph above for securities deposited by the CONTRACTOR. Following the expiration of 35 days from the date of final acceptance of the Work and filing of a Notice of Completion of the Work by the OWNER, the CONTRACTOR shall receive from the Escrow Agent all securities, interest, and payments received by the Escrow Agent from the OWNER, pursuant to the terms of this paragraph. The CONTRACTOR shall pay to each subcontractor, if applicable,

not later than 20 days of receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure the performance of the CONTRACTOR. If the CONTRACTOR requests this alternative, the attached "ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION" must also be completed.

3. The interest earned on the Securities or the money market accounts held by OWNER (hereinafter the "Security Deposit Account") and all interest earned on that interest shall be for the sole account of CONTRACTOR and shall be subject to withdrawal by CONTRACTOR at any time subject to reasonable notice to the OWNER to allow for the OWNER's withdrawal of the funds and conveyance to the CONTRACTOR.
4. CONTRACTOR shall have the right to withdraw all or any part of the principal in the Security Deposit Account only by written notice to the OWNER and with the OWNER consent to the withdrawal of the amount sought to be withdrawn by CONTRACTOR.
5. The OWNER shall have the right to draw upon the Securities in the event of default by CONTRACTOR. Drawings by OWNER shall also be permitted for amounts necessary to cover payments and costs specified in the Section on Substitution of Securities in the General Provisions of the Contract, as well as for any other purpose set forth in the Contract for which amounts may be withheld from the CONTRACTOR and utilized by the OWNER.
6. Upon final determination by the OWNER that the Contract is final and complete, and that CONTRACTOR has complied with all requirements and procedures applicable to the Contract, the OWNER shall release to CONTRACTOR all Securities and interest on deposit, less Security Deposit Account fees and charges, in the Security Deposit Account. The Security Deposit Account shall be closed immediately upon disbursement of all moneys and Securities on deposit and payments of fees and charges.

7. The names of the persons who are authorized to give written notice or to receive written notice on behalf of OWNER and on behalf of CONTRACTOR in connection with the foregoing, and exemplars of their respective signatures are as follows:

Dated: _____

TRABUCO CANYON WATER DISTRICT
Owner

By _____
General Manager

ATTEST: _____
Secretary of the Board

(SEAL)

Dated: _____

Contractor

By _____

APPROVED

Title _____

Attorney for OWNER

(SEAL)

**ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION**

THIS ESCROW AGREEMENT is made and entered into this ____ day of ____, 20__ by and between the Trabuco Canyon Water District whose address is 32003 Dove Canyon Drive, Trabuco Canyon, California 92679 (hereinafter "Owner"), and whose address is _____ (hereinafter "Contractor"), and _____ whose address is _____ (hereinafter "Escrow Agent") and forms a part of the Contract for the _____ between Owner and Contractor, dated _____.

FOR THE CONSIDERATION hereinafter set forth, the Owner, Contractor and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit Securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the construction Contract entered into between Owner and Contractor for the _____ in the amount of \$_____ dated _____ (hereinafter the "Contract"). The Contractor has entered into the "Supplemental Agreement," included in and part of the Contract, to substitute _____ (specify securities or attach Schedule 1 with list of securities) (hereinafter the "Securities") for retention earnings. The Supplemental Agreement is attached as Exhibit "A" and incorporated herein by this reference, except that only Section 4 of the Supplemental Agreement shall be applicable to the Escrow Agent. When Contractor deposits the Securities as a substitute for Contract earnings, Escrow Agent shall notify Owner within ten (10) days of the deposit. Thereafter, the Escrow Agent shall mail to Owner on a regular monthly basis a statement of the total amount of the Securities and/or funds held in the escrow on the date of such statement. The market value of the Securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between Owner and Contractor. The Securities shall be fully insured by F.D.I.C. or shall be collateralized to the satisfaction of Owner. The Securities shall be held in the name of the Trabuco Canyon Water District and shall designate Contractor as the beneficial owner.
2. Owner shall make progress payments to Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds the Securities in the form and amount above.

3. Alternatively, Owner may make payments directly to Escrow Agent in the amount of retention for the benefit of Owner until such time as the Escrow created hereunder is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner (if any). The escrow fees and expenses and payment terms shall be determined by the Contractor and Escrow Agent.
5. The interest earned on the Securities held in escrow (hereinafter the "Escrow Account") and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to Owner.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from Owner to Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.
7. Owner shall have a right to draw upon the Securities pursuant to Section 5 of the Supplemental Agreement. No later than seven (7) days from receipt of written notice by the Escrow Agent from Owner of Owner's demand for sums and the purpose for which the demand amount is to be used pursuant to Section 5 of the Supplemental Agreement, Escrow Agent shall immediately convert the Securities to cash and shall distribute the cash as instructed by Owner.
8. Upon receipt of written notification from Owner certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all the Securities and interest on deposit, less escrow fees and charges, in the Escrow Account. The Escrow Account shall be closed immediately upon disbursement of all moneys and the Securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on the written notifications from Owner and Contractor pursuant to Sections Five (5) through Eight (8), inclusive, of this Agreement and Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the Securities and interest as set forth above.
10. The names of the persons who are authorized to give written notice, or to receive written notice, on behalf of Owner, on behalf of Contractor and on behalf of Escrow Agent in connection with the foregoing, and exemplars of their respective signatures are as follows:

Dated: _____

TRABUCO CANYON WATER DISTRICT
Owner

By _____
General Manager

ATTEST: _____
Secretary of the Board

(SEAL)

Dated: _____

Contractor

By _____

APPROVED

Title _____

Attorney for OWNER

(SEAL)

Bond Number: _____

Premium \$ _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: THAT

WHEREAS, THE Board of Directors of the

TRABUCO CANYON WATER DISTRICT

by Minute Order at the meeting held the ____ day of _____, 20____, has awarded to

_____, hereinafter designed as the "Principal", a contract for the construction of:

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract,

NOW, THEREFORE, we the Principal and

as Surety, and held firmly bound unto the

TRABUCO CANYON WATER DISTRICT

hereinafter called the "Obligee", in the penal sum of _____

_____ Dollars (\$ _____), lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, and firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the above-bounded Principal, his or its heirs, executors, administrators, successors, or assigns shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Obligee, the Obligee's Representative, the Engineer/Architect and their consultants and each of their officers, directors, agents and employees, as therein stipulated, this obligation shall become null and void, otherwise, it shall be and remain in full force and virtue inclusive of the entire Contract guarantee period. And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or to the

Work to be performed thereunder, or the plans or specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice by District of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work or to the plans or specifications. Principal and Surety agree that if Obligee is required to engage the services of an attorney(s) in connection with the enforcement of this bond, each shall also pay Obligee's reasonable attorneys' fees incurred with or without suit.

IN WITNESS WHEREOF, three counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by the Principal and Surety above named, on the ____ day of _____ 20__.

APPROVED:

Principal _____

By _____

Title _____

(Attorney for the OWNER)

Any Claims under this bond may be addressed to:

_____(Name and address of Surety)

_____(Name and Address of Agent

_____or Representative in California, if different from above)

_____(Telephone Number of Surety and Agent or Representative in California)

Surety

(Attach Acknowledgment)

By _____

Title _____

NOTICE: No substitution or revision to this bond form will be accepted. Sureties must be admitted and authorized to do business in and have an agent for service of process in California. A certified copy of Power of Attorney must be attached

Bond Number: _____

Premium \$ _____

PAYMENT BOND

We, _____

as Principal, and _____

as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein, to the Trabuco Canyon Water District (herein called Owner) for payment of the penal of sum of _____ Dollars (\$ _____), lawful money of the United States of America. Owner has awarded Principal a contract for the construction of:

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

If Principal or any of his subcontractors fails to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the California Unemployment Insurance Code with respect to work or labor performed under the Contract or during the one-year guarantee period, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department Franchise Tax Board from wages of employees of the Contractor and his subcontractors pursuant to Section 13020 of the California Unemployment Insurance Code, with respect to such work and labor, then Surety will pay the same in an amount not exceeding the sum specified above, and also will pay, in case suit is brought upon this bond, such reasonable attorney's fees as shall be fixed by the court.

This bond shall inure to the benefit of any of the persons named in Section 3181 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Surety agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or the work to be performed thereunder, or the plans and specifications shall in any way affect its obligation on this bond, and it does hereby waive notice by District thereof.

Principal and Surety agree that should Owner become a party to any action on this bond that each will also pay Owner reasonable attorneys' fees incurred therein in addition to the sum above set forth.

Executed in three original counterparts on

_____, 20_____

Corporate Seal



Principal_____

By _____

Title _____

Any Claims under this bond may be addressed to:

_____(Name and address of Surety)

_____(Name and Address of Agent

_____or Representative in California, if different from above)

_____(Telephone Number of Surety and Agent or Representative in California)

Surety

(Attach Acknowledgment)

By _____

Attorney-in-Fact

APPROVED:

Attorney for OWNER

NOTICE: No substitution or revision to this bond form will be accepted. Sureties must be admitted and authorized to do business in and have an agent for service of process in California. A certified copy of Power of Attorney must be attached

CONTRACTOR'S CERTIFICATE
REGARDING WORKER'S COMPENSATION

Description of Contract:

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

California Labor Code Section 3700 provides:

"Every employer, except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and I will comply with such provisions before commencing the performance of any and all work required under the terms and conditions of this Contract.

Dated: _____, 20_____

Contractor

By _____

(SEAL)

(In accordance with Article 5 commencing at Section 1860, Chapter 1, Division 2, Part 7, of the California Labor Code, the above certificate must be signed and filed with the District (the awarding body) prior to performing any work under this contract.)

GENERAL PROVISIONS

DIMENSION WATER TREATMENT PLANT

OPERATIONS TRAILER

PROJECT NUMBER: 2122-011

GENERAL PROVISIONS

Table of Contents

SECTION 1: DEFINITIONS, TERMS, AND ABBREVIATIONS

- 1-1. Definitions Section 1 – Page 1
- 1-2. Terms Section 1 – Page 2
- 1-3. Abbreviations..... Section 1 – Page 2

SECTION 2: PROPOSAL REQUIREMENTS AND CONDITIONS

- 2-1. Contract Documents..... Section 2 – Page 1
- 2-2. License and Classification of Bidder Section 2 – Page 1
- 2-3. Proposals..... Section 2 – Page 1
- 2-4. Withdrawal of Bid Section 2 – Page 2
- 2-5. Bidders Interested In More Than One Bid Section 2 – Page 2
- 2-6. Interpretation of Plans and Other Contract Documents..... Section 2 – Page 2
- 2-7. Addenda..... Section 2 – Page 2
- 2-8. Existing Conditions and Examination of Contract Documents Section 2 – Page 2

SECTION 3: AWARD AND EXECUTION OF CONTRACT

- 3-1. Award of Contract or Rejection of Bids Section 3 – Page 1
- 3-2. Execution of Contract Section 3 – Page 1
- 3-3. Bonds..... Section 3 – Page 1
- 3-4. Insurance Requirements..... Section 3 – Page 1
- 3-5. Failure to Execute Contract..... Section 3 – Page 2

SECTION 4: SCOPE OF WORK

- 4-1. Work to be Done..... Section 4 – Page 1
- 4-2. Changes in the Work..... Section 4 – Page 1
- 4-3. Obstructions Section 4 – Page 1
- 4-4. Utilities..... Section 4 – Page 1
- 4-5. Plans and Specifications Furnished by the Owner Section 4 – Page 2
- 4-6. Final Cleanup..... Section 4 – Page 3

SECTION 5: QUALITY OF THE WORK

- 5-1. Authority of the Owner’s Representative..... Section 5 – Page 1
- 5-2. Supplemental Drawings Section 5 – Page 1
- 5-3. Conformity with Contract Documents and Allowable Deviations Section 5 – Page 1
- 5-4. Manufacturer’s Instructions Section 5 – Page 1
- 5-5. Coordination of Plans and Specifications..... Section 5 – Page 1
- 5-6. Interpretation of Plans and Specifications Section 5 – Page 1

5-7. Errors or Discrepancies Noted by Contractor	Section 5 – Page 2
5-8. Supervision and Superintendence.....	Section 5 – Page 2
5-9. Shop Drawings	Section 5 – Page 3
5-10. Quality and Safety of Materials and Equipment	Section 5 – Page 4
5-11. Standards, Codes, Samples, and Tests	Section 5 – Page 4
5-12. Observation of Work by Owner’s Representative	Section 5 – Page 5
5-13. Removal of Defective and Unauthorized Work.....	Section 5 – Page 5
5-14. One Year Guarantee.....	Section 5 – Page 5
SECTION 6: PROSECUTION AND PROGRESS	
6-1. Subcontracting.....	Section 6 – Page 1
6-2. Assignment.....	Section 6 – Page 1
6-3. Contractor’s Construction Schedule and Cost Breakdown	Section 6 – Page 2
6-4. Time for Completion and Forfeiture Due to Delay.....	Section 6 – Page 2
6-5. Extension of Time	Section 6 – Page 3
6-6. Use of Completed Portions.....	Section 6 – Page 4
SECTION 7: LEGAL RELATIONS AND RESPONSIBILITIES	
7-1. Observing Laws and Ordinances	Section 7 – Page 1
7-2. Permits and Licenses.....	Section 7 – Page 1
7-3. Inventions, Patents, and Copyrights	Section 7 – Page 1
7-4. Public Convenience and Safety.....	Section 7 – Page 2
7-5. Responsibility for Loss, Damage, or Injuries.....	Section 7 – Page 2
7-6. Contractor’s Responsibility for the Work	Section 7 – Page 2
7-7. Preservation of Property	Section 7 – Page 3
7-8. Excavation and/or Digging Trenches	Section 7 – Page 3
7-9. Safety	Section 7 – Page 4
7-10. Personal Liability	Section 7 – Page 4
7-11. Indemnity	Section 7 – Page 5
7-12. Hours of Labor	Section 7 – Page 5
7-13. Prevailing Wage	Section 7 – Page 6
7-14. Travel and Subsistence Payments.....	Section 7 – Page 7
7-15. Apprentices.....	Section 7 – Page 8
7-16. Warranty of Title.....	Section 7 – Page 9
7-17. Property Rights in Materials	Section 7 – Page 10
7-18. Mutual Responsibility of Contractors	Section 7 – Page 10
7-19. Termination for Breach.....	Section 7 – Page 10
7-20. Notice and Service Thereof	Section 7 – Page 11

7-21. Partial Invalidity	Section 7 – Page 12
7-23. Lands and Right-Of-Way.....	Section 7 – Page 12
7-24. Waiver of Rights.....	Section 7 – Page 12
7-25. Taxes	Section 7 – Page 12
7-26. Assignment of Anti-Trust Actions.....	Section 7 – Page 12
7-27. Payroll Records	Section 7 – Page 13
7-28. State Review and Audit of Records	Section 7 – Page 13
SECTION 8: CONTRACTOR’S INSURANCE	
8-1. General	Section 8 – Page 1
8-2. Worker’s Compensation Insurance and Employer’s Liability Insurance.....	Section 8 – Page 1
8-3. Liability Insurance	Section 8 – Page 1
A. General Liability	Section 8 – Page 1
B. Automobile Liability	Section 8 – Page 2
8-4. Deductibles and Self-Insured Retentions	Section 8 – Page 2
8-5. Builders’ Risk “All Risk” Insurance	Section 8 – Page 2
8-6. Contractor’s Liability Not Limited by Insurance.....	Section 8 – Page 2
SECTION 9: ESTIMATES AND PAYMENTS	
9-1. Payments for Changes in the Work	Section 9 – Page 1
9-2. Progress Payments.....	Section 9 – Page 2
9-3. Final Estimate and Payment.....	Section 9 – Page 3
9-4. Owner’s Right to Withhold Certain Amounts and Make Application Thereof; Retention of Proceeds.....	Section 9 – Page 3
9-5. Substitution of Securities for Amounts Withheld	Section 9 – Page 4
9-6. Resolution of Construction Claims	Section 9 – Page 5
SPECIAL PROVISIONS	
SECTION 0:	
Special Provisions.....	Section 0 – Page 1
PROJECT TECHNICAL PROVISIONS	
SECTION 1:	
Technical Requirements	Section 1 – Page 1

APPENDIX

SECTION 1 DEFINITIONS, TERMS AND ABBREVIATIONS

1-1 DEFINITIONS

Whenever the following terms occur in the contract documents, the meaning shall be interpreted as follows:

ACCEPTANCE, FINAL ACCEPTANCE - The formal action by the Owner accepting the Work as being complete.

ACCEPTED BID- the bid (proposal) accepted by the Owner.

AGREEMENT - The written agreement executed between the Owner and the Contractor covering the performance of the work. Other Contract Documents are incorporated into the Agreement and are made a part of it.

ENGINEER – Trabuco Canyon Water District and its subsidiaries. The term "Engineer" means the Engineer or its authorized representative.

BIDDER - Any individual, partnership, corporation, joint venture, or other combination thereof submitting a proposal for the Work contemplated, acting directly or through an authorized representative.

CONTRACTOR - The individual, partnership, corporation, joint venture, or other combination thereof who has entered into the contract with the Owner for the performance of the work. The term "Contractor" means the Contractor or his authorized representative.

CONTRACT DOCUMENTS, or CONTRACT - The contract documents set forth in the Agreement; also any and all supplemental agreements amending or extending the work contemplated. Supplemental agreements are written agreements covering alterations, amendments, or extensions to the contract and include contract change orders.

DAYS - Unless otherwise specified, days shall mean calendar days.

OWNER - The public entity identified as such in the Agreement. The term "Owner" means the Owner or its authorized representative.

OWNER'S REPRESENTATIVE - The person or firm authorized by the Owner to represent it during the performance of the work by the Contractor, or the Owner's Representative assistants.

PLANS, DRAWINGS - The plans (drawings), or reproduction thereof, which show the location, character, dimensions, and details of the work to be done.

SPECIAL PROVISIONS - Additions, deletions, and changes to the General Provisions and Standard Specifications.

SPECIFICATIONS - The directions, provisions, and requirements contained in the General Provisions and Standard Specifications as supplemented by the Special Provisions and the Technical Specifications.

STANDARD SPECIFICATIONS -The Contract Documents identified or referenced as such.

SUBCONTRACTOR - An Individual, partnership, corporation, joint venture, or other combination thereof who has a contract with the Contractor to perform any of the work at the site. Subcontractor also means an individual, partnership, corporation, joint venture, or other combination thereof who has a contract with another subcontractor to perform any of the work at the site.

STANDARD DRAWINGS, STANDARD PLANS - That portion of the Plans identified or referenced as such.

TECHNICAL SPECIFICATIONS - The documents identified as such in the Contract Documents (also may be referred to as Specifications or Special Provisions).

UTILITY - Public or private fixed works for the transportation of fluids, gases, power, signals, or communications.

WORK - Any and all obligations, duties, and responsibilities necessary to complete the construction assigned to, or undertaken by, the Contractor pursuant to the Contract Documents. Also, the completed construction or parts thereof required to be provided under the Contract Documents, including all materials, equipment, and supplies incorporated or to be incorporated in the construction.

1-2 TERMS

Wherever the terms "required", "permitted", "ordered", "designated", "prescribed", or terms of like import are used, it shall be understood that the requirements, permission, order, designation, or prescription of the Owner's Representative is intended. Similarly the terms "acceptable", "satisfactory", "or equal", or terms of like import shall mean acceptable to or satisfactory to the Owner's Representative, unless otherwise expressly stated. The word "provide" shall be understood to mean furnish and install.

1-3 ABBREVIATIONS

Wherever the following abbreviations are used, they shall have the meanings indicated:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AI	The Asphalt Institute
AISC	American Institute of Steel Construction
AISI	American Iron & Steel Institute
ANSI	American National Standards Institute (formerly USASI, USAS, ASA)
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standards Association (Now ANSI)
ASCE	American Society of Civil Engineers

ASHRAE	American Society of Heating, Refrigerating, Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
CalTrans	State of California, Business & Transportation Agency, Department of Transportation
CRSI	Concrete Reinforcing Steel Institute
IEEE	Institute of Electrical and Electronics Engineers
NBFU	National Board of Fire Underwriters
NEMA	National Electrical Manufacturers Association
PCA	Portland Cement Association
STATE SPECIFICATIONS	Standard Specifications, State of California Business & Transportation Agency, Department of Transportation (CalTrans)
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code, Pacific Coast Building Officials Conference of the International Conference of Building Officials
U/L or UL	Underwriters' Laboratories, Inc.
USASI or	United States of America Standards Institute
USAS	(Now ANSI)

END OF SECTION

SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 CONTRACT DOCUMENTS

The Contract Documents are set forth in the agreement form and the definition of "Contract Documents" in the section on DEFINITIONS, TERMS, AND ABBREVIATIONS. In the event of a conflict between the Contract Documents, and the components thereof, priority shall be given to the provisions contained within, from order of highest to lowest priority: (i) any addenda or supplemental contracts; (ii) Special Provisions; (iii) General Provisions; (iv) Construction Services Agreement; (v) Notice Inviting Sealed Proposals (Bids). With respect to Standard Specifications, Plans and Specifications, and Technical Specifications, Section 5-5 of these General Provisions shall govern priority.

2-2 LICENSE AND CLASSIFICATION OF BIDDER

No bid will be accepted from a Bidder who is not licensed to conduct business in the State of California and licensed to perform the class of Work defined by the Contract Documents. The classification of the Contractor's license which a Contractor shall possess at the time the Contract is awarded as listed in the Notice Inviting Bids.

2-3 PROPOSALS

Bids shall be made upon the bid form and the Contract Documents furnished by the Owner and no substitution thereto shall be permitted without the Owner's written consent. All bids shall be properly executed and with all items filled in; the signatures of all persons signing shall be in longhand. Erasures, interlineations, or other corrections shall be authenticated by affixing in the margin immediately opposite the correction the initials of a person signing the bid. If the unit price and the total amount named by a Bidder for any item are not in agreement, the unit price alone shall be considered as representing the Bidder's intention, and the totals shall be corrected to conform thereto.

Bids shall not contain any recapitulation of the Work to be done. Alternative proposals will not be considered, except as called for in writing by the Owner. No oral, telegraphic or telephonic proposals or modifications will be considered.

Bids shall be accompanied by a "Proposal Guarantee" in the form of a cashier's or a certified check, or Bidder's bond, in an amount not less than 10% of the amount of bid, made payable to or for the benefit of the Owner. Said check or bond shall be given as a guarantee that the Bidder will enter into a Contract and furnish the required bonds and insurance certificates and endorsements if awarded the Contract, and in case of refusal or failure to enter into said Contract and furnish the required bonds and insurance certificates and endorsements within 15 Days after notice of award by the Owner in writing, the check and the money represented by said check shall be forfeited to the Owner, or in the event that a bond is deposited, said bond shall be forfeited. Forfeiture does not preclude the Owner from seeking all other remedies provided by law to recover losses sustained as a result of the Contractor's failure to enter into the Contract or to furnish the required bonds or insurance certificates and endorsements.

Bids shall be sealed in an envelope marked and addressed as set forth in the Special Provisions. Bids shall be delivered to the addressee at the location designated in the Notice Inviting Sealed Proposals on or before the day and hour set for the opening of bids in the Notice Inviting Sealed Proposals, and shall bear the name of the Bidder. A bid will not be accepted after the date and time designated in the Notice Inviting Sealed Proposals. It is the sole responsibility of the Bidder to see that his bid is delivered and

received in proper time. Any bid received after said designated date and time shall be returned to the Bidder unopened.

2-4 WITHDRAWAL OF BID

A Bidder may withdraw a bid by a signed written request any time prior to the date and time for receiving bids designated in the Notice Inviting Sealed Proposals.

The withdrawal of a bid does not prejudice the right of a Bidder to file a new bid so long as the new bid is delivered as set forth in the Section 2.3, PROPOSALS, prior to the closing time specified for all bids.

2-5 BIDDERS INTERESTED IN MORE THAN ONE BID

No individual, partnership, corporation, joint venture, or other combination thereof shall be allowed to make or file, or be interested in more than one bid for the Work, unless alternative bids are called for. An individual, partnership, corporation, joint venture, or other combination thereof submitting a subproposal to a Bidder, or who has quoted prices on material to a Bidder, is not thereby disqualified from submitting a subproposal or quoting prices to other Bidders.

2-6 INTERPRETATION OF PLANS AND OTHER CONTRACT DOCUMENTS

If any person or entity contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other Contract Documents, or finds discrepancies in, or omissions from the Plans and Specifications or other Contract Documents, he may submit to the Engineer a written request for an interpretation or correction thereof. The person or entity submitting the request will be responsible for its prompt delivery. An interpretation or correction of the Contract Documents will be made only by Addendum duly issued by the Engineer. A copy of such Addendum will be mailed or delivered to each person or entity that has received a set of such documents. The Owner and the Engineer will not be responsible for any other explanation or interpretation of the documents.

2-7 ADDENDA

Addenda issued before the time in which to submit bids expire shall be included in the bid and shall be made a part of the Contract Documents.

2-8 EXISTING CONDITIONS AND EXAMINATION OF CONTRACT DOCUMENTS

The Bidder represents that it has carefully examined the Contract Documents and the site where the Work is to be performed and has familiarized itself with all local conditions and federal, state, and local laws, ordinances, rules, and regulations that may affect in any manner the performance of the Work. The Bidder further represents that it has studied all surveys and investigation reports about subsurface and latent physical conditions pertaining to the jobsite, that it has performed such additional surveys and investigations as it deems necessary to complete the Work at the bid price, and that it has correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies and as to the character, quality, quantities, and scope of the Work.

The Plans and Specifications for the Work show subsurface conditions or otherwise hidden conditions as they are supposed or believed by the Engineer to exist; but it is not intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the Owner, the Engineer, and their consultants shall not be liable for any loss sustained by the Contractor as a result of any variance of such

conditions as shown on the Plans and the actual conditions revealed during the progress of the Work or otherwise.

Where the Owner or the Engineer or their consultants have made investigations of subsurface conditions in areas where the Work is to be performed, such investigations were made only for the purpose of study and design. The conditions indicated by such investigations apply only at the specific location of each boring or excavation at the time the borings or excavations were made. Where such investigations have been made, Bidders or Contractors may inspect the records as to such investigations subject to and upon the conditions hereinafter set forth. The inspection of the records shall be made at the office of the Engineer.

The records of such investigations are not a part of the Contract and are shown solely for the convenience of the Bidder or Contractor. It is expressly understood and agreed that the Owner, the Engineer, and their consultants assume no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations; the records thereof; or of the interpretations set forth therein or made by the Owner's consultants, the Engineer or his consultants in the use thereof by the Engineer, and there is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions, densities, or other characteristics different from those indicated may not be encountered.

When a log of test borings showing a record of the data obtained by the investigation of subsurface conditions by the Owner, the Engineer or their consultants is included with the Plans or other documents, it is expressly understood and agreed that said log of test borings does not constitute a part of the Contract, represents only the opinion of the Owner or the Engineer or their consultants as to the character of the materials encountered by them in the test borings, is included in the Plans or other documents only for the convenience of Bidders, and its use is subject to all of the conditions and limitations set forth in this Section.

The availability or use of information described in this Section 2-8 is not to be construed in any way as a waiver of the provisions of the first paragraph in this Section 2-8 and a Bidder or Contractor shall make such independent investigations and examination necessary to satisfy himself as the conditions to be encountered in the performance of the Work.

No information derived from such inspection of records of investigations or compilation thereof made by the Owner, the Engineer, or their consultants will in any way relieve the Bidder or Contractor from any risk or from properly fulfilling the terms of the Contract nor entitle the Contractor to any additional compensation.

END OF SECTION

SECTION 3 AWARD AND EXECUTION OF CONTRACT

3-1 AWARD OF CONTRACT OR REJECTION OF BIDS

The award of the Contract, if it be awarded, will be to the lowest responsible responsive Bidder complying with the instructions contained in the Contract Documents. The Owner, however, reserves the right to select the schedules under which the bids are to be compared, to reject any and all bids, and to waive any informality in bids received. If, in the judgment of the Owner, a bid is unbalanced or if the Bidder is not responsible, it shall be considered sufficient grounds for rejection of the entire bid.

The Owner shall have the period of time set forth in the Special Provisions after the opening of bids within which to accept or reject the bids. No Bidder may withdraw its bid during said period. The Owner will return the proposal guarantees, except any guarantees which have been forfeited, and except Bidders' bonds, to the respective Bidders whose proposals they accompanied within ten Days after the execution of the Contract by the successful Bidder or rejection of all bids or upon receipt of a written request therefore received after said period of time set forth in the Special Provisions.

Before award of the Contract, any Bidder shall furnish upon request a recent statement of its financial condition and previous construction experience or such other evidence of his qualifications as may be requested by the Owner. If a Bidder fails to furnish in a timely manner the information requested, it shall be considered sufficient grounds for rejection of such Bidder's entire bid.

3-2 EXECUTION OF CONTRACT

The form of Agreement, bonds, and other documents which the successful Bidder, as Contractor, will be required to execute are included as a part of the Contract Documents.

The Contract shall be signed by the successful Bidder and returned to the Owner, together with the bonds and certificates of insurance and endorsements, within 15 Calendar Days or such additional time as may be allowed by the Owner from the date of the mailing of notice from the Owner to the Bidder or from the date of personal delivery of notice from the Owner to the Bidder that the Agreement is ready for signature. The Agreement, bonds, certificates of insurance and endorsements, and other documents to be executed by the Contractor shall be executed in original-triplicate, one each of which shall be filed with the Owner and one each with the Attorney for the Owner and the Engineer for the Owner.

3-3 BONDS

The successful Bidder, simultaneously with the execution of the Agreement, shall furnish a payment bond and a performance bond each in amount equal to 100% of the Contract amount. Bonds shall be furnished by surety companies satisfactory to the Owner on the forms furnished as a part of the Contract Documents. Surety companies must be authorized to do business and have an agent for service of process in California.

3-4 INSURANCE REQUIREMENTS

The successful Bidder will be required to furnish the Owner proof of full compliance with all insurance requirements as specified in Section 8 CONTRACTOR'S INSURANCE. The forms of certificate of insurance and endorsement which the successful Bidder, as Contractor, will be required to furnish are included as part of the Contract Documents.

3-5 FAILURE TO EXECUTE CONTRACT

Failure by a Bidder to whom the Contract is awarded to execute the Contract or to furnish the required bonds or insurance certificates and endorsements shall be just cause for the annulment of the award and the forfeiture of the proposal guarantee.

A Bidder who is awarded the Contract and fails to execute the Contract or furnish the required bonds or insurance certificates and endorsements shall be liable to the Owner for all damages resulting therefrom, including reasonable attorneys' fees. The proposal guarantees forfeited shall not be a limitation thereon.

END OF SECTION

SECTION 4 SCOPE OF WORK

4-1 WORK TO BE DONE

The Work to be done consists of furnishing all transportation, labor, materials, tools, equipment, services, permits, utilities and all other items which are necessary or appurtenant to construct and complete the entire project and construct the project designated in the Contract Documents, and to leave the grounds in a neat and presentable condition.

4-2 CHANGES IN THE WORK

The Owner may require changes in, additions to, or deductions from the Work, including complete termination thereof. Adjustment, if any, in the amounts to be paid to the Contractor by reason of any such change, addition, or deduction shall be determined as set forth in Section 9 ESTIMATES AND PAYMENTS.

The Owner's Representative may order minor changes in the Work not involving an increase or decrease in the Contract amount, not involving a change in the time for completion, and not inconsistent with the purposes for which the Work is being constructed. If the Contractor believes that any order for minor changes in the Work involves changes in the Contract amount or time for completion, he shall not proceed with the minor changes so ordered and shall within seven days of the receipt of such order notify the Owner's Representative in writing of his estimate of the changes in the Contract amount and time for completion he believes to be appropriate.

No payment for changes in the Work will be made and no changes in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work.

4-3 OBSTRUCTIONS

The Contractor shall remove and dispose of all structures, debris, or other obstructions of any character necessary to accommodate the Work. Where such obstructions consist of improvements not required by law to be removed by the Owner thereof, all such improvements shall be removed, maintained, and permanently replaced by the Contractor at his expense except as otherwise specifically provided in the Contract Documents.

4-4 UTILITIES

The Engineer has endeavored to determine the existence of utilities at the site of the Work from the records of the Owners of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown on the Plans. The service connections to these utilities are not shown on the Plans.

The Contractor shall make his own investigations, including exploratory excavations, to determine the locations and type of existing service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the Work. If the Contractor discovers Utility facilities not identified in the Plans or Specifications or in a position different from that shown in the Plans and Specifications, he shall immediately notify in writing the Owner's Representative and the Owner of the Utility facility.

The Owner shall have the responsibility for the timely removal, relocation, protection, and temporary maintenance of existing main or trunkline Utility facilities which are not indicated in the Plans and Specifications with reasonable accuracy.

In case it would be necessary to remove, relocate, protect, or temporarily maintain a Utility because of interference with the Work, the Work on such Utility shall be performed and paid for as follows:

When it is necessary to remove, relocate, protect, or temporarily maintain an existing main or trunkline Utility facility not indicated in the Plans and Specifications with reasonable accuracy, the Owner will compensate the Contractor for the cost of locating, for the costs of repairing damage not due to the failure of the Contractor to exercise reasonable care, for the costs of removing, relocating, protecting, or temporarily maintaining such Utility facilities, and for the costs for equipment on the site necessarily idled during such Work. These costs, the Work to be done by the Contractor in locating, removing, relocating, protecting or temporarily maintaining such Utility facilities shall be covered by a written change order conforming to the provisions of Section 4.2, CHANGES IN THE WORK, and Section 9.1, PAYMENT FOR CHANGES IN THE WORK. The Owner may make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, protect, or temporarily maintain such Utility facilities or to reduce the costs of the Work involved in removing, relocating, protecting or temporarily maintaining such Utility facilities. Changes in alignment and grade will be ordered in accordance with Section 4.2, CHANGES IN THE WORK. The Contractor shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by a failure of the owner of the utility to provide for removal or relocation of such facility.

When it is necessary to remove, relocate, protect, or temporarily maintain a Utility (other than (1) existing main or trunkline Utility facilities not indicated in the Plans and Specifications with reasonable accuracy, or (2) existing service laterals or appurtenances when their presence cannot be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the Work) the cost of which is not required to be borne by the Owner thereof, the Contractor shall bear all expenses incidental to the Work on the Utility or damage thereto. The Work on the Utility shall be done in a manner satisfactory to the Owner thereof; it being understood that the Owner of the Utility has the option of doing such Work with his own forces, or permitting the Work to be done by the Contractor. No representations are made that the obligations to remove, relocate, protect, or temporarily maintain any Utility and to pay the cost thereof is or is not required to be borne by the Owner of such Utility, and it shall be the responsibility of the Contractor to investigate to find out whether or not said cost is required to be borne by the Owner of the Utility.

The right is reserved to governmental agencies and to Owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

4-5 PLANS AND SPECIFICATIONS FURNISHED BY THE OWNER

The Owner will furnish to the Contractor free of charge 5 copies of Plans and Specifications at no charge. Additional sets will be furnished for the cost of reproduction. The Contractor shall keep one set of Plans and Specifications in good order available to the Owner's Representative at the site of the Work.

4-6 FINAL CLEANUP

Upon completion and before making application for Acceptance of the Work, the Contractor shall clean all rights-of-way, streets, borrow pits, and all other grounds occupied by him in connection with the Work of all rubbish, excess materials, temporary structures, and equipment, and all parts of the Work and grounds occupied by him shall be left in a neat and presentable condition.

END OF SECTION

SECTION 5 QUALITY OF THE WORK

5-1 AUTHORITY OF THE OWNER'S REPRESENTATIVE

The Owner's Representative shall decide any and all questions which may arise as to the interpretation of the Plans and Specifications and shall have authority to disapprove or reject materials and equipment furnished and Work performed which, in his opinion, is not in accordance with the Contract Documents.

5-2 SUPPLEMENTAL DRAWINGS

The Plans shall be supplemented by such Drawings as are necessary to define the Work adequately. All such Drawings delivered to the Contractor by the Owner's Representative shall be deemed written instructions to the Contractor. If the Contractor believes that any supplemental Drawings call for changes in the Work for which the Contract amount or time for completion should be changed, he shall not proceed with the changes in the Work so called for and shall within seven Days of the receipt of the supplemental Drawings notify the Owner's Representative in writing of his estimate of the changes in the Contract amount and time for completion he believes to be appropriate.

No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work.

5-3 CONFORMITY WITH CONTRACT DOCUMENTS AND ALLOWABLE DEVIATIONS

The Work shall conform to the lines, grades, dimensions, tolerances, and material and equipment requirements shown on the Plans or set forth in the Specifications. Although measurement, sampling, and testing may be considered evidence as to such conformity, the Owner's Representative shall be the sole judge as to whether the Work or materials deviate from the Plans and Specifications, and his decision as to any allowable deviations therefrom shall be final.

If specific lines, grades, and dimensions are not shown on Plans, those furnished by the Owner's Representative shall govern.

5-4 MANUFACTURER'S INSTRUCTIONS

All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier or distributor, except as otherwise specifically provided in the Contract Documents.

5-5 COORDINATION OF PLANS AND SPECIFICATIONS

The Specifications, Plans, and other Contract Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for the complete Work. In the event of an apparent difference between Plans and Specifications, reference shall be made to the Owner's Representative whose decision thereon shall be final.

5-6 INTERPRETATION OF PLANS AND SPECIFICATIONS

Figured dimensions on Drawings shall govern, but Work not dimensioned shall be as clarified by Owner's Representative. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large scale details shall take precedence over smaller scale Drawings as to shape

and details of construction. Specifications shall govern as to materials and workmanship. Drawings and Specifications are intended to be fully complementary and to agree. The specification calling for the higher quality material or workmanship shall prevail. Materials or Work described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards. In the event of any discrepancy between any Drawings and the figures thereon, the figures shall be taken as correct. In the event of any doubt or question arising respecting the true meaning of the Plans or Specifications, reference shall be made to the Owner's Representative whose decision thereon shall be final.

5-7 ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR

It is the duty of the Contractor to promptly notify the Owner's Representative in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect of insufficiency exists in design, materials, or specified method and fails to promptly notify the Owner's Representative in writing of this belief, the Contractor waives any right to assert that defect or insufficiency in design materials, or specified method at any later date in any legal or equitable proceeding against the Owner, or in any subsequent arbitration or settlement conference between the Owner and the Contractor. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any Work done by the Contractor after he comes to the belief that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at his own risk and he shall bear all cost arising therefrom.

If the Contractor, either before commencing Work or in the course of the Work, finds any discrepancy between the Specifications and the Plans or between either of them and the physical conditions at the site of the Work or finds any error or omission in any of the Plans or in any survey, he shall promptly notify the Owner's Representative of such discrepancy, error, or omission. If the Contractor observes that any Plans or Specifications are at variance with any applicable law, ordinance, regulation, order or decree, he shall promptly notify the Owner's Representative in writing of such conflict. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any Work done by the Contractor after his discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, or conflict will be at his own risk and he shall bear all costs arising therefrom.

5-8 SUPERVISION AND SUPERINTENDENCE

The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but the Contractor shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents except as otherwise provided in the Section 5.7 ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR.

The Contractor shall be responsible to see that the completed Work complies with the Contract Documents.

The Contractor shall designate and keep on the Work site at all times during its progress a competent superintendent, who shall not be replaced without written notice to the Owner's Representative. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor. During periods when the Work is suspended, the Contractor shall make appropriate arrangements for any emergency Work which may be required.

Whenever the superintendent is not present on any particular part of the Work where the Owner's Representative may desire to inform the Contractor relative to interpretation of the Plans and Specifications or to disapproval or rejection of materials or Work performed, the Owner's Representative may so inform the foreman or other worker in charge of the particular part of the Work in reference to which the information is given. Information so given shall be as binding as if given to the superintendent.

5-9 SHOP DRAWINGS

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier, or distributor and which illustrative some portion of the Work.

The Contractor shall review, mark with his approval, and submit for review by the Owner's Representative, shop Drawings as called for in the Special Provisions and Standard Specifications or requested by the Owner's Representative. Drawings shall be submitted in sextuple to the Owner's Representative and be accompanied by a letter of transmittal listing the Drawings submitted. Drawings shall show the name of the project, the name of the Contractor, and, if any, the names of suppliers, manufacturers, and Subcontractors. Shop Drawings shall be submitted with promptness and in orderly sequence so as to cause no delay in prosecution of the Work.

Shop Drawings shall be completed in all respects. If the shop Drawings show any deviations from the requirements of the Plans and Specifications because of standard shop practices or other reasons, the deviations and the reasons therefore shall be set forth in the letter of transmittal. By submitting shop Drawings, the Contractor represents that material, equipment, and other Work shown thereon conforms to the Plans and Specifications, except for any deviations set forth in the letter of transmittal. Within 30 calendar Days after receipt of said Drawings, the Owner's Representative will return two of the copies of the Drawings to the Contractor with any comments noted thereon. If so noted by the Owner's Representative, the Contractor shall correct the Drawings and resubmit them in the same manner as specified for the original submittal. The Contractor in the letter of transmittal accompanying resubmitted shop Drawings shall direct specific attention to revisions other than the correction requested by the Owner's Representative on previous submittals.

The review by the Owner's Representative is only of general conformance with the design concept of the project, and general compliance with the Plans and Specifications and shall not be construed as relieving the Contractor of the full responsibility for: providing materials, equipment, and Work required by the Contract; the proper fitting and construction of the Work; the accuracy and completeness of the shop Drawings; selecting fabrication processes and techniques of construction; and performing the Work in a safe manner.

No portion of the Work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the Owner's Representative and returned to the Contractor with a notation indicating that resubmittal is not required.

If the Contractor believes that any shop drawing or communication relative thereto calls for changes in the Work for which the Contract amount or time for completion should be changed, he shall not proceed with the changes in the Work so called for shall promptly notify the Owner's Representative in writing of his estimate of the changes in the Contract amount and time for completion he believes to be appropriate. No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner in advance of Contractor's proceeding with changed Work.

5-10 QUALITY AND SAFETY OF MATERIALS AND EQUIPMENT

All equipment, materials, and supplies to be incorporated in the Work shall be new, unless otherwise specified. All equipment, materials, and supplies shall be produced in a good and workmanlike manner. When the quality of a material, process, or article is not specifically set forth in the Plans and Specifications, the best available quality of the material, process, or article shall be provided.

Whenever any material, process, or article is indicated or specified by grade, patent or proprietary name, or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of the materials, process, or articles desired and shall be deemed to be followed by the words "or equal", and the Contractor may offer any material, process, or article which shall be substantially equal or better in every respect to that so indicated or specified; provided, however, that if the material, process or article ordered by the Contractor is not, in the opinion of the Owner's Representative, equal or better in every respect to that specified, then the Contractor must furnish the material, process, or article or one that in the opinion of the Owner's Representative is the substantial equal or better in every respect. In the event that the Contractor furnishes material, process, or article more expensive than that specified, the difference in cost of such material, process, or article so furnished shall be borne by the Contractor.

In accordance with Section 4380 of the Government Code, the Contractor shall submit data substantiating requests for substitution of "equal" items within 35 Days after award of the Contract. This 35-day period of time is included in the number of Days allowed for the completion of the Work.

All materials, equipment, and supplies provided shall, without additional charge to Owner, fully conform with all applicable state and federal safety laws, rules, regulations, and orders, and it shall be Contractor's responsibility to provide only such materials, equipment, and supplies notwithstanding any omissions in the Contract Documents therefore or that a particular material, equipment, or supply was specified.

5-11 STANDARDS, CODES, SAMPLES AND TESTS

Whenever reference is made to a standard, code, specification, or test and the designation representing the date or adoption or latest revision thereof is omitted, it shall mean the latest revision of such standard, code, specification, or test in effect on the day the Notice Inviting Sealed Proposals (Bids) is dated.

The tests shall be made in accordance with commonly recognized procedures of technical organizations and such special procedures as may be prescribed elsewhere in the Plans and Specifications. The

Contractor shall furnish without charge such samples for testing as may be required by the Owner's Representative. Tests and samples may be required at the source of materials as well as at the site of the Work.

5-12 OBSERVATION OF WORK BY OWNER'S REPRESENTATIVE

The Owner's Representative shall at all times have access to the Work during construction and shall be furnished with every reasonable facility for ascertaining full knowledge respecting the progress, workmanship, and character of materials and equipment used and employed in the Work.

Whenever the Contractor varies the normal period during which Work or any portion of it is carried on each day, he shall give timely notice to the Owner's Representative so that the Owner's Representative may, if he wishes, be present to observe the Work in progress. If the Contractor fails to give such timely notice, any Work done in the absence of the Owner's Representative will be subject to rejection.

The Contractor shall give timely notice to the Owner's Representative in advance of backfilling or otherwise covering any part of the Work so that the Owner's Representative may, if he wishes, observe such part of the Work before it is concealed.

The observation, if any, by the Owner's Representative of the Work shall not relieve the Contractor of any of his obligations to fulfill the Contract as prescribed. Defective Work shall be made good, and materials, and equipment furnished and Work performed which is not in accordance with the Contract Documents may be rejected notwithstanding the fact that such materials, equipment, and Work have been previously observed by the Owner's Representative or that payment therefore has been included in an estimate for payment.

5-13 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Any Work which does not conform to the requirements of the Contract Documents shall be remedied or removed and replaced by the Contractor, together with any other Work which may be displaced in so doing, and no compensation will be allowed him for such removal, replacement, or remedial Work. All nonconforming materials shall be immediately removed from the site.

Any Work done beyond the lines and grades shown on the Plans or established by the Owner's Representative or any changes in, additions to, or deductions from the Work done without written authority will be considered as unauthorized and will not be paid for. Work so done may be ordered remedied, removed, or replaced by the Contractor.

Upon failure on the part of the Contractor to comply promptly with any order of the Owner's Representative made under the provisions of this Section, the Owner's Representative shall have authority to cause nonconforming materials, rejected Work, or unauthorized Work to be remedied, removed, or replaced at the Contractor's expense and to deduct the costs from any monies due or to become due the Contractor.

5-14 ONE YEAR GUARANTEE

Besides guarantees required elsewhere, the Contractor shall and hereby does guarantee the Work for a period of one year after the date of Acceptance of the Work by the Owner except for any portion of the Work that is utilized or placed into service by the Owner in accordance with the provisions of the Section on USE OF COMPLETED PORTIONS. The guarantee period for portions of the Work so utilized or placed into service shall be one year commencing on the date of the written notification to the Contractor

described in the Section on USE OF COMPLETED PORTIONS. The Contractor shall repair or remove and replace any and all such Work, together with any other Work which may be displaced in so doing, that is found to be defective in workmanship and/or materials within said one year periods, without expense whatsoever to the Owner, ordinary wear and tear and unusual abuse or neglect excepted. In the event of failure to comply with the above-mentioned conditions within one week after being notified in writing, the Owner is hereby authorized to proceed to have the defects remedied and made good at the expense of the Contractor who hereby agrees to pay the cost and charges therefore immediately on demand. Such action by the Owner will not relieve the Contractor of the guarantees required by this Section or elsewhere in the contract documents.

The performance bond and the payment bond shall continue in full force and effect for the guarantee period.

If, in the opinion of the Owner, defective Work creates a dangerous condition or requires immediate corrections or attention to prevent further loss to the Owner or to prevent interruption of operations of the Owner, the Owner will attempt to give the notice required by this Section. If the Contractor cannot be contacted or does not comply with the Owner's request for correction within a reasonable time as determined by the Owner, the Owner may, notwithstanding the provisions of this Section, proceed to make such correction or provide such attention; and the costs of such corrections or attention shall be charged against the Contractor. Such action by the Owner will not relieve the Contractor of the guarantees required by this Section or elsewhere in the Contract Documents.

This Section does not in any way limit the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer or supplier gives a guarantee for a longer period. The Contractor agrees to act as a co-guarantor with such manufacturer or supplier and shall furnish the Owner all appropriate guarantee or warranty certificates upon completion of the project. No guarantee period whether provided for in this Section or elsewhere shall in any way limit the liability of Contractor or his sureties or insurers under the indemnity or insurance provisions of these General Provisions.

END OF SECTION

SECTION 6 PROSECUTION AND PROGRESS

6-1 SUBCONTRACTING

If the Contractor shall subcontract any part of Contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractor and of the persons either directly or indirectly employed by his Subcontractor as he is for the acts and omissions of persons directly employed by himself. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the Owner. The Contractor shall bind every Subcontractor to be bound by the terms of the Contract Documents as applicable to its Work.

The divisions and sections of any Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or suppliers or delineating work to be performed by any specific trade. The divisions of the Specifications are complementary, and anything mentioned or shown in a division of the Specifications or in a specific trade drawing shall be of like effect as if shown in all divisions of the Specifications and in all Drawings.

Contractor is prohibited from performing any of the Work with a Subcontractor who is (1) ineligible to perform such Work pursuant to Section 1771.1 or 1777.7 of the Labor Code; or (2) not registered as a public works contractor with the DIR pursuant to Section 1725.5 of the Labor Code. Contractor agrees that in accordance with Public Contract Code Section 6109, a subcontract with an ineligible Subcontractor is void as a matter of law, amounts paid to the Subcontractor shall be returned to Owner, and Contractor is responsible for paying wages of the Subcontractor's employees if the Subcontractor is allowed to perform any part of the Work.

Contractor shall not award work to Subcontractors in excess of 50% percent of the Contract amount without prior written approval of Owner. Except as provided by law, Contractor shall not employ any Subcontractor, supplier, or other person or organization (including but not limited to those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection.

Contractor shall give prompt written notice to Owner as to the identity and qualifications of any Subcontractor, supplier, or other person or organization to whom Contractor intends to award work, and of Contractor's intent to remove or replace a Subcontractor, supplier, or other person.

All Work performed for Contractor by a Subcontractor, supplier or other person or organization will be in accordance with an appropriate subagreement between Contractor and the Subcontractor, supplier, or other person or organization which specifically binds the Subcontractor, supplier, or other person or organization to the applicable terms and conditions of the Contract Documents for the benefit of Owner.

If requested in writing by Owner, Contractor shall deliver to Owner a copy of each subagreement with a Subcontractor, supplier, or other person or organization performing a part of the Work within seven days of Owner's request.

6-2 ASSIGNMENT

The performance of the Contract shall not be assigned, except upon the written consent of the Owner. Consent will not be given to any proposed assignment which would relieve the original Contractor or his

surety of their responsibilities under the Contract, nor will the Owner consent to any assignment of a part of the Work under the Contract.

Upon obtaining a prior written consent of the Owner, the Contractor may assign monies due or to become due him under the Contract, to the extent permitted by law, but any assignment of monies shall be subject to all proper setoffs in favor of the Owner and to all deductions provided for in the Contract, and particularly all money withheld, whether assigned or not, shall be subject to being used by the Owner for the completion of the Work in the event that the Contractor should be in default therein.

No assignment of this Contract will be approved unless it shall contain a provision that the funds to be paid to the assignee under the assignment are subject to a prior lien for services rendered or materials supplied for performance of the Work called for under the Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials and that the Owner may withhold funds due until all Work required by the Contract Documents is completed to the Owner's satisfaction.

6-3 CONTRACTOR'S CONSTRUCTION SCHEDULE AND COST BREAKDOWN

Within ten days after execution of the Contract, the Contractor shall deliver to the Owner's Representative a construction progress schedule and cost breakdown in bar chart form showing the proposed dates of commencement and completion and cost of each of the various parts of the Work and the anticipated amount of each monthly payment that will become due the Contractor in accordance therewith.

The construction progress schedule shall serve as an index of progress prosecution as contemplated by the Contractor. In the event the actual construction progress varies substantially from the scheduled progress, the Owner's Representative will require and the Contractor shall be required, within ten days to provide a revised construction progress schedule and cost breakdown, giving in detail the particular changes in production as estimated by the Contractor to complete the Work within the specified Contract time. Time is of the essence in this regard.

6-4 TIME FOR COMPLETION AND FORFEITURE DUE TO DELAY

The Contractor shall complete all or any designated portion of the Work called for under the Contract within the time set forth in the Special Provisions.

Failure of the Contractor to perform any covenant or condition contained in the Contract Documents within the time period specified shall constitute a material breach of this Contract entitling the Owner to terminate the Contract unless the Contractor applies for, and receives, an extension of time in accordance with the procedures set forth in this Section and the Section on EXTENSION OF TIME.

Failure of the Owner to insist upon the performance of any covenant or condition within the time period specified in the Contract Documents shall not constitute a waiver of the Contractor's duty to complete performance within the designated periods unless the waiver is in writing.

The Owner's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provisions contained in the Contract Documents. Failure of the Contractor to complete performance promptly within the additional time authorized in the waiver or extension of time agreement shall constitute a material breach of this Contract entitling the Owner to terminate.

In accordance with Government Code 53069.85, Contractor agrees to forfeit and pay Owner the amount per day set forth in the Special Provisions for each and every day of delay which shall be deducted from any payments due or to become due the Contractor.

The Contractor shall not be deemed in breach of this Contract and no forfeiture due to delay shall be made because of any delays in the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor provided the Contractor requests an extension of time in accordance with the procedures set forth in this Section and the Section on EXTENSION OF TIME. Unforeseeable causes of delay beyond the control of Contractor shall include acts of God, acts of public enemy, acts of the government, acts of the Owner, or acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unsuitable weather, or delays of Subcontractors due to such causes, or delays caused by failure of the Owner or the owner of a Utility to provide for removal or relocation of existing Utility facilities. Delays caused by actions or neglect, of Contractor or his agents, servants, employees, officers, Subcontractors, directors, or of any party contracting to perform part or all of the Work or to supply any equipment or materials shall not be excusable delays. Excusable delays (those beyond Contractor's control) shall not entitle the Contractor to any additional compensation. The sole remedy of the Contractor shall be to seek an extension of time.

6-5 EXTENSION OF TIME

The time specified for completion of all of the Work or any part of the Work may be extended only by a written change order executed by the Owner or other written form executed by the Owner.

Requests for an extension of time must be delivered to the Owner's Representative within ten consecutive Days following the date of the occurrence which caused the delay. The request must be submitted in writing and must state the cause of the delay, the date of the occurrence causing the delay, and the amount of additional time requested. Requests for extensions of time shall be supported by all evidence reasonably available or known to the Contractor which would support the extension of time requested. Requests for extensions of time failing to include the information specified in this Section and requests for extensions of time which are not received within the time specified above shall result in the forfeiture of the Contractor's right to receive any extension of time requested.

If the Contractor is requesting an extension of time because of weather, he shall supply daily written reports to the Owner's Representative describing such weather and the Work which could not be performed that day because of such weather or conditions resulting therefrom and which he otherwise would have performed.

The Owner's acceptance of the daily reports shall not be deemed an admission of the Contractor's right to receive an extension of time or a waiver of the Owner's right to strictly enforce the time provisions contained in the Contract Documents.

When the Contractor has submitted a request for an extension of time in accordance with the procedures of this Section and the Section on TIME FOR COMPLETION AND FORFEITURE DUE TO DELAY, the Owner will ascertain the facts and extent of the delay and extend the time for completing the Work if, in its judgment, the findings of fact justify such an extension, and its findings of facts thereon shall be final and conclusive. An extension of time may be granted by the Owner after the expiration of the time originally

fixed in the Contract or as previously extended, and the extension so granted shall be deemed to commence and be effective from the date of such expiration.

6-6 USE OF COMPLETED PORTIONS

When the Work or any portion of it is sufficiently complete to be utilized or placed into service, the Owner shall have the right upon written notification to the Contractor to utilize such portions of the Work and to place the operable portions into service and to operate same.

Upon said notice and commencement of utilization or operation by the Owner, the Contractor shall be relieved of the duty of maintaining the portions so utilized or placed into operation; provided, however, that nothing in this Section shall be construed as relieving the Contractor of the full responsibility for completing the Work in its entirety, for making good defective Work and materials, for protecting the Work from damage, and for being responsible for damage, and for the Work as set forth in the General Provisions and other Contract Documents nor shall such action by the Owner be deemed completion and Acceptance, and such action shall not relieve the Contractor, its sureties, or insurers of the provisions of the Sections on CONTRACTOR'S INSURANCE, INDEMNITY, and GUARANTEES.

Any extension of time shall not release the sureties upon any bond required under the Contract.

END OF SECTION

SECTION 7 LEGAL RELATIONS AND RESPONSIBILITIES

7-1 OBSERVING LAWS AND ORDINANCES

The Contractor shall keep himself fully informed of all existing and future laws, ordinances, and regulations which in any manner affect those engaged or employed in the Work or the materials used in the Work or which in any way affect the conduct of the Work and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency is discovered in the Plans, Specifications, or Contract for the Work in relation to any such law, ordinance, regulation, order, or decree, he shall forthwith report the same to the Owner's Representative in writing and cease operations on that part of the Work until the Owner's Representative has given him appropriate instructions as provided for in the Section on ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR.

The Contractor shall at all times observe and comply with and shall cause all his agents, employees, Subcontractors, and suppliers to observe and comply with all such existing and future laws, ordinances, regulations, orders, and decrees, and shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, by the Contractor, his employees, agents, Subcontractors, or suppliers.

7-2 PERMITS AND LICENSES

Certain permits are required for the construction and/or completion of the Work. These permits are made part of these Contract Documents, and all requirements shall be met solely and fully by Contractor. All costs incurred due to the permit requirements shall be included in the various bid items and no additional allowance will be made for them. The Contractor, at its sole expense and cost, shall procure and maintain during the term hereof all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the Work, except as provided in the Special Provisions. Copies of any permits and licenses, including current Contractor's licenses from the State of California, shall be provided to Owner upon request.

7-3 INVENTIONS, PATENTS, AND COPYRIGHTS

The Contractor shall pay all royalties and assume all costs arising from the use of any invention, design, process, materials, equipment, product, or device which is the subject of patent rights or copyrights.

The Contractor shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from and against all claims, damages, losses, expenses, and other costs, including costs of defense attorneys' fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, materials, equipment, product or device, and shall defend all such claims in connection with any alleged infringement of such right.

7-4 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public, and he shall have under construction no greater length or amount of Work

that he can prosecute properly with due regard to the rights of the public. Convenient access to driveways, houses and buildings along the line of Work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time.

The Contractor shall provide and maintain such fences, barriers, directional signs, lights and flagmen as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the construction Work and to give directions to the public.

7-5 RESPONSIBILITY FOR LOSS, DAMAGE, OR INJURIES

The Contractor shall be responsible for all claims demands, or liability from any cause arising out of or resulting from or in connection with the performance of the Work, excepting only those as may be caused solely and exclusively by the fault or negligence of the Owner, Engineer, the Owner's Representative, or their consultants, or their directors, officers, employees, and agents. Such responsibility shall extend to claims, demands, or liability for loss, damage, or injuries occurring after completion of the Work as well as during the progress of the Work.

7-6 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

Until the Acceptance of the Work, the Contractor shall have the responsible charge and care of the Work and of the materials to be used therein (including materials for which he has received partial payment or materials which have been furnished by the Owner) and shall bear the risk of injury, loss, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non execution of the Work.

The Contractor shall rebuild, repair, restore, and make good all injuries, losses, or damages to any portion of the Work or materials occasioned by any cause before its completion and Acceptance and shall bear the expense thereof. Where necessary to protect the Work or materials from damage, the Contractor shall at his expense provide suitable drainage and erect such temporary structures as are necessary to protect the Work or materials from damage. The suspension of the Work or the granting of any extension of time from any cause whatever shall not relieve the Contractor of his responsibility for the Work and materials as herein specified.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorizations, is authorized to act at his discretion to prevent such threatened loss or injury.

Notwithstanding the foregoing provisions of this Section, the Contractor shall not be responsible for the cost of repairing and restoring damage to the Work, which damage is determined to have been proximately caused by an Act of God, in excess of 5% of the contracted amount, provided that the Work damaged is built in accordance with accepted and applicable building standards and the Plans and Specifications. For the purposes of this paragraph, "Acts of God" shall include only the following occurrences or conditions and effect: earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves.

7-7 PRESERVATION OF PROPERTY

The Contractor shall exercise due care to avoid injury to existing improvement or facilities, Utility facilities, adjacent property, and trees and shrubbery that are not to be removed.

All trees, shrubbery, and landscaping that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and waterlines, all highway or street facilities, and any other improvements or facilities within or adjacent to the Work shall be protected from injury or damage, and the Contractor shall provide and install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operation, they shall be replaced or restored at the Contractor's expense to a condition as good as when the Contractor entered upon the Work or as good as required by the Plans and Specifications if any such objects are a part of the Work being performed.

The fact that any such pipe or other underground facility is not shown on the Plans shall not relieve the Contractor of his responsibility under this Section.

In addition to any requirements imposed by law, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the Work which are in any way affected by the excavations or other operations connected with the performance of the Work. Whenever any notice is required to be given by the Owner or the Contractor to any adjacent or adjoining landowner or other party before commencement of any Work such notice shall be given by the Contractor.

In any emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorizations, is authorized to act at his discretion to prevent such threatened loss or injury.

7-8 EXCAVATION AND/OR DIGGING TRENCHES

As required by Labor Code Section 6705, if the total amount of the Contract is in excess of \$25,000, the Contractor shall submit to the Owner for Acceptance, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches 5 feet or more in depth. The plan shall be prepared by a registered civil or structural Engineer. As a part of the plan, a note shall be included stating that the registered civil or structural Engineer certifies that the plan complies with the CAL-OSHA Construction Safety Orders, or that the registered civil or structural Engineer certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the Safety Orders.

The Owner or the Engineer or their consultants may have made investigations of the subsurface conditions in areas where the Work is to be performed. If so, these investigations are identified in the Special Provisions and the records of such investigations are available for inspection at the office of the Engineer. The detailed plan showing the design of shoring, etc., which the Contractor is required to submit to the Owner for Acceptance in advance of excavation will not be accepted by the Owner if the plan is based on subsurface conditions which are more favorable than those revealed by the investigations made by the Owner or the Engineer or their consultants; nor will the plan be accepted if it is based on soils related design criteria which is less restrictive than the criteria set forth in the report on the aforesaid investigations of subsurface conditions.

The detailed plan showing the design of shoring, etc., shall include surcharge loads for nearby embankments and structures, for spoil banks, and for construction equipment and other construction loadings. The plan shall indicate for all trench conditions the minimum horizontal distances from the side of the trench at its top to the near side of the surcharge loads.

Nothing contained in this Section shall be construed as relieving the Contractor of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

As required by Public Contracts Code Section 7104, in any Contract which involves digging trenches or other excavations that extend deeper than four feet below the surface, the Contractor shall promptly, and before the following conditions are disturbed, notify the Owner, in writing, of any:

- (1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
- (2) Subsurface or latent physical conditions at the site differing from those indicated.
- (3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

Owner shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a change order under the procedures described in the Contract.

In the event that a dispute arises between the Owner and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes and protests between the parties.

7-9 SAFETY

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the Work, and the Contractor shall fully comply with all state, federal and other laws, rules, regulations, and orders relating to safety of the public and workers.

The right of the Engineer or the Owner's Representative to conduct construction review or observation of the Contractor's performance will not include review or observation of the adequacy of the Contractor's safety measure in, on, or near the construction site.

7-10 PERSONAL LIABILITY

No director, officer, employee, or agent of the Owner, the Engineer, the Owner's Representative, or their consultants shall be personally responsible for any liability arising under or by virtue of the Contract.

7-11 INDEMNITY

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, agents, and employees from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of

the Work, both on and off the jobsite provided that any of the foregoing (1) is attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (2) is caused in whole or in part by any act or omission of the Contractor, any Subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not it is caused in part by any act or omission, of a party indemnified hereunder (except for the sole negligence or willful misconduct or active negligence of such party).

In any and all claims against the indemnified parties by any employee of the Contractor, any Subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the first and fourth paragraphs in this Section on INDEMNITY shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor, or any Subcontractor, or any supplier or other person under workers' compensation acts, disability benefit acts, or other employee acts.

The obligations of the Contractor under the first and fourth paragraphs in this Section on INDEMNITY shall not extend to the liability of the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents, arising out of or resulting from or in connection with the preparation or approval of maps, Drawings, opinions, reports, surveys, designs or Specifications, providing that the foregoing was the sole and exclusive cause of the loss, damage, or injury.

The Contractor shall also indemnify and hold harmless the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from and against all losses, expenses, damages (including damages to the Work itself), attorneys' fees and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of the Contractor's obligations under the Contract. Such costs, expenses, and damages shall include all cost, including attorneys' fees incurred by the indemnified parties in any lawsuit to which they are a party.

7-12 HOURS OF LABOR

The Contractor shall forfeit as a penalty to the Owner \$25.00 for each worker employed in the execution of the Contract by the Contractor or any Subcontractor under him for each calendar day during which such worker is required or permitted to Work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of the Labor Code and, in particular, Section 1810 to Section 1815 thereof, inclusive, except that Work performed by employees of Contractor in excess of 8 hours per day and 40 hours during any one week shall be permitted upon compensation for all hours worked in excess of 8 hours per day at not less than one and one-half times the basic rate of pay as provided in said Section 1815. Any work performed by workers necessary to be performed after working hours or on Saturday, Sundays or other holidays shall be performed without adjustment to the Contract Price or any other additional expense to the District.

7-13 PREVAILING WAGE

a. The Contractor must be, and shall be deemed and construed to be, aware of and understand the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., and Title 8 of the California Code of Regulations ("CCR"), Section 16000 et seq. (collectively, "Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on

certain "public works" and "maintenance" projects. Unless otherwise noted in the Special Provisions, the Project is a "public works" project, as defined by the Prevailing Wage Laws, and the Contractor must perform all of the Work as a public works project. The Contractor must fully comply, and must ensure full compliance by all Subcontractors and other persons and entities as required, with all applicable Prevailing Wage Laws.

b. No contractor may bid on or be awarded a contract for a public works project unless the contractor is, and no subcontractor may be listed in any bid for a public works project unless the subcontractor is, currently registered with the Department of Industrial Relations ("DIR") and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of Labor Code Section 1725.5 for an unregistered contractor to submit a bid authorized by Business and Professions Code Section 7029.1 or Public Contract Code Section 20103.5, if the contractor is registered at the time the contract is awarded. Notwithstanding anything to the contrary, if at any time during the performance of the Work, the Contractor or any of its Subcontractors is not duly registered pursuant to Labor Code Section 1725.5 (including, without limitation, if the registration expires or the DIR revokes the registration), Owner in its sole discretion may cancel the Contract and/or replace the Contractor or Subcontractor with a contractor or subcontractor that is duly registered pursuant to Labor Code Section 1725.5.

c. Under the provisions of the California Labor Code, the Director of the Department of Industrial Relations ("DIR") has determined the prevailing rate of wages for the locality in which the Work is to be performed and the Owner has adopted said prevailing rate of wages. A copy of these prevailing rates may be obtained from the DIR, and shall be made available to any interested party on request. A copy of such wage rates shall be posted on the job site by the Contractor.

d. The Contractor acknowledges that, in applicable circumstances, the DIR will provide certain services in connection with the Project, in accordance with the California Labor Code, Section 16450 et seq. of Title 8 of the CCR and/or other applicable law. In any event, the Contractor and all Subcontractors, at no additional cost to the District, must comply with any and all applicable labor-related requirements, regardless of how implemented, including, without limitation, requirements for payment of wages in accordance with the Prevailing Wage Laws, maintenance, inspection and submittal (electronically, as required) of payroll records, interviewing of workers, et cetera. The Contractor, at no additional cost to the District, must cooperate with the DIR, the District, and any District consultants in connection with labor-law compliance matters. The Contractor must post all job-site notices required by law in connection with the Work, including, without limitation, posting required by DIR regulations. The Contractor must make all Subcontractors aware of the foregoing requirements and must require that the Subcontractors comply with all labor-related requirements at no extra cost to the District. The District will coordinate and conduct any mandatory pre-construction conference, and the Contractor and each of its Subcontractors must attend such conference in order to ensure they are aware of applicable labor-law requirements.

e. In accordance with Labor Code Section 1775, Contractor or Subcontractor shall forfeit not more than Two Hundred Dollars (\$200.00) to the District for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed by the Contractor or by any Subcontractor, of any tier, in connection with the Work. Pursuant to Labor Code Section 1775, the difference between such prevailing wage rates and the amount paid to each worker for each calendar

day, or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker in the addition to the penalties. The amount of forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the Contractor's mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages, subject to the provisions of Labor Code Sections 1775(1)(2)(B), which provides that:

- (i) The penalty may not be less than Forty Dollars (\$40.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the contractor or subcontractor.
- (ii) The penalty may not be less than Eighty Dollars (\$80.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the contractor or subcontractor has been assessed penalties within the previous three years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.
- (iii) The penalty may not be less than One Hundred Twenty Dollars (\$120.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1.

Contractors and Subcontractors shall note that minimum penalty amounts are not subject to negotiation or waiver.

Labor Code § 1742.1 makes the Contractor, any Subcontractor and the payment bond insurer jointly and severally liable for Liquidated Damages equal to the total underpayment of wages remaining uncorrected for sixty (60) days after service of a Notice of Withholding Contract Payments or a Civil Wage and Penalty Assessment. The underpaid employee will receive both the Liquidated Damages and the underpayment amount. The District may also request imposition of penalties equal to Two Hundred Dollars (\$200.00) per day per worker in addition to the Liquidated Damages and underpayment.

Labor Code § 1741(b) requires that "Interest shall accrue on all due and unpaid wages at the rate described in subdivision (b) of Section 3289 of the Civil Code. The interest shall accrue from the date that the wages were due and payable, as provided in Part 7 (commencing with Section 1720) of Division 2, until the wages are paid." The underpaid employee shall receive any and all interest collected.

7-14 TRAVEL AND SUBSISTENCE PAYMENTS

Each worker needed to execute the Work must be paid travel and subsistence payments as defined in the applicable collective bargaining agreements filed in accordance with Labor Code Section 1773.8.

7-15 APPRENTICES

The Contractor and each subcontractor shall be responsible for compliance with the provisions of law relating to employment of apprentices, including, without limitation, Sections 1777.5, 1777.6, and 1777.7 of the California Labor Code. As provided by Labor Code Section 1777.7, violations of Labor Code Section 1777.5 may result in forfeiture not to exceed \$100 for each full calendar day of non-compliance. Information regarding apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San

Francisco, California, or from the Division of Apprenticeship Standards of the DIR ("DAS"). **IF THE CONTRACT FALLS WITHIN THE JURISDICTION OF SECTION 1777.5, THE CONTRACTOR MUST NOTIFY OWNER NOT MORE THAN TWENTY-FOUR HOURS AFTER RECEIVING THE NOTICE OF AWARD.**

Per Labor Code §1777.5(e) the Contractor and all Subcontractors shall notify an applicable, approved training program that can supply apprentices to the area of the Public Works project. If the Contractor or Subcontractor does not have an existing agreement with an applicable, approved training program that can supply apprentices to the area of the Public Works project, it shall provide notification to all applicable, approved training programs that can supply apprentices to the area of the Public Works project. All apprentices employed by the Contractor to perform any of the Work shall be paid the prevailing wages identified by the Director of Industrial Relations. Only apprentices, as defined in Labor Code §3077 who are in training under apprenticeship standards and written apprenticeship agreements under Labor Code § 3070, et seq. are eligible to be employed for the Work. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which such apprentice is training or the rules and regulations of the California Apprenticeship Council.

When the Contractor or any Subcontractor, of any tier, in performing any of the Work employs workers in any Apprenticeable Craft or Trade, the Contractor and such Subcontractor shall apply to the Joint Apprenticeship Committee administering the apprenticeship standards of the craft or trade in the area of the site of the Work for a certificate approving the Contractor or such Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected; provided, however, that the approval as established by the Joint Apprenticeship Committee or Committees shall be subject to review by the Administrator of Apprenticeship.. The Joint Apprenticeship Committee or Committees, subsequent to approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or such Subcontractor in order to comply with Labor Code §1777.5. The Contractor and Subcontractors shall submit contract award information to the applicable Joint Apprenticeship Committee which shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed.

The ratio of work performed by apprentices to journeymen employed in a particular craft or trade on the public work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates where the contractor agrees to be bound by those standards, but, except as otherwise provided in this section, in no case shall the ratio be less than one hour of apprentice work for every five hours of journeyman work. This ratio of apprentice work to journeyman work shall apply during any day or portion of a day when any journeyman is employed at the jobsite and shall be computed on the basis of the hours worked during the day by journeymen so employed. Any work performed by a journeyman in excess of eight hours per day or 40 hours per week shall not be used to calculate the ratio. The contractor shall employ apprentices for the number of hours computed as above before the end of the contract or, in the case of a subcontractor, before the end of the subcontract. However, the contractor shall endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the jobsite. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Chief of the Division of

Apprenticeship Standards, upon application of an apprenticeship program, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification.

The Contractor or any Subcontractor, of any tier, who performs any of the Work by employment of journeymen or apprentices in any Apprenticeshipable Craft or Trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any such craft or trade in the area of the site of the Work, to which fund or funds other contractors in the area of the site of the Work are contributing, shall contribute to the fund or funds in each craft or trade in which it employs journeymen or apprentices in the same amount or upon the same basis and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept such funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The contractors shall provide proof of such contributions when requested, including checks, check stubs, receipts, or other records required to prove that all required payments were made.

In the event the Contractor willfully fails to comply with the provisions of this Article or Labor Code § 1777.5, and pursuant to Labor Code § 1777.7, the Contractor shall: (i) be denied the right to bid on any public works contract for a period of one (1) year from the date the determination of non-compliance is made by the Administrator of Apprenticeship; and (ii) forfeit, as a civil penalty, One Hundred Dollars (\$100.00) and up to Three Hundred Dollars (\$300.00) for each full calendar day of noncompliance. The District shall withhold such amount from the Contract Price then due or to become due upon request of the DAS.

7-16 WARRANTY OF TITLE

No materials, supplies, or equipment for the Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale Contract or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. The Contractor warrants clear and good title to all materials, supplies, and equipment installed and incorporated in the Work and agrees upon completion of all Work to deliver the premises together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens, encumbrances, or charges and further agrees that neither he nor any person, firm, or corporation furnishing any material or labor for any Work covered by the Contract shall have any right to a lien upon the premises or any improvement or appurtenance thereon, provided that this shall not preclude the Contractor from installing metering devices or other equipment of Utility companies or of municipalities, the title of which commonly retained by the Utility company or the municipality. Nothing contained in this Section, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for their protection, or any right under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this Section shall be inserted in all subcontracts and material contracts, and notices of its provision shall be given to all persons furnishing materials for the Work when no formal Contract is entered into for such materials.

7-17 PROPERTY RIGHTS IN MATERIALS

Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or the soil, or after payment has been made for materials delivered to the site of the Work, or stored subject to or under the control of the Owner.

All such materials shall become the property of the Owner upon being so attached or affixed or upon payment for materials delivered to the site of the Work or stored subject to or under the control of the Owner.

Soil, stone, gravel, and other materials found at the site of the Work and which conform to the Plans and Specifications for incorporation into the Work may be used in the Work. No other use shall be made of such materials except as may be otherwise described in the Plans and Specifications.

7-18 MUTUAL RESPONSIBILITY OF CONTRACTORS

Nothing in the Contract shall be interpreted as granting to the Contractor exclusive occupancy of the site of the project. The Contractor must ascertain to his own satisfaction the scope of the project and the nature of any other Contracts that have been or may be awarded by the Owner in the construction of the project, to the end that the Contractor may perform this Contract in the light of such other Contracts, if any.

The Contractor shall not cause any unnecessary hindrance or delay to any other Contractor working on the project. If the performance of any Contract for the project is likely to be interfered with by the simultaneous performance of some other Contract or Contracts, the Owner's Representative shall decide which Contractor shall cease Work temporarily and which Contractor shall continue or whether the Work under the Contracts can be coordinated so that the Contractors may proceed simultaneously. On all questions concerning conflicting interest of Contractors performing related Work, the decision of the Owner's Representative shall be binding upon all Contractors concerned and the Owner, the Engineer, the Owner's Representative, and their consultants shall not be responsible for any damages suffered or extra costs incurred by the Contractor resulting directly or indirectly from the award or performance of attempted performance of any other Contract or Contracts on the project or caused by a decision or omission of the Owner's Representative respecting the order of precedence in the performance of the Contracts.

If through acts of neglect on the part of the Contractor, any other contractor or any Subcontractor shall suffer loss of damage on the Work, the Contractor agrees to settle with such other contractor or Subcontractor by agreement or arbitration, if such other contractor or Subcontractor will so settle. If such other contractor or Subcontractor shall assert any claim against the Owner, the Engineer, the Owner's Representative, or their consultants, on account of any damage alleged to have been so sustained, the Owner shall notify Contractor who shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants and each of their directors, officers, employees, and agents against any such claim, including all attorneys' fees and any other costs incurred by the indemnified parties relative to any such claim.

7-19 TERMINATION FOR BREACH

If the Contractor refuses or fails to prosecute the Work or any separable part thereof with such diligence as will ensure its completion within the time specified herein, or any extension thereof, or fails to complete such Work within such time, or if the Contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of his insolvency, or if it files a petition to take advantage of any debtor's act, or if he or any of his Subcontractors should violate any of the provisions of the Contract, or if it should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials to complete the Work in the time specified, or if it should

fail to make prompt payment to Subcontractors or for material or labor, or if it should persistently disregard laws, ordinances, or instructions given by the Owner or Owner's Representative, the Owner may, without prejudice to any other right or remedy, serve written notice upon the Contractor and its surety of Owner's intention to terminate the Contract, said notice to contain the reasons for such intention to terminate the Contract, and unless within ten Days after the service of such notice such violations shall cease and satisfactory arrangements for the corrections thereof be made, the Contract shall upon the expiration of said ten Days cease and terminate. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.

In the event of any such termination, the Owner shall immediately serve written notice thereof upon the surety and Contractor, and the surety shall have the right to take over and perform the Contract; provided, however, that if the surety within 15 Days after the serving upon it of a notice of termination does not give the Owner written notice of its intention to take over and perform the Contract or does not commence performance thereof within 30 Days from the date of serving said notice, the Owner may take over the Work and prosecute the same to completion by Contract or by any other method it may deem advisable for the account and at the expense of the Contractor, and his surety shall be liable to the Owner for any excess cost or other damage occasioned the Owner thereby, and in such event the Owner may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plants and other property belonging to the Contractor that may be on the site of the Work and be necessary therefore. For any portion of such Work that the Owner elects to complete by furnishing its own employees, materials, tools, and equipment, the Owner shall be compensated for such in accordance with the schedule of compensation for force account Work in the Section on PAYMENT FOR CHANGES IN THE WORK.

If the unpaid balance of the Contract price exceeds the direct and indirect costs of completing the Work, including, but not limited to, all costs to Owner arising from professional services and attorneys' fees and all costs generated to insure or bond the Work of substituted Contractors or Subcontractors utilized to complete the Work, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner promptly upon demand; on failure of Contractor to pay the surety shall pay on demand by Owner. Any portion of such difference not paid by Contractor or surety within 30 Days following the mailing of a demand for such costs by Owner shall earn interest at the rate of 10% per annum or the maximum rate authorized by California law, whichever is lower.

The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the Owner.

7-20 NOTICE AND SERVICE THEREOF

Any notice required or given under the Contract shall be in writing, be dated, and signed by the party giving such notice or his duly authorized representative, and be served as follows:

If to the Owner, by personal delivery or by deposit in the United States mail.

If to the Contractor, by personal delivery to the Contractor or to his authorized representative at the site of the project or by deposit in the United States mail.

If to the surety or any other person, by personal delivery to said surety or other person or by deposit in the United States mail.

All mailed notices shall be in sealed envelopes, shall be sent by certified mail with postage prepaid, and shall be addressed to the addresses in the Contract Documents or such substitute addresses which a party designates in writing and serves as set forth herein.

7-21 PARTIAL INVALIDITY

If any provision of this Contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall nevertheless continue in full force without being impaired or invalidated in any way.

7-22 ATTORNEYS' FEES

Should either party to the Contract bring an action to enforce any provision of the Contract, the prevailing party shall be entitled to recover his reasonable attorneys' fees and costs in connection therewith.

7-23 LANDS AND RIGHTS-OF-WAY

The lands and rights-of-way for the facility to be constructed will be provided by the Owner. The Contractor shall make his own arrangements and pay all expenses for additional area required by him outside the limits of the Owner's lands and rights-of-way.

Work in public right-of-way shall be done in accordance with the requirements of the permit issued by the public agency in whose right-of-way the Work is located in addition to conforming to the Plans and Specifications. If a permit is not required, the Work shall conform to the standards of the public agency involved in addition to conforming to the Plans and Specifications.

7-24 WAIVER OF RIGHTS

Except as otherwise specifically provided in the Contract Documents, no action or failure to act by the Owner, Engineer, Owner's Representative, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder.

7-25 TAXES

The Contractor shall pay all sales, consumer, use, and other taxes.

NOTICE OF TAXABLE POSSESSORY INTEREST - The terms of this document may result in the creation of a possessory interest. If such a possessory interest is vested in a private party to this document, the private party may be subjected to the payment of personal property taxes levied on such interest.

7-26 ASSIGNMENT OF ANTI-TRUST ACTIONS

pursuant to a public works Contract, the Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works Contract or the subcontract. This assignment shall be made and become effective at the time the Owner tenders final payment to the Contractor, without further acknowledgment by the parties.

In submitting a bid to a public purchasing body, the Bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2

[commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the Bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the Bidder.

7-27 PAYROLL RECORDS

The Contractor and each Subcontractor must comply with all applicable provisions of Labor Code Sections 1776 and 1812, which relate to preparing and maintaining accurate payroll records, and making such payroll records available for review and copying by the District, the DIR's Division of Labor Standards Enforcement, and DAS. The payroll records must be certified, maintained at the principal offices of the Contractor, and made available as required pursuant to Labor Code Section 1776. The Contractor must inform the District of the location at which the payroll records are located, including the street address, city, and county, and must, within five working days, provide a notice of any change of location and address. The Contractor and any Subcontractor that fails to timely comply with requests for certified payroll records shall forfeit, as a penalty to the District, \$100 for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated, and, in addition to penalties as provided by law, may be subject to debarment pursuant to Labor Code Section 1771.1. In addition, the Contractor and each Subcontractor must comply with Labor Code Section 1771.4(a)(3), which relates to providing the payroll records directly to the Labor Commissioner.

7-28 STATE REVIEW AND AUDIT OF RECORDS

In accordance with Government Code Section 8546.7, the State of California ("State") has the right to examine, review, audit and/or copy the Records of the Work during the three-year period following final payment to the Contractor pursuant to the Contract. In addition, the Owner has the right to examine, review, audit and/or copy the Records of the Work during the four-year period following final payment to the Contractor pursuant to the Contract. Therefore, the Contractor shall preserve and retain all such Records of the Work for a period of four years commencing upon final payment to the Contractor pursuant to the Contract or, if an examination, review or audit is commenced but not completed within such four-year period, until such examination, review or audit has been completed. The Contractor, upon request, shall make the Records of the Work available for the purposes described in this Section at all reasonable times during the period the Contractor is required to preserve and maintain the Records of the Work. In each Subcontract, the Contractor shall require that the Subcontractor preserve and retain its Records of the Work, and make those Records of the Work available for examination, review, audit and/or copying, to the same extent as is required of the Contractor pursuant to this Section.

END OF SECTION

SECTION 8 CONTRACTOR'S INSURANCE

Contractor shall procure and maintain for the duration of the contract, *and for 5 years thereafter*, insurance against claims for injuries or death to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.

Coverage - Coverage shall be at least as broad as the following:

1. **General Liability - Commercial General Liability (CGL)** - Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least five million dollars (\$5,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to Trabuco Canyon Water District or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability** - Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
3. **Workers' Compensation Insurance** - The Contractor shall provide workers' compensation coverage as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease. **Waiver of Subrogation** (also known as Transfer of Rights of Recovery Against Others to Us): The Contractor hereby agrees to waive rights of subrogation to obtain endorsement necessary to affect this waiver of subrogation in favor of the Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers, for losses paid under the terms of this coverage which arise from work performed by the Named Insured for the Trabuco Canyon Water District; this provision applies regardless of whether or not the Trabuco Canyon Water District has received a waiver of subrogation from the insurer.
4. **Builder's Risk** – (Course of Construction) if necessary- insurance utilizing an "All Risk" (Special Perils) coverage form with limits equal to the completed value of the project and no coinsurance penalty provision. See **Responsibility of Work**
5. **Contractor's Pollution Liability** – (optional: if project involves environmental hazards) with limits no less than \$5,000,000 per occurrence or claim, and \$10,000,000 policy aggregate.

If the Contractor maintains broader coverage and or/higher limits than the minimums shown above, the Trabuco Canyon Water District requires and shall be entitled to the broader coverage and/or higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum of insurance and coverage shall be available to the Trabuco Canyon Water District)

Other Required Provisions – The Commercial General Liability policy and Contractors Pollution (if necessary) are to contain, or be endorsed to contain, the following provisions:

1. **Additional Insured Status:** Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as

ISO Form CG 20 10 11 85 or if not available, through the addition of **both** CG 20 10 10 01 and CG 20 37 10 01, with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance.

2. **Primary Coverage:** For any claims related to this project, the Contractor's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Trabuco Canyon Water District.

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or equivalent or as otherwise approved by Trabuco Canyon Water District.

The Contractor agrees and he/she will comply with such provisions before commencing work. All of the insurance shall be provided on policy forms and through companies satisfactory to Trabuco Canyon Water District. The Trabuco Canyon Water District reserves the right to obtain complete, certified copies of all required insurance policies, including the policy declarations page with endorsement number. Failure to continually satisfy the Insurance requirements is a material breach of contract.

Responsibility for Work - Until the completion and final acceptance by Trabuco Canyon Water District of all the work under and implied by this agreement, the work shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erectments, and repairs occasioned or rendered necessary by causes of any nature whatsoever.

The Contractor shall provide and maintain **builder's risk** (course of construction) or an installation floater (for materials and equipment) covering all risks of direct physical loss, damage or destruction to the work in the amount specified in the General Conditions, to insure against such losses until final acceptance of the work by Trabuco Canyon Water District. Such insurance shall insure at least against the perils of fire and extended coverage, theft, vandalism and malicious mischief, and collapse. The Policy shall be endorsed with Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers named as loss payee, as their interest may appear. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for Trabuco Canyon Water District or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any direct physical loss, damage or destruction occurring prior to final acceptance of the work by Trabuco Canyon Water District.

Deductibles and Self-Insured Retentions - Insurance deductibles or self-insured retentions must be declared by the Contractor, and approved by the Trabuco Canyon Water District. At the election of Trabuco Canyon Water District the Contractor shall either cause the insurer to reduce or eliminate such self-insured retentions as respects the Trabuco Canyon Water District, its directors, officers, employees, and authorized volunteers or the Contractor shall provide a financial guarantee satisfactory to the Trabuco Canyon Water District guaranteeing payment of losses and related investigations, claim administration, and defense expenses. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the Trabuco Canyon Water District.

Verification of Coverage - Evidences of Insurance Contractor shall furnish the Trabuco Canyon Water District with copies of certificates and amendatory endorsements effecting coverage required by this contract. All certificates and endorsements are to be received and approved by the Trabuco Canyon

Water District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The Trabuco Canyon Water District reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration pages and Endorsement pages, required by these specifications, at any time. Failure to continually satisfy the Insurance requirements is a material breach of contract.

Continuation of Coverage - The Contractor shall, upon demand of Trabuco Canyon Water District deliver evidence of coverage showing continuation of coverage for at least (5) years after completion of the project. Contractor further waives all rights of subrogation under this agreement. When any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement and evidence of waiver of rights of subrogation against Trabuco Canyon Water District (if builder's risk insurance is applicable) to Trabuco Canyon Water District at least ten (10) days prior to the expiration date.

Sub-Contractors - In the event that the Contractor employs other Contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above (via as broad as ISO CG 20 38 04 13). The Contractor shall, upon demand of Trabuco Canyon Water District, deliver to Trabuco Canyon Water District copies such policy or policies of insurance and the receipts for payment of premiums thereon.

SECTION 9 ESTIMATES AND PAYMENTS

9-1 PAYMENTS FOR CHANGES IN THE WORK

Changes in, additions to, or deductions from the Work, including increases or decreases in the quantity of any item or portion of the Work, shall be set forth in a written change order executed by the Owner and by the Contractor which shall specify:

The changes, additions, and deductions to be made.

The increase or decrease in compensation due the Contractor, if any.

Adjustment in the time of completion, if any.

Adjustment in the compensation due the Contractor shall be determined by one or more of the following methods in the order of precedence listed below:

Unit prices contained in the Contract.

Mutually agreeable lump sum or unit prices. If requested by the Owner's

Representative, the Contractor shall furnish an itemized breakdown of the quantities and prices used in computing proposed lump sum and unit prices.

Force account whereby the Contractor is compensated for furnishing labor, materials, tools, and equipment as follows:

Cost of labor plus 15% for workers directly engaged in the performance of the Work. Cost of labor shall include actual wages paid, including employer payments to or on behalf of the workers for health and welfare, pension, vacation and similar purposes plus payments imposed on payroll amounts by state and federal laws plus subsistence and travel allowance payments to workers.

Cost of material plus 15%. Cost of material shall include sales tax, freight, and delivery charges. The Owner reserves the right to furnish such materials as he deems advisable and the Contractor shall not be paid the 15% markup on such materials.

For tools and equipment actually engaged in the performance of the Work, rental rates plus 15%. The rental rates shall be those prevailing in the area where the Work is performed. No rental charge shall be made for the use of tools or equipment having a replacement value of \$500 or less.

Subcontractor invoices to the Contractor plus 5%. Subcontractor invoices shall be based on the above described cost of labor plus 15%, cost of material plus 15%, and tool and equipment rental rates plus 15%.

No payment shall be made for any item not set forth above, including without limitation, Contractor's overhead, general administrative expense, supervision, or damages claimed for delay in prosecuting the remainder of the Work.

For force account Work, the Contractor shall submit to the Owner's Representative for his verification daily Work sheets showing an itemized breakdown of labor, materials, tools, and equipment used in performing the Work. No payment will be made for Work not verified by the Owner's Representative.

9-2 PROGRESS PAYMENTS

The Owner shall, on or before the tenth day of each calendar month after actual construction Work is started, cause an estimate in writing to be made by the Owner's Representative of the value of the Work completed by the Contractor and of materials delivered on the ground at the site of the Work or stored subject to or under the control of the Owner to the first of the month in which the estimate is made. In estimating such value, the Owner's Representative may take into consideration, along with other facts and conditions deemed by him to be proper, the ratio of the difficulty or cost of the Work done to the probable difficulty or cost of the Work remaining to be done. The Owner shall retain five percent (5%) of such estimated value as part security for the fulfillment of the Contract by the Contractor and shall by the end of each month in which the estimate is made payable to the Contractor the balance of such estimated value after deducting therefrom all previous payments and all sums to be kept or retained under the terms of the Contract.

If the Owner fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from the Contractor, Owner shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

Upon receipt of a payment request, the Owner shall act in accordance with both of the following:

- (1) Review the payment request as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request; and
- (2) In the event that any payment request is determined not to be a proper payment request suitable for payment, the Owner shall return such payment request to the Contractor as soon as practicable, but not later than seven days, after receipt. A request for payment returned as improper shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper. The number of days available to the Owner to make a payment without incurring interest shall be reduced by the number of days by which the Owner exceeds the seven-day return requirement set forth above.

The District will withhold contract payments to the Contractor and/or any Sub-contractor if contractors have failed to submit certified weekly payroll records on a monthly basis, as required, herein. Withholding will be in the amount of the full Payment Application amount requested on behalf of the Contractor or Subcontractor for whom certified weekly payroll records have not been received or whose submitted certified weekly payroll records are inadequate or incomplete. In such cases, a written request for provision or correction of the certified weekly payroll records, within not more than 10 days, will be issued by the District. Should noncompliance continue after such 10-day period, the Contractor shall, as a penalty to the District, forfeit One Hundred Dollars (\$100.00) for each calendar day, or portion thereof, for each worker affected by those records, until strict compliance is effectuated.

The District will withhold contract payments, after investigation by the District and/or investigation, approval or request of DLSE, in amounts equal to identified worker underpayments, liquidated damages and/or penalties as authorized by the Labor Code or these contract Supplementary Conditions, if: (a)

prevailing wages have not been paid to all workers employed on the project; (b) the Contractor fails to comply with the Labor Code requirements concerning apprentices or, (c) the Contractor willfully fails to provide payroll records, as requested by the District.

The Contractor, any Subcontractor of any tier and the bond insurer may become liable for the underpayments and Liquidated Damages if the responsible employer fails to correct identified underpayments within 60 days of any issued finding of underpayment. The Contractor and or any responsible Subcontractor of any tier and the bond insurer will be jointly and severally liable for liquidated damages. Liquidated Damages are equal to the total underpayment of wages remaining uncorrected sixty, (60) days after receipt of the first notice. The underpaid employee will receive both the liquidated damages and the underpayment amount. The District may also impose penalties equal to Two Hundred Dollars (\$200.00) per day per worker in addition to the liquidated damages and underpayment.

9-3 FINAL ESTIMATE AND PAYMENT

When the Work has been completed, the Owner's Representative will make a final estimate of the total amount of Work done thereunder and the amount to be paid therefore under the terms of the Contract. If the Owner finds the Work has been completed according to the Contract, he shall accept the Work, shall file a notice of completion, and shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be retained under the provisions of the Contract. All prior progress estimates and payments shall be subject to correction in the final estimate and payment. The final payment shall not be due and payable until the expiration of 35 Days from the date of filing a notice of completion of the Work by the Owner.

It is mutually agreed between the parties to the Contract that no certificate given or payment made under the Contract shall be conclusive evidence of performance of the Contract and no payment shall be construed to be an Acceptance of any defective Work or improper materials.

The Contractor further agrees that the payment of the final amount due under the Contract shall release the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from any and all claims or liability arising out of the Contract.

9-4 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF; RETENTION OF PROCEEDS

In addition to the amount which the Owner may retain under Section 9.2 PROGRESS PAYMENTS, the Owner may withhold a sufficient amount or amounts from any payment otherwise due to the Contractor as in his judgment may be necessary to cover:

- (1) Payments which may be past due and payable for properly filed claims against the Contractor or any Subcontractors for labor or materials furnished in or about the performance of the Work on the project under the Contract.
- (2) Estimated or actual costs for correcting defective Work not remedied.
- (3) Amounts claimed by the Owner as forfeiture due to delay or other offsets.

The Owner may apply such withheld amount or amounts to the payment of such claims in his discretion. In so doing, the Owner shall be deemed the agent of the Contractor and any payments so made by the Owner shall be considered as a payment made under the Contract by the Owner to the Contractor, and

the Owner shall not be liable to the Contractor for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. The Owner will render to the Contractor a proper account of such funds disbursed on behalf of the Contractor.

Pursuant to Section 7107 of the Public Contract Code, within 60 days after the date of completion of the Contract, the retention proceeds withheld from any payment by the Owner to the Contractor shall be released. In the event of a dispute between the Owner and the Contractor, the Owner may withhold from the final payment an amount not to exceed 150 percent of the disputed amount.

Within ten days from the time that all or any portion of the retention proceeds are received by the Contractor shall pay each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by the Contractor is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor if the payment is consistent with the terms of the subcontract. The Contractor may withhold from a subcontractor its portion of the retention proceeds if a bona fide dispute exists between the subcontractor and the Contractor. The amount withheld from the retention payment shall not exceed 150 percent of the estimated value of the disputed amount.

In the event that retention payments are not made within the time periods specified above, the Owner or Contractor withholding the unpaid amounts shall be subject to a charge of 2 percent per month on the improperly withheld amounts in lieu of any interest otherwise due. Additionally, in any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to attorney's fees and costs.

9-5 SUBSTITUTION OF SECURITIES FOR AMOUNTS WITHHELD

any money withheld by the Owner to ensure performance of the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the Owner or with a state or federally chartered bank as the escrow agent, who shall release such securities to Contractor following the expiration of 40 Days from the date of filing of a Notice of Completion of the Work by the Owner, to the extent such securities have not previously been utilized by Owner for purposes as provided hereinafter or are not then subject to withholding by Owner to satisfy stop notices or other claims and costs associated therewith.

The request for substitution of securities to be deposited with the Owner, or with a state or federally chartered bank as escrow agent, shall be submitted on the form set forth following this section, which when executed by the Contractor and the Owner shall constitute a Supplemental Agreement forming a part of this Contract. The Owner shall have 30 Days from receipt of any such written request, properly completed and signed by the Contractor and, if applicable, accompanied by an escrow agreement in a form acceptable to Owner, to approve said request and effect the substitution. Owner shall not unreasonably withhold approval of said request. Owner shall determine the value of any security so deposited. Such Supplemental Agreement and any escrow agreement shall provide for the release of the securities to Contractor as set forth herein and shall also set forth the manner in which Owner may convert the securities or portions thereof to cash and apply the proceeds to the accomplishment of any purposes for which monies may be withheld and utilized as described in the Contract, including but not limited to the completion of the Contract, correction of defective Work and the answering of any stop notice claims and litigation cost thereof.

Securities eligible for investment under this section shall be those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit.

The Contractor shall be the beneficial Owner of any securities substituted for monies withheld and shall receive any interest thereon.

9-6 RESOLUTION OF CONSTRUCTION CLAIMS

This Section is intended as a summary of the provisions of Section 1.5 (commencing with Section 20104) of Chapter 1 of Part 3 of Division 2 of the Public Contract Code ("Claims Resolution Statute") and is subject to the actual provisions of the Claims Resolution Statute. This Section shall govern the resolution of any claim of \$375,000 or less which may be made by the Contractor hereunder.

As used in this Section, "claim" is defined as a separate demand by the Contractor for (a) a time extension, (b) payment of money or damages arising from the Work, payment for which is not otherwise expressly provided for or Contractor is not otherwise entitled to, or (c) an amount, the payment of which is disputed by the Owner.

The Contractor shall make all claims in writing and include the documents necessary to substantiate the claims. Any claim by the Contractor which is intended to invoke the procedures under the Claims Resolution Statute shall specify that the claim is being made pursuant to the Claims Resolution Statute. All claims by the Contractor must be filed on or before the date of final payment; provided, however, nothing in this Section is intended to extend the time limits or supersede notice requirements which may otherwise be provided within the Contract Documents for the filing of claims by the Contractor including, but not limited to, those provided in Section 6-4 (Time for Completion and Forfeiture Due to Delay), Section 6-5 (Extension of Time) and Section 4-2 (Changes in the Work).

Claims Less Than \$50,000.

The Owner shall respond in writing within 45 Days of receipt of the claim, or the Owner may request, in writing, within 30 Days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the Owner may have against the Contractor. If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the Owner and the Contractor. If the Owner requests additional documentation, the Owner's written response to the claim shall be submitted to the Contractor within 15 Days after receipt of the additional documentation, or within the same time period as used by the Contractor in producing the additional documentation, whichever is greater.

Claims Over \$50,000 But Less Than \$375,000.

The Owner shall respond in writing within 60 Days of receipt of the claim, or may request, in writing, within 30 Days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the Owner may have against the Contractor. If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the Owner and the Contractor. If the Owner requests additional documentation, the Owner's written response to the claim shall be submitted to the Contractor within 30 Days after receipt of the additional documentation, or within the same time period as used by the Contractor in producing the additional information, whichever is greater.

Procedure Following Owner's Response

If the Contractor disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Contractor may, by giving written notice to the Owner within 15 Days of receipt of the Owner's response (or within 15 Days of the Owner's failure to respond), demand an informal conference to meet and confer for settlement of the issues in dispute. Upon such demand, the Owner shall schedule a meet and confer conference within 30 Days.

If after the meet and confer conference, any portion of the claim remains in dispute, the Contractor may file a claim pursuant to Government Code Section 900 et seq. If a court action is thereafter filed to resolve the claim, the court must, within the time specified by law, submit the matter to nonbinding mediation unless waived by mutual stipulation of the Owner and the Contractor. If after the mediation process, the matter remains in dispute, the case must then be submitted to judicial arbitration pursuant to the applicable law.

END OF SECTION

SECTION 0
SPECIAL PROVISIONS

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

Project Number: 2122-011

SECTION 0
SPECIAL PROVISIONS

Table of Contents

<u>SECTION</u>	<u>DESCRIPTION</u>
00100	Bid Modifications
00110	Definitions, Standards and Drawings
00120	Contract Procedures and Modifications
00200	The Work
00220	Lands and Rights-of-Way
00400	Shop Drawings
00500	Construction Schedule
00800	Termination for Convenience of the District

SECTION 00100

BID MODIFICATIONS

1.01 BASIS FOR DETERMINING LOWEST RESPONSIBLE RESPONSIVE BIDDER

The basis for determining of the lowest responsible, responsive bidder shall be as stipulated in Section 3-1 of the General Provisions.

1.02 BIDDING ON SUBSTITUTE ITEMS

The District will not consider application of a substitute item until after the effective date of the Agreement as stipulated in the General Provisions. The Contractor shall submit all requests for substitution of materials in conformance with the General Provisions.

1.03 TIME ALLOWED FOR ACCEPTANCE OF BIDS

DISTRICT shall have sixty (60) days after the opening of bids within which to accept or reject the bids. No Bidder may withdraw their bid during said period. DISTRICT will return the proposal guarantees, except Bidders' bonds and any guarantees that have been forfeited, to the respective Bidders whose proposals they accompanied within ten (10) days after the execution of the Agreement by the successful Bidder or rejection of all bids.

Before award of the contract, any Bidder upon request shall furnish a recent statement of their financial condition and previous construction experience or such other evidence of their qualifications as may be requested by DISTRICT. Failure to do so upon request shall constitute grounds for rejection of the bid.

END OF SECTION

SECTION 00110

DEFINITIONS, STANDARDS AND DRAWINGS

1.01 DEFINITIONS

Definitions shall be as stipulated in Section 1 of the General Provisions and as amended below:

DISTRICT – The Trabuco Canyon Water District (TCWD). The term “DISTRICT” means DISTRICT or their authorized representative

1.02 STANDARDS

- A. The following Standard Specifications are used in this project
 - 1. “Greenbook”- Standard Specifications for Public Works Construction (SSPWC), current edition.
 - 2. Standard Plans for Public Works Construction (SPPWC), current edition.
 - 3. Trabuco Canyon Water District Standard Drawings

1.03 DRAWINGS

<u>SHEET #</u>	<u>DWG</u>	<u>DWG NAME</u>
1	G-01	Title Sheet, Vicinity and Location Maps, and Sheet Index
2	G-02	General Notes, Standard Symbols and Abbreviations
3	C-01	Site and Demolition Plan
4	C-02	Office Trailer Interior Furnishings
5	E-01	Electrical Symbols and Notes
6	E-02	Electrical Site Plan
7	E-03	Office Trailer Electrical Plan
8	E-04	Single Line Diagram

END OF SECTION

SECTION 00120

CONTRACT PROCEDURES AND MODIFICATIONS

1.01 CONTRACT TIME

The Contractor shall complete all of the work included in this Contract two hundred and forty (240) calendar days from the date of the Notice to Proceed. This duration includes timelines for submittals, review, approval, permitting with the State, manufacturing, delivery, and construction.

1.02 LIQUIDATED DAMAGES

General Provisions Section 6-4 shall be supplemented as follows:

Contractor agrees to forfeit One Thousand Dollars (\$1,000.00) per calendar day as liquidated damages for every day of contract delay.

END OF SECTION

SECTION 00200

THE WORK

1.01 GENERAL

The work to be done by the Contractor under these Specifications shall consist of performing all operations necessary for construction of the Dimension Water Treatment Plant Operations Trailer conforming to the design shown on the plans and in accordance with these specifications.

The Contractor shall furnish all transportation, materials (except where stipulated otherwise), equipment, labor, and supplies to complete installation the Project together with all appurtenant work necessary or incidental to complete in a workmanlike manner the improvements as contemplated and as intended by the plans and these specifications.

1.02 LOCATION OF PROJECT SITE

The Project is located at the Dimension Water Treatment Plant (between Canada Road and Lake Forest Drive) in Lake Forest, CA 92630.

1.03 DESCRIPTION OF THE WORK

The Work includes furnishing products, labor, tools, transportation, and services to:

- A. Design, submit for review, permit through the State, manufacture, and deliver a prepackaged fully functioning modular office trailer including interior furnishings as shown on the construction plans.
- B. Design and submit for review structural foundation design to support the trailer on existing asphalt concrete pavement.
- C. Construct ADA ramp and stairways for entrance and access to the office trailer.
- D. Extend potable water line and provide service to new office trailer.
- E. Extend sewer line and connect to new office trailer.
- F. Construct miscellaneous site electrical work and provide power, internet, communication, and cable to the new office trailer.
- G. Remove and relocate existing metal storage shed.
- H. Demolish and dispose existing operations trailer.
- I. Restore existing pavement after construction.

1.04 ORDER OF WORK

The general order of work will be determined by the Contractor and a schedule will be submitted to the District for approval. The Contractor shall sequence construction on this project in a manner that minimizes disruption to other projects in the area and other existing uses adjacent to the project site.

1.05 WORKING HOURS AND HOLIDAYS

Work hours shall be 8:00 a.m. to 4:30 p.m. Monday through Friday

Contractor is responsible for all inspection and administration costs for work outside of normal working hours and outside the night work schedule at the locations described above. No work shall be performed on Saturdays, Sundays, or District holidays. See Appendix for list of District holidays. In instances where contract time extends past the year's list of District holidays, regularly observed holidays shall be followed.

1.06 OBSTRUCTIONS AND COORDINATION WITH OTHER WORK

At least forty-eight (48) hours prior to construction and prior to any operations involving existing District facilities, the Contractor shall notify the District's Representative.

Prior to construction, the Contractor shall expose all known utility crossings in order to provide for grade and alignment adjustments, if necessary.

1.07 PRECONSTRUCTION VIDEO AND PHOTOGRAPHS

Prior to the execution of the work, the Contractor shall provide both video and photographs of the existing site and surrounding area that may be impacted by construction. The video and photographs should provide comprehensive coverage of all structures (inside and outside) and all existing site features and the landscaping and area immediately surrounding the site. The photographs and video shall be submitted to the District prior to construction.

END OF SECTION

SECTION 00220

LANDS AND RIGHTS-OF-WAY

1.01 LANDS AND RIGHTS-OF-WAY

The proposed improvements will be performed inside property owned by the District.

END OF SECTION

SECTION 00400

SHOP DRAWINGS

1.01 SHOP DRAWING SUBMITTALS

- A. Shop drawings shall be submitted in accordance with Section 5-9 of the General Provisions and Section 01330 of Technical Specifications.

1.02 SHOP DRAWING TRANSMITTAL FORM

- A. The Shop Drawing Submittal Form, a copy of which is included in the Appendix, shall accompany all shop drawing submittals. Submittals shall be returned "un-reviewed", if not accompanied by a submittal form or if the form is not completed in full.

END OF SECTION

SECTION 00500

CONSTRUCTION SCHEDULE

1.01 CONSTRUCTION SCHEDULE

- A. CONTRACTOR shall submit a construction progress schedule in compliance with Section 6-3 of the General Provisions. The schedule shall show the various parts of the work in detail so as to identify the beginning and end of each of the various construction activities. The schedule shall include the following at the minimum:
- Submittal milestones
 - All construction activities
 - Lump sum break down
 - Equipment/material procurement and deliveries
 - Permit imposed work times
 - Partial, substantial, and final completion milestones
 - Critical path activities
- B. Within ten (10) days after Notice of Award, DISTRICT will schedule and conduct a Preconstruction Scheduling Conference to commence development of the required project schedule. At this meeting, scheduling requirements will be reviewed with CONTRACTOR. CONTRACTOR shall be prepared to review and discuss methodology for the schedule and sequence of operations plus cost and manpower loading methodology.
- C. CONTRACTOR shall submit Construction Schedule to DISTRICT for review within thirty (30) days after Notice of Award. CONTRACTOR's Construction Schedule shall be comprised of a detailed Network Diagram as described in Paragraph F. All on site construction activities shall be cost loaded. The cost value of all on site construction activities shall equal the Contract value.
- D. Time extensions shall not be granted nor delay damages paid until a delay occurs which is beyond the control and without the fault or negligence of CONTRACTOR and its SUBCONTRACTORS or SUPPLIERS, at any tier and which extends actual performance of the work beyond the current Contract Completion Date. If the delay occurs along a path which the current approved Construction Schedule update projects late completion prior to addition of any DISTRICT caused delay, then the time extension allowed will be only for the additional delay demonstrated by the approved Time Impact Analysis. Time extensions shall be granted only if they are clearly demonstrated by CONTRACTOR through the submittal of a Time Impact Analysis which demonstrates the estimated impact on the end date of the work; is based upon the updated Construction Schedule current as of the month the delay occurred; and demonstrates that the delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other means. Since float time within the Construction Schedule is jointly owned, it is acknowledged that DISTRICT caused delays on the project may be offset by DISTRICT caused time savings (e.g. critical path submittals returned in less time than allowed by the Contract, approval of substitution requests which result in a savings of time to CONTRACTOR). In such an event, CONTRACTOR shall not be entitled to receive a time extension or delay damages until all DISTRICT caused time savings are exceeded and the Contract completion date is also exceeded.

SPECIAL PROVISION

SECTION 00500 – CONSTRUCTION SCHEDULE

- E. Upon DISTRICT's request, CONTRACTOR shall participate in the review of CONTRACTOR's Construction Schedule submissions (including the original material, all update submittals, and any resubmittals). All revisions shall be submitted within fifteen (15) calendar days after DISTRICT's review.
- F. The Detailed Network Diagram shall provide a workable plan for performing the work, establish and clearly display the critical elements of the work, forecast completions of the construction, and match the Contract duration in time. Exclusive of those activities for submittal review and material fabrication and delivery, activity durations shall not be less than one (1) nor more than thirty (30) calendar days, unless otherwise approved by DISTRICT. In addition to the detailed network diagram, CONTRACTOR shall submit the following reports with the original submittal:
 - 1. Predecessor/ Successor Report or a list showing the predecessor activities and successor activities for each activity in the schedule sorted by Early Start.
 - 2. Activity Report sorted by activity number or a list showing each activity in the schedule.
- G. An updated Construction Schedule shall be submitted to DISTRICT with the submittal of CONTRACTOR's monthly payment request. For those activities started but not yet completed at the time of submittal, the updated schedule shall reflect the percentage complete, as agreed between CONTRACTOR and DISTRICT, and an estimate of the remaining duration. The monthly update of the construction schedule shall include a copy of the following:
 - 1. A bar chart diagram showing target versus actual dates for each activity remaining to be completed.
 - 2. The Predecessor/Successor report sorted by Early Start.
 - 3. The Activity Report sorted by activity number.
 - 4. The updated network diagram or the data necessary to produce such a diagram or electronic file, as agreed with DISTRICT.
- H. Upon approval of a change order or issuance of a notice to proceed with a change, the approved change shall be reflected in the next schedule update submittal by CONTRACTOR.
- I. If completion of any part of the work, the delivery of equipment or materials, or submittal of CONTRACTOR submittals is behind the updated Construction Schedule, and will impact the end date of the work past the contract completion date, CONTRACTOR shall submit in writing, a recovery plan acceptable to DISTRICT for completing the work by the current Contract completion date, if requested by DISTRICT.

1.02 SCHEDULE CONSTRAINTS

The schedule constraints shall be as stipulated in the contract agreement, bonds and insurance.

END OF SECTION

SECTION 00800

TERMINATION FOR CONVENIENCE OF THE DISTRICT

1.01 GENERAL

Include Section 6-5 of the Standard Specifications for Public Works Contracts “Green Book” and supplement as follows:

The DISTRICT may at any time, in its absolute discretion, terminate the Contract, in whole or in part, at any time by giving written or telegraphic notice thereof to the Contractor. Upon any such termination, the DISTRICT shall in no event be obligated to pay Contractor any anticipated, lost or unearned profits for work terminated or work not actually performed by Contractor. The DISTRICT shall have no liability to Contractor for claims for costs and expenditures not specifically covered in Subparagraph below.

1.02 PROCEDURE

Upon receipt of any such notice, the Contractor shall, unless the notice directs otherwise:

Immediately discontinue the work on the date and to the extent specified in the notice;

Place no further orders or subcontracts for materials, services or facilities, except as may be necessary or required for completion of such portion of the work under the Contract that is not terminated;

Promptly make every reasonable effort to obtain cancellation upon terms satisfactory to the DISTRICT of all orders and subcontracts to the extent they relate to the performance of work terminated;

Provide the DISTRICT with copies of all outstanding purchase orders and subcontracts and an inventory of all material delivered to the work site but not incorporated in the Work, listing the quantity and description of each item of material;

Settle and discharge such purchase orders and subcontracts as the DISTRICT may direct in writing;

Transfer and assign to the DISTRICT such purchase orders and subcontracts as the DISTRICT may direct in writing;

Transfer and assign to the DISTRICT in accordance with the DISTRICT’s instructions, all materials, supplies, work in process and other things for which the Contractor is entitled to receive reimbursement, and all drawings, specifications and information in connection with the Work except as provided for in the Contract Documents and take action to secure to the DISTRICT the rights of the Contractor under all purchase orders and subcontracts made in accordance with this Contract; and

Permit the DISTRICT’s auditors or accountants to inspect and make copies of Contractor’s records and books of account relating to costs incurred by the Contractor under this Contract.

1.03 PAYMENT

Upon any such termination where the Contractor is not in default under the Contract, the District will pay to the Contractor an amount determined in accordance with the following (without duplication of any item):

Actual and reasonable net costs owed and not previously paid to the Contractor for work completed in accordance with the Contract prior to such notice, and for work thereafter completed as specified in such notice.

END OF SECTION

SECTION 1
TECHNICAL SPECIFICATIONS

DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER

Project Number No. 2122-011

TABLE OF CONTENTS

DIVISION 1 GENERAL REQUIREMENTS

1. Section 01010: Summary of Work and Sequence of Construction
2. Section 01025: Measurement and Payment
3. Section 01040: Coordination
4. Section 01330: Submittal Procedures

DIVISION 13 SPECIAL CONSTRUCTION

5. Section 13135: Modular Prepackaged Trailer

DIVISION 16 ELECTRICAL

6. Section 16010: Electrical General Provisions
7. Section 16111: Conduits
8. Section 16120: Wire and Cable
9. Section 16195: Electrical Identification and Testing
10. Section 16450: Grounding
11. Section 16461: Dry Type Transformers
12. Section 16470: Panelboards

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

SECTION 01010
SUMMARY OF WORK AND SEQUENCE OF CONSTRUCTION

PART 1 - GENERAL

1.1 Work Covered by Contract Documents

- A. The Work includes furnishing products, labor, tools, transportation, and services to:
1. Design, submit for review, permit, manufacture, deliver and construct prepackaged fully functioning modular office trailer including interior furnishings as shown on the construction plans.
 2. Design and submit for review structural foundation design to support the trailer on existing asphalt concrete pavement.
 3. Construct ADA ramp and stairways for entrance and access to the office trailer.
 4. Extend potable water line and provide service to new office trailer.
 5. Extend sewer line and connect to new office trailer.
 6. Construct miscellaneous site electrical work and provide power, internet, communication, and cable to the new office trailer.
 7. Remove and relocate the existing metal storage shed.
 8. Demolish and dispose existing operations trailer.
 9. Restore existing pavement after construction.
- B. Furnish and install complete operating engineered systems including appurtenant structural, mechanical and/or electrical mountings fittings or connections required for compliance with Manufacturer's installation requirements, for compliance with applicable building, fire, plumbing, mechanical, electrical, and energy codes and standards, and as needed to permit systems to perform all functions required by Contract Documents and described in Manufacturer's printed literature.

1.2 Project Location

- A. Project is located inside the Dimension Water Treatment Plant in the City of Lake Forest.

1.3 Reference Standards

- A. Where items of Work are not fully specified in this document, refer to the following Reference Standards in order of precedence shown.
1. Federal, State, and local regulations and permit requirements,
 2. These Contract Documents,
 3. Owner's published Design Criteria, Standard Drawings, and Standard Specifications
 4. Published Design Criteria and Standard Drawings of public and private agencies having jurisdiction over portions of work within their service area. These include:
 - a. City and District Standards
 - 1) City of Lake Forest Standard Drawings and Standard Specifications
 - 2) Trabuco Canyon Water District Standards
 5. Standard Specifications for Public Works Construction "Greenbook,"
- B. The most recent editions and supplements to these documents adopted as of date of advertisement for bid shall govern Work covered by these Contract Documents except as expressly modified herein.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 Work Sequence

A. General sequence of Work shall be as follows:

Preparation

1. Before beginning Work, obtain required permits and licenses. Call **Underground Service Alert** and utilities to obtain staking and marking of buried utilities. Submit proposed schedule of Work, insurance and bonds. Pothole as needed to supplement staking and marking. Take preconstruction photographs.
2. Verify utility locations, field dimensions, pipe types and voltage and phase of on-site electrical services. If discrepancies or conflicts are found, bring these to attention of Owner's Representative.
3. Submit shop drawings and other submittals.
4. Begin manufacturing and shipping materials and equipment after receiving approved submittals.

Construction

5. Mobilize on to project site.
6. Construct structural foundation piers and set prepackaged modular office trailer.
7. Construct ADA ramp and stairways for entrance and access to trailer.
8. Construction miscellaneous site work including trenching of potable water and sewer line extensions, and electrical improvements.
9. Construct interior trailer ethernet network.
10. Demonstrate satisfactory installation and operation of installed work, including performing system functional tests.
11. Furnish and install trailer interior furnishing as shown on the drawings.
12. Remove and relocate existing metal storage shed.
13. Demolish and dispose of existing operations trailer.
14. Restore pavement and other site improvements disturbed during construction.

Closeout

15. Clean up, restore construction areas, and demobilize.
16. Provide warranty as specified.

3.2 Normal Working Hours

A. Contractor shall conduct all Work within the following Owner-accepted schedule:

1. Normal Work Hours: 7:30 AM to 3:30 PM
2. Normal Work Days: Monday through Friday, excepting legal holidays.

B. Exceptions to this Work schedule shall be only as accepted in writing by Owner.

C. No work shall be done outside of normal work hours and work days, except where necessary for proper care and protection of Work already performed, or except in case of emergency, and in any case only with written notice to Owner's Representative.

3.3 Cooperation with Other Contractors

A. Owner may have additional work performed in this area by other Contractors. Contract requires cooperation with those contractors in the area. Any difference or conflict which may arise between Contractor and other contractors shall be adjusted and determined by Owner. Contractor shall conduct their operations as to minimize interference with work being done

by other contractors. Contractor shall, at their sole expense, make good, promptly, any injury or damage to other contractors' work caused at their hands.

3.4 Contractor Use of Premises

- A. The following facilities shall remain operational during construction of this project:
 - 1. Dimension Water Treatment Plant and all of its operational function.
 - 2. Existing Operations Trailer will be useable until the new trailer is ready for occupation.
 - 3. Do not shut off pipelines or power, or take action which might adversely affect Owner's use or operation of his facilities or premises without prior written authorization from Owner.
 - 4. Install approved signs, barricades and lights necessary to ensure public safety and safety of Owners operators and personnel. Provide steel plates across ditches to enable safe access of Owner's personnel to facilities.
- B. Contractor shall restrict their area of operations to avoid damage of trees and shrubs and shall not remove trees unless specifically directed by Owner. Contractor shall legally dispose of all material removed.
- C. Fences, walls, shrubs, sprinkler systems, substructures or other improvements removed or disturbed by Contractor during construction shall promptly be replaced and/or repaired at Contractor's sole expense to Owner's satisfaction.

3.5 Responsibility for Job Site Conditions

- A. Contractor agrees they shall assume sole and complete responsibility for job site conditions during course of construction of Work, including safety and health of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that Contractor shall defend, indemnify and hold Owner and design consultant harmless from any and all liability except that arising from the sole negligence of Owner or design consultant.

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 - GENERAL

1.1 Description

- A. Measurement and payment for Bid Items listed in proposal shall be based upon use of lump sum or unit price method. Extra Work or changes in Work shall be accomplished as provided in Special Provisions.

1.2 Payment

- A. Payment for Unit Price Items

Payment for unit price Bid Items shall be based upon amount shown in bid schedule multiplied by total quantity measurement of item, and shall be full compensation for furnishing all supervision, planning, design, design engineering fees, labor, transportation, materials, equipment, tools, and appurtenances required for construction of item complete in place in accordance with Plans and Specifications.

- B. Payment for Lump Sum Items

Payment for lump sum Bid Items shall be based upon amount shown in bid schedule and shall be full compensation for furnishing all supervision, planning, design, design engineering fees, labor, transportation, materials, equipment, tools and appurtenances required for construction of unit of Work complete in place in accordance with Plans and Specifications.

- C. Work Not Listed in Bid Schedule

Costs for related Work and appurtenances which are required and/or implied by General Provisions, Technical Specifications, Special Provisions, and Plans and are not listed as separate Bid Item but are necessary to complete project shall be included in appropriate Bid Item or items within proposal.

PART 2 - MATERIALS

2.1 General (Measurement)

- A. Measurement for unit price quantities shall be based upon appropriate Bid Item in proposal. Actual quantity of measurement shall be as constructed by Contractor in place in conformance with Plans and Specifications.

2.2 Unit Measurements

- A. Measurement for Bid Items involving units of item shall be based upon quantity of units counted as indicated in Bid Item.

2.3 Lump Sum Measurement

- A. Measurement for lump sum Bid Items shall be considered as a complete project or portion of project constituting a unit. Items to be included in lump sum Bid Items shall be as specified in proposal Bid Item and/or Standard or Special Provisions.

2.4 Payment for Testing

- A. Party responsible for payment for testing is identified in individual sections of Contract Documents under tests required. Where specifications are silent regarding responsible party paying for tests, costs of first tests will be paid by Owner.

- B. If testing or inspection indicates failure of material or procedure to meet Contract Document requirements, Owner will back-charge Contractor for retesting and reinspection costs incurred by testing or inspection agency of Owner's choice.
- C. Additional tests and inspections not specified herein but requested by Owner will be paid for by Owner, unless result of such tests and inspections are found to not comply with Contract Documents, in which case Owner will pay all costs for initial testing as well as retesting and reinspection and back-charge Contractor for retesting and reinspection.
- D. Costs for additional tests or inspections required because of change in materials being provided or change of source or supply shall be paid by Contractor direct to testing laboratory.
- E. Cost of testing which is required solely for convenience of Contractor in his scheduling and performance of Work shall be borne by Contractor.
- F. Contractor shall pay all costs for correcting deficiencies.

2.5 Changes in Quantities Initiated by Owner

- A. Owner may change Contract Documents or character and quantity of work provided total arithmetic dollar value of all changes, both additive and deductive, does not exceed 25% of Contract Price. Changes in allowance Bid items with stipulated prices will not be considered to contribute toward this total.
- B. Should it become necessary to exceed this limitation, change shall be documented by written Supplemental Agreement between Contractor and Owner unless both parties agree to proceed under Change Order.
- C. Changes ordered in Work items which do not substantially change character of Work from that shown in Contract Documents, will be accompanied by proportional adjustment in payment to reflect quantity changes using unit prices bid, provided Bid quantity does not change by more than 25%.
- D. Where Bid quantities under any Bid item are limited to 2 or 3 integral units (eg. 2 valves) the 25% figure above shall be revised upward (to 50% or 34% respectively) to permit addition or deletion one integral unit without changing Bid price.
- E. Payment for quantities in excess of 125% of quantities (or appropriate percentage for 2- or 3-unit Bid items) will be made at mutually agreed rate lower than Bid amount since Contractor's fixed costs shall be deemed to have been recovered through payment for Bid quantity at Contract unit price.
- F. Payment for quantities less than 75% (or appropriate percentage for 2- or 3-unit Bid items) will only be adjusted by mutual agreement if Contractor requests so in writing. In no case will payment be less than Contractor is entitled to under original Bid prices nor more than payment due for 75% (or appropriate percentage for 2- or 3-unit Bid items) of Bid quantity at Contract Unit Price.
- G. If mutual agreement cannot be reached, Owner may direct Contractor to proceed on basis of Extra Work as covered in General Provisions.
- H. Should any Bid item be eliminated in its entirety, payment will be made to Contractor for actual out-of-pocket costs incurred in connection with eliminated item prior to written notification from Owner of deletion of Bid item. Where applicable, Contractor will also be reimbursed for out-of-pocket shipping costs and Manufacturer's restocking fees.
- I. If materials have been ordered prior to date of written notification of deletion of Bid item and order cannot be cancelled, Contractor will be paid for actual cost of ordered item and ordered material shall become Owner's property.
- J. In no case shall expenses such as bonding costs expressly covered under other Bid items be double-charged to Owner.

PART 3 - EXECUTION

3.1 Scope

- A. This section defines Bid Items listed in Bid schedule and describes measurement and payment provisions for each item.

3.2 Bid Item 1 – Mobilization/Demobilization

- A. Payment for this item will be made at lump sum price named in Bid Schedule under Item Number 1, which price shall constitute full compensation for all Work and expenditures required to mobilize, provide bonds and insurance, obtain required permits, take preconstruction photos and videos, prepare project schedule, perform required surveys, testing, site maintenance and cleanup, remove and reinstall existing site facilities as required, comply with all General and Supplementary conditions, demobilize, provide record drawings, and warranties, and provide cleanup of construction site complete in place, as required by Contract Documents with sole exclusion of payments to be made as defined herein for other items in Bid Schedule.
- B. Work to be paid for under this item shall also include furnishing, setting up, and removing Contractor's operations at project site including temporary utilities, staging areas, security, etc. Work shall also include furnishing any temporary construction facilities required by Contract Documents.
- C. Upon completion of mobilization, 50% of amount bid for this item will be paid to Contractor. Remainder will be paid as part of final contract payment upon project completion.

3.3 Bid Item 2 – Structural, Mechanical and Electrical Demolition

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include all labor, materials and equipment for structural, mechanical and electrical demolition including removal of existing concrete, masonry, steel, metal, wood, or plastic structural, mechanical or electrical items shown, salvage of materials noted, and any appurtenant Work as required by Contract Documents.

3.4 Bid Item 3 – Design, Permit, Manufacture, Ship and Construct Prepackaged Modular Trailer

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include furnishing all labor, materials, and equipment for design, permitting, coordination, manufacturing, shipping, and construction of prepackaged modular trailer, complete and in place, including exterior walls, roofing, insulation, interior walls, deck and flooring, seismic supports, t-bar ceilings, kitchen cabinetry and countertops, doors, windows, toilet, shower, sinks, exhaust fans, HVAC system (heat pump, ducting, thermostats, vents), electrical system (panels, conduits, wiring, grounding, lights, raceways, boxes, switches, receptacles, breakers, disconnects, sensors), potable water system (water heater, cold and hot water piping, supports, valves), sewer system (sewer piping, supports, cleanouts, drains), ethernet junction boxes and conduits, and any appurtenant Work as shown on the drawings and as required by Contract Documents.
- C. Work to be paid for under this item shall include furnishing all labor, materials, and equipment for ADA compliant ramps and stairways, including decking, guide and hand rails, posts, landings, supports, jacks, skirtings, bolts, stair treads, based on the configuration shown on the drawings, and any appurtenant Work as required by Contract Documents.
- D. Work to be paid for under this item shall include furnishing all labor, materials, and equipment to design, permit, and construct trailer foundation work including anchor piers, seismic piers, foundation pads, column supports, brace connections, structural drawings

and calculations, and all other items to securely mount the new trailer to existing asphalt concrete pavement, and any appurtenant Work as required by Contract Documents.

- E. Work to be paid for under this item shall include furnishing all labor, materials, and equipment for furnishing and installing interior furnishings that are not included in the prepackaged trailer but shown on the construction plans including cabinetry, lockers, cubicles, and any appurtenant Work as required by Contract Documents.

3.5 Bid Item 4 – Extend Water Service and Connect to Trailer Water Pipe Stub

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include furnishing all labor, materials, and equipment to extend existing water service, including sawcutting and removal of paving and surface features where shown, trenching, construction of ¾" copper line and meter box, and appurtenances, backfilling and compacting excavations, connecting to trailer water pipe stub, restoration of damaged pavement, disposal of excess excavated material, and any appurtenant Work as required by Contract Documents.

3.6 Bid Item 5 – Extend Sewer Line and Connect to Trailer Sewer System

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include all labor, materials, and equipment to extend existing sewer line, including sawcutting and removal of paving and surface features where shown, trenching, construction of 4" PVC sewer pipe and cleanout, fittings, and appurtenances, backfilling and compacting excavations, connecting to trailer sewer pipe stub, restoration of damaged pavement, disposal of excess excavated material, and any appurtenant Work as required by Contract Documents.

3.7 Bid Items 6 – Construct Miscellaneous Electrical and Communication Improvements

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include all labor, materials, and equipment to construct miscellaneous mechanical electrical and communication improvements, including power conduits and wiring, network conduits and wiring, communication conduits and wiring, panel boards, transformers, sawcutting and removal of paving and surface features where shown, relocating existing flow indicator, trenching, conduits and wiring, backfilling and compacting excavations, connecting to trailer electrical panel box, restoration of damaged pavement, disposal of excess excavated material, and any appurtenant Work as required by Contract Documents.
- C. Work to be paid for under this item shall include all labor, materials, and equipment to construct trailer interior network system, including ethernet cable, RJ45 jacks, telephone backboard, ethernet switch, startup and testing, and any appurtenant Work as required by Contract Documents.

3.8 Bid Item 7 – All Other Work

- A. No measurement will be made for this item.
- B. Work to be paid for under this item shall include any Work shown in Contract Documents for which no bid item is expressly provided.
- C. To facilitate progress payments, Contractor shall provide breakdown of Work items included in this bid item at Preconstruction Meeting.
- D. In absence of said breakdown, Contractor will be paid for this item in percentages equal to percentage of Work completed.

3.9 Bid Item 8 – Allowance for Additional Trailer Interior Furnishings and Upgrades

- A. No measurement will be made for this item.

- B. Stipulated lump sum price of \$10,000 has been established as allowance for Owner to purchase interior furnishings not shown on the drawings including but not limited to shelves, lockers, cubicles, interior finish upgrades, cabinets in configurations and finishes acceptable to Owner, not shown on the construction plans.
- C. Reimbursement shall be at Manufacturer's invoice price FOB jobsite, including sales tax, freight and delivery. Stipulated lump sum price is set aside solely to provide an allowance for fair reimbursement to Contractor for purchase price of certain materials whose quality, quantity, and type is best negotiated directly between Owner and Contractor with direct reimbursement to Contractor for purchase price.
- D. Reimbursement for upgrades shall be difference in Manufacturer's invoice price FOB jobsite, including sales tax, freight, and delivery for upgraded versus specified item.
- E. Cost of labor, tools, and equipment to install materials, and cost of Contractor's markup, overhead, and profit shall be included in other Bid Items for building construction and will not be paid out of this Bid Item allowance.
- F. Owner reserves right to supply materials directly to Contractor in-lieu of paying Contractor to order from third parties.

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

SECTION 01040 COORDINATION

PART 1 - GENERAL

1.1 Work Included

- A. Licenses, permits, sales taxes, coordination with Owner, Federal, State and Local authorities, utilities, neighboring property owners, special events, design engineer, and other contractors.

1.2 Permits

- A. Obtain, pay for, and comply with required permits, licenses, work permits and authorizations from appropriate agencies, including:
 - 1. Licenses
 - a. Before submitting bids, Contractors shall be licensed in accordance with provisions of Chapter 9, Division 3, of Business and Professions Code of State of California.
 - 2. State and Federal permits
 - a. Owner will obtain and have on hand for Contractor the California State Approval and Permit for Prepackaged Trailer Construction
 - 3. Local permits – None Required
- B. Obtain permits before starting construction.

1.3 Coordination with Owner

- A. Notify Owner at least 72 hours before start of construction.
- B. Submit written details and reasons for proposed deviations from Contract Documents. Do not deviate from Contract Documents until written authorization is received.
- C. If Contractor fails to comply with a request of Owner, or is unable to comply with a request, and it is necessary for Owner's forces to do Work that is Contractor's responsibility, Owner will bill Contractor. Each incident requiring work by Owner's forces will be covered by a separate billing.
- D. Notify Water Operations in writing at least 72 hours before shutdown of water, sewer or drainage facilities. Do not assume water or sewer lines can be shut down. Do not shut down utilities without prior written authorization or presence of Operations Staff.

1.4 Requests for Information (RFI's)

- A. Immediately upon discovery of need for additional information or interpretation of Contract Documents, Contractor shall prepare and submit an RFI in format specified.
 - 1. Owner's Representative will only respond to RFI's submitted by Contractor. RFI's submitted by other entities will be returned with no response.
- B. Coordinate and submit RFIs in prompt manner to avoid delays in Contractor's Work or Work of subcontractors.
- C. RFI's shall include detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name
 - 2. Project number
 - 3. Date
 - 4. Name of Contractor
 - 5. Name of Engineer of Record

6. Name of Owner's Representative
 7. RFI number, numbered sequentially
 8. RFI subject
 9. Specification Section number and title and related paragraphs, as appropriate.
 10. Drawing number and detail references, as appropriate.
 11. Field dimensions and conditions, as appropriate.
 12. Contractor's suggested resolution. If Contractor's suggested resolution impacts Contract Time or Contract Sum, Contractor shall state impact in RFI.
 13. Contractor's signature
 14. Attachments, including sketches, descriptions, measurements, photos, catalog data, shop drawings, coordination drawings, and other information necessary to fully describe items needing interpretation. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- D. RFI Forms shall be software-generated forms with content shown above, acceptable to Owner's Representative.
- E. Attachments shall be electronic files in Adobe Acrobat PDF format.
- F. Owner's Representative will review each RFI, determine action required, and respond. Allow 7 working days for Owner's response for each RFI. RFIs received by Owner's Representative after 1:00 p.m. will be considered as received the following working day.
- G. The following Contractor-generated RFIs will be returned without action:
1. Requests for acceptance of submittals.
 2. Requests for acceptance of substitutions where no monetary rebate is included.
 3. Requests for acceptance of Contractor's means and methods.
 4. Requests for coordination information already indicated in Contract Documents.
 5. Requests for adjustments in Contract Time or Contract Sum.
 6. Requests for interpretation of actions of Owner's Representative on submittals.
 7. Incomplete RFIs or inaccurately prepared RFIs.
- H. Owner's Representative's action may include request for additional information, in which case Owner's Representative's time for response will date from time of receipt of additional information.
- I. Owner's Representative's action on RFIs that may result in changes to Contract Time or Contract Sum may be eligible for Contractor to submit Change Order requests.
- J. If Contractor believes RFI response warrants change in Contract Time or Contract Sum, notify Owner's Representative in writing within 10 days of receipt of RFI response.
- K. Prepare, maintain, and submit tabular log of RFIs organized by RFI number. Submit log weekly. Include the following:
1. Project name
 2. Name and address of Contractor
 3. Name and address of Owner's Representative
 4. RFI number including RFIs returned without action or withdrawn
 5. RFI description
 6. Date RFI was submitted

7. Date Owner's Representative's response was received

- L. On receipt of Owner's Representative's action, update RFI log and immediately distribute RFI response to affected parties. Review response and notify Owner's Representative within 7 days if Contractor disagrees with response.

1.5 Coordination with Utilities

- A. Obtain service requirements from public utilities for water, sewer, gas, power, telephone, telemetering and other utility requirements. Work needed to connect to public utilities shall comply with utility service requirements. Pay service charges of utilities, including charges for trenching, piping, conduit, cables, boxes, metering, grounding and backfill.
- B. Protect existing underground utilities.
- C. Electrical utility companies may maintain energized aerial electrical power lines in immediate vicinity of Work. Do not consider these lines to be insulated. Construction personnel working near these lines are exposed to extreme hazard from electrical shock. Contractors, their employees, and construction personnel working on this project must be warned of danger and instructed to take adequate protective measures, including maintaining at least 10 feet clearance between lines and construction equipment and personnel. (See OSHA Std. 1926.550(A)15). As additional safety precaution, call electrical utility company to arrange, if possible, to have these lines de-energized or relocated when Work reaches their immediate vicinity. Cost of such temporary arrangements shall be borne by Contractor.

1.6 Coordination with Design Engineer

- A. Engineering firm responsible for preparation of Plans and Specifications is:

JIG Consultants
318 W. Katella Ave., Suite A
Orange, CA 92867
(714 978-4407

Contact: Joseph Gutierrez

1.7 Lines of Communication

- A. Lines of communication between Contractor, Owner, and other parties shall be defined at Preconstruction Conference. Contractor shall adhere to direction regarding this matter given to them at that time.

1.8 Submittals

- A. Supplementary progress schedules shall be submitted after Work is in progress, when requested by Owner's Representative. Schedule changes requiring increase in Owner's, Servicing Utility's or City's Engineering personnel on project shall not be put into effect until Owner, Servicing Utility, or City has made arrangements for additional personnel.

1.9 Unit Prices

- A. Payment for obtaining and complying with permits during construction, including licenses, inspection fees, and Federal, State and local taxes will be included in prices bid for Work for which such costs are appurtenant.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

**SECTION 01330
SUBMITTAL PROCEDURES**

PART 1 - GENERAL

1.1 Work Included

- A. General procedures and requirements for submittals, initial submittal, submittals required on Owner's request, progress reports, Shop Drawings, product data and samples, notification of affected residences and businesses, and submittal forms.

1.2 Electronic (Digital) Submittals

- A. Submit digital copy of **each** submittal using one of following methods chosen by Owner:
1. Email: Send submittal as pdf attachment to Owner and Owner's Representative.
 2. Data tracking System (DTS): Upload digital file to server maintained by Owner's Representative.
 3. CD: Burn a CD containing one or more submittals and furnish copy of CD to Owner and Owner's Representative.
- B. Multiple hard copies of submittals will not be accepted in lieu of digital submittal unless otherwise authorized or directed by Owner's Representative.
- C. One digital copy of stamped submittal with cover letter will be returned to Contractor by email or DTS as appropriate.
- D. Contractor shall verify emails sent with large attachments have been successfully received by Owner and Owner's Representative. Files in excess of 5 MB in size shall not be sent as attachments to emails due to size restrictions associated with users' email systems.
- E. Number submittals using numbering system as directed by Owner's Representative.
- F. Shop Drawing Transmittal Form. Use form included in the Appendix unless otherwise directed by Owner. Submit separate form for each submittal and assign a submittal number. Form shall be first page of each digital submittal. Submittals without completed Contractor's Transmittal Form as first page will be returned without review and stamped "REJECTED/RESUBMIT AS SPECIFIED."
- G. Stock or standard drawings will not be accepted for review unless full identification and supplementary information is shown thereon in ink or typewritten form.
- H. Exceptions and departures from Contract Documents shall be clearly noted, along with brief justification for each exception or departure.

1.3 Owner's Review of Submittals

- A. Owner's review or acceptance of submittals shall only constitute acceptance of the following:
1. Portions of submittal in compliance with Contract Documents.
 2. Exceptions or departures expressly noted on Contractor's submittal as "exceptions" or "departures" and accepted in writing by Owner.
 3. Exceptions or departures Owner or their Representative may by chance discover and acknowledge and accept in writing in Owner's response to said submittal.
- B. If any submittal's exception or departure from Contract Documents is neither noted by Contractor on their submittal nor acknowledged and expressly accepted by Owner, Contract shall remain unchanged. Owner's failure to discover all exceptions and departures in submittals whether intentional or unintentional on Contractor's part shall not relieve Contractor of any Contract responsibilities.
- C. Review of submittals will proceed as follows:

1. Submit specified quantity of complete submittals together with Contractor's submittal forms to Owner's Representative for review. At Owner's discretion, Owner may review submittals prior to, parallel with, or after Owner's Representative has reviewed submittals.
 2. Submittals will be stamped "ACCEPTED", "ACCEPTED AS NOTED", "REVISE AS NOTED/RESUBMIT", "REJECTED/RESUBMIT AS SPECIFIED," "NO ACTION REQUIRED," or "SUBMITTAL NOT REQUESTED, RETURNED WITHOUT REVIEW." Three copies with letter of transmittal will be returned to Contractor.
 3. If drawing or data is returned stamped "ACCEPTED", "ACCEPTED AS NOTED", "NO ACTION REQUIRED," or "SUBMITTAL NOT REQUESTED, RETURNED WITHOUT REVIEW." No further resubmittals will be required for that item.
 4. If drawing or data is stamped "REVISE AS NOTED/RESUBMIT," or "REJECTED/RESUBMIT AS SPECIFIED," make necessary corrections and resubmit documents as required in Instruction 1. Contractor's submittal form transmitting revised documents shall show that documents comprise a resubmittal. Revisions and re-submittals shall be numbered as Revision #1, Revision #2, or as appropriate.
 5. If changes other than those noted by Owner are made on submittal before resubmittal, note such changes on resubmittal.
 6. Revise and resubmit submittals as required, until confirmation of compliance is obtained.
- D. Costs incurred by Owner for original submittal and first re-submittal will be paid by Owner. Costs incurred by Owner for second and subsequent re-submittals will be deducted from payment due Contractor.
- E. Allow not less than 31 calendar days for review and response to submittals. Review may be delayed if contingent on receipt of other submittals. Upon timely written request by Contractor, Owner's Representative will make reasonable efforts to shorten review periods which may fall on Contractor's critical path.
- F. Correct and resubmit rejected submittals within 14 calendar days.
- G. Do not order products or begin work described in required submittals until such submittals have been reviewed and returned by Owner stamped "ACCEPTED" or "ACCEPTED AS NOTED". Contractor's acceptance of delivery of products prior to receipt of Owner's Representative's satisfactory return of applicable submittals shall be at Contractor's risk.
- H. Review of submittals by Owner's Representative shall extend solely to general type and layout of Work and shall not be construed as relieving Contractor of full responsibility for adequacy and accuracy of submitted designs and details shown in submittals.

1.4 Initial Submittal

- A. Submit the following within 72 hours after bid opening.
1. Names and addresses of Manufacturers furnishing products valued greater than either 4 percent of contract value or \$40,000, whichever is less. State locations of shops at which manufacture will take place. State whether products are already designed or in production. Include brief description of products proposed, including sizes and catalog numbers.
 2. Letter addressed to Owner's Representative identifying Contractor's superintendent, safety officer, and traffic control coordinator, including emergency telephone numbers and signature authorization, and listing names, addresses and telephones for subcontractors.
 3. Proposed Construction Schedule.

1.5 Submittals on Owner's Request - Supplemental Information

- A. Detailed construction schedule updates shall be submitted, with monthly pay requests to describe scheduling of elements of construction requiring Owner's or Contractor's coordination with public, or other private parties or public agencies.
- B. Supplemental information will be requested for "accepted equals" and may be requested when there is a question a Manufacturer's product conforms to Contract Documents. Owner reserves right to require submittal of supplemental information as described herein before acceptance of product.
- C. Certification of compliance with listed reference standards shall be submitted by Manufacturers on Owner's request. Failure of Owner to request certification of compliance shall not serve as waiver of Contractor's duty to comply with reference standards.
- D. Transcripts of results of acceptance tests performed at point of manufacture of products furnished shall be submitted by Manufacturers on Owner's request.
- E. Samples shall be submitted on Owner's request.
- F. Names and addresses of nearest local service representatives maintaining technical service personnel and complete inventory of spare parts and accessories shall be submitted on Owner's request.
- G. List of 3 installations in which products comparable in size, capacity and rating with those required in Contract Documents are now in regular operation shall be submitted on Owner's request. Include listing of size capacity or rating of each installation. Include name and telephone number of at least one reference responsible for operations at each installation whom Owner's Representative may contact.

1.6 Progress Reports

- A. Daily log shall be submitted by Contractor's superintendent on one-page form provided by Owner. These logs shall be detailed with activities that took place during each day. Submit logs daily to Owner's Representative by end of following workday.
- B. Schedule updates shall be submitted with monthly pay requests. If Work falls behind schedule, monthly pay requests shall include revised schedules to demonstrate how Contractor intends to bring work back on schedule.
- C. Record drawings, consisting of one set of full size annotated blue-line plans and other drawings forming a part of contract, showing installed locations of improvements and all changes made during construction shall be available to Owner for inspection throughout project. Record all deviations from Contract Documents, including accepted change orders, using additional sketches or ink revisions, immediately after installing each portion of Work. Show locations of underground piping, conduit, sensor lines, valves, capped ends, branch fittings, pull boxes and Work. Keep one current record copy of Contract Documents, addenda, supplementary drawings, working drawings, change orders and clarifications at site and in good order. Report changes and deviations promptly to Owner's Representative.
- D. Partial payment requests may be withheld if daily logs, schedule updates or record drawings are damaged, lost or not kept current to satisfaction of Owner's Representative.

1.7 Contractor's Notice of Pending Delay Claim

- A. In event a delay claim is foreseen by Contractor, Contractor shall immediately notify Owner in writing. Following said notice, Contractor shall have no more than 7 calendar days to furnish follow-up information as required by Owner to allow Owner to act judiciously to minimize losses. As a minimum, said information shall consist of a letter identifying and substantiating cost of expected claim per day of delay accompanied by schedule showing any available float and delay's impact on overall schedule.

1.8 Shop Drawings and Product Data

- A. Shop Drawings shall be defined as job-specific drawings showing details of manufactured or assembled products.
- B. Shop Drawings shall be prepared to scale wherever possible and shall include project name on shop drawing.
- C. Except where preparation of a submittal is contingent upon acceptance of a prior submittal, Contractor shall make every reasonable effort to combine all submittals relating to same class or portion of Work into one package, regardless of variety of trades or types of equipment required to construct that portion of Work. *e.g.* all above ground piping, fittings, valves, actuators, pipe stands, couplings, flow meters and appurtenances shall be submitted as one package for review.
 - 1. Packages shall clearly reference specification sections and specified submittal requirements therein, showing where in submitted literature each submittal requirement is satisfied.
 - 2. Packages clearly incomplete will be returned without review.
 - 3. To facilitate approval of critical path items or to facilitate Contractor's communication with multiple suppliers and subcontractors, packages may contain several submittals from several suppliers so long as all relevant submittals are contained in package.
 - 4. Where expedited review of one submittal item within package is desired to facilitate critical path items, notify Owner's Representative in writing to request expedited review of said item. Contractor's request for expedited review of a portion of a submittal package shall be taken as full acceptance of responsibility by Contractor for any subsequent field modifications or substitutions later necessary to remedy any conflict between expedited submittals and other submittals or to remedy any conflict between expedited submittals and Contract Documents not brought to Owner's attention at time of submittal.
- D. Catalog Data shall be defined as Manufacturer's pre-printed drawings which need not include project name. However, where multiple products or options are shown in same catalog cut, product or option being furnished shall be clearly delineated as specified below.
- E. All submittals shall show US units. For submittals prepared in foreign countries where Manufacturer's literature is printed solely in metric units, Contractor may make hand annotations to convert to US units as long as annotations are legible. Submittals not bearing US units will be returned without review.
- F. Submittals bearing text in languages other than English will be returned without review.
- G. Shop Drawings for structural and architectural items shall include:
 - 1. Lengths, widths, thickness, embedment, dimensions and tolerances of structural members or architectural items.
 - 2. Detailing of openings and wall penetrations including doors, windows, hatches, louvers, vents, ducts, pipes and all floor, slab, wall and door penetrations.
 - 3. Connection details including applicable sizes, diameters, thickness, spacing, embedment and edge distances of bolts, anchors, rivets, nails, screws, spikes, connection plates, holdowns, joints, sleepers and other fasteners and fastening systems.
 - 4. Welding details using standard ANSI/AWS 2.4 symbols and showing type, electrode, length, spacing and thickness of welds.
 - 5. Materials listing and properties, including types, strengths and finishes of concrete, masonry, metals, wood, plastics and other construction materials.

- H. Shop Drawings for equipment shall include:
1. Dimensions, clearances and floor space requirements.
 2. Weight and type of equipment.
 3. Location where product will be installed.
 4. Anchor bolt sizes and embedments.
 5. Finishes and coatings.
 6. Performance characteristics.
 7. Parts and materials lists and ratings and details of appurtenances to be furnished, along with references to appropriate ASTM, Federal Specifications and other reference standards and grades.
 8. Piping and conduit attachments and sizes.
- I. In addition to above requirements for Shop Drawings for equipment, Shop Drawings for electrically powered or controlled equipment shall include:
1. Elevations showing arrangements and positions of all panel components including nameplates.
 2. Electrical diagrams as needed to show wiring circuit schematics, single line diagrams, voltage wire numbers and identified interlocks and terminals.
 3. Logic diagrams for programmable controllers or relays if used.
 4. Nameplate data showing nameplate material, height of letters, number of lines, inscriptions and dimensions.
- J. Shop Drawings for replacement items shall include field measurements needed to verify fit in existing spaces.
- K. Catalog Data shall clearly indicate applicable items when several products are covered on one page. Using black ink, indicate on submitted catalog data, specification section or plan reference being satisfied.
- L. Installation Instructions or Application Instructions shall be defined as Manufacturer's printed instructions including warranty requirements, clearances required and proper field procedures to deliver, handle, install and prepare product for use. In absence of Manufacturer's published literature, ASTM, AWWA or trade standards for installation will usually be accepted. If no instructions are submitted for installing or applying item of Work, Owner reserves right to stop work on subject item at any time, and to retain experts of Owner's choosing to prepare appropriate instructions to control Contractor's work. Installation Instructions shall include recommended bolt torques for assembly and installation of bolted items.
- M. Operation and Maintenance Instructions shall be defined as Manufacturer's printed instructions for correct operation and maintenance procedures for product, along with data which must accompany manual as directed by current regulations of government agency. Include operating instructions for each piece of equipment. Describe equipment function, operating characteristics, limiting conditions, operating instructions, startup procedures, normal and emergency conditions, regulation and control, and shutdown. Include preventative maintenance instructions. List warranty requirements. Explain and illustrate preventative maintenance tasks. Include lubrication charts, lists of acceptable lubricants, trouble shooting instructions, and lists of required maintenance tools and equipment. List recommended spare parts, their costs, and ordering information for one Manufacturer who can supply these parts. Index instructions for easy reference. Include information for installed equipment only.

- N. Certificate of compliance shall certify materials or procedures have been sampled, tested and found to comply with applicable reference standards, and shall be accepted by Owner prior to shipping items described therein.
- O. Engineering calculations shall be clearly legible, shall follow recognized engineering principles and shall be sufficiently detailed to permit ready check of procedures used. Where published tables or charts are included in calculations, clearly show design or load variables used to make selection, highlighting applicable columns or rows in tables and highlighting intersecting variables on chart axes. Engineering calculations shall demonstrate compliance with current state and local codes, applicable standards, and contract requirements. Calculations shall be sealed by registered engineer licensed in State of California. Calculations or drawings bearing seals with expired expiration dates will not be accepted.
- P. Foundry or test record transcripts shall fully describe required tests in accordance with specified test standards, shall certify that factory quality control, testing and inspection requirements have been successfully completed and shall be accepted by Owner prior to shipping items described therein.
- Q. Furnish the following submittals:

SUBMITTAL	DESCRIPTION
Preconstruction Photographs or Videos	Preconstruction photographs or videos shall be submitted to Owner before Work is performed which has potential to disturb or modify public or private property not owned by Owner. Photographs shall be of sufficient quality and thoroughness to fully document preexisting damage or wear to photographed property for which Contractor or Owner might be asked to compensate property owner were it not for photographic evidence of preexisting damage. Where existing cracks in concrete, masonry or other materials are wider than thickness of a dime, include dime or similar visual standard in photo or video for reference. Failure by Contractor to submit preconstruction photographs or videos, may be taken by owner as evidence that subsequent claims by property owners for damage to their property can be rightfully attributed to Contractor's actions.
Warranty	Unless otherwise stated, furnish one-year warranty from date of final acceptance.

- R. Owner's Representative's review of submittals shall be limited to review of products to be incorporated in Work and to remain in place upon project completion.
 1. Contractor shall have sole responsibility at all times for construction means, methods and jobsite safety.
 2. Contractor shall retain services of California-licensed civil, structural or traffic engineer, as appropriate, to design and prepare plans for necessary safety equipment required by OSHA, Cal OSHA and other state and local regulatory authorities during construction, and to prepare summary documents for Contractor's use for accomplishing said work including, but not limited to sheeting, shoring, trench plating, excavation protection, falsework, formwork, scaffolding, barricading, pedestrian safety and traffic control.
 3. Originals of summary documents, signed and sealed by engineer of record who prepared them, shall be submitted solely as proof this requirement has been fulfilled.
 4. Since Contractor has sole responsibility for means, methods and jobsite safety, review of said documents will be limited to verifying preparing engineer's registration is current and that engineer of record has no active complaints filed against them with California Board for Professional Engineers and Land Surveyors.
- S. Use of contract drawing reproductions for shop drawings is subject to rejection.

1.9 Unit Prices

- A. Payment for submittals and re-submittals, will be included in price bid for those items of Work for which submittals are required.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

**SECTION 13135
MODULAR PREPACKAGED TRAILER**

PART 1 - GENERAL

1.1 Work Included

- A. Design, permitting, manufacture, and delivery of modular prepackaged trailers.
- B. Modular prepackaged trailer shall be in accordance with the requirements of the California Code of Regulations, CCR Title 25, Chapter 3, Subchapter 2 (Commercial modular).
- C. Modular prepackaged trailer shall be submitted and permitted by the State of California.

1.2 Building Construction

- A. Provide modular prepackaged trailer to be delivered and set on existing asphalt concrete pavement, complete with structure, ADA compliant ramp, stairways, and structural members to support the structure. Trailer shall be of watertight construction. Trailer requirements shall be as specified on **Table 1** and as follows:
 - 1. Provide 7'-10" minimum ceiling height.
 - 2. Provide offices, work area, shower and restroom as specified.
 - 3. Do not use temporary partitions.
 - 4. Provide inter-connecting doors between rooms.
 - 5. Provide vinyl flooring throughout.
- B. Provide windows in building as shown on the construction plans.
- C. Provide two steel insulated entrance doors to building, one at each end. Provide cylinder lock and hydraulic closer. Provide six sets of keys to Owner.
- D. Insulate walls, roof deck, and floor deck.

1.3 Building Equipment and Utilities

- A. Electrical and Lighting
 - 1. Provide 4000 Lumen 2'x4' flat panel LED recessed lay-in with dimmable electronic ballast to evenly illuminate the rooms to a minimum of 50 foot-candles and an average of 70 foot-candles measure at desk height. Provide a one LED light fixture in the restroom. Provide dimmable light switch in each room, with occupancy sensor switch for office and restroom.
 - 2. Provide two LED porch lights with photocell on the entry side of the trailer with switch.
 - 3. Provide a minimum of one duplex 120-volt outlet on each wall of each room. Provide a minimum of two duplex 120-volt outlets on each wall of working area. Provide one GFCI duplex 120-volt outlet in restroom and three GFCI duplex 120-volt outlet in kitchen (one for refrigerator).
 - 4. Provide exterior mounted NEMA 3R electrical breaker panel appropriately sized for the application.
- B. HVAC System
 - 1. HVAC system shall include appropriately sized heat pump.
 - 2. Provide supply and return ductwork, plenum, diffusers, grills, etc.
 - 3. Provide programmable thermostat located inside the trailer.
- C. Restroom
 - 1. Restroom shall be ADA compliant with toilet, sink, mirror, and shower.
 - 2. Provide appropriately sized exhaust fan.

3. Provide lockers inside the restroom as shown on construction plans.

D. Utilities

1. Trailer shall be plumbed with hot and cold water, electric water heater, and electric disconnect.
2. Provide sewer system complete with waste drains and vents.
3. Provide network system including incoming data port, network switch, ethernet junction boxes, ethernet wiring, and cover plates.

E. Kitchen

1. Trailer shall include a kitchen complete with cabinetry (base and upper), countertop, and garbage disposal unit.

F. Cubicles

1. Trailer shall be furnished with two full height 6x6 cubicles with desk, shelf, cabinetry, and built-in electrical receptacles and connectors.

G. Stairs and Ramps

1. Trailer shall be furnished with metal stairways for each entry door.
2. Provide one ADA compliant metal ramp to supplement one of the stairways.

1.4 Submittals

A. Furnish the following submittals.

SUBMITTAL	DESCRIPTION	
Shop Drawings	Required for modular prepackaged trailer and all equipment, utilities, and appurtenances per shop drawing requirements.	.
Catalog Data	Required for standard manufactured components including cubicles, lockers, sinks, toilets, heat pump, doors, windows, cabinetry, water heater, etc. per catalog data requirements.	
Engineering Calculations	Required for trailer structural components and foundation per current California Building Code. Calculations shall comply with engineering calculations requirements and shall be stamped by a registered professional engineer in the State of California.	
Warranty	Furnish one-year warranty from date of final acceptance	

- B. Refer to Section 01330 for definition of requirements for shop drawings, catalog data, installation instructions, engineering calculations and test record transcripts.

1.5 Unit Prices

- A. Payment for Work in this section shall be included as part of a lump sum or unit price for which such Work is appurtenant.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 Preparation

- A. Make field measurements needed to install prepackaged trailers before submitting shop drawings or ordering. Make minor changes in dimensions and alignments as needed to avoid utilities or structural conflicts.
- B. Examine areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of Work.

3.2 Installation

- A. Furnish and install prepackaged trailers at locations shown on Plans and Submittals.
- B. The following installation standards shall be followed:
 - 1. Manufacturer's installation and warranty requirements
 - 2. Applicable OSHA and Cal OSHA regulations
 - 3. Applicable building, fire, plumbing, mechanical and electrical code requirements
- C. Refer variances between above documents and Contract Documents to Owner's Representative.
- D. Install prepackaged trailer to tolerances recommended by Manufacturer. Unless otherwise shown, install prepackaged trailer true and level using precision gauges and levels.

3.3 Field Quality Control

- A. Field testing shall include the following:

ITEM	TEST FOR	TEST STANDARD (ASTM OR OTHER TEST STANDARD)	FREQUENCY	FIRST TEST PAID FOR BY	RETESTS PAID FOR BY
Modular Prepackaged Trailer	Installation	Visual inspection of finished installation	1 inspection	Owner	Owner
	Leakage	30-minute hose test No visible leakage through roof or around windows	1 inspection	Owner	Owner
	Field Performance	Demonstrate compliance to Contract Documents and Manufacturer's printed literature	1 test	Contractor	Contractor
	11-month Warranty Inspection	Demonstrate compliance to Contract Documents and Manufacturer's printed literature	1 test	Owner	Contractor

END OF SECTION

**TABLE 1
MODULAR PREPACKAGED TRAILER REQUIREMENTS**

	Design Criteria
Office square footage	720 sf (12' x 60')
Type of construction	VB
Occupancy use group	B
Occupancy load	10
Floor live load	50 psf (2000 lb concentrated)
Roof live load	20 psf
Roof dead load	12 psf
Roof snow load	30 psf
Wind load	2019 CBC – 115 MPH, Exp. C
Occupancy / Risk Category	II
Seismic	S _S =3.370, S ₁ =1.389, Site Class “D” Design Category “E”
Climate zone	8
Sprinklers	Not required
Set type	Pad/pier above grade / F.F. 36” above grade
	Frame / Chasis
Frame type	Basement (CH2)
Quantity and size	1 (11'-8" x 60'-0")
Hitch	Detachable with standard hitch
	Floor Construction
Floor	Single layer ¾" T&G Plywood
Insulation	R-19 unfaced fiberglass batt
Bottom	Reinforced plastic
	Exterior Wall Construction
Wall Sheathing	5/8" gypsum to roof sheathing for 1-hour fire rating
Insulation	R-19 Kraft back fiberglass batt
Siding Type	3/8" vertical siding (8" grooves) with wrap underlayment
	Interior Wall Construction
Insulation	None
	Roof Construction
Roof Type	Complex
Insulation	R-30 unfaced fiberglass batt with support netting
Sheathing	½" 24/0 Sheathing
Roofing	45 mil single ply EPDM over ½" gypsum

Trailer Accessories and Accommodations

Windows	5 windows, 4'x3' in size with blinds / clear dual glazed
Entrance/Exit doors	2 doors, 3' wide x 6'-8" height
Number of office rooms	1 (120 sf minimum)
Kitchenette	
Base cabinets	4 lf (pre-finish - Maple Rye)
Upper cabinets	4 lf (pre-finish - Maple Rye)
Counters	4 lf of 25-1/2" wide laminate countertop 4" backsplash / rolled edge
Restroom (ADA)	132 sf minimum

Finishes

Floor covering and base	0.08 self cove sheet vinyl, covered up wall minimum 5"
Exterior Walls	5/8" Type X gypsum for 1-hour fire rating full height
Interior Walls (Restroom)	Pre-laminated FRP panels over 1/2" MR gypsum
Interior Walls (Elsewhere)	1/2" vinyl covered gypsum

Ceiling

Type	2'x4' heavy duty T-Grid w/ Struts and Wires
Restroom	Vinyl washable

THIS PAGE INTENTIONALLY BLANK

**SECTION 16010
ELECTRICAL GENERAL PROVISIONS**

PART 1 - GENERAL

1.1 Scope of Work

- A. The work of this division shall include all labor, materials and equipment required for the electrical installation for the project as shown on the plans and as otherwise specified herein, and shall be complete and ready for use.

1.2 Intent

- A. Mention herein or indication on the drawings of article, materials, operation or methods requires that the Contractor provide each item mentioned or indicated, of a quality subject to qualifications noted; perform each operation prescribed according to conditions stated or to the best practice of the trade; provide therefore all necessary labor, equipment, and incidentals. Furthermore, the intent shall be construed to mean that all conduit and wiring systems, equipment and fixtures shall be complete and left in operating conditions unless specifically shown or indicated otherwise in either the plans or specifications.

1.3 Work Included

- A. The principal items of work to be furnished and installed under this Contract and division are listed and shall not be considered as a complete list of work. All items of work called for in detail on plans or by reference in specifications and incidental to work and necessary for the complete installation and proper operation of the electrical work described herein, or reasonably implied in connection herewith, shall be furnished as if called for in detail on plans or specifications. The following brief description denotes systems required and items of work indicated.

1. Connection to Main Service Board.
 - a. Utility Connections.
 - b. Power Distribution System.
 - c. Power Transformers.
2. Site work, excavation, backfill and concrete work required to complete items in this section.
3. Shop drawings, equipment data and record drawings.
4. Cleaning, patching and repairing.
5. Tests and inspections.
6. Perform all miscellaneous work required for the completion of electrical work.

1.4 Reference Symbols

- A. Electrical plan and diagram reference symbols are in accordance with the legend shown on the Electrical Drawings.

1.5 Codes and Standards

- A. All work to comply with 2008 National Electric Code and material shall be in full accordance with all applicable codes and governing authorities. It shall be the responsibility of the successful bidder to bid in accordance with these rules, and thereafter to comply with the above mentioned rules, even though the work is not shown on the drawings or mentioned in the specifications. Due to conflict between requirements, the plan drawings or the most restrictive shall apply. Nothing in the plans or specifications is deemed as authority to violate any ordinance. Violations shown on the plans shall be brought to the attention of the Engineer before any work is done. As a minimum, construction shall comply with the latest editions of the following:

1. 2008 National Electrical Code (NEC)
2. American National Standards Institute (ANSI)
3. National Electrical Manufacturers Association (NEMA)
4. National Fire Protection Association (NFPA)
5. Institute of Electrical and Electronic Engineers (IEEE)
6. Underwriters' Laboratories, Inc. (UL)
7. Occupational Safety and Health Act (OSHA)

1.6 Permits and Inspections

- A. All permits required shall be paid for by the Contractor.

1.7 Drawings

- A. The Contractor shall visit the site and verify the exact conditions relating to his work and shall obtain such information as may be necessary to present a conclusive bid. No allowance shall be made for any extra expense due to the failure of the Contractor to make such a visit.

1.8 Record Drawings

- A. The Contractor shall keep available and up-to-date two sets of accurately dimensioned blue-line prints showing all work that is installed differently than shown on the original drawings. At completion and before acceptance of the work by the Engineer, record drawings shall be signed and dated by the Electrical Contractor. The following information shall be shown:
1. All conduit runs and circuits as actually installed.
 2. Indicate on prints all change orders made during construction.
 3. Locate by dimensions underground conduits, pullboxes, etc.

1.9 Guarantee

- A. The Contractor shall guarantee in writing all work under this contract to be free from defects of workmanship and materials. The entire electrical installation under this contract shall be complete and guaranteed against defective materials and/or improper workmanship, for a period of one (1) year from the date of final acceptance and during the period covered by this guarantee, replacements, and repairs shall be made at no cost to the Owner.

1.10 Tests

- A. The Contractor shall make all tests required by authorities having jurisdiction. Additional tests as deemed necessary by the Engineer shall be made including the continuity of wiring, improper grounds, short circuits, and the operation of all equipment furnished and installed to demonstrate that they are properly installed and function in the manner required.
- B. Failures shall be corrected in a manner satisfactory to the Engineer. The Contractor shall furnish all necessary testing equipment and pay all costs of tests including all replacement parts and labor necessary due to damage resulting from damaged equipment or from test and correction of faulty installation.

1.11 Safety

- A. The Contractor shall be solely and completely responsible for condition of the premises on which the work is performed and for safety of all persons and property on the site during performance of the contract. This requirement shall not be limited to normal working hours, but shall apply continuously.
- B. The Contractor shall conform with all governing safety regulations.

1.12 Substitutions

- A. The Base Bid shall include material as specified without exception.

- B. For any proposed substitution, complete descriptive, technical and cost comparison data and test reports shall be submitted for approval. No substitute items shall be furnished or installed without written approval at the time of contract signing. The Contractor shall reimburse the District for any additional engineering charges and for any charges for changes in the work of other trades resulting from substitutions. Proposed substitutions shall be listed on the Bid Form, stating the reasons for substitution and the amount to be deducted or added to the bid if the substitution is allowed. The Engineer may accept or reject any of the alternate items.

1.13 Submittals

- A. The Contractor shall submit to the Engineer, for written approval, six (6) sets of detailed shop drawings for all items of equipment. No equipment shall be ordered or put into manufacture until these drawings are approved. The shop drawings shall be pictorial and shall indicate materials, finishes, ratings, and dimensions.
- B. The Contractor shall check, correct and indicate approval of shop drawings prior to submission to the Engineer. The Contractor shall verify dimensions of equipment and be satisfied to correctness prior to submission for approval. If the shop drawings show variations from the contract requirements, the Contractor shall make specific mention of such variations in order that suitable action may be taken. The Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract, even though the shop drawings have been approved.
- C. When structural calculations are required for the connection design of a specified product to the supporting structure, the following shall apply.
 - 1. Connecting members and their connections to the supporting structure shall be adequate to resist the applicable loading requirements specified in the 2010 Edition of the California Building Code and Title 24, Part 2 of the California Administrative Code. The calculations shall be certified by a Structural Engineer registered in the State of California. The responsible Engineer shall certify that he has reviewed the applicable Shop Drawings and the structural performance requirements of this specification have been met and properly interpreted on the Shop Drawings. Certification may be by letter to the Engineer's signature on Shop Drawings.
 - 2. Submit four (4) copies of calculations in conjunction with related Shop Drawings

PART 2 - PRODUCTS

2.1 Materials

- A. All equipment and materials supplied by the Contractor for the electrical work herein specified shall be new and suited for the intended installation. All equipment shall comply with the requirements of the Underwriter's Laboratory and bear the label of approval. Where subject to such approval, they shall comply with the ANSI, IEEE, and NEMA standards. The Engineer reserves the right to reject any materials, which in his opinion, are not in compliance with the specification, either before or after installation. All electrical equipment and materials shall be of the type or make specified and no substitution will be approved without prior written approval of the Engineer.
- B. Materials and equipment that are described by catalog number indicate quality and type. Items so named shall comply as to details, layout and schedules as indicated on plans.
- C. The Contractor shall promptly remove from the premises all materials condemned by the Engineer, whether or not they are incorporated in the work. The Electrical Contractor shall promptly replace and re-execute to the Owner, and shall bear the expense of making good all work of other contractors damaged by such removal or replacement.

2.2 Startup

- A. The Contractor shall provide an electrician during the start-up of all equipment who is familiar with the installation and will verify that work is properly installed and in working order. The

Contractor shall instruct the Owner's personnel in the operation of each item of equipment and the location of all equipment and controls.

PART 3 - EXECUTION

3.1 Locations of Equipments and Outlets

- A. The general arrangement of panelboards, outlets, and other equipment, as shown on the plans, is diagrammatic and approximately correct as to locations. Where minor changes are required because of structural conditions or for the convenience of the Owner, such changes shall be made without additional expense to the Owner. The Contractor shall be responsible for the accurate location of all panelboards, outlets, etc. with respect to equipment, doors, partitions, cabinets and the finished work of others.
- B. The Contractor shall check all work under this Section for interference with work under other contracts, and shall cooperate in locating equipment so as to avoid all such interferences, and shall organize this work to harmonize with the work of other trades, so that all work may proceed as expeditiously as possible. Coordinate the work of installing built-in work, attaching items to building, and cutting and patching.
- C. No extras will be allowed due to the moving of work under this Section to avoid interference with the work of other Contractors.

3.2 Workmanship

- A. The Contractor shall personally, or through an authorized representative constantly supervise the work, and shall insofar as possible keep the same foreman and workmen on the job from commencement to completion. The workmanship of the entire job must be in every way first class, and only experienced competent workmen will be allowed on the job. The Owner reserves the right to ask the withdrawal of any workman who does not do satisfactory work.
- B. The Contractor shall cooperate with all other trades and avoid conflict in locating outlets and materials. All electrical work shall be scheduled to correspond with the general construction.

3.3 Demolition

- A. Provide all labor, material and equipment required for demolition of existing electrical appurtenances conflicting with new installation.
- B. The demolition shall include those electrical items that interfere with the new construction.
- C. The Owner will have the first option at retaining title to existing materials, fixtures and other items. All other materials not to be retained by the Owner or reused shall become the property of the Contractor and shall be removed from the premises.
- D. All demolition work shall be coordinated with the other trades and the Owner.

3.4 Existing Building

- A. The Contractor shall recognize that to perform certain work covered by the Specifications, certain existing electrical equipment must be de-energized to allow connection of new equipment, the re-connection of existing equipment of a combination thereof. Refer to Division 1.

3.5 Protection of Services

- A. The Contractor, at his own expense, shall repair, replace and maintain in service any utilities, facilities, or services (underground, overground, exterior, interior) damaged, broken or otherwise rendered inoperative during the course of construction.

3.6 Cutting and Patching

- A. Provide all cutting and patching necessary for the electrical work.
- B. Refer to the Division 1 for project coordination.

- C. Where chases and openings are required, notify the appropriate trade who shall incorporate such chases and opening into his work. Furnish all necessary sleeves, lintels, anchor bolts, and frames required for such work.
- D. Consult with the General Contractor before cutting any openings and cut such openings in an approved manner so that they will not weaken or damage any structural part of the building.
- E. This Contractor shall be held responsible for the provision of openings, whether or not he serves proper notice to the General Contractor as to his requirements. It shall be his duty to closely watch the progress of the General Contractor and to see that proper provisions are being made for his work.
- F. Do not remove or damage fire proofing materials or fire rated ceilings. Where possible install hangers, inserts, supports and anchors prior to installation of fireproofing. Fireproofing shall be repaired or replaced by the General Contractor at the expense of this Contractor where fireproofing is removed or damaged by this Contractor.
- G. Unless specified on structural drawings, any alterations or modifications to a structural element by cutting, drilling, boring, bracing, welding, etc. shall have written approval by structural engineer of record prior to start of work.

3.7 Penetrations – Existing Construction

- A. Core-bore all holes in existing construction that are required for the installation of electrical raceway systems.
- B. Patch all core-bored holes as required in order to present a finished look without any concrete spalling being visible. If necessary, grout in an EMT sleeve as required for new construction in order to leave a round opening with smooth edges in the floor or wall.
- C. No core-boring shall be done without the written approval of the Structural Engineer.

3.8 Earthwork

- A. Excavation and backfill necessary for proper installation of the electrical work shall conform to the provisions of applicable sections of the SSPWC.

3.9 Painting

- A. Lighting fixtures, distribution panelboards and signaling system cabinet trims and doors shall be baked enamel finished at the place of manufacture and touched up by the Contractor where required.
- B. All painting of electrical components in finished areas shall be done under the direction of the Owner and applicable sections of the SSPWC.

3.10 Equipment and System Identification

- A. All control and indicating devices for equipment shall be identified with laminated plastic nameplates. Nameplates shall identify equipment and/or function. Nameplates shall be provided for all panel boards, control panels, special outlets, pullboxes, disconnects, motors, fans and chart recorders. Three-phase outlets shall be identified with circuit origin and phase identification.
- B. All control devices locate within control panels shall be identified with permanent tags. Embossed, stick-on, plastic tags shall not be used. Terminal strips shall be identified by imprinted markers in center or under terminal strip.
- C. All cables and all conductors shall be identified at each termination. All circuits and all multi-conductor cables shall be identified in each manhole and pull box. Individual conductors that make up a circuit shall be bundled and laced together with imprinted heat shrink tubing or imprinted plastic coated cloth. Circuit and multi-conductor cable identification shall be made with imprinted metal bands or tags.
- D. All control wiring shall be color coded and color continuity maintained throughout the system. Provide minimum of (6) different colors for field wiring. Control circuit color coding is as follows:

<u>Color</u>	<u>Service</u>
Red	Hot lead (usually to stop P.B.)
Yellow	Common return
Brown	Main coil (usually to start P.B.)
Blue	Reset coil
Orange	Trip coil

- E. All conductors shall be marked at both ends with shrink fit markers which clearly display a computer generated circuit number at each end of the conductor.

3.11 Cleaning

- A. Cleaning shall be done as the work progresses and the premises shall be kept as clean as practicable. At the completion of work, the Contractor shall thoroughly clean all fixtures, apparatus and equipment. All dirt and rubbish shall be removed and dirt, paint, or grease spots on walls, ceilings, floors or other equipment shall be cleaned. At completion, the premises shall be left in first class condition. All scratched or damaged materials shall be replaced or refinished to the satisfaction of the Engineer.

END OF SECTION

SECTION 16111 CONDUIT

PART 1 - GENERAL

1.1 Work Included

- A. Rigid metal conduit and fittings.
- B. Electrical metallic tubing and fittings.
- C. Flexible metal and conduit fittings.
- D. Liquid tight flexible metal conduit and fittings.
- E. Non-metallic conduit and fittings.

1.2 Related Work

- A. SSPWC Section 300 – Earthwork
- B. SSPWC Section 201 – Concrete, Mortar and Related Materials: Protective envelope for underground conduit installations

1.3 References

- A. ANSI C80-1 - Rigid Steel Conduit, Zinc-Coated.
- B. ANSI C80.3 - Electrical Metallic Tubing, Zinc-Coated.
- C. ANSI C80.5 - Rigid Aluminum Conduit.
- D. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- E. FS WW-C-563 - Electrical Metallic Tubing.
- F. FS WW-C-566 - Specification for Flexible Metal Conduit.
- G. FS WW-C-581 - Specification for Galvanized Rigid Conduit.
- H. NEMA RN 1 - PVC Externally-Coated Galvanized Rigid Steel Conduit and Electrical Metallic Tubing.
- I. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

PART 2 - PRODUCTS

2.1 Rigid Metal Conduit and Fittings

- A. Rigid Galvanized Steel Conduit: ANSI C80.1.
- B. Rigid Aluminum Conduit: ANSI C80.5.
- C. PVC Externally Coated Conduit: NEMA RN 1; rigid steel conduit with external 20 PVC coating and internal galvanized surface.
- D. Fittings and Conduit Bodies: ANSI/NEMA FB 1; threaded type, material to match conduit.

2.2 Electrical Metallic Tubing (EMT) and Fittings

- A. EMT: ANSI C80.3 galvanized tubing.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel compression type.

2.3 Flexible Metal Conduit and Fittings

- A. Conduit: FS WW-C-566.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1.

2.4 Liquid Tight Flexible Conduit and Fittings

- A. Conduit: Flexible metal conduit with PVC jacket.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1.

2.5 Plastic Conduit and Fittings

- A. Conduit: NEMA TC 2; Schedule 40 PVC.
- B. Fittings and Conduit Bodies: NEMA TC 3.

2.6 Conduit Supports

- A. Conduit Clamps, Straps, and Supports: Steel or malleable iron.

PART 3 - EXECUTION

3.1 Conduit Sizing, Arrangement, and Support

- A. Size conduit for conductor type installed or for Type THW conductors, whichever is larger; 3/4 minimum size, unless noted otherwise.
- B. Arrange conduit to maintain headroom and present a neat appearance.
- C. Route exposed conduit parallel and perpendicular to walls and adjacent piping.
- D. Maintain minimum 6 inch clearance between conduit and piping. Maintain 12 inches clearance between conduit and heat sources such as flues, steam pipes, and heating appliances.
- E. Arrange conduit supports to prevent distortion of alignment by wire pulling operations. Fasten conduit using galvanized straps, lay-in adjustable hangers, clevis hangers, or bolted split stamped galvanized hangers.
- F. Group conduit in parallel runs where practical and use conduit rack constructed of steel channel with conduit straps or clamps. Provide space for 25 percent additional conduit.
- G. Do not fasten conduit with wire or perforated pipe straps. Remove all wire used for temporary conduit support during construction, before conductors are pulled.
- H. Support conduit at a maximum of 10 feet on center.

3.2 Conduit Installation

- A. Rigid steel conduit shall be used where subject to mechanical injury such as exposed conduit in mechanical or work rooms. Rigid steel conduit may be used in concrete, brick or masonry walls. Conduit installed in wet or exposed locations in concrete shall have threads filled with red lead. Rigid steel conduit shall be used for all overhead feeders larger than 2" trade size. Rigid galvanized steel conduit shall be used for all exterior exposed devices. Seal all threads.
- B. Electrical metallic tubing up to and including 2" may only be used where exposed to view at least 8' above the floor and not subject to mechanical damage. EMT may also be used in dry concealed locations such as above furred ceilings and in stud walls.
- C. Flexible steel conduit may be used only where indicated on drawings and in other locations due to structural conditions as permitted by Code and with approval of the Engineer. Flexible metallic conduit shall be used for short motor connections and connections to recessed fixtures. Sealtite flexible conduit shall be used for final connections to motors and in wet, damp, or outdoor areas where drawings indicated the use of flexible conduit. The flexible steel conduit and all fittings shall be galvanized and shall give a positive continuity to the ground.
- D. P.V.C. heavy wall, Schedule 40 conduit shall be used where placed underground, in concrete, in brick or masonry construction. When installed under slabs on grade, the

conduits shall be separated by a minimum of 3" between identical systems and 12" between power and signal system. Rigid steel conduit, concrete encased, shall be used for all bends and risers.

- E. Cut conduit square using a saw or pipe cutter; de-burr cut ends.

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

SECTION 16120 WIRE AND CABLE

PART 1 - GENERAL

1.1 Work Included

- A. Building wire.
- B. Cable.
- C. Wiring Connections and terminations.
- D. Modular wiring system.

1.2 References

- A. NEMA WC 3 - Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
- B. PNEMA WC 5 - Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

1.3 Submittals

- A. Submit shop drawings and product data under the provisions of Section 01300.
- B. Submit shop drawings for modular wiring system including layout of distribution devices, branch circuit conduit and cables, circuiting arrangement, and outlet devices.
- C. Submit manufacturer's instructions.
- D. Submit manufacturer's instructions for splicing and terminating aluminum conductors.

PART 2 - PRODUCTS

2.1 Building Wire

- A. Thermoplastic-insulated Building Wire: NEMA WC 5.
- B. Feeders and Branch Circuits 8 AWG and Larger: Copper, stranded conductor, 600 volt insulation, Type THHN/THWN.
- C. Feeders and Branch Circuits smaller than 8 AWG: Copper, solid conductor, 600 volt insulation, Type THHN/THWN.
- D. Control Circuits: Copper, stranded conductor 600 volt-insulation.

2.2 Remote Control and Signal Cable

- A. Control Cable for Class 1 Remote Control and Signal Circuits: Copper conductor, 600 volt insulation, rated 60 degree C, individual conductors twisted together, shielded, and covered with an interlocked aluminum armor with an overall PVC jacket.
- B. Control Cable for Class 2 or Class 3 Remote Control and Signal Circuits: Copper conductor, 300 volt insulation, rated 60 degree C, individual conductors twisted together, shielded, and covered with a PVC jacket; UL listed.

PART 3 - EXECUTION

3.1 General Wiring Methods

- A. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 14 AWG for control wiring.

- B. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 75 feet.
- C. Place an equal number of conductors for each phase of a circuit in same raceway or cable.
- D. Splice only in junction or outlet boxes.
- E. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- F. Make Conductor lengths for parallel circuits equal.

3.2 Wiring Installation in Raceways

- A. Pull all conductors into a raceway at the same time. Use UL listed wire pulling lubricant for pulling 4 AWG and larger wires.
- B. Install wire in raceway after interior of building has been physically protected from the weather and all mechanical work likely to injure conductors has been completed.
- C. Completely and thoroughly swab raceway system before installing conductors.

3.3 Cable Installation

- A. Provide protection for exposed cables where subject to damage.
- B. Use suitable cable fittings and connectors.

3.4 Wiring Connections and Terminations

- A. Splice only in accessible junction boxes.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Torque test conductor connections and terminations to manufacturer's recommended values.
- D. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.
- E. Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.

3.5 Field Quality Control

- A. Field inspection and testing will be performed under provisions of Section 01410 and 16010.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Torque test conductor connections and terminations to manufacturer's recommended values.
- D. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

3.6 Wire and Cable Installation Schedule

- A. Concealed Interior Locations: Building wire in raceways.
- B. Exposed Interior Locations: Building wire in raceways.
- C. Above Accessible Ceilings: Building wire in raceways.
- D. Wet or Damp Interior Locations: Building wire in raceway.
- E. Exterior Locations: Building wire in raceways.
- F. Underground Locations: Building wire in raceways.

END OF SECTION

**SECTION 16195
ELECTRICAL IDENTIFICATION AND TESTING**

PART 1 - GENERAL

1.1 Section Includes

- A. Nameplates and labels.
- B. Junction box markers.

1.2 References

- A. ANSI/NFPA 70 - National Electrical Code.

1.3 Regulatory Requirements

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.1 Nameplates and Labels

- A. Nameplates: Engraved three-layer laminated plastic, white letters on black background.

2.2 Tagging and Marking

- A. General Requirements: Nameplates and tags shall be provided for electrical equipment and devices, including all pushbuttons, selector switches, circuit breakers, starters, transformers, and outlets. Where equipment also can be started from another location, or started automatically, a caution nameplate shall be provided.
- B. Items to Indicate on the Tag: The nameplate description shall show the equipment, number and service of the controlled equipment. All switchgear, motor control centers, and panelboards shall have nameplates stating the appropriate designation, voltage, continuous current rating, and number of phases. Lighting and power panels shall be supplied with complete circuit directories.
- C. Lighting Circuits and Receptacles: Lighting circuits and receptacles shall be tagged with the appropriate circuit numbers. All power circuits shall be tagged with appropriate identification at their termination points, at each point where circuit goes underground, or enters or leaves a conduit way or cable tray. Tags of a permanent nature shall be securely attached to conduit by means of stainless steel wire, 0.040-inch minimum diameter. Lighting circuits and receptacles fed with UPS power shall have red tags.
- D. Wiring Identification: All wiring shall be identified at each termination with permanent, printed, heat-shrinkable plastic sleeves or with clear, heat-shrinkable sleeves that cover adhesive wrap-on markers. The wire identification number shall include the complete circuit or instrument number. The wire identification shall be the identification shown on the wiring diagram. If none is shown on a wiring diagram, the Company Representative shall be consulted for proper identification. Electrical cables shall be labeled with the circuit number and phase designation at each end of cable. If the cable is in conduit, the conduit tag may serve as an indication of the circuit number for power circuits.
- E. Conduit and Junction Box Identification
 - 1. Seal Plugs: After seal fittings are poured and inspected, the seal plug shall be marked red to indicate that the seals are completed.

2. **Conduit Tags and Their Location:** Conduits shall be tagged with stainless steel tags at the point where the conduit leaves the electrical equipment room and at the end points. These tags shall have the conduit number as designated on the conduit schedules. Conduit not appearing on the conduit schedules (such as lighting and instrumentation conduit) shall be tagged using nomenclature approved by the Company Representative.
 3. **Conduit Markers:** Underground conduits shall be designated by markers, as shown on the Drawings. These shall be placed over the centerline of the conduit bank with arrows pointing in the direction of the run. Where it is not possible to place the signs directly over the centerline of the conduit banks, the distance and direction to the centerline of the bank shall be stenciled on the marker post. Signs shall be so located as to be visible from the nearest access way. Conduit located below pavements or below the floor of a building shall be marked by casting cable markers in the concrete.
 4. **Junction Box Prefixes:** Junction box labels shall have prefixes as follows:

JB	–	instrument boxes
AB	–	alarm boxes
TB	–	thermocouple boxes
CB	–	control boxes
- F. **Nameplates at Pushbutton Stations:** Nameplates at pushbutton station shall be installed in accordance with the Drawing.
- G. **Electrical Warning Signs**
1. **Signs Alerting Personnel:** Signs alerting personnel of voltage levels present shall be posted at the following locations.
 - a. All equipment and enclosures which may be accessed without the use of a tool and contain noninsulated conductors or other devices operating at over 50 volts.
 - b. All equipment and enclosures which contain noninsulated conductors or other devices operating at over 150 volts and do not bear a manufacturer's label stating operating voltages.
 - c. All equipment and enclosures with operating voltages over 450 volts.
 - d. Pull and junction boxes for systems over 600 volts must be permanently marked "DANGER, HIGH VOLTAGE, KEEP OUT" with 1/2" minimum letters.
 2. **Wording:** Wording shall be CAUTION XXX VOLTS for voltages 480 volts and below. Wording shall be DANGER, HIGH VOLTAGE, KEEP OUT XXXX VOLTS for voltages above 480 volts.
 3. **Letter Size and Colors:** Letter sizes and layout on signs and sign colors and general format shall be in accordance with the Drawings.
 4. **Enclosures Requiring More Than One Disconnect:** Enclosures requiring more than one disconnect to remove all power from the enclosure shall have a warning sign reading CAUTION--ENERGIZED BY MULTIPLE VOLTAGE SOURCES.
 5. **Terminal Strips:** Terminal strips shall be labeled as shown on construction drawings. Instrumentation terminals shall be labeled as shown on construction drawings.
 6. **Panelboard Circuits:** Panelboard circuits shall be labeled to designate the circuit number and the items each circuit serves as designated on the Drawings.
- H. **Field Tie-in Points:** Field tie-in points shall be identified with a stainless steel tag. The tag shall identify the tie-in service and connection drawing number.

2.3 Equipment Identification

- A. Identify all panels, control points, control centers, switchboard receptacles, motors, switches, etc., in accordance with the identification markings shown on the Drawings and/or as directed. Identify equipment with suitably sized engraved plastic laminate phenolic tags/labels; white background with black lettering.
- B. Label equipment after the general painting of the building interiors and other general painting is completed.
- C. Identify power and lighting panels by the panel number, the number of feeder supplying the panel, and the voltage of the panel bus. Where panels are located in finished off areas, identify them on the inside cover.
- D. Identify disconnecting switches, relays, motors and motor starters by voltage, number of phases, equipment controlled, and the circuit from which they are fed
- E. Identify power receptacles by number of phases, voltage and circuit from which they are fed.
- F. For each component of equipment, unless otherwise specified, securely attach a plate with manufacturer's name and catalog number on it or stamp or cast into the body of the items the name and catalog number of the equipment.

PART 3 - EXECUTION

3.1 Preparation

- A. Degrease and clean surfaces to receive nameplates and markings.
- B. Electrical equipment shall be properly installed, adjusted, connected, and tested by the Contractor and before such equipment will be taken over by the Owner, unless the Contractor is specifically relieved from performing part of the work in writing by the Engineer.
- C. All circuits shall be checked for continuity and proper insulation before the circuit will be taken over by the Owner, unless the Contractor and Supplier is specifically relieved from performing part of the work in writing by the Engineer.
- D. All shipping blocking of instruments, relays and mechanisms shall be removed.
- E. All equipment shall be thoroughly cleansed inside and outside of all dirt, grease, grit, cable and conductor strippings, metal filings, or any other foreign matter. All items shall be properly cleaned and finish painted or touch-up painted, as required by the Engineer. Protective relay cases and associated auxiliaries shall be thoroughly blown out with dry nitrogen gas and checked for proper operation of jack contacts, shorting bars, and built-in switches.
- F. Identification markers and nameplates shall be properly and accurately installed.
- G. High-voltage connections shall be accurately torqued or welded, and any compounds or weld spatter shall be removed.
- H. Insulator assemblies and all insulator materials for bushings, but supports, and lightning arrestors shall be thoroughly cleaned immediately prior to energizing.
- I. Insulating oil shall be properly filtered and purified, checked for proper level, and tested for insulating quality prior to energizing the equipment with which it is used.
- J. The alignment of all working parts shall be checked; all adjustable devices calibrated and set at their proper operating value; all artificial load tests completed; and all preliminary functional and operational tests required for satisfactory line operation completed.

- K. General: All tests required to ensure the satisfactory installation, adjustment, operation, and performance of all equipment and materials erected and installed under and in accordance with this specification shall be performed by the Contractor and by the Owner as outlined herein and hereinafter in other specification sections. Testing of equipment shall be in accordance with the requirements of NETA STD ATS-1987.
- L. Testing by the Contractor: The Contractor shall furnish all other electrical test equipment and all other meters, instruments, and miscellaneous equipment and shall perform all work required, as directed by the Engineer, to make ground system resistance tests, insulation resistance (megohmmeter), and high potential tests, on all power and control cables, motors, heaters, AC and DC auxiliary power systems, lighting system, miscellaneous electrical equipment, and all other equipment. The Contractor shall also complete all equipment checks, lubrication checks, bearing temperature tests, and all artificial loading of starters and circuit breakers furnished as miscellaneous equipment. The Contractor shall furnish the Engineer with three copies of all test data taken for tests performed by the Contractor. The test data shall be properly signed by an authorized Contractor's representative. The test data forms used for tabulating the information required shall be furnished by the Contractor and approved by the Engineer.
- M. Low and Medium Voltage Equipment Insulation Tests: After installation, but prior to making external wiring connections, the Contractor shall measure and record the insulation resistance to ground and phase-to-phase at ambient temperature of the windings of the auxiliary motors and transformers, the buses of metal-clad switchgear, and DC equipment. Electronic devices must be isolated from the system prior to testing. The insulation resistance and Polarization Index of transformers and motors shall meet the requirements of the IEEE Standards and shall be performed as follows:
1. After wiring is complete but before utilization devices are installed, insulation tests shall be applied at each lighting and appliance panelboard and at each distribution panel or switchboard rated 6700V or less.
 2. Tests shall be made using a 1,000 VDC megohmmeter which has been approved by the Engineer.
 3. All bus work, feeders, subfeeders, and branch circuits shall be tested for insulation and continuity. Each phase shall be insulation tested to each other phase and to ground.
 4. Motors shall be tested phase to ground.
 5. Insulation resistance readings of less than 2 megohms after 60 seconds shall be cause for rejection of that device or portion of the system. The subject item or system element shall be replaced and retested at no additional cost to the Owner.
- N. Operational Tests of Station Auxiliary Systems by the Contractor:
1. Prior to placing the station auxiliary systems in service, the component equipment and devices shall be tested for satisfactory operation under normal operating conditions.
 2. Station Auxiliary systems include lighting, heating, and ventilating.
 3. Each system shall be operated through sufficient cycles and for a sufficient length of time to establish, to the satisfaction of the Engineer, that the system operates properly and is ready to be placed in service.
- O. Testing by the Owner: Testing by the Owner shall be as follows:
1. After completion of the tests specified hereinbefore, the Owner will perform such tests as deemed necessary or advisable to determine that the motors, transformers, power distribution system, and station control systems are ready for operation.

2. The Contractor shall remove covers and panels, disconnect and reconnect wiring, and provide power to equipment and wiring as required to permit performance of these tests at no additional cost to the Owner.
3. The system to be tested by the Owner includes the Contractor-furnished equipment specified herein, related equipment and systems, control and interlock circuits and devices, protective relays, and sensors.
4. Protection devices, such as switchgear, relays, shall be properly set and calibrated by the Manufacturers and verified by the utility prior to energizing the system. Control system connections to relays, current transformers, and the like shall be checked for polarity, tightness, and completeness. Relay settings shall be furnished by the Engineer. All instruments shall be tested and calibrated.

3.2 Demonstration of Complete Electrical Systems

- A. After the Electrical installation has been completed and the various components contained therein have been checked and tested for satisfactory installation and proper operation. The various systems shall be operated a sufficient number of times to demonstrate to the Engineer that all equipment, components, and materials for each such completed system have been properly installed and will perform the desired operation. Such demonstration of all power and control circuitry, lighting system, grounding system, protective relaying, fire detection system, and other similar complete systems shall be considered an integral part of the work of the Contract.
- B. If, in the opinion of the Engineer, test results show improper adjustment, operation, or performance of any equipment and such deficiencies are due to negligence or unsatisfactory installation by the Contractor, the Contractor shall furnish all plant, labor, and equipment and materials required to remedy the situation to the satisfaction of the Engineer and at no increase in cost to the Owner.

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

SECTION 16450 GROUNDING

PART 1 - GENERAL

1.1 Section Includes

- A. Section Includes: Provide and install a grounding system as indicated.

1.2 Related Sections

- A. See related Sections for their system grounding Requirements.
- B. Section 16010: Electrical General Provisions

1.3 System Description

- A. All metallic objects on the premises that enclose electrical conductors or that are likely to be energized by electrical currents shall be effectively grounded.
- B. All metal equipment parts such as enclosures, raceways, and equipment grounding conductors and all earth grounding electrodes shall be solidly joined together into a continuous electrically conductive system.
- C. All metallic systems shall be solidly interconnected to the electrical system as provided by the service entrance and for each grounded separately derived system that is installed.
- D. A separately derived A.C. source shall be grounded to the equipment grounding conductor and to a separate made electrode.
- E. Electrical continuity to ground metal raceways and enclosures, isolated from equipment ground by use of non-metallic conduit or fittings, shall be provided by a green insulated grounding conductor of approved size within each raceway connected to isolated metallic raceways, or enclosures at each end. Each flexible conduit over 6'-0" in length shall be provided with a green insulated grounding conductor of approved size.
- F. Cold water or other utility piping systems shall not be used as grounding electrodes. Grounding electrodes shall be "made electrodes" specified as follows:
 - 1. Grounding electrodes as specified in Article 2. 1, Paragraph B of this Specification.
 - 2. Concrete enclosed electrode, which is made up of at least 20'-0" of #4 AWG, minimum size, copper conductor, encased by at least 2" of concrete, located within or near bottom of a concrete foundation, or footing, which is in direct contact with earth. Footing rebar must be connected to copper wire using approved connections. An external electrode as specified in Article 2.01, Paragraph B of this Specification Section must be installed and connected to foundation or footing rebar.
- G. Non-current-carrying metal parts of high voltage equipment enclosure, signal and power conduits, switchboard and panelboard enclosures, motor frames, equipment cabinets, and metal frames of buildings shall be permanently and effectively grounded.
- H. Metallic or semi-conducting shields, and lead sheaths of cables operating at high voltage, shall be permanently and effectively grounded at each splice and termination.
- I. Neutral of service conductors shall be grounded as follows:
 - 1. Neutral shall be grounded at only one point within the site for that particular service. Preferable location of grounding point shall be at service switchboard, or main switch.
 - 2. Equipment and conduit grounding conductors shall be bonded to that grounding point.
 - 3. If other buildings on campus are served from a switchboard or panelboard in another building, power supply is classified as a feeder and not as a service.

4. Equipment grounding conductor is carried from switchboard to each individual building. At building, grounding conductor is bonded with power equipment enclosures, metal frames of building, etc., to "made electrode" for that building.
5. Neutral of feeder shall not be grounded.
- J. If there is a distribution transformer at a building, secondary neutral conductor shall be grounded to "made electrode" serving building.
- K. Within every building, main switchboard or panel, shall be bonded to a 1" or larger cold water line with a 1" conduit with one #6 wire. Metallic piping systems (gas, fire sprinkler, etc.) shall be bonded to cold water line with 3/4" conduit with one #8 wire.

1.4 Submittals

- A. Submit in accordance with Section 01330: Submittal Procedures

PART 2 - PRODUCTS

2.1 Materials

- A. Pull boxes shall be precast concrete and shall be approximately 14" wide, 19" long, and 12" deep (outside dimensions), or larger, if necessary, to obtain required clearances. Boxes shall be equipped with bolt-down, steel traffic covers - stamped per plans. Pull boxes shall be Brooks 36 or approved equal.
- B. "Made" electrodes shall be approved copper-clad steel ground rods, minimum 3/4" diameter, 10'-0" long.

PART 3 - EXECUTION

3.1 Installation

- A. Grounding electrodes shall be located in nearest usable planting area, where not otherwise indicated on Drawings, and each electrode shall terminate within a concrete yard box installed flush with finish grade. In planting areas, concrete yard box shall be 2" above planting surfaces.
- B. If concrete enclosed electrode is used, grounding wire shall terminate to a suitable copper plate with grounding lugs.
- C. Grounding rods shall be driven to a depth of not less than 8'-0.
- D. Grounding electrodes shall have a resistance to ground of not more than 5 ohms.
- E. When using grounding rods, if resistance to ground exceeds 5 ohms, 2 or more rods connected in parallel shall be provided to meet grounding resistance requirement.
- F. Ground rods shall be separated from one another by not less than 10'-0".
- G. Parallel grounding rods shall be connected together with approved fittings and approved grounding conductors in galvanized rigid steel conduit, buried not less than 12" below finish grade.
- H. Electrical Contractor shall include in his bid, cost of services of an approved independent testing laboratory, to test grounding resistance of all made electrodes, ground rods, and bonding of building steel, water pipes, gas pipes and other utility piping. Tests to be performed are as follows:
 1. Visually and mechanically examine ground system connections for completeness and adequacy.

2. Perform "fall of potential" tests on each ground rod or ground electrode where suitable locations are available per IEEE Standard No. 81, Section 8.2.1.2. Where suitable locations are not available, measurements will be referenced to a known dead earth or reference ground.
 3. Perform the two-point method test per IEEE No. 81, Section 8.2.1.1 to determine ground resistance between ground rod and building steel, and utility piping - such as water, gas and panelboard grounds. Metal railings at building entrances and at handicapped ramps shall also be tested.
 4. Test shall be conducted in presence of the District Electrical Inspector.
- I. Three copies of test results shall be submitted to the Engineer. Test results shall be submitted on an official form from the independent testing laboratory showing project location, test engineer, test conditions, test equipment data, ground system layout or diagram, and final test results.

END OF SECTION

THIS PAGE INTENTIONALLY BLANK

**SECTION 16461
DRY TYPE TRANSFORMERS**

PART 1 - GENERAL

1.1 Work Included

A. Dry type two winding transformers.

1.2 References

A. ANSI/NEMA ST 20 - Dry Type Transformers for General Applications.

1.3 Submittals

A. Submit product data under provisions of Sections 01330 and 16010.

B. Include outline and support point dimensions of enclosures and accessories, unit weight, voltage, KVA, and impedance ratings and characteristics, loss data, efficiency at 25, 50, 75, and 100 percent rated load, sound level, tap configurations, insulation system type, and rated temperature rise.

C. Calculations: In accordance with the provisions of Sections 16010 and 01330 as required by Title 24 2-23J.

PART 2 - PRODUCTS

2.1 Acceptable Manufacturers – Dry Type Two Winding Transformers

A. ACME

B. Magnetek Jefferson

C. General Electric

2.2 Dry Type Two Winding Transformers

A. Dry Type Transformers: ANSI/NEMA ST 20; factory-assembled, air cooled dry type transformers; ratings as shown on the Drawings.

B. Insulation system and average winding temperature rise for rated KVA as follows:

<u>Rating</u>	<u>Class</u>	<u>Rise (Degree C)</u>
1-15	185	115
16-500	220	115

C. Case temperature shall not exceed 35 degrees C rise above ambient at its warmest point.

D. Winding Taps, Transformers Less than 15 KVA: 5 percent below rated voltage, full capacity taps on primary winding.

E. Sound Levels: ANSI/NEMA ST 20.

F. Ground core and coil assembly to enclosure by means of a visible flexible copper grounding strap.

G. Coil Conductors: Continuous copper windings with terminations brazed or welded.

PART 3 - EXECUTION

3.1 Installation

A. Set transformer plumb and level.

3.2 **Field Quality Control**

- A. Check for damage and tight connections prior to energizing transformer.
- B. Measure primary and secondary voltages and make appropriate tap adjustments.

END OF SECTION

SECTION 16470 PANELBOARDS

PART 1 - GENERAL

1.1 Work Included

- A. Lighting and appliance branch circuit panelboards.
- B. Load centers.

1.2 References

- A. NEMA AB 1 - Molded Case Circuit Breakers.
- B. NEMA KS 1 - Enclosed Switches.
- C. NEMA PB 1 - Panelboards.
- D. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.
- E. NEMA PB 1.2 - Application Guide for Ground-fault Protective Device for Equipment.

1.3 Submittals

- A. Submit shop drawings for equipment and component devices under provisions of Section 01350.
- B. Include outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, and circuit breaker arrangement and sizes.

1.4 Spare Parts

- A. Keys: Furnish 8 each to District.
- B. Circuit Breakers: Furnish to District 3 spare circuit breakers of each type and rating installed.

PART 2 - PRODUCTS

2.1 Acceptable Manufacturers – Panelboards

- A. General Electric.
- B. Square-D.
- C. Westinghouse.
- D. Substitutions: Under provisions of Section 01640.

2.2 Branch Circuit Panelboards

- A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB1; circuit breaker type.
- B. Enclosure: NEMA PB 1; as noted.
- C. Cabinet Size: 6 inches deep.
- D. Provide flush cabinet front with concealed trim clamps, concealed hinge and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.
- E. Provide panelboards with copper bus, ratings as scheduled on Drawings. Provide copper ground bus in all panelboards.
- F. Minimum Integrated Short Circuit Rating: 10,000 amperes rms symmetrical for 120/208 and 120/240 volt panelboards, 14,000 amperes rms symmetrical for 277/480 volt panelboards or as shown on Drawings.

- G. Molded Case Circuit Breakers: NEMA AB 1; bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits.
- H. Current Limiting Molded Case Circuit Breakers: NEMA AB 1; provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical amperes, let-through current and energy level less than permitted for same size Class RK-5 fuse.

PART 3 - EXECUTION

3.1 Installation

- A. Install panelboards plumb and flush with wall finishes, in conformance with NEMA PB 1.1.
- B. Height: 6 ft (2 m).
- C. Provide filler plates for unused spaces in panelboards.
- D. Provide typed circuit directory for each branch circuit panelboard. Revise directory to reflect circuiting changes required to balance phase loads.

3.2 Field Quality Control

- A. Measure steady state load currents at each panelboard feeder. Should the difference at any panelboard between phases exceed 20 percent, rearrange circuits in the panelboard to balance the phase loads within 20 percent. Take care to maintain proper phasing for multi-wire branch circuits.
- B. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.

END OF SECTION

APPENDIX

Table of Contents

- A. Shop Drawing Transmittal Form
- B. Request for Information Form
- C. Dewatering Report Form
- D. List of District Holidays
- E. Trabuco Canyon Water District Standard Drawings S-5 and S-6

APPENDIX A



Trabuco Canyon Water District

32003 Dove Canyon Drive • Trabuco Canyon, CA 92679
Phone: (949) 858-0277 • Fax: (949) 858-3025 • www.tcwd.ca.gov

Shop Drawing Transmittal

Project: _____

Project No.: _____

Contractor: _____

Address: _____

To: Trabuco Canyon Water District
 32003 Dove Canyon Drive
 Trabuco Canyon, CA 92679

Date: _____

Attention: _____
 TCWD PROJECT MANAGER

Phone No.: _____

Fax No.: _____

e-mail: _____

SUBJECT OF SUBMITTAL: _____

SPECIFICATION SECTION(S): _____

CONTRACTOR'S CERTIFICATION: Check and complete either statement below:

Contractor has verified that the material or equipment contained in this submittal meets all the requirements specified in or shown on the contract documents with no exceptions.

Contractor has verified that the material or equipment contained in this submittal meets all the requirements specified in or shown on the contract documents except for the following deviations:

REQUIREMENT:

Contractor shall use this **Transmittal Form** for submittal of shop drawings to the Owner's Representative. The procedure governing shop drawings submittal is contained in the General Provisions of the Specifications. Failure to comply with all the requirements specified therein will constitute grounds for return of the shop drawings for proper resubmittal.

Contractor's Authorized Signature

APPENDIX B



Trabuco Canyon Water District

32003 Dove Canyon Drive • Trabuco Canyon, CA 92679
Phone: (949) 858-0277 • Fax: (949) 858-3025 • www.tcwd.ca.gov

Request For Information

Project: _____

Project No.: _____
Contractor: _____

Address: _____

To: Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679

Date: _____

Attention: _____
TCWD PROJECT MANAGER

Phone No.: _____

Fax No.: _____

e-mail: _____

INFORMATION REQUESTED: _____

RFI No.: _____

BY: _____

REQUESTED DATE OF REPLY: _____

REPLY: _____

BY: _____

DATE: _____

APPENDIX C



Trabuco Canyon Water District

32003 Dove Canyon Drive • Trabuco Canyon, CA 92679
Phone: (949) 858-0277 • Fax: (949) 858-3025 • www.tcwd.ca.gov

Weekly Dewatering Report

Date: _____

Company: _____

Address: _____

Telephone No.: _____

Fax No.: _____

ATTENTION:

Project: _____

Project Number: _____

Pursuant to the Project Specifications, this is to inform you that construction activity for the week ending

_____ :

Required no dewatering.

Required dewatering. The dewatering method used was: _____

Estimated Volume of Water (gallons/day): _____

Refer to attached report for laboratory test results.

Name of Lab performing testing: _____

Contact Person

Telephone #

Sincerely,

Name

Title

Date

Weekly Dewatering Report

(continued)

Summary of Monitoring and Reporting Requirements:

(Note: This is a summary to help facilitate compliance with the monitoring and reporting requirements. The contractor is responsible for complying with all permit requirements and this summary in no way modifies the permit requirements.)

Sampling:

- Each time a dewatering system is turned off and restarted. (If there is no discharge from the system then the sampling procedures begin as if it is a new discharge when the system is restarted.)
- Samples must be taken at the scheduled intervals regardless of holidays or other non-working days for the contractor.
- For a continuous discharge, the interval between sampling events must not exceed seven days. If the contractor wishes to change sample days after the discharge has begun and the initial samples have been collected, then the change must be made in a way that the interval between samples does not exceed the seven day requirement.
- If there is more than one discharge point, each one is considered a separate discharge and must be sampled separately.
- Flow must be measured daily.

IF THERE IS ANY INDICATION THAT DEWATERING REQUIREMENTS ARE NOT BEING MET, DEWATERING MUST BE STOPPED AND CONTACT THE TCWD INSPECTOR IMMEDIATELY. THE CONTRACTOR IS RESPONSIBLE FOR ANY PENALTIES ASSESSED.

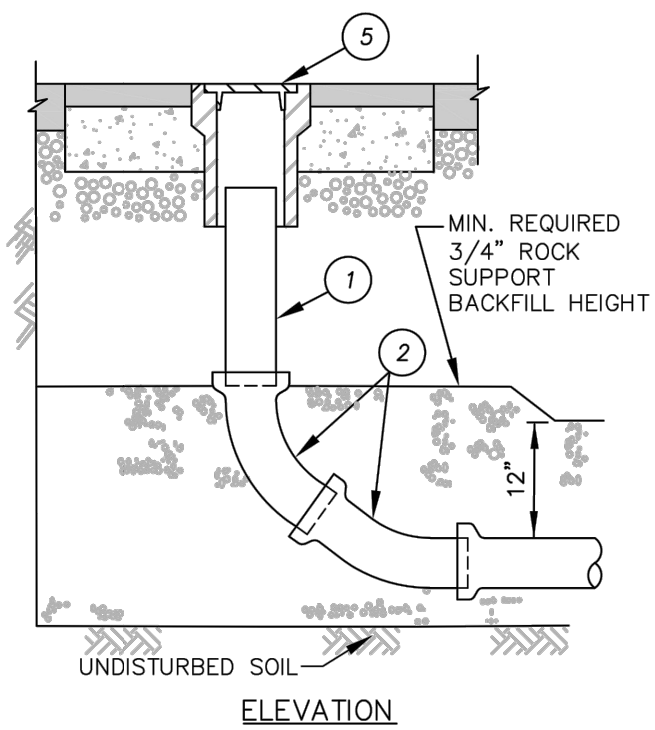
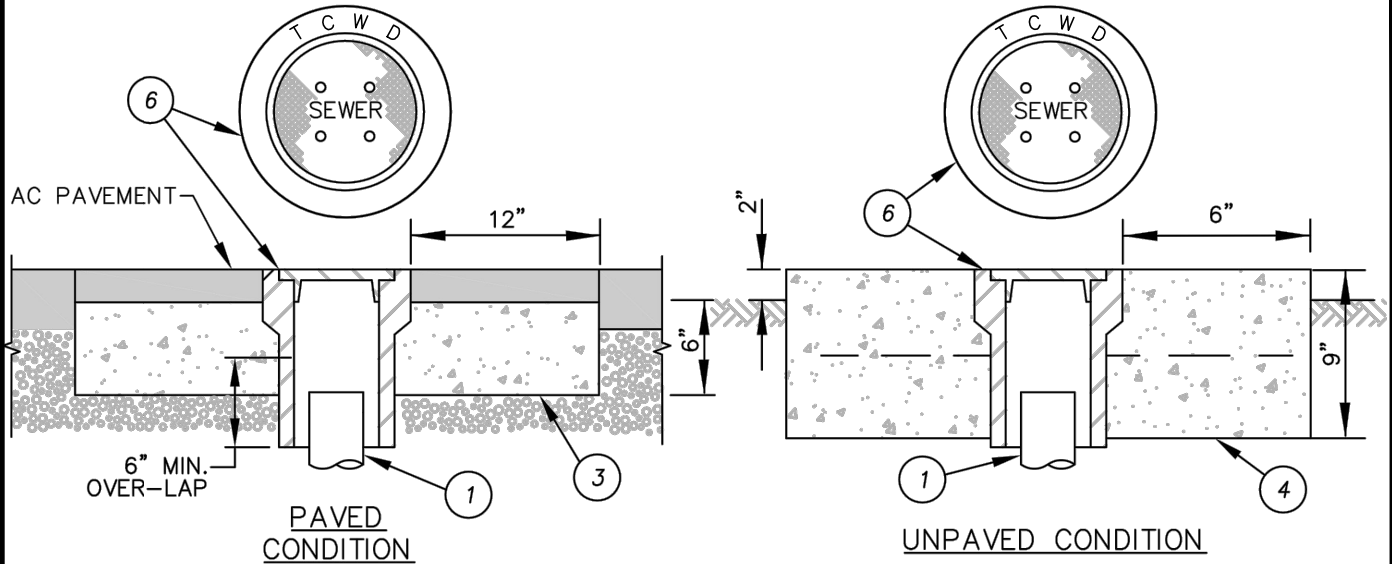
APPENDIX D

DISTRICT HOLIDAYS

Per the District's Personnel and Salary Policy, Section 7, B, 2, the District-observed holidays are as follows:

- New Year's Day (January 1st)
- Martin L. King Day (3rd Monday in January)
- Presidents' Day (3rd Monday in February)
- Memorial Day (Last Monday in May)
- Independence Day (July 4th)
- Labor Day (1stMonday in September)
- Veteran's Day (November 11th)
- Thanksgiving Day (4th Thursday in November)
- Day after Thanksgiving (Friday after 4th Thursday in November)
- Day prior to Christmas (December 24th)
- Christmas Day (December 25th)

APPENDIX E



ITEM MATERIAL

- 1 — 8" CLEAN-OUT RISER, SEE NOTE 1.
- 2 — 8" 45° BEND, LONG-RADIUS SWEEP (VCP ONLY).
- 3 — CLASS "B" CONCRETE COLLAR (ROUND).
- 4 — CLASS "B" CONCRETE COLLAR (SQUARE). WITH W.W.F. 1.6 X 1.6.
- 5 — CONSTRUCT FRAME, COVER AND CONCRETE COLLAR PER "PAVED" OR "UNPAVED" CONDITION HEREON.
- 6 — PRECAST BOX, FRAME AND COVER WITH MARKING AS SHOWN HEREON. COVER TO HAVE FOUR 3/4" DIA. HOLES. SEE TCWD STD. DWG. W-22 FOR SIMILAR APPLICATION.

NOTES:

1. CLEANOUT RISER PIPE TO BE SAME MATERIAL AS SEWER MAIN.
2. SEWER MAINS LARGER THAN 8" SHALL HAVE TERMINAL MANHOLE.
3. TIE DOWN ALL CLEANOUTS ON THE NEAREST CURB FACE BY MEANS OF A 4-INCH WHEEL GRINDER, SEE DETAIL ON TCWD STD. DWG. S-1, SHEET 2 FOR SIMILAR APPLICATION.

TERMINAL CLEANOUT

REVISION			
NO.	DATE	APPROVED	DATE

APPROVED BY ENGINEERING DEPARTMENT

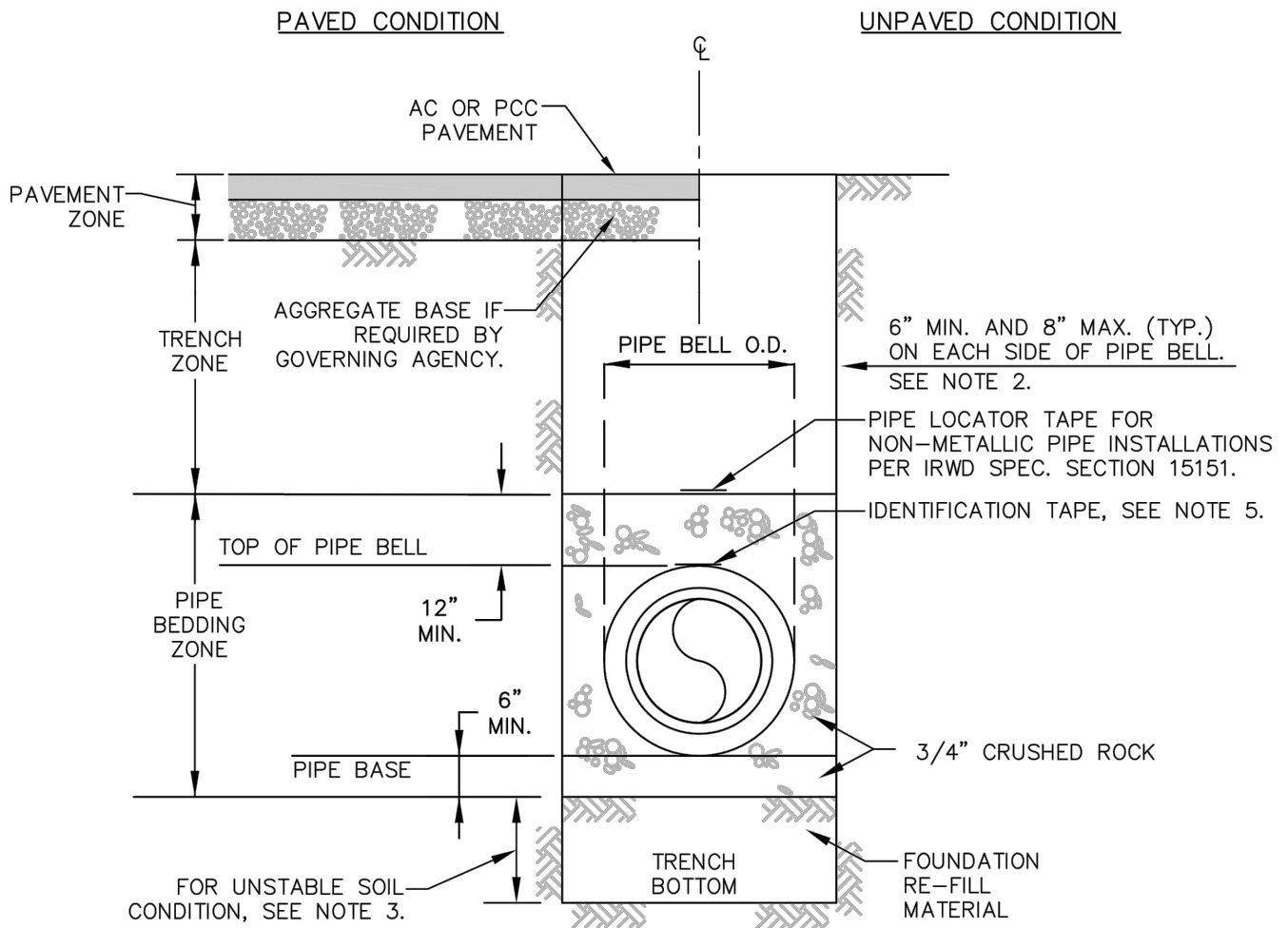
LORRIE LAUSTEN, P.E.

DATE



TCWD
STD.DWG.
S-5

SHEET "1" OF "1"



NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH TCWD STD. SPEC. SECTION 02223.
2. WHERE CONTRACTOR FAILS TO MAINTAIN PROPER TRENCH WIDTH LIMITS, SPECIAL BACKFILL (SUCH AS ONE-SACK SLURRY) AND BEDDING SHALL BE REQUIRED AS DETERMINED IN THE FIELD BY THE DISTRICT REPRESENTATIVE.
3. IF UNSTABLE SOIL IS ENCOUNTERED, THE DISTRICT REPRESENTATIVE SHALL DETERMINE OVEREXCAVATION DEPTH AND FOUNDATION RE-FILL MATERIAL PER TCWD STD. SPEC. SECTION 02223.
4. CONTRACTOR SHALL PROVIDE HAND EXCAVATED "BELL HOLE" FOR EACH PIPE JOINT SO THAT THE WEIGHT OF PIPE DOES NOT BEAR ON THE BELL. CONTRACTOR SHALL RE-FILL AND HAND-TAMP EACH "BELL HOLE" PRIOR TO COMPLETING THE PLACEMENT OF PIPE BEDDING.
5. PIPE IDENTIFICATION TAPE (LABELED SEWER) SHALL BE INSTALLED PER TCWD STD. SPEC. SECTION _____. TAPE SHALL BE FASTENED TO THE PIPE WITH 2" WIDE 10 MIL PIPE WRAP TAPE AT 5' INTERVALS. PIPE WRAP TAPE SHALL BE WRAPPED AROUND THE ENTIRE CIRCUMFERENCE OF THE PIPE.
6. THE MIN. DEPTH OF COVER FROM FINISH GRADE TO THE TOP OF THE SEWER MAIN SHALL BE SEVEN (7') FEET UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER.

SEWER TRENCH

REVISION			
NO.	DATE	APPROVED	DATE

APPROVED BY ENGINEERING DEPARTMENT

LORRIE LAUSTEN, P.E.

DATE



TCWD
STD.DWG.
S-6

SHEET "1" OF "1"

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

ENGINEERING MATTERS

ITEM 4: TOPANGA BOOSTER PUMP STATION AUTOMATIC TRANSFER SWITCH (ATS) REPLACEMENT PROJECT

Trabuco Canyon Water District owns and operates the Topanga Booster Pump Station in the Santiago Canyon Estates community in Silverado Canyon which provides boosted system pressure for approximately 20 homes. This facility has a backup power generator with an automatic transfer switch (ATS) that allows for the automatic conversion from street power to backup power during an electrical power outage as well as generator shut down and restoration of street power when the system is reactivated, and electrical power is restored. Recently, Water Operations staff has reported certain operational issues with the ATS at this facility that cannot be resolved due to lack of supported hardware and parts, and as such, the ATS cannot be repaired and must be replaced. This critical equipment ensures adequate domestic water system pressure for emergency operations in an area adjacent to the wildfire interface.

District staff has requested a proposal from Duthie Power for a new ATS and temporary rental equipment to be used during the replacement period, as well as a proposal from Hydrotech Electric for the required electrical services. The following is a summary of the received proposals:

Line Item	Vendor	Service Description	Proposed Costs
1	Duthie Power Services	New ATS - Eaton 480v 400 Amp 3 Pole	\$ 20,534.35
2	Duthie Power Services	Rental ATS & Assy.	\$ 6,762.50
3	Hydrotech Electric	Electrical Services, LOTO, Removal & Disposal	\$ 15,957.00
4	N/A	10% Contingency	\$ 4,325.39
			\$ 47,579.24

Due to supply chain related issues, the current lead times for parts received is estimated at six months. More information may be presented at the time of the meeting.

FUNDING SOURCE:

Capital Improvement Funding

FISCAL IMPACT (PROJECT BUDGET):

\$47,579.24 (this amount includes a 10% contingency)

ENVIRONMENTAL COMPLIANCE:

All environmental compliance for disposal will be met by the respective vendor.

RECOMMENDED ACTION:

Approve and recommend the Board of Directors ratify the purchase of one new Automatic Transfer Switch and temporary rental equipment from Duthie Power Services for \$27,297, and related electrical services from Hydrotech Electric for \$15,957, with a 10% contingency for a total not to exceed amount of \$47,579.24 (Action Calendar).

EXHIBIT(S):

1. Duthie Power Proposal – Replacement ATS – Eaton 480v 400 Amp 3 Pole ATS
2. Duthie Power Proposal – Temporary Rental ATS Equipment and Assembly
3. Hydrotech Electric Proposal – Topanga Pump Station ATS Replacement – Electrical Services

CONTACTS (staff responsible): PALUDI/KESSLER/STROUD



2335 E Cherry Industrial Circle
Long Beach, CA 90805-4416

24 Hour Service

Generators • Fire Pumps • Transfer Switches



Phone (562) 790-1772 (800) 394-7697
Fax (562) 408-3020 Lic # 708125

QUOTE

Quote Number:
42682

Work Order Id:
183943
Date:
06/30/2022
Submitted By:
DEWEY BRUNSON
Page: 1 of 2

Proposal To:
TONY QUINONEZ
18525 TOPANGA CANYON TOPANGA BOOSTER SANTIAGO
CANY
TOPANGA BOOSTER
SANTIAGO CANYON ESTATES
SILVERADO CA 92676
(949)226-3133
tquinonez@tcwd.ca.gov

Service Location:
TRABUCO CANYON WATER
18525 TOPANGA CANYON TOPANGA BOOSTER
SANTIAGO CANY
TOPANGA BOOSTER
SANTIAGO CANYON ESTATES
SILVERADO CA 92676
TRA200-003

Option #	Equipment	Manufacturer	Model
29	ATS	CUTLER-HAMMER	
	Serial #		Year: 0000 Size 0.00 -

THIS QUOTE IS FOR RECOMMENDED CORRECTIONS TO EMERGENCY EQUIPMENT
TRAVEL TO JOBSITE, GAIN ACCESS TO EMERGENCY EQUIPMENT

** UTILITY POWER WILL NEED TO BE SHUTOFF WHILE REPAIRS ARE BEING DONE **

REMOVE OLD 480VAC 400 AMP 3 POLE ATS CONTACTOR & CONTROLLER
INSTALL NEW EATON 480 VOLT 400 AMP 3 POLE CONTACTOR ASSEMBLY
INSTALL NEW EATON ATS CONTROLLER UTILIZING EXISTING ATS ENCLOSURE
CALIBRATE NEW ATS AS NEEDED
PROGRAM NEW ATS CONTROLLER PER CUSTOMER SPECS.

TEST EMERGENCY GENERATOR SYSTEM TO ENSURE PROPER OPERATION

Initial: _____	Total	19,316.01
	Estimated Sales Tax	1,218.34
	Estimated Total Sale	20,534.35

***** ALL QUOTES ARE VALID FOR A PERIOD OF 90 DAYS *****

EQUIPMENT WILL BE OUT OF SERVICE TO DO THIS WORK. THIS IS FOR NORMAL WORKING HOURS AND DOES NOT INCLUDE PRIOR SERVICE CALLS.

If the repairs listed above require the unit to be out of service, we can provide you with a rental generator at an additional charge.

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.

WARRANTY STATEMENT, ALL PARTS & LABOR COVERED FOR (12) MONTH PERIOD. ANY MANUFACTURER'S WARRANTY THAT EXCEEDS THE (12) MONTH PERIOD WILL BE HONORED FOR DURATION OF STATED COVERAGE.

NOTE: ONCE QUOTE IS APPROVED AND PARTS ARE ORDERED, IF WORK IS CANCELED A 15% RESTOCKING FEE WILL APPLY

Thank you,

Dewey Brunson
Service Manager
Duthie Power Service
(562) 790-1772 x 1223



2335 E Cherry Industrial Circle
Long Beach, CA 90805-4416

24 Hour Service

Generators • Fire Pumps • Transfer Switches



Phone (562) 790-1772 (800) 394-7697
Fax (562) 408-3020 Lic # 708125

QUOTE

Quote Number:
42682

Page: 2 of 2

Accepted By: _____

PO#: _____

Date: _____



24 Hour Service
Specializing in Generators & Diesel Fire Pumps
2335 E. Cherry Industrial Circle
Long Beach, CA 90805-4416
Phone (562) 790-1772 Fax (562) 790-8137

To: Tony Quinonez
Company: Trabuco Canyon Water (Topanga Booster)
Phone: 949-226-3133 tquinonez@tcwd.ca.gov

02/28/22

Subject: 400AMP 480Volt ATS

Table with 2 columns: Description and Price. Includes items like (1)400AMP ATS, 375' of 4/O Single Conductor Cable, Deliver/Connect, Disconnect/Pickup, and Estimated Total.

Labor rates: S/T \$125/Hour, O/T \$187.50/Hour, D/T \$250/Hour

All permit local or state permits are the sole responsibility of lease. Duthie does not or will not pull any permits.
Service is required every 200 hours of operation. Standard service includes changing oil, oil filter(s), fuel filter(s), water filter(s) and air filter(s). If unit is not serviced at 200 hours an hourly surcharge per hour will be applied in addition to rental billing.

*Basis for Shift Rates

Table showing shift rates based on 3 Days, 3 Weeks, and 1 Month. Columns include Single Shift, Double Shift, and Triple Shift with run times per day, week, and month.

Rentals based on availability. Rentals are strictly first come, first served basis. We do not pro rate our rates. Quotes good for 30 days. Scheduling or commitments will not be made until signed quote is returned.

- **Price subject to change upon availability
***Price based on normal working hours, after hours/holiday labor will be billed at T/M
****Fuel price is subject to change
*****Prices and terms are subject to change pending credit application when applicable
*****Voltage, phase rotation and grounding is the sole responsibility of the lessee
*****A Prelim may be required for any rental agreement
*****Billing terms are net 15

Sal Hernandez
Rental Manager

Proposal Accepted By: _____ PO# _____
Signature: _____ DATE: _____



PROPOSAL
TCWD
TOPANGA PUMP STATION ATS
REPLACEMENT

Addendum: None Noted

DIR REG # 1000001266

2-24-22 Pg 1 of 2

Specifications: TCWD Construction Standards

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

1. Lock Out Tag out of existing Eaton MCC.
2. Removal and disposal of existing Eaton ATS.
3. 1- Eaton 400A ATV3LDA30400XKU ATS with required appurtenances per attached B.O.M.
4. 1- ATS programming and Parameter Settings as required.
5. Perform functional testing of ATS with TCWD.

Excluded from Scope:

1. *Temporary Power Requirements for operation or by-pass equipment.*
2. Building Permits, Utility charges, Bonds and Associated Fees.
3. Any Instrumentation devices, Control Panels or Electrical panels not listed in the above scope of work

Total Bid Price.....\$15,957.00

Price Valid for 30 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# 1000001266
CLSB #977838
WBE Certified

Ken Cloud 909 270-0430

Item No.	Qty	Product	Description
	1	Automatic Transfer Switches	Quote Date: 2/17/2022
			Product Family: Wall Mount Switch Type: Automatic Molded Case Switch 30A thru 1000A 480/277v, 60hz, 3 Phase, 4 Wire, 3 poles Transition Mode: Open Controller Type: ATC-300+ Continuous Current: 400 Amps Withstand: 65kA Normal Source Terminals: (1) 4/0-600 CU/AL Emergency Source Terminals: (1) 4/0-600 CU/AL Load Side Terminals: (2) #1-500 CU/AL Neutral Terminals: (6) 250-350 CU/AL Standard Features: 1a, 2a, 3a, 4a, 5h, 5j, 5k, 5l, 6b, 7a, 8c, 8d, 12c, 12d, 12g, 12h, 14l, 14m, 15e, 15f, 23k, 26d, 26h, 26j, 26k, 26l, 32a, 35a, 48f, 49c, Optional Features: 34c,

Catalog No ATV3LDA30400XKU

Qty List of Materials

- 1 ATV3LD 3 Poles 400 Amps
- 1 No Enclosure
- 1 1a. Time Delay Normal to Emergency Adj. 0-1800 sec
- 1 2a. Time Delay Engine Start Adj. 0-120 sec
- 1 3a. Time Delay Emergency to Normal Adj. 0-1800 sec
- 1 4a. Time Delay Engine Cool-off Adj. 0-1800 sec
- 1 5h. Emergency (S2) Sensing Phase Reversal
- 1 5j. Emergency (S2) Sensing Under Voltage/Under Freq
- 1 5k. Emergency (S2) Sensing Over Voltage/Over Freq
- 1 5l. Emergency (S2) Sensing Voltage Unbalance
- 1 6b. Test Pushbutton
- 1 7a. Time Delay Engine Fail Adj. 0-6 sec
- 1 8c. Time Delay Bypass Emergency to Normal
- 1 8d. Time Delay Bypass Normal to Emergency
- 1 12c. LED Indicator Normal Position
- 1 12d. LED Indicator Emergency Position
- 1 12g. LED Indicator Normal Source Present
- 1 12h. LED Indicator Emergency Source Present
- 1 14l. Normal (S1) Source Present (2 Form C)
- 1 14m. Emergency (S2) Source Present (2 Form C)
- 1 15e. Normal (S1) Position Indication (1 Form C Micro Switch Outputs)
- 1 15f. Emergency (S2) Position Indication (1 Form C Micro Switch Outputs)
- 1 22. Ground Bar
- 1 23k. Auto Plant Exerciser 1/7/14/28 Day
- 1 26d. Go To Source 2
- 1 26h. Normal (S1) Sensing Phase Reversal
- 1 26j. Normal (S1) Sensing Under-voltage/Under-frequency
- 1 26k. Normal (S1) Sensing Over-voltage/Over-frequency
- 1 26l. Normal (S1) Sensing Voltage Unbalance
- 1 32a. Time Delay Neutral Adjustable 0 - 120 seconds
- 1 34c. Logic Extender Cable 96"
- 1 35a. Pre-transfer Signal Contacts (1 Form C)
- 1 48f. MODBUS Communication
- 1 49c. Multi-Tap Transformer



Detail Bill of Material

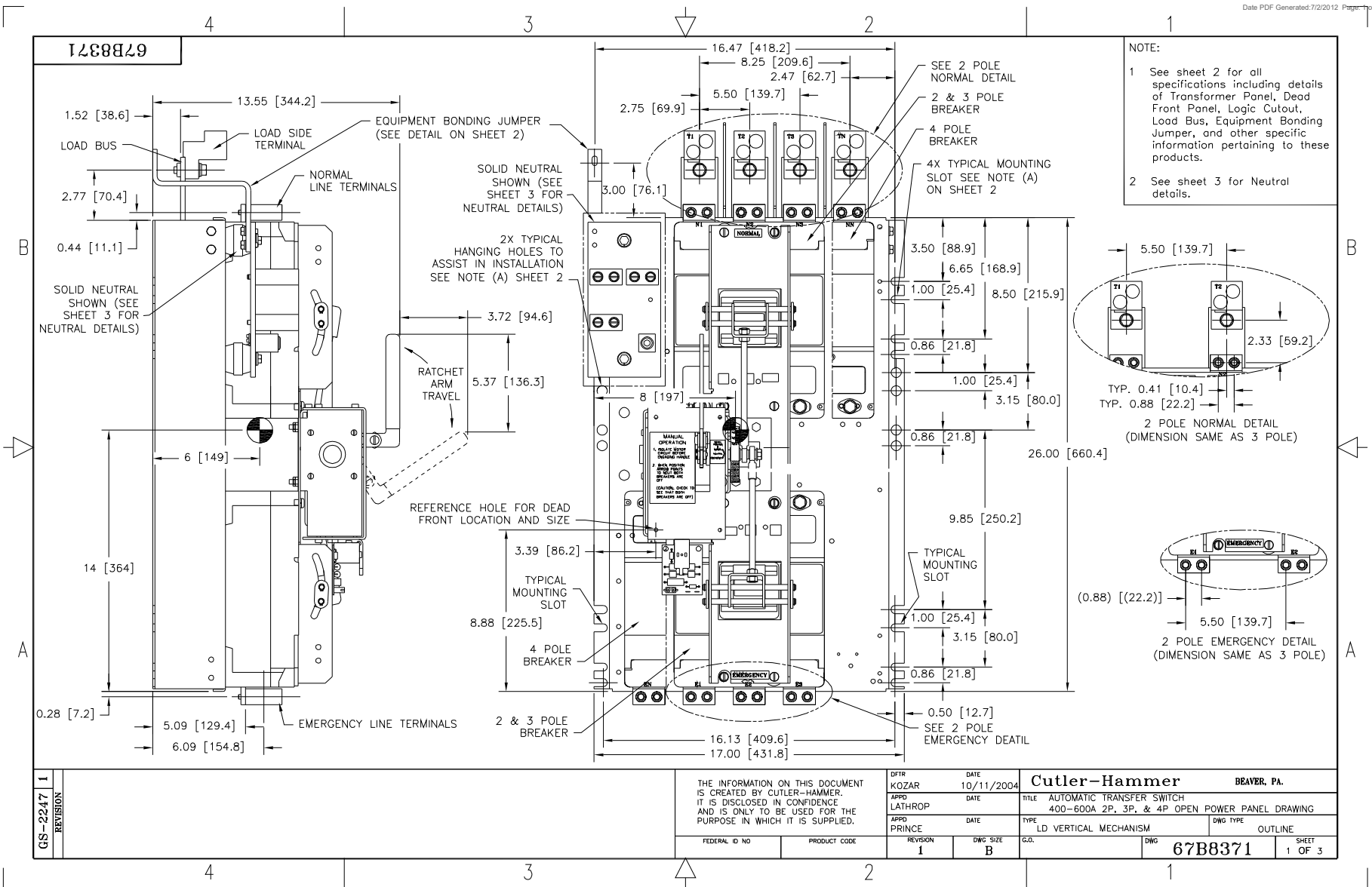
Page 2 of 2

Project Name: Feb 2022 Quoting Purposes Only
General Order No:

Negotiation No: T8330202X2K1
Alternate No: 0000

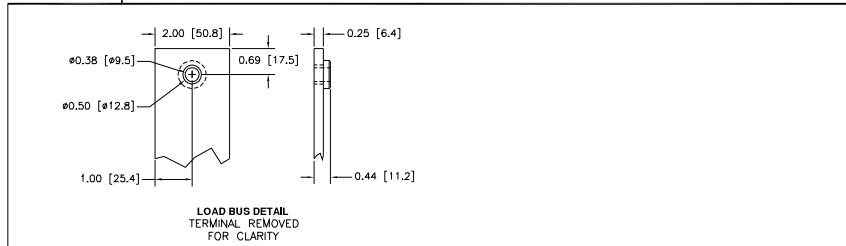
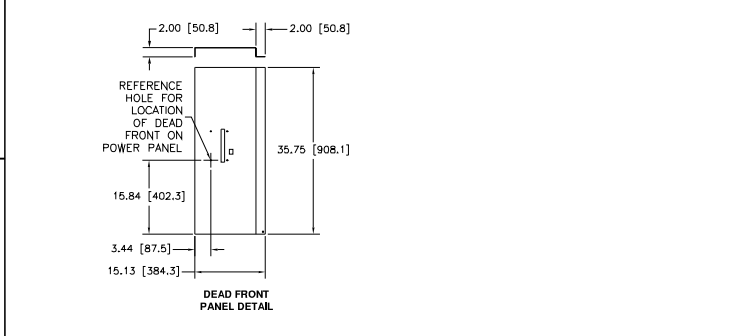
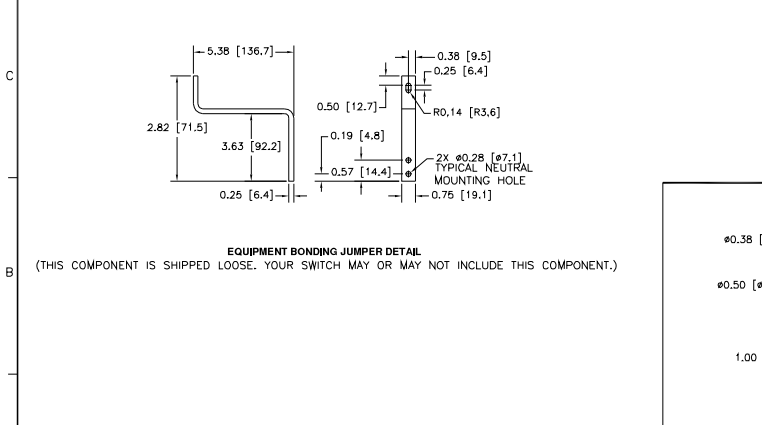
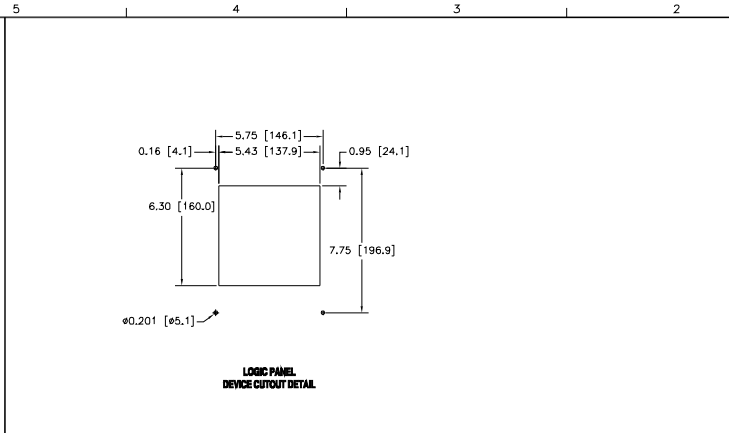
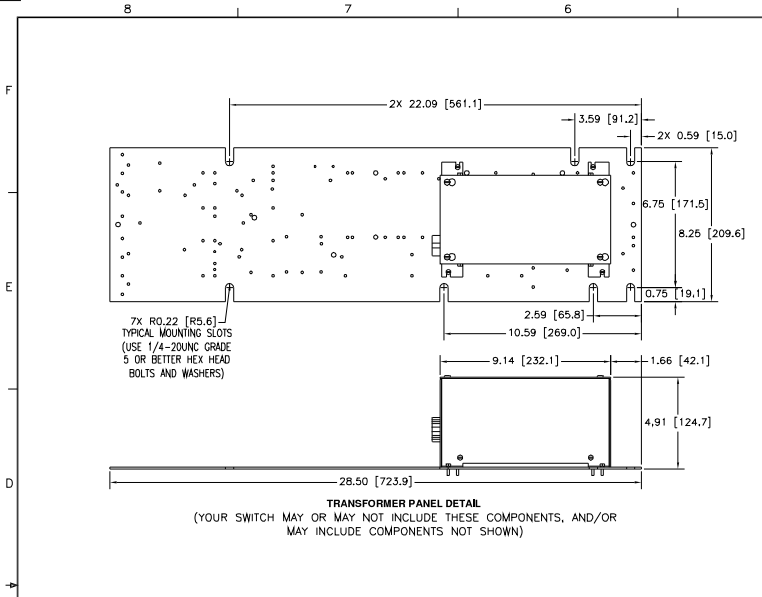
All orders must be released for manufacture within 90 days of date of order entry. If approval drawings are required, drawings must be returned approved for release within 60 days of mailing. If drawings are not returned accordingly, and/or if shipment is delayed for any reason, the price of the order will increase by 1.0% per month or fraction thereof for the time the shipment is delayed.

Seller shall not be responsible for any failure to perform, or delay in performance of, its obligations resulting from the COVID-19 pandemic or any future epidemic, and Buyer shall not be entitled to any damages resulting thereof.



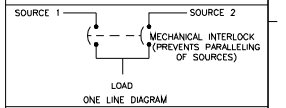
GS-2247 REVISION	THE INFORMATION ON THIS DOCUMENT IS CREATED BY CUTLER-HAMMER. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DFR KOZAR DATE 10/11/2004	Cutler-Hammer BEAVER, PA.		
	APPROVED BY LATHROP DATE		TITLE AUTOMATIC TRANSFER SWITCH 400-600A 2P, 3P, & 4P OPEN POWER PANEL DRAWING			
	APPROVED BY PRINCE DATE		TYPE LD VERTICAL MECHANISM	DWG TYPE OUTLINE		
	FEDERAL ID NO	PRODUCT CODE	REVISION 1	DWG SIZE B	DWG 67B8371	SHEET 1 OF 3

GO/NEG-Alt-Date: T8330202X2K1-0000-2/17/2022	Job Name: Feb 2022 Quoting Purposes Only
Item Number:	Designation:
Catalog Number: ATV3LDA30400XKU	



Seismic Zone 4 Qualified (BOCA, CBC, IBC, UBC) Mechanical Mounting Requirements

A For seismic application use (4) 3/8"-16UNC grade 5 or better hex head bolts and washers. These bolts are to be torqued to 75 ft.lbs. (102 Nm). See typical mounting holes on sheet 1. For hanging guides use (2) 1/4"-20UNC grade 5 or better hex head bolts.



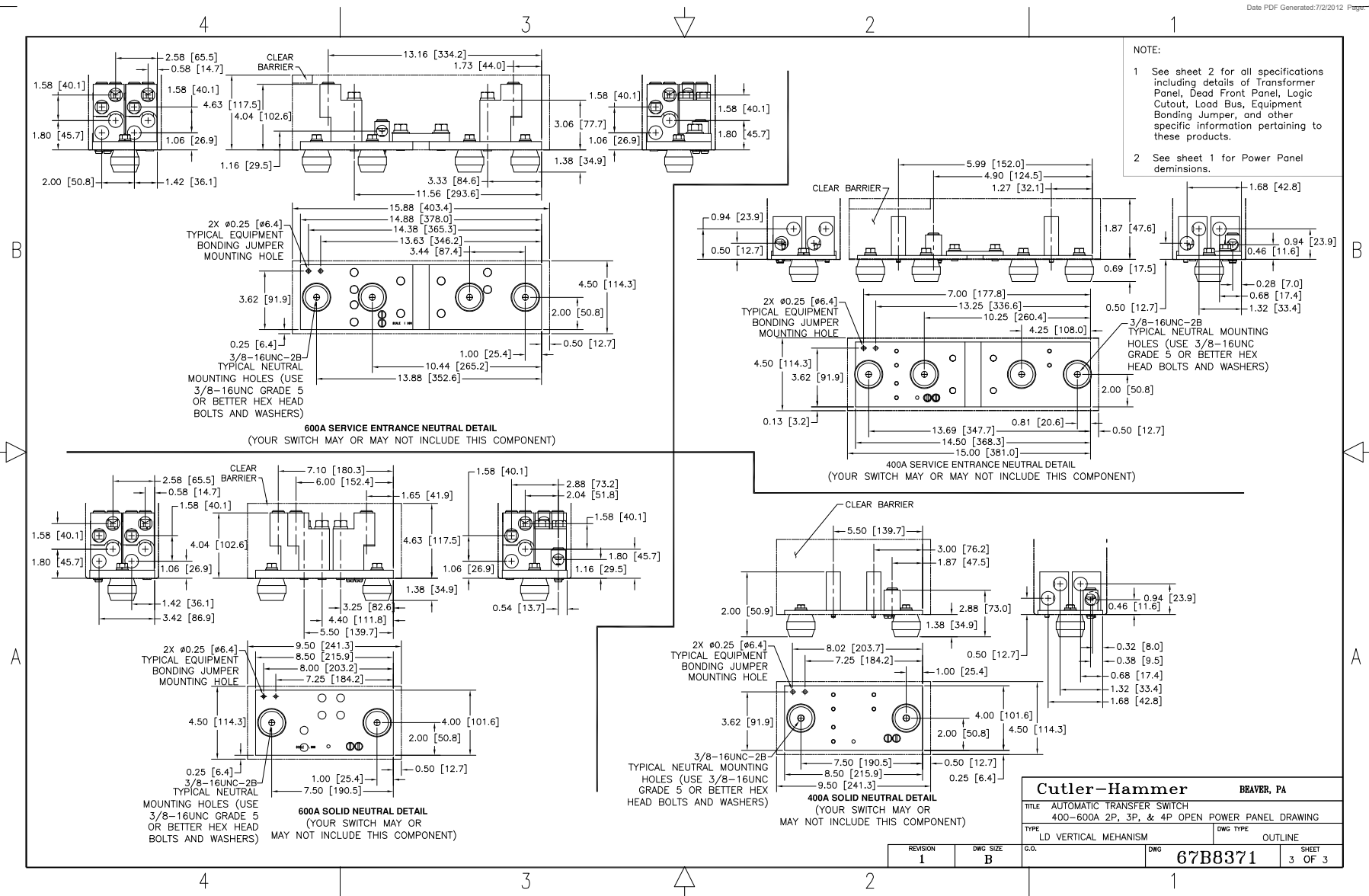
- NOTES:
- Automatic, Non-automatic, Manual, and Service Equipment controls provided based on customer order information.
 - All Dimensions: inches [millimeters].
 - For switched neutral applications, connect to terminals marked "NN", "EN", and "LN". Neutral assembly will not be provided.
 - If a Ground Fault Sensing System was ordered, a window CT and a GFR relay are provided. Installer to route all load phase and neutral conductors through window CT with "H1" and "X1" markings facing the bus terminals.
 - = Center of gravity.
 - Torque Specifications:
Load Terminals - 25 ft/lbs
Line Terminals - 25 ft/lbs
 - Manual and Automatic Switch dimensions DO NOT vary.
 - All sketches are Not To Scale.
 - This drawing pertains to the switch types listed in the following table:

APPROX. SHIPPING WT. Lbs. (kg)	CATALOG NUMBER	AMPS	VOLTS	STYLE NUMBER
265 (12)	ATV3	400	120-600	N/A

1 GS-2247
2 BELFUSION
3
4
5
6
7
8

THE INFORMATION ON THIS DOCUMENT WAS CREATED BY CUTLER-HAMMER. IT WAS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT WAS SUPPLIED.		DTR DATE 10/11/2004 APPD DATE 10/11/2004 LATHORP S.O.	Eaton Cutler-Hammer TITLE AUTOMATIC TRANSFER SWITCH 400-600A 2P, 3P & 4P OPEN POWER PANEL DRAWING TYPE LD VERTICAL MECHANISM OUTLINE
FEDERAL ID NO. 88726	PRODUCT CODE	REVISION 2	G.O. DWG 67B8371 SHEET 2 OF 3

GO/NEG-Alt-Date: T8330202X2K1-0000-2/17/2022	Job Name: Feb 2022 Quoting Purposes Only
Item Number:	Catalog Number: ATV3LDA30400XKU
Designation:	



GO/NEG-Alt-Date: T8330202X2K1-0000-2/17/2022	Job Name: Feb 2022 Quoting Purposes Only
Item Number:	Catalog Number: ATV3LDA30400XKU
Designation:	

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

ENGINEERING MATTERS

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. South Orange County IRWM Grant Project
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 | AUGUST 3, 2022**

OPERATIONAL MATTERS

ITEM 6: WATER SYSTEM UPDATES

The following is a brief report of the water system for **July 2022**.

Projects and Repairs

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

1. Flushed 68 hydrants in the Dove Canyon Community.
2. Restored SCADA control to the Trabuco Oaks Pressure Regulator Valve (PRV).
3. Worked with Delco Sales to service 15 flow control valves at the Dimension Water Treatment Plant.
4. Replaced a fire hydrant on Weeping Willow in the Walden Homes Community.
5. Continued to work with Cartegraph on the new CMMS system.
6. Worked with Maintenance Department to clean up landscape for Orange County Fire Authority (OCFA) approval.
7. Dimension Water Treatment Plant (DWTP) was back online 7/5/2022 and Water Operations staff continues to work with Tesco Controls to improve the SCADA system at this facility.

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**

2022													
DIMENSION WTP													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
SAC METER AC/FT	138	151	51	0	0	0							340
BACKWASH AC/FT	4	4	1	0	0	0.2							9
FLUSHWATER AC/FT	6	7	2	0	0	0.5							16
WTP EFFLUENT AC/FT	141	151	47	0	0	0							339
WELLS													
TRABUCO CREEK GWTF	0	0	0	0	0	0							0
US WELL AC/FT	0	0	0	0	0	0							0
AMP WATER													
SMWD AC/FT	0	0	27	57	75	54							213
IRWD AC/FT	3	0	80	117	123	115							438
TOTAL SUPPLY													
AC/FT	144	151	154	174	198	169							990
CFS DAILY AVERAGE	2.3	2.7	2.6	2.9	3.2	2.7							2.7
AC/FT PER DAY	4.6	5.4	5.0	5.8	6.4	5.5							5.4
OPERATIONS in GAL.													
WTP DOMESTIC	38,672	31,715	11,070	374	0	2,917							84,748
WWTP DOM	710	750	1,181	1,655	1,758	1,571							7,625
OPERATIONS (AF)													
SUPPLEMENT TO RW	0	0	0	0	0	0							0
LOSSES in GAL.													
FLUSHING (gal.)	0	0	170,000	0	0	1,000							171,000
SEWER CLEANING (gal.)	5,000	5,000	5,000	5,000	5,000	5,000							30,000
LINE BREAKS (gal.)	100,000	50,000	0	300,000	25,000	0							475,000
SYSTEM DEMAND **													
CFS DAILY AVERAGE	2.3	2.6	2.6	2.9	3.2	2.8							2.7
AC/FT PER DAY	4.6	5.4	5.0	5.8	6.4	5.5							5.5
RESERVOIR STORAGE													
MONTHLY AVG (MG)	8.8	9.0	8.9	8.8	9.0	8.9							9
DAYS OF STORAGE	3	4	4	3	4	4							4
ZONES (AF)													
RIDGELINE PS	130	140	43	0	0	0							313
EL TORO P.S.	3	0	80	117	123	115							438
TOPANGA	2	2	2	2	3	3							14
FALCON	0.4	0.5	0.6	0.7	0.9	0.8							4
ROSE PRV/ OAKS	3	2	4	3	4	3							19
CANYON CREEK	0.2	0.5	0.3	0.3	0.3	0.4							2
ROSE P.S.	0.4	0.2	0.2	0.1	0.1	0.04							1
ROBINSON RANCH	32	39	42	43	43	59							258
DOVE CANYON	59	62	70	70	81	85							427
PORTOLA HILLS	10	10	10	11	12	12							65

* Usage estimated new meter installed

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

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

OPERATIONAL MATTERS

ITEM 7: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system for **July 2022**.

Projects and Repairs

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

1. Removed 200 feet of a 6-inch HDPE pipe from the Shadow Rock Detention Basin for future projects.
2. Repaired a leak on a filter located at the Dove Recycle Booster Station.
3. Rehab of sewer manhole and gravity lines to eliminate trouble spot in Dove Canyon Community.
4. Worked on preparing Cartegraph templates for the CMMS program.
5. Removed all bypass equipment from the Golf Club Sewer Lift Station.

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:

Sewer System Management Plan (SSMP) Monthly Update	
Total Sewer Line, Feet*	210,495
Total Sewer Line Cleaned (Ft) – Month	16,000
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	137,695
Cleaning Cycle Period (Mos.) [Start date: 8/9/21]	11
Total Sewer Line Cleaned, %	65%
The Oaks at Trabuco – Pumping Frequency for the Month	13
O’Neill Park Sewer System Status	Ok
O’Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	2Q 2022
SSMP Program Audit – <i>Next Audit Report**</i>	February 2023

**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

CONTACTS (staff responsible): PALUDI/PEREA/ULLOA

TRABUCO CANYON WATER DISTRICT | NON-DOMESTIC WATER SYSTEM SUMMARY - 2022

RECYCLED WATER SUPPLY															
	MAX	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	49.9	42.6	42.6	44.6	44.1	42.6							266.5	534.4
Reclaimed Reservoir Level, FT	1274.5	1,273.8	1,274.2	1,270.5	1,268.0	1,263.5	1,261.0							-	-
Reclaimed Reservoir Free Board, FT	25.5	0.7	0.3	4.0	6.5	11.0	13.5							-	-
Reclaimed Reservoir Storage, AF	145.5	138.6	140.5	122.8	108.9	84.8	73.2							-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0							0.0	44.5

RECYCLED WATER SYSTEM DEMAND															
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	0.2	0.2	0.2							1.1	13.4%
Dove Canyon Golf Course	106.7	5.8	13.3	21.1	26.3	34.9	52.9							154.3	144.7%
Dove Canyon Master Association	279.3	13.0	5.0	14.0	21.7	28.0	24.8							106.4	38.1%
Robinson Ranch	80.2	0.8	1.0	1.2	1.7	2.4	5.0							11.9	14.9%
Trabuco Highlands	159.7	1.2	2.3	5.0	6.9	9.8	10.3							35.5	22.2%
City of RSM	0.1	0.01	0.0	0.00	0.00	0.00	0.00							0.01	6.9%
Construction Water	N/A	0.0	0.0	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	0.0							0.0	0.0%
SMWD	N/A	0.0	0.0	0.0	0.0	0.0	0.0							0.0	N/A
TY Nursery	17.9	0.0	0.0	20.8	0.1	0.0	0.0							20.9	116.7%
TOTAL, AF	653.2	21.1	21.7	62.2	56.8	75.2	93.1							330.1	50.5%
PERCENTAGE OF NDW ALLOCATION/YEAR		3.2%	6.6%	16.1%	24.8%	36.3%	50.5%								
TOTAL ANNUAL AVG. NDW AVAILABLE**	774.36														

URBAN RUNOFF CAPTURE AND REUSE															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.01	0.01	0.03	0.01	0.01	0.01							0.08	14.2
Dove Tick Creek Production*	<i>Dry Season</i>	7.4	7.1	1.1	4.6	2.4	2.7							25.3	58.8
	TCWD Portion	7.4	7.1	1.1	2.3	1.2	1.4							20.4	-
	SMWD Portion	0.0	0.0	0.0	2.3	1.2	1.4							4.9	-
Dove Lake Water Pumped		0.0	0.0	0.0	0.0	0.0	40.2							40.2	185.8
Dove Lake Free Board, Ft		3.9	3.1	1.2	0.8	0.8	2.5							-	-
Dove Lake Storage, AF		161.0	165.0	176.3	177.3	177.3	176.0							-	-
Total Rainfall, In.		0.0	0.5	1.5	0.01	0.0	0.0							2.0	14.7

* 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

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | AUGUST 3, 2022**

OPERATIONAL MATTERS

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of the wastewater system for **July 2022**.

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

1. Scheduled Evans Hydro for onsite startup of the 1CFS booster pump located at the Dimension Water Treatment Plant.
2. Picked up a spare submersible pump for the Golf Club Lift Station.
3. Picked up materials and toured the P&F shop located in San Bernadino, which is a distributor of High-Density Polyethylene.
4. Assisted with the Dove Lake pump-barge build.
5. Repaired the hydraulic system leak on the Vactor truck.
6. Sent hydraulic ram out for emergency repair for the Belt Press at the Wastewater Treatment Plant.
7. Assisted the Wastewater Operations with the manhole rehab on Golf View, located in the Dove Canyon Community.
8. Assisted Wastewater Operations with the Golf Club Lift Station bypass rental equipment clean up and return.
9. Attended the Cartegraph CMMS meetings.
10. Repaired a hydraulic leak on the CAT backhoe.

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 | AUGUST 3, 2022**

REGULATORY AND OTHER MATTERS

ITEM 9: OTHER MATTERS/REPORTS

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