



**ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA**  
**TRABUCO CANYON WATER DISTRICT**  
**32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA**  
**ADMINISTRATION FACILITY, BOARDROOM**  
**MARCH 2, 2022 AT 7:00 AM**

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**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  
Jason Stroud, Maintenance Superintendent

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

**CALL MEETING TO ORDER**

**VISITOR PARTICIPATION**

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

**ORAL COMMUNICATION**

*Members of the public who wish to make comment on matters not appearing on the agenda are requested to submit oral communication by email to the Committee at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). Under the requirements of State Law, Directors cannot take action on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For 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 | MARCH 2, 2022

**ENGINEERING MATTERS**

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**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. February 2, 2022 Committee Meeting

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT (DWTP) OFFICE AND STORAGE IMPROVEMENTS**

**RECOMMENDED ACTION:**

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

**ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT**

**RECOMMENDED ACTION:**

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

**ITEM 4: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES**

1. Golf Club Lift Station Motor Control Center Upgrade
2. Saddleback Meadows Development
3. Saddlecrest Development
4. Other Projects

**RECOMMENDED ACTION:**

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

**OPERATIONAL MATTERS**

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

**ITEM 5: WATER SYSTEM UPDATES**

**RECOMMENDED ACTION:**

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



**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | MARCH 2, 2022**

**ITEM 6: WASTEWATER SYSTEM UPDATES**

**RECOMMENDED ACTION:**

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

**ITEM 7: MAINTENANCE DEPARTMENT UPDATES**

**RECOMMENDED ACTION:**

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

**REGULATORY AND OTHER MATTERS**

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**ITEM 8: OTHER MATTERS/REPORTS**

**RECOMMENDED ACTION:**

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

**ADJOURNMENT**

**AVAILABILITY OF AGENDA MATERIALS**

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

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

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



**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | MARCH 2, 2022**

**ADMINISTRATIVE MATTERS**

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

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**RECOMMENDED ACTION:**

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

- 1. February 2, 2022 Committee Meeting*

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



## TRABUCO CANYON WATER DISTRICT ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | FEBRUARY 2, 2022

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### **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  
Gary Kessler, Water Superintendent  
Jason Stroud, Maintenance Superintendent  
Oscar Ulloa, Wastewater Chief Plant Operator  
Lisa Marie Sangi, Executive Assistant

### **PUBLIC PRESENT**

None

### **PUBLIC PRESENT VIA CONFERENCE CALL**

There were members of the public present on the call.

### **CALL MEETING TO ORDER**

Director Dopudja called the February 2, 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**

There were no comments.

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

Mr. Paludi reported on the following matters:

- The District received the new backup power mobile generator partially funded with State grant funds. Discussion occurred concerning regulatory use compliance and certain equipment specifications.
- District staff is scheduling a tour of District facilities for the Board of Directors and will coordinate with Directors on the event date and time.
- The District has reserved a table at the Municipal Water District Orange County (MWDOC) Water Policy Forum & Dinner on February 23, 2022.

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

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

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | FEBRUARY 2, 2022**

**RECOMMENDED ACTION**

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

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING AMENDMENT NO. 2 TO THE T-MOBILE CELLULAR SITE LEASE**

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Mr. Paludi presented this matter for Committee review, and he provided a brief overview of the substantive changes to the site lease agreement. Mr. Paludi expressed his appreciation for District staff efforts in completing this project, and he highlighted the efforts of ATS Communications in negotiating the amended terms. Mr. Paludi reviewed certain terms of amendment with the Committee, and he recommended this matter be approved by the Board of Directors.

**RECOMMENDED ACTION:**

The Committee recommended the Board of Directors approve the T-Mobile West LLC Amendment No. 2 to the Site Lease Agreement (Action Calendar).

**ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING THE 2021 SYSTEMWIDE MASTERPLAN AND CONDITION ASSESSMENT**

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Ms. Lausten presented this matter for Committee consideration, and she provided a brief project update for the Committee. Ms. Lausten reported that District staff did not include the Robinson Ranch Wastewater Treatment Plant in the original project scope and budget, but she recommended including this facility in the condition assessment based on internal discussions with operations and maintenance staff. Ms. Lausten presented a proposed scope of work amendment for Committee consideration. There was a brief discussion related to the original scope of work and the proposed amendment.

**RECOMMENDED ACTION:**

The Committee recommended the Board of Directors approve Amendment No. 1 for the Wastewater Treatment Plant Condition Assessment to Hazen Sawyer in the amount of \$66,780 (Action Calendar).

**ITEM 4: OTHER ENGINEERING AND OPERATIONS PROJECTS,**

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***1. County of Orange Trabuco Creek Bridge Replacement***

Ms. Lausten provided an update on this matter, and she reported on her attendance at quarterly project meetings with the County. Ms. Lausten mentioned that the County has incorporated certain comments provided by the District related to the project, and she provided a handout of the proposed bridge replacement project. Discussion occurred concerning the potential relocation of District pipelines adjacent to the bridge and general construction of the bridge.

***2. Golf Club Lift Station Motor Control Center Upgrade***

Ms. Lausten provided a brief project update, and she reported that District staff is coordinating for the mentioned that there will be rental equipment onsite for the bypass at the station for ten (10) days.

***3. 2021-2022 SCADA Improvements***

Ms. Lausten provided a brief project update, and she provided an overview of TESCO Controls SCADA Project phased schedule. Discussion occurred concerning communication system improvements and parallel system operations.

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | FEBRUARY 2, 2022**

**4. Other Projects**

Mr. Paludi reported that District staff has been notified by a local developer with questions concerning the County of Orange Joplin Youth Camp property.

**RECOMMENDED ACTION**

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

**ITEM 5: WATER SYSTEM UPDATES**

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

1. Replaced a hydrant bury on Columbine in the Dove Canyon community.
2. Repaired a hydrant bury on Latigo Canyon Road, Santiago Estates in the Canyon community.
3. Worked with Hazen and Sawyer Engineering on the District Assessment Project.
4. Conducted two (2) fire flow tests in Trabuco Oaks, Canyon community.
5. Worked with Ferreira Construction to repair a sixteen-inch (16) water main break on the El Toro Bike Trail.

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 6: WASTEWATER SYSTEM UPDATES**

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

1. Assisted Santa Margarita Water District with the Vactor truck on a sewer by-pass job located in the Cota De Caza community.
2. Replaced the Filter Press belts, for solids handling and dewatering at the Robinson Ranch Wastewater Treatment Plant.
3. Replaced the jetter hose reel on the Vactor truck.
4. Cleaned trouble spots in the collections system with the following communities: Rancho Cielo, Dove Canyon and Robinson Ranch.
5. Cleaned the Barneburg lift station wet well.

Mr. Ulloa provided a review of the Monthly Non-Domestic Water (NDW) System Summary report for December 2021. Discussion occurred concerning increased pumping frequency at the Crystal Canyon Wastewater Treatment Facility.

**RECOMMENDED ACTION**

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

**ITEM 7: MAINTENANCE DEPARTMENT UPDATES**

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Mr. Stroud reviewed the projects and repairs for January 2022, and he provided the additional highlights:

1. Finished up the new service truck for the Water Department.
2. Received the new mobile emergency generator.
3. Worked with Hazen and Sawyer Engineering on the District Site Assessment Project.
4. Attended the TESCO Controls meeting on next SCADA phase.

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | FEBRUARY 2, 2022**

5. Assisted the Sanitation Department with the install of a new jetter hose for the Vactor truck.
6. Assisted the Sanitation Department on the install of the new Belt Press belt at the Robinson Ranch Wastewater Treatment Plant.

Discussion occurred concerning the new backup power mobile generator and regulatory use compliance and requirements.

**RECOMMENDED ACTION**

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

**ITEM 8: OTHER MATTERS/REPORTS**

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Mr. Paludi reported that District staff met with Cartegraph for a project kick-off meeting to review the Computerized Maintenance Management System (CMMS) implementation schedule for the District's management of assets and systems. Mr. Paludi added that a demonstration of the system will be provided to the Committee after full implementation.

**RECOMMENDED ACTION**

There was no action taken.

**ADJOURNMENT**

Director Dopudja adjourned the February 2, 2022 Engineering/Operational Committee Meeting at 8:20 AM.

DRAFT

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | MARCH 2, 2022**

**ENGINEERING MATTERS**

**ITEM 2: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING DIMENSION WATER TREATMENT PLANT (DWTP) OFFICE AND STORAGE IMPROVEMENTS**

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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 (Exhibit 1). 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 24'x60' modular building and includes a supervisor office, several cubicles, a storage/communications room, a kitchen area and an improved bathroom which includes a shower and locker facilities. The plans have been approved by the state and presented for Committee review and comment prior to bidding out the Project (Exhibits 2 & 3).

**FUNDING SOURCE:**

General Fund

**FISCAL IMPACT:**

\$500,000 (Including Engineering, Inspection and Testing)

**ENVIRONMENTAL COMPLIANCE:**

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

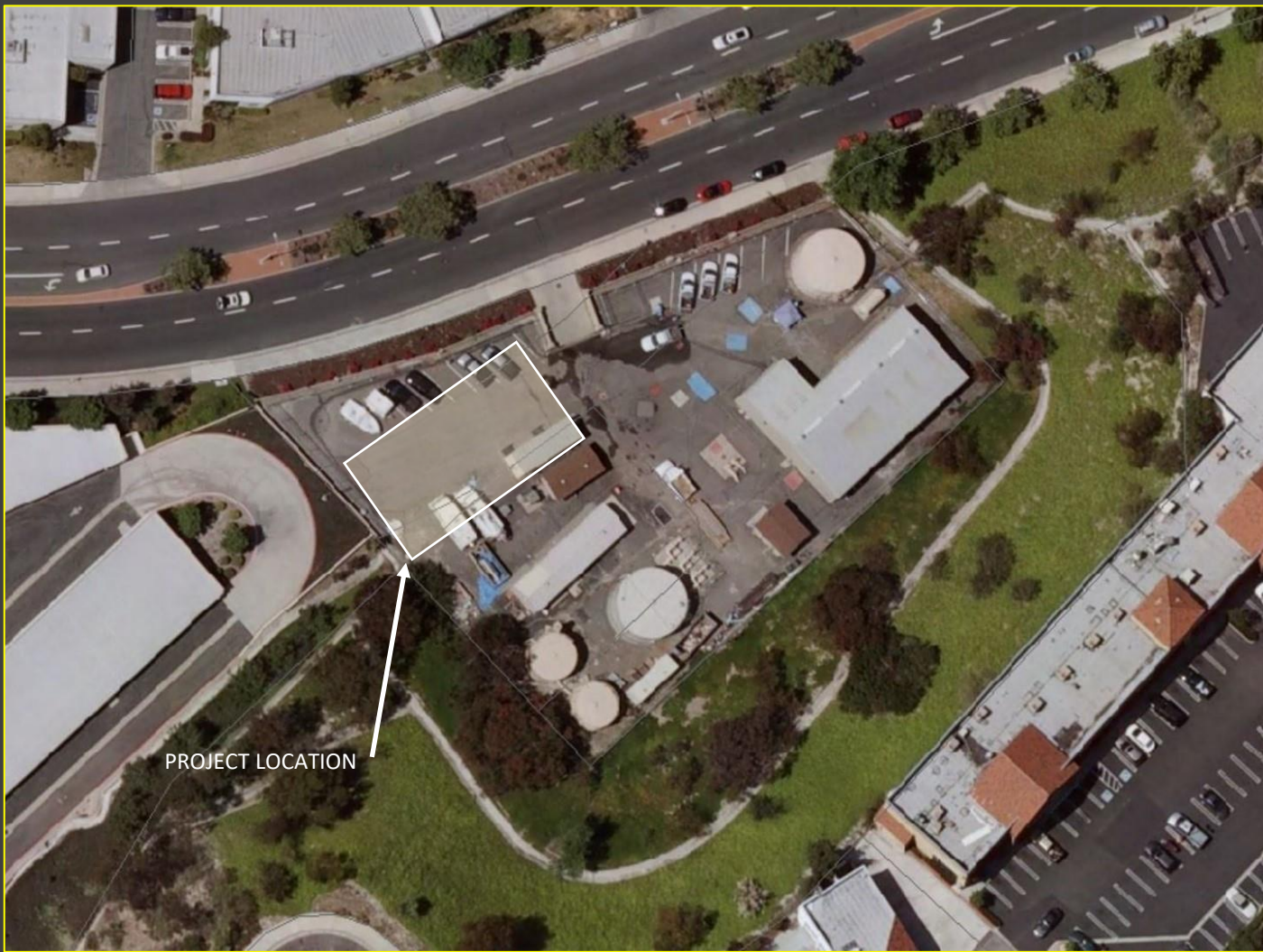
**RECOMMENDED ACTION:**

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

**EXHIBIT(S):**

1. Project Photos
2. Construction Plans (100%)
3. Engineer's Cost Estimate

**CONTACTS (staff responsible): LAUSTEN**



# Dimension Water Treatment Plant Office Improvements

# Dimension Water Treatment Plant Office Improvements



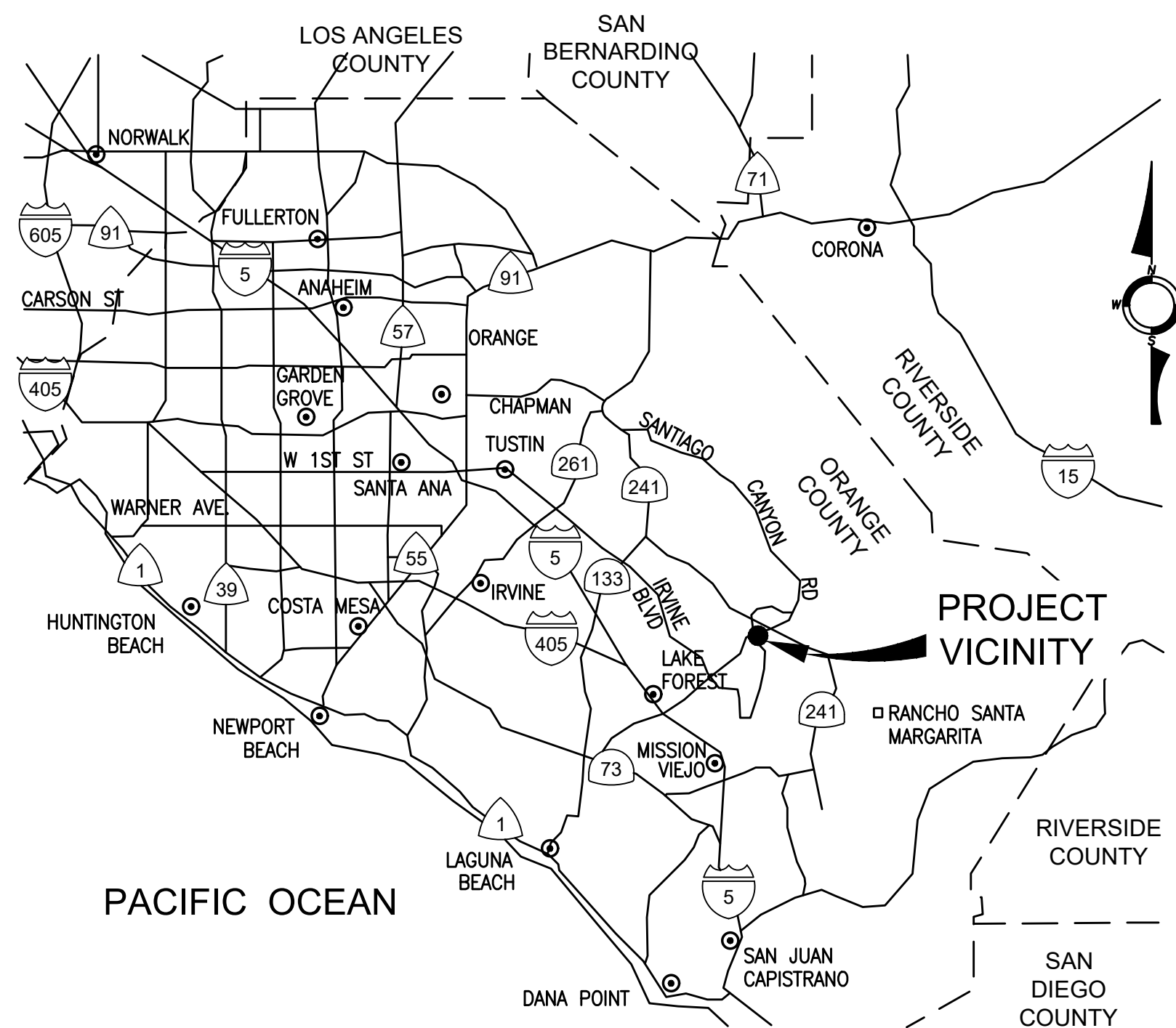
**Existing Office**

# TRABUCO CANYON WATER DISTRICT

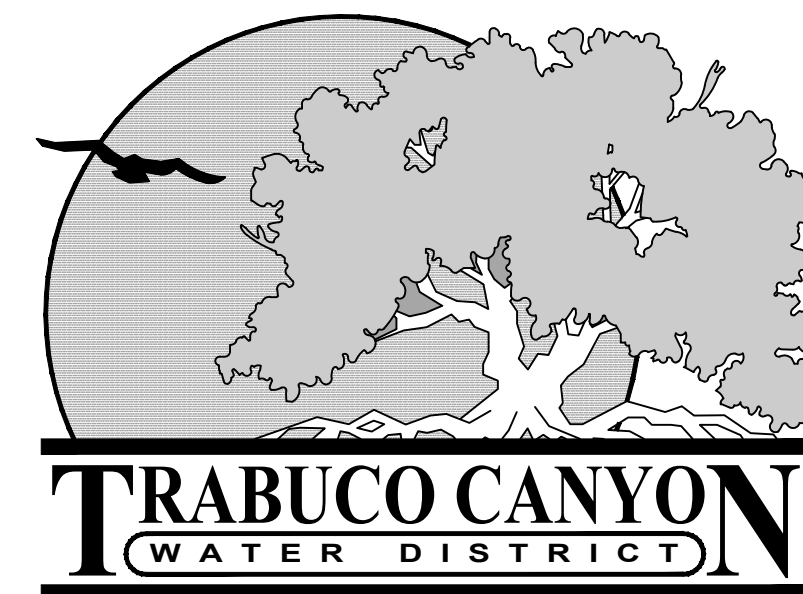
## DIMENSION WATER TREATMENT PLANT

### OPERATIONS TRAILER

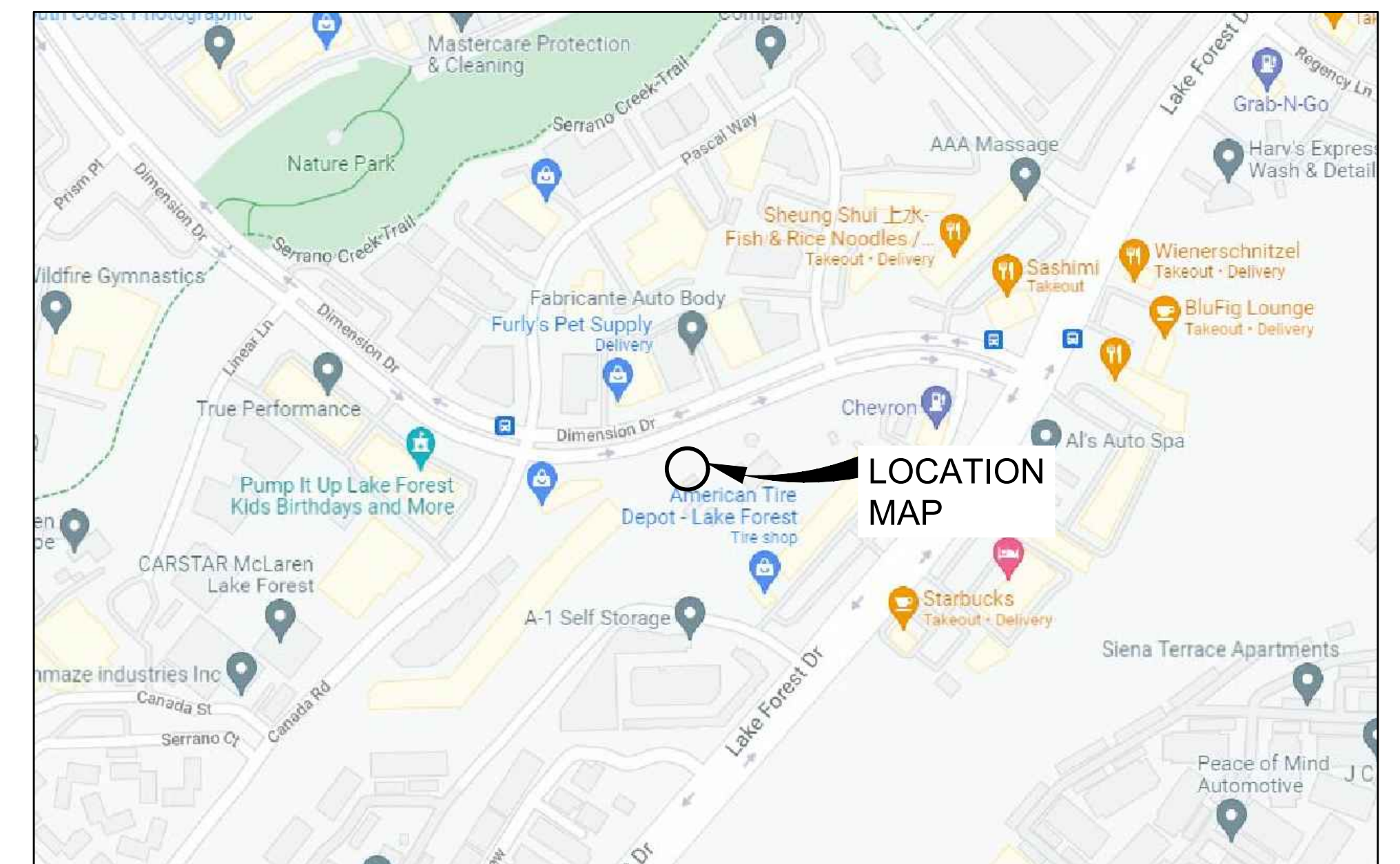
### PROJECT NO. 2122-011



**VICINITY MAP**  
NOT TO SCALE



**MARCH 2022**



**LOCATION MAP**  
NOT TO SCALE

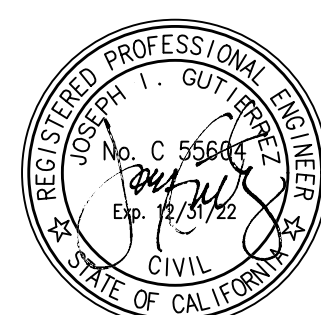
**SHEET INDEX**

DWG. NO.	SHT. NO.	SHEET TITLE
G-01	1	TITLE SHEET, VICINITY, LOCATION MAPS AND SHEET INDEX
G-02	2	GENERAL NOTES, STANDARD SYMBOLS AND ABBREVIATION
C-01	3	SITE PLAN, UTILITIES LOCATION AND DEMOLITION PLAN
C-02	4	OFFICE TRAILER INTERIOR FURNISHINGS
A-01	5	PREPACKAGED MODULAR TRAILER - SPECIFICATIONS AND CONDITIONS
A-02	6	PREPACKAGED MODULAR TRAILER - FLOOR PLAN, PLUMBING SCHEDULE, STRUCTURAL LEGEND, DOOR AND WINDOW SCHEDULES
A-03	7	PREPACKAGED MODULAR TRAILER - ELECTRICAL PLAN, ELECTRICAL SCHEDULE, ELECTRICAL PANEL SCHEDULE, ELECTRICAL NOTES
A-04	8	PREPACKAGED MODULAR TRAILER - REFLECTED CEILING PLAN, BUILDING CROSS SECTION
A-05	9	PREPACKAGED MODULAR TRAILER - HVAC PLAN AND SCHEDULE
A-06	10	PREPACKAGED MODULAR TRAILER - BUILDING ELEVATIONS
A-07	11	PREPACKAGED MODULAR TRAILER - CABINET ELEVATIONS, DETAILS
A-08	12	PREPACKAGED MODULAR TRAILER - FIRE RATED WALL & ROOF DETAILS
A-09	13	PREPACKAGED MODULAR TRAILER - PLUMBING ISOMETRICS
S-01	14	MODULAR FOUNDATION DESIGN
E-01	15	ELECTRICAL SYMBOLS AND NOTES
E-02	16	ELECTRICAL SITE PLAN
E-03	17	OFFICE TRAILER ELECTRICAL PLAN
E-04	18	SINGLE LINE DIAGRAM

**APPROVED:**  
TRABUCO CANYON WATER DISTRICT

*Lorraine S. Lausten*

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.

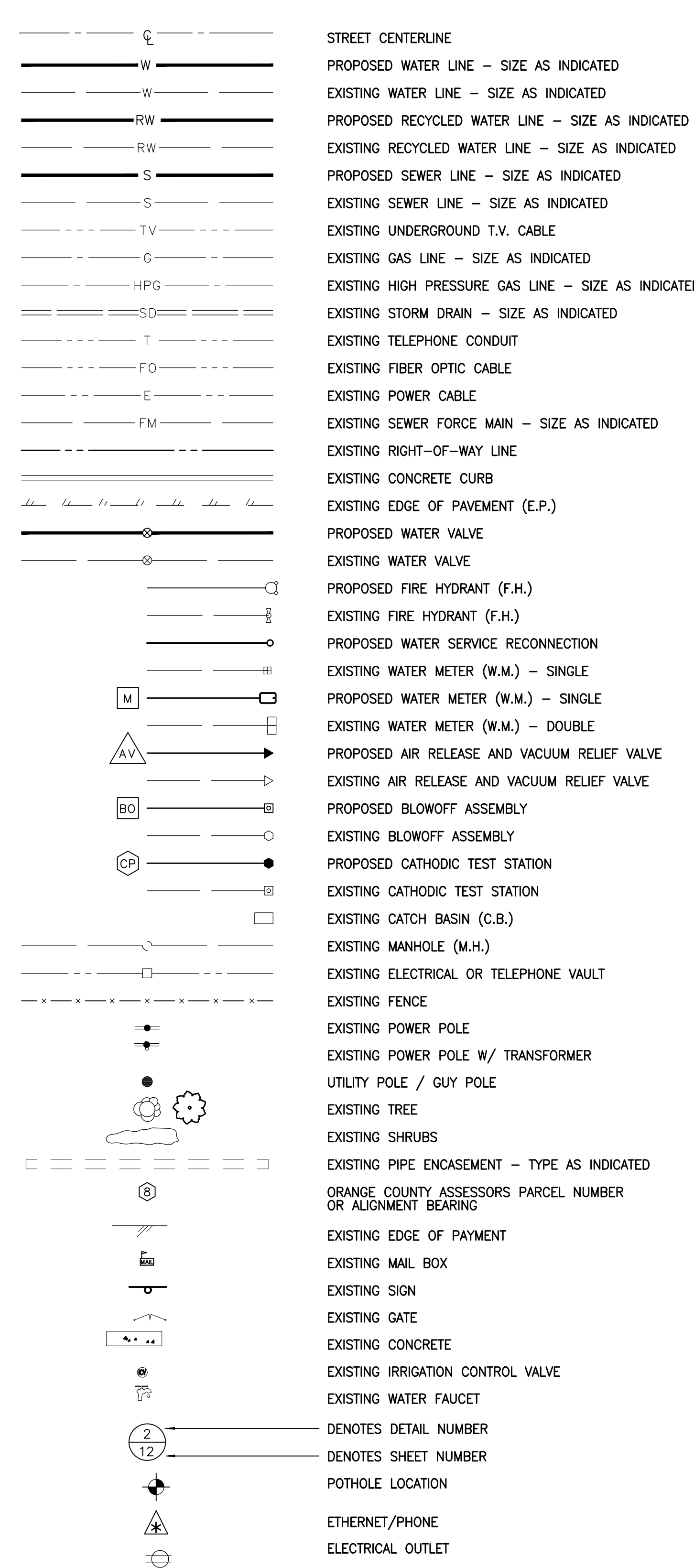
SUCH "DISCHARGES" OF MATERIAL OTHER THAN STORM WATER ARE ALLOWED ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETIONS OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NOISANCE; OR 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.

- 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.

# 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	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

**UGALERT** 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	DATE
DRAWN: KN	ENGINEER: JOSEPH A. GUTIERREZ RCE 55604
CHECKED: JG	DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

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

GENERAL NOTES, STANDARD SYMBOLS AND ABBREVIATION

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SCALE: 1"=10'

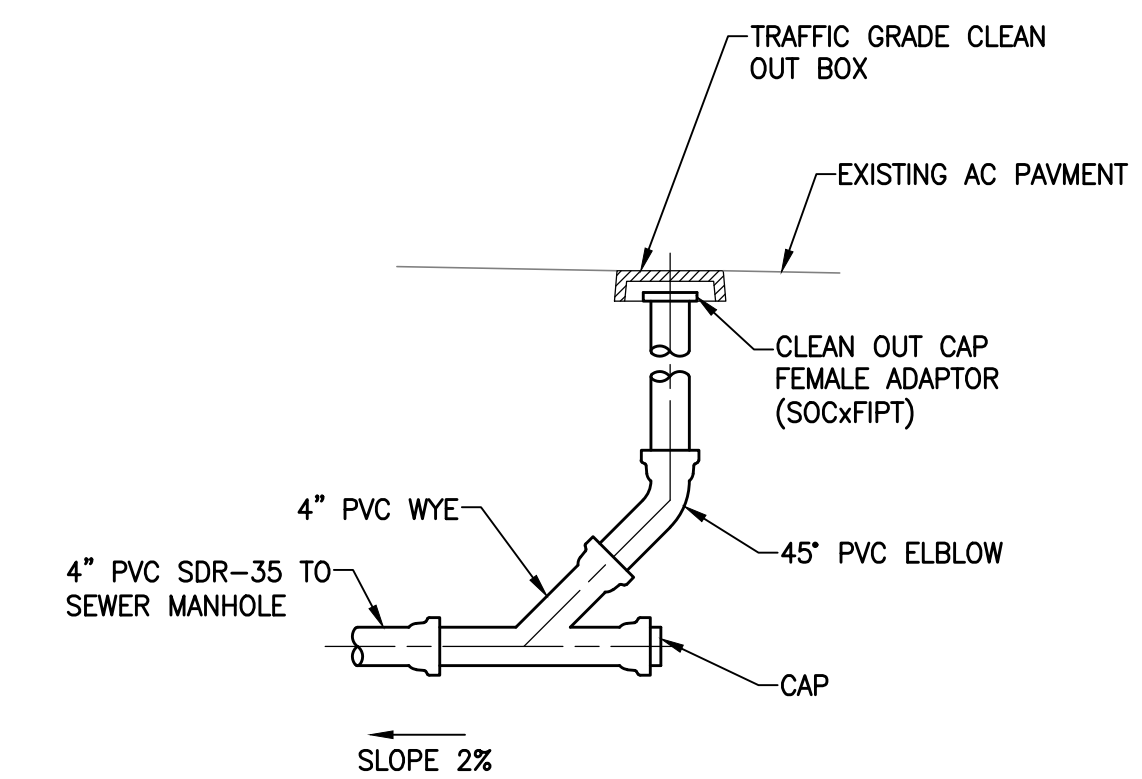
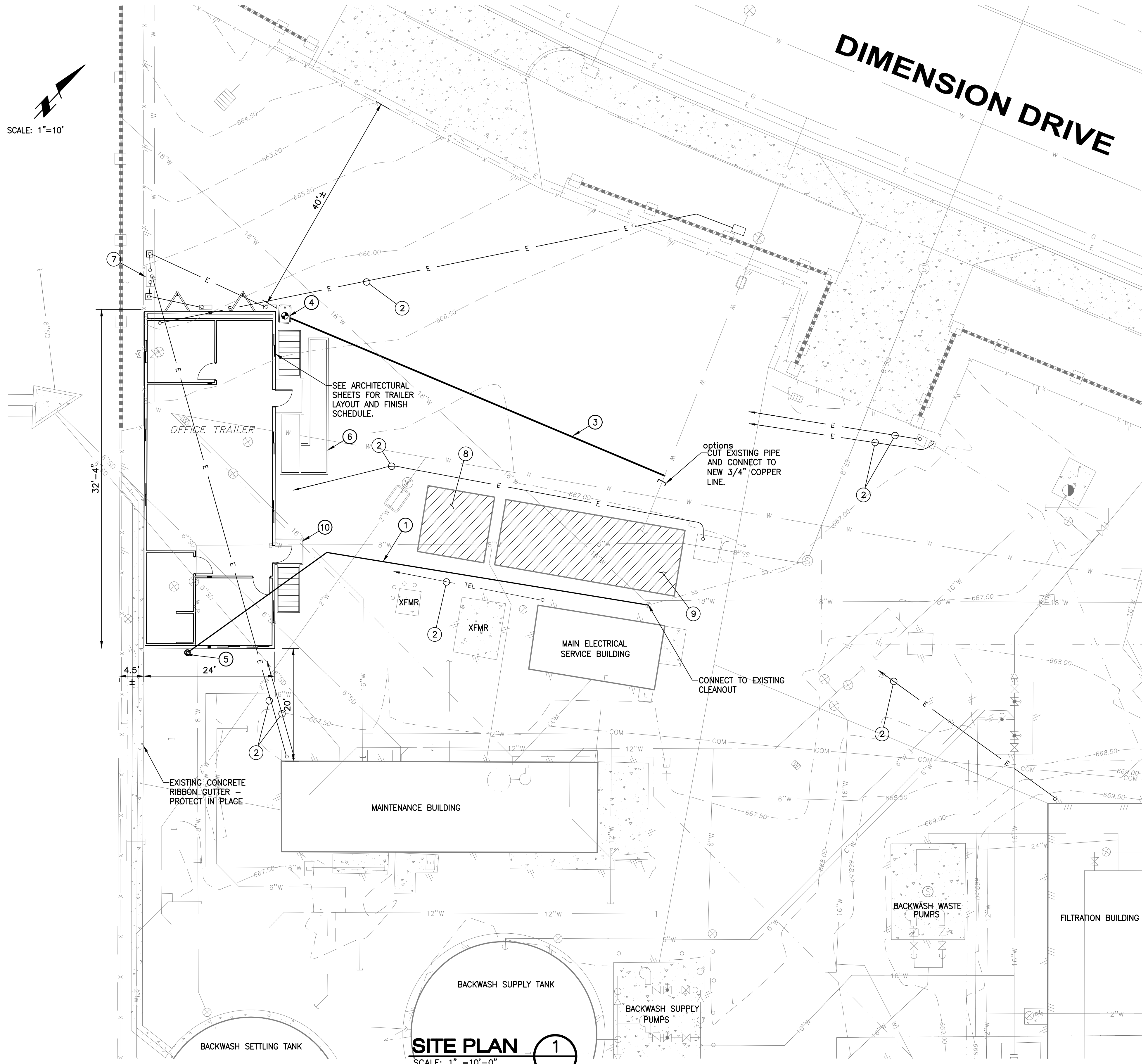
# DIMENSION DRIVE

### GENERAL NOTES TO CONTRACTOR:

1. POTHOLE AND FIELD VERIFY ALL POINTS OF CONNECTION BEFORE ORDERING MATERIALS.
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 SCHEDULE OF TRANSITION FROM EXISTING TO NEW TRAILER.

### CONSTRUCTION NOTES

1. CONSTRUCT 4" PVC SDR-35 SEWER WITH MINIMUM SLOPE OF 2%.
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. REPAIR PAVEMENT TO MATCH EXISTING PAVEMENT SECTION.
4. CONSTRUCT 3/4" BALL VALVE INSIDE CONCRETE VALVE BOX PER TCWD STD. DWG W-2.
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. REMOVE AND DISPOSE OF EXISTING STORAGE BUILDING.
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.



**SEWER CLEAN OUT** 2  
NOT TO SCALE

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

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

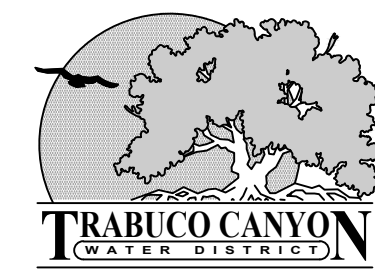
CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK. SEE GENERAL NOTES FOR FURTHER INFORMATION.

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NO.	DATE	REVISIONS

DESIGN: KN	DATE
DRAWN: KN	ENGINEER: JOSEPH L. GUTIERREZ RCE 55604
CHECKED: JG	DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027



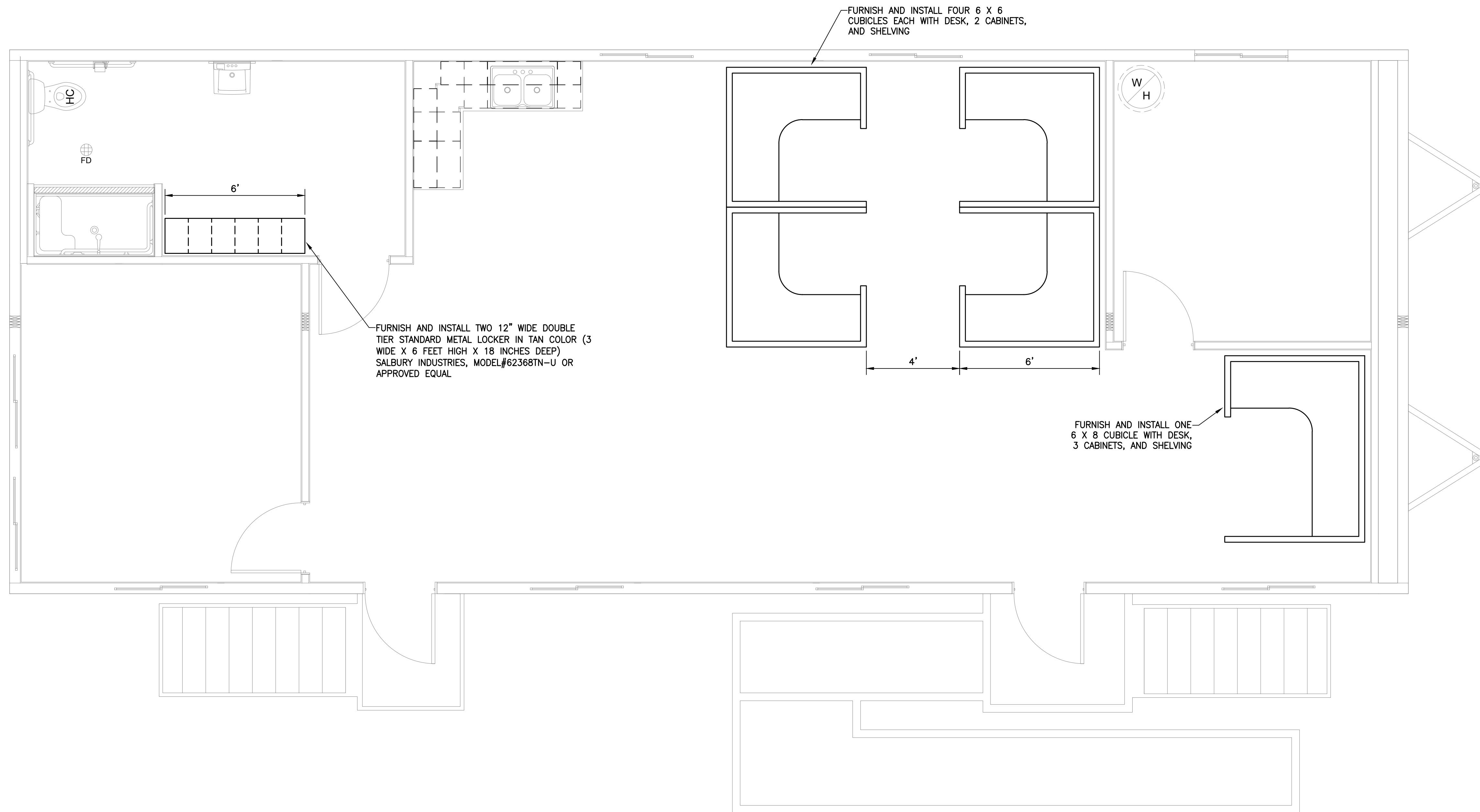
**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
**PROJECT NO.**

**SITE AND DEMOLITION PLAN**

**C-01**  
SHEET **3**  
OF **18**

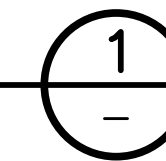
**GENERAL NOTES TO CONTRACTOR:**

1. SEE SHEETS 5 THROUGH 13 FOR OPERATIONS TRAILER FLOOR PLAN, ELECTRICAL PLAN, CEILING AND LIGHTING PLAN, HVAC PLAN, AND PLUMBING PLAN.
2. SEE SHEET 14 FOR TRAILER FOUNDATION DESIGN AND SUPPORT SYSTEM.
3. THIS SHEET SPECIFIES INTERIOR FURNISHINGS THAT WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL OTHER INTERIOR FURNISHINGS WILL BE PROVIDED WITH PREPACKAGED DOUBLE WIDE TRAILER.



**OFFICE INTERIOR FURNISHING**

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

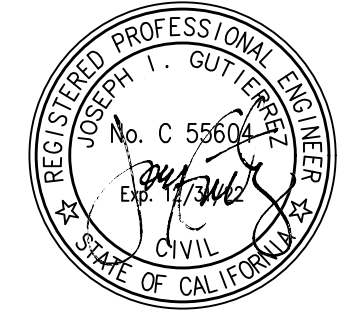


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NO.	DATE	REVISIONS

DESIGN: KN  
 DRAWN: KN  
 CHECKED: JG

DATE: \_\_\_\_\_  
 ENGINEER: JOSEPH L. GUTIERREZ RCE 55604  
 DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
 PROJECT NO. \_\_\_\_\_

**OFFICE TRAILER INTERIOR FURNISHINGS**

**C-02**  
 SHEET **4**  
 OF **18**

**DRAWING INDEX**

SHEET 1: SPECIFICATIONS AND CONDITIONS  
 SHEET 2: FLOOR PLAN, PLUMBING SCHEDULE, STRUCTURAL LEGEND, DOOR & WINDOW SCHEDULES  
 SHEET 3: ELECTRICAL PLAN, ELECTRICAL SCHEDULE, ELECTRICAL PANEL SCHEDULE, ELECTRICAL NOTES  
 SHEET 4: REFLECTED CEILING PLAN, BUILDING CROSS SECTION  
 SHEET 5: HVAC PLAN, HVAC SCHEDULE  
 SHEET 6: BUILDING ELEVATIONS  
 SHEET 7: CABINET ELEVATIONS, DETAILS  
 SHEET 7.1: FIRE RATED WALL & ROOF DETAILS  
 SHEET 8: PLUMBING ISOS

DEALER:  
**MODULAR BUILDING CONCEPTS**  
 PROJECT:  
**LAKE FOREST OFFICE**  
**24' X 60'**  
**PMI-5317-2460**

**MANUFACTURER:**

MANUFACTURER & ADDRESS: PHOENIX MODULAR  
 5301 W. MADISON ST., PHOENIX, AZ, 85043  
 (SEE WEBSITE FOR WARRANTY INFORMATION) PHOENIXMODULAR.COM

**DESIGN CRITERIA / LOADS:**

NO OF MODULES: 2  
 BUILDING SQ. FT.: 1400  
 TYPE OF CONSTRUCTION: VB  
 OCCUPANCY USE GROUP: B  
 OCCUPANCY LOAD: 10  
 FLOOR LIVE LOAD: 50 psf (2000 lb concentrated)  
 125 psf @ Storage 101  
 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 CATG. II S=3,730, S1=1,389  
 SEISMIC Site Class 'D'  
 PERMISSIBLE GAS TYPE. Design Category 'E'  
 CLIMATE ZONE. N/A

NAME AND DATE OF CODES:  
 CA: 2019 CBC, 2019 CPG, 2019 CMC, 2019 CEC,  
 2019 CA Energy, & 2019 CBC Chapter 11B Accessibility

**PHOENIX MODULAR**

5301 W. MADISON ST. - PHOENIX, AZ 85043  
 PH 602-447-6460 FAX 602-447-6460

**SUNBELT MODULAR, INC.**

THESE DRAWINGS REMAIN THE PROPERTY OF PHOENIX MODULAR AND ARE NOT TO BE USED IN ANYWAY WITHOUT WRITTEN PERMISSION.

DEALER:  
 MODULAR BUILDING CONCEPTS

PROJECT:  
 LAKE FOREST OFFICE

STATES:  
 CA

SERIAL NUMBERS:  
 PMI-5317-2460

DRAWN BY:  
 RMIAP

PLOT DATE:  
 1/24/2022

REV # / DATE:

R. MARK STEELE, P.E.  
 CORPORATE ENGINEER  
 SUNBELT MODULAR, INC  
 5301 W. MADISON ST.  
 PHOENIX, AZ, 85043  
 (602) 327-4769

SHEET:  
**1**  
 OF  
**8**

**FRAME / CHASSIS:**

Frame Type: Basement (CH2)  
 Quantity: (2) EA  
 Size: 11'-8" X 60'-0"  
 Type: Outrigger @ 96" O.C.  
 Crossmember @ 96" O.C.  
 Module line Clips @ 96" O.C.  
 Main Rails @ 99 1/2" O.C.  
 Beam Size: 12" Jr. I-beam  
 Axles:  
 Module 1: Qty: Six 6000# rated with (All) brake  
 Offset: 4" (Toward sidewall / See detail 7/7)  
 Module 2: Qty: Quad 6000# rated with (All) brake  
 Offset: None  
 Hitch: Detachable with Standard Hitch  
 Tires: 8x14.5 14 ply rated

Additional Frame / Chassis Items Included in Quoted Price:  
 Item 1: None

**FLOOR CONSTRUCTION:**

Floor Joist: 2X8 #2 HF equal or better  
 Joist Length: 133'-7/8"  
 Joist Spacing: 16" O.C. / 12" O.C. @ Storage 101  
 Floor: Single layer 3/4" T&G Plywood.  
 Insulation: R-19 unfaced fiberglass batt  
 Bottom: Reinforced Plastic

Additional Floor Items Included in Quoted Price:  
 Item 1: None

**EXTERIOR WALL CONSTRUCTION:**

Framing: Stud: 2X6 #2 HF equal or better @ 16" O.C.  
 Top Plate: Double 2X6 #2 HF equal or better  
 Bottom Plate: Single 2X6 #2 HF or better

Wall Sheathing: 5/8" Type X gypsum sheathing to roof sheathing at sidewall for 1-hr fire rating. Fire taped as needed. See hatching on floor plan. See details 1/7.1 & 2/7.2

Insulation: R-19 Kraft back fiberglass batt  
 Siding Type: 3/8" LP Smart-panel vertical siding (8" grooves) with barricade wrap underlayment.  
 Sidewall Height: See cross section for heights

Additional Exterior Wall Items Included in Quoted Price:  
 Item 1: Sidewall on Floor 1 only to be 1-hr fire rated. See hatching of Floor Plan & details 1/7.1, 2/7.1 & 3/7.1

**INTERIOR WALL CONSTRUCTION:**

Framing: Stud: 2X4 #2 HF equal or better @ 16" O.C.  
 Top plate: Single 2X4 #2 HF equal or better (Double as needed)  
 Bottom plate: Single 2X4 #2 HF or better bottom plate  
 Stud length: 92'-5/8" (Ceiling Ht.)

Insulation: NONE

Additional Interior Wall Items Included in Quoted Price:  
 Item 1: None

**ROOF CONSTRUCTION:**

Roof Type: Complex  
 Roof Slope: 1/4 in 12  
 Rafter size: 2X10 #2 HF equal or better  
 (Roof diaphragm chord strap 'ST2215' at rafters installed on-site, see 1/7)

Rafter Length: 135' 1/8"  
 Spacing: 24" O.C. (Sheathing clips required)  
 Mate Beam: Multi-layer plywood  
 Height: 30" to 37 1/2" to 30"  
 Length: 60'  
 No. of Beams: 2

Insulation: R-30 unfaced fiberglass batt with support netting  
 Sheathing: 1/2" 24/0 Sheathing  
 Roofing: 45 mil single ply EPDM over 1/2" Gypsum  
 Color: White

Additional Roof Items Included in Quoted Price:  
 Item 1: 1-layer of 5/8" Type-X unfinished gypsum board (taped and bedded) for 1-hr rating, installed on bottom of rafters at Module 1 only. See detail 1/7.1  
 Item 2: Matebeams wrapped for 1-hr fire rating. (See detail 1/7.1)

**EXTERIOR/INTERIOR DOORS:** (SEE DOOR SCHEDULE)

**WINDOWS:** (SEE WINDOW SCHEDULE)

**CLOSEUP:**

Type: Medium  
 Notes: Module WILL NOT exceed 12'-0" (Except door hardware)

**ACCESSORIES:**

Base Cabinets: 13 L.F.  
 Color: Pre-Finish (Maple Rye)

Upper Cabinets: 13 L.F.  
 Color: Pre-Finish (Maple Rye)

Counters: 13 L.F. of 25-1/2" wide Laminate Countertop  
 Backsplash: 4"  
 Edge Type: Rolled  
 Color: (MIDNIGHT STONE)

Dealer Signs: Provided by Dealer and installed at factory (See Elevations for locations) (Typical 4)

**FINISHES:**

**FLOOR COVERING:**

Type 1: 0.080 self cove Sheet vinyl, covered up wall min. 5"  
 Location: THROUGHOUT  
 Color to be: WHITE CLIFFS

**BASE:**

Cove Base 1: Sheet vinyl self cove (See Floor Covering Type 1)  
 Location: THROUGHOUT

**WALLS:**

Covering 1: 5/8" Type X gypsum for 1-hr fire rating (fire taped as required) full height to roof sheathing. See detail 1/7.1.  
 Location: See hatching on Floor Plan for location

Covering 2: 1/2" vinyl covered gypsum (ceiling ht) over 5/8" Type X gypsum for 1-hr fire rating (fire taped as required) full height to roof sheathing. See details 1/7.1, 2/7.2 & 3/7.3 for fire rated wall details.  
 Location: See hatching on Floor Plan for location  
 Pre-laminated FRP panels (NUDO) over 1/2" MR gypsum all walls  
 Location: RESTROOM 103  
 Covering height: 8'  
 Color: WHITE

Covering 3: 1/2" vinyl covered gypsum  
 Location: REMAINDER  
 Covering height: 8'  
 Color to be: (CALCUTTA COTTON)

**TRIM:**

Wall Trim 1: FRP trim  
 Location: RESTROOM 103  
 Color to be: WHITE

Wall Trim 2: Vinyl Covered trim  
 Location: REMAINDER  
 Color to be: (To match VCG)

**CEILING:**

Type 1: 2x4" HEAVY DUTY T-Grid w/ Struts & wires  
 (Armstrong Kitchen Zone #672 (VINYL WASHABLE) or Equal)  
 Location: RESTROOM 103  
 Height: 7'-10"

Type 2: 2x4" HEAVY DUTY T-Grid w/ Struts & wires  
 (Armstrong Tile #769A or Equal)  
 Location: REMAINDER  
 Height: 7'-10"

Installed at factory, held back at module lines.  
 Completion of ceiling installation on-site by others; not in PMI's scope.

**EXTERIOR**

Siding body: Color: (TOASTED ALMOND PPG1097-3) 8" sheets  
 Hood: Color: (TOASTED ALMOND PPG1097-3)  
 Corner trim: Color: (DUSTY TRAIL PPG1097-4)  
 Door & window trim: Color: (DUSTY TRAIL PPG1097-4)  
 Bottom horizontal trim: Color: (DUSTY TRAIL PPG1097-4)  
 Intermediate horizontal trim: Color: (DUSTY TRAIL PPG1097-4) separates hood & body  
 Top horizontal trim: Color: (DUSTY TRAIL PPG1097-4)  
 Module line trim: Color: (Match hood above intermediate horizontal trim & match body below)  
 All paint to be: Satin Finish (Glossen)

**SPECIAL CONDITIONS AND OR LIMITATIONS:**

SPRINKLERS REQUIRED: NO

**RED TAG:**

1. NONE

**NOT INCLUDED IN SCOPE OF WORK:**

- PORCHES, STEPS, AND RAMPS TO BE SUPPLIED AND INSTALLED BY OTHERS IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT
- PORTABLE FIRE EXTINGUISHERS TO BE SUPPLIED AND INSTALLED ON SITE BY OWNER IN ACCORDANCE WITH LOCAL BUILDING DEPARTMENT
- ANY REQUIRED FIRE/SMOKE DETECTION AND/OR SUPPRESSION TO BE INSTALLED BY OTHERS ON SITE IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT
- THE BUILDING OWNER IS RESPONSIBLE FOR THE DEVELOPMENT & DESIGN OF ALL SITE REQUIRED ACCESSIBILITY ELEMENTS. THESE ELEMENTS ARE NOT INCLUDED IN THE SCOPE OF THIS DESIGN. SUBMITTALS ARE REQUIRED BY OWNER THROUGH THEIR DESIGN PROFESSIONAL

**IDENTIFICATION:**

DATA PLATE AND STATE DECAL TO BE LOCATED ON LOWER RIGHT HAND CORNER OF THE ENDWALL OPPOSITE THE HITCH END OF THE MODULE.

**NOTES:**

- SITE PLAN NOT AVAILABLE AT THIS TIME. BUILDING DESIGNED TO HAVE FIRE SEPARATION DISTANCE GREATER THAN 10 FT. TO PROPERTY LINES AS PER LOCAL BUILDING DEPARTMENT REQUIREMENTS.
- THIS PLAN MAY BE REVERSED AND/OR MIRRORRED.
- SEE STRUCTURAL PACKAGE FOR ALL STRUCTURAL STANDARDS AND DETAILS.
- COMPLIANCE WITH HCD IGNITION RESISTANT CONSTRUCTION SYSTEM REQUIREMENTS? (CBC CHAPTER 7A) NO
- TO BE INSTALLED ON A PERMANENT FOUNDATION. NO
- THIS BUILDING IS DESIGNED TO COMPLY WITH THE COMMERCIAL MODULAR REQUIREMENTS OF CALIFORNIA CODE OF REGULATIONS TITLE 25.

**STATE REQUIRED INFORMATION ON USE AND LOCATION OF FACTORY-BUILT BUILDING**

- PROPOSED ADDRESS: 28904 DIMENSION DR AND/OR LOCATION OF UNIT: LAKE FOREST, CA 92830
- EXPLANATION OF BUILDING USE: OFFICE
- SET TYPE: PAD/PIER ABOVE GRADE ASSUMED F.F. TO BE 36" A.F.G.

APPROVED  
 APPROVED EXCEPT AS NOTED  
 REVISE AND RESUBMIT

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

\*PLEASE REVIEW DRAWINGS AND SPECIFICATIONS CAREFULLY. WHILE EVERY EFFORT IS MADE TO ASSURE THE DRAWINGS REFLECT THE EXPECTATIONS AND QUOTATION, THE FINAL CONSTRUCTION WILL BE BASED SOLELY ON THE SPECIFICATIONS AND DRAWINGS APPROVED.\*

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NO.	DATE	REVISIONS

DESIGN: KN	DATE
DRAWN: KN	ENGINEER
CHECKED: JG	DISTRICT ENGINEER

JOSEPH L. GUTIERREZ RCE 55604  
 LORRIE LAUSTEN RCE 67027

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

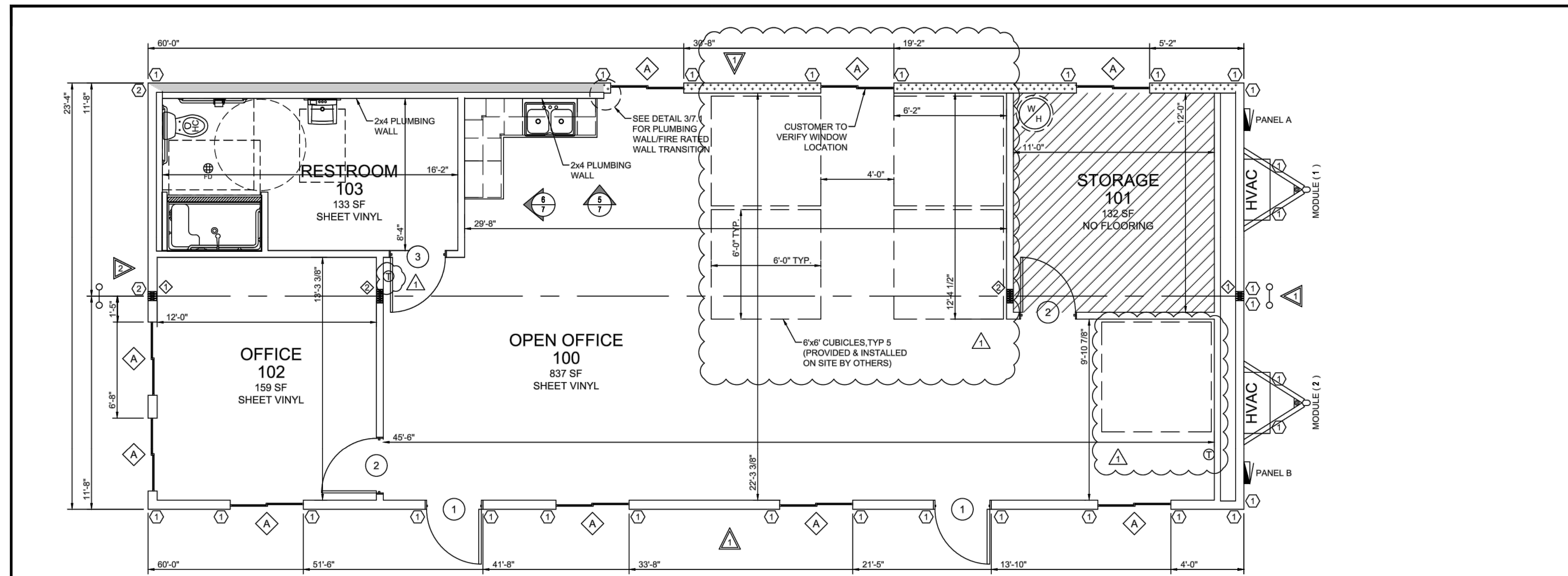
**PREPACKAGED MODULAR TRAILER SPECIFICATIONS AND CONDITIONS**

A-01  
 SHEET 5 OF 18

**NOTE TO CONTRACTOR:**

THE PLAN AND INFORMATION SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY. A COPY OF THE FINAL PLAN, SIGNED AND STAMPED BY THE TRAILER DESIGN ENGINEER, APPROVED BY THE STATE OF CALIFORNIA ARE AVAILABLE WITH THE DISTRICT FOR CONTRACTOR'S USE.

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**1 FLOOR PLAN**  
1/4"=1'-0" SQUARE FOOTAGE - 1400 S.F.  
OCCUPANCY LOAD = 10

**HATCHING LEGEND:**

	125 PSF FLOOR LIVE LOAD (2x8 #2 HF @ 12" O.C.)
	1-HR. RATED EXT. WALL W/ (1) LAYER 5/8" TYPE X GYPSUM (SHEATHING GRADE ON EXT. SIDE) AND R-19 INSULATION. 1/2" VCG OVER 5/8" TYPE X GYPSUM ON INT. FIRE TAPED AS REQUIRED.
	1-HR. RATED EXT. WALL W/ (1) LAYER 5/8" TYPE X GYPSUM (SHEATHING GRADE ON EXT. SIDE) AND R-19 INSULATION. 5/8" TYPE X GYPSUM ON INT. FIRE TAPED AS REQUIRED.

**STRUCTURAL LEGEND**

\*\*ALL INTERIOR DIMENSIONS ARE FROM FINISH TO FINISH & ALL EXTERIOR DIMENSIONS ARE FROM STUD TO STUD\*\*

Symbol	Description	Qty
	SHEARWALL TAG (SEE STRUCTURAL PACKAGE FOR DESCRIPTION, SEE SHEET 24)	TYP @ 4 LOCATIONS
	HOLD DOWN TAG (SEE STRUCTURAL PACKAGE FOR DESCRIPTION, SEE SHEET 24)	TYP @ 32 LOCATIONS
	DIAPHRAGM CHORD THE SIMPSON 'ST2215' (SEE DETAIL 1/7)	TYP @ 2 LOCATIONS
	(2) 2X6 HF #2 POST ON EACH SIDE OF MOD-LINE W/ BLOCKING UNDER POST (TYP. #3 HOLDOWN STRAP @ TOP & BOTTOM)	TYP @ 2 LOCATIONS
	(3) 2X4 HF #2 POST ON EACH SIDE OF MOD-LINE W/ BLOCKING UNDER POST (TYP. #3 HOLDOWN STRAP @ TOP & BOTTOM)	TYP @ 2 LOCATIONS

**PLUMBING:**

Symbol	Type	Qty	Note	Description
	Water Closet	1	Low Flow	Floor mtd. ADA elongated tank type with shut off valve / flush handle to be on open side of r.r. (Factory standard)
	Grab Bars	1		Set(s) with (1) each 42", 36" horizontal, and 18" vertical (Factory standard)
	Paper Holder	1		Single roll wall mount toilet paper holder mtd. ADA height (Factory standard)
	Lavatory	1	Low Flow	19" X 17" White vitreous wall hung with ADA handles and shut off valves. (Factory standard)
	Sink	1	Low Flow	33"x22" Stainless steel double bowl sink with single faucet, and shut off valves (Factory standard)
	Mirror	1		24"x36" w/ clips mtd. 38" to bottom edge (Factory standard)
	2" Floor Drain	1		Floor drain with trap guard (Factory standard)

**PLUMBING:**

Symbol	Type	Qty	Note	Description
	Shower	1		36"x60" Accessible shower with S.S. curtain rod with curtain (72"x78"), mixing valve, hand-held shower head with hose and slide bar, S.S. grab bar, S.S. recessed dish soap, folding chair, and water dam. Factory to supply CA, accessible hook & slope floor (with filler) at 1:12 under floor finish for 3" (1/4" rise)
	Water Heater	1		40 Gallon w/ seismic straps and expansion tank
	In-line Strainer	1	3/4"	240v Electric with relief valve, water tight drain pan (3/4" drain), and pipe insulated first 8' (non-simultaneous operation) (Factory standard)
	Supply	1		Copper inlet
	DWV System	1		Type M copper or Pex
	R.R. Sign	1		Door Mtd

**WINDOWS:**

Qty	NO.	Type	Glazing	Size	Rough Opening	U-Factor	SHGC	Mini-Blind	Notes
9	A	WHITE VINYL HORIZONTAL SLIDER	CLEAR, DUAL GLAZED, LOW-E	4'0X3'0"	48"x36"	0.31	0.22	HORIZONTAL ALUMINUM COLOR: (ALABASTER)	HEADER AT 61" AFF

**DOORS:**

Qty	NO.	Type	Jamb	Wall Thickness	Glazing	Size	Rough Opening	U-Factor	Color	Closer	Deadbolt	Hardware	Fire Rating	Keying	Notes
2	1	STEEL INSULATED 18 GA.	TELL 18 GA. BRONZE	6 3/8"	NONE	3'0X8'8"	36" x 81"	0.31	COLOR: DUSTY TRAIL PPG1097-4 (SAME BOTH SIDES)	HYDRAULIC	SINGLE CYLINDER	PASSAGE LEVER, TELL GRADE 2	NONE	ALIKE	DRIP CAP. (2) STD & (1) NRP HINGES, WEATHERSTRIPPING, THRESHOLD, DOOR SWEEP
2	2	PREFINISHED WOOD HOLLOW CORE	TIMELY METAL JAMB BROWNTONE	4 1/2"	NONE	3'0X8'8"	37 1/2" x 80 3/4"	N/A	LEGACY OAK	NONE	NONE	PASSAGE LEVER, TELL GRADE 3	NONE	N/A	HINGES & WALL MOUNT STOPS
1	3	PREFINISHED WOOD HOLLOW CORE	TIMELY METAL JAMB BROWNTONE	4 5/8"	NONE	3'0X8'8"	37 1/2" x 80 3/4"	N/A	LEGACY OAK	NONE	NONE	PRIVACY LEVER, TELL GRADE 3	NONE	N/A	HINGES & WALL MOUNT STOPS

**PHOENIX MODULAR**  
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**DEALER:**  
MODULAR BUILDING CONCEPTS

**PROJECT:**  
LAKE FOREST OFFICE

**STATES:**  
CA

**SERIAL NUMBERS:**  
PMI-5317-2480

**DRAWN BY:**  
RMIAP

**PLOT DATE:**  
1/24/2022

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(602) 327-4769

**SHEET:**  
**2**  
OF  
**8**

**DIG ALERT** CALL TOLL FREE 811  
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**TRABUCO CANYON WATER DISTRICT**

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

**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
PROJECT NO.

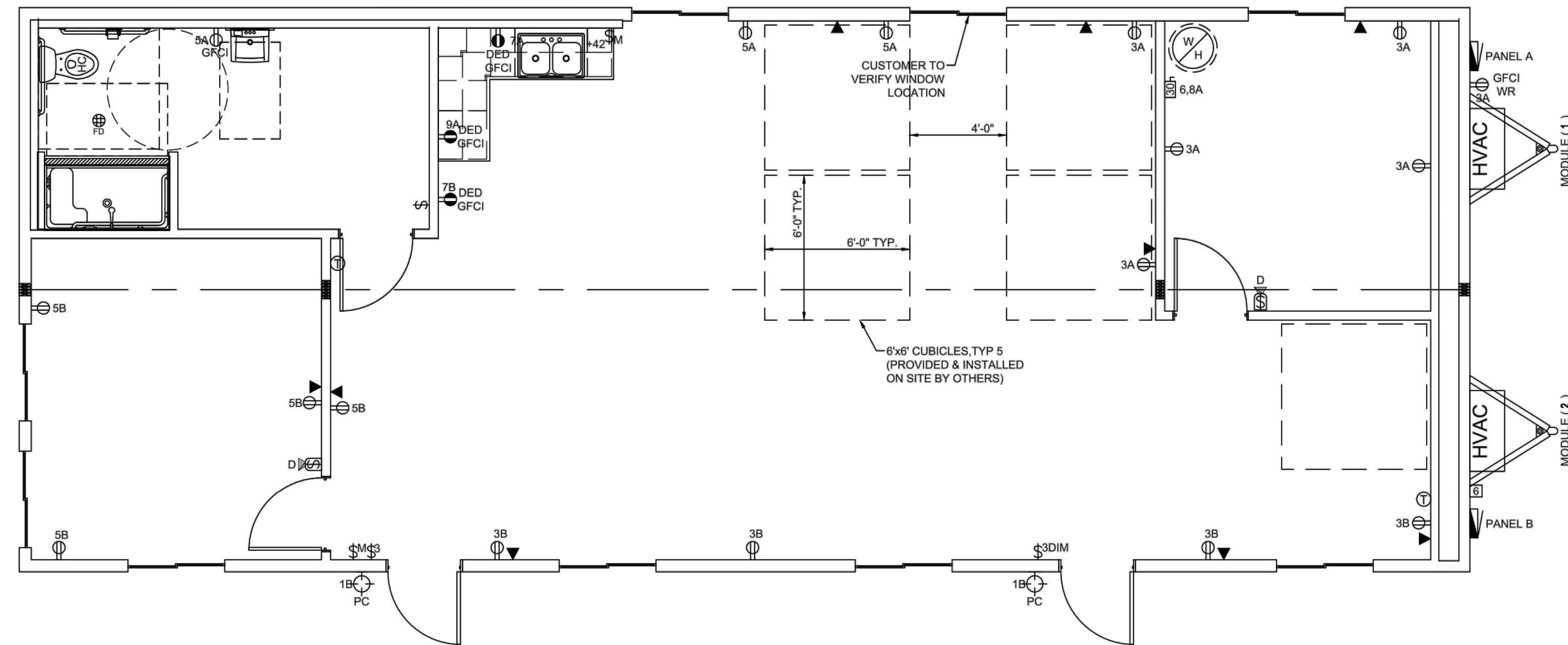
**PREPACKAGED MODULAR TRAILER**  
**FLOOR PLAN, PLUMBING SCHEDULE,**  
**STRUCTURAL LEGEND, DOOR &**  
**WINDOW SCHEDULES**

**A-02**  
SHEET  
**6**  
OF  
**18**

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**1 ELECTRICAL PLAN**  
1/4"=1'-0"

Symbol	Type	Qty	Note	Description
	Elec Service	1		120/240V 60 HZ, single phase
	Elec Raceway	1		MC Cable/flex
	Elec Panel	2	12-Space	120/240v 1 PH 125 amp panel w/ 125 amp main breaker. Exterior NEMA 3R mounted 36" a.f.f. to top (Factory standard)
	Elec Disconnect	1	For water heater	30a/240v Fused interior mtd. electrical disconnect mtd. 60" a.f.f. (Factory standard)
	Lights	13	4000 Lumen	2'x4' Flat panel LED recessed lay-in with dimmable electronic ballast (Factory standard)
	Lights	2	CTL: LW11JJ/BL/P -LED-CCT (Shipped-loose)	12W LED porch light with photocell mtd. 87" a.f.f.
	Lights	1	Halo: H71-CT / Halo: 300-P trim or equal	IC-Rated can light with open trim / 75 Watt halogen
	Switch	1		15a/120v Standard single toggle w/ cover plate mtd. 46" a.f.f. (Factory standard)
	Switch	1		15a/120v 3-Way wall mtd. single toggle w/ cover plate mtd. 46" a.f.f. (Factory standard)
	Switch	2	Lutron: MS-Z101 or equal	20a/120v Wall mtd. occupancy / dimming sensor switch w/ cover plate mtd. 46" a.f.f.
	Switch	1	Lutron: DVSTV or equal	0-10v Wall mtd. 3-way dimming w/ cover plate mtd. 46" a.f.f.
	Switch	2	Wattstopper: DCC2 or equal	20a/120v Momentary override w/ cover plate mtd. 46" a.f.f.
	Occupancy Sensor	5	Sensor: CI-205 / Power pack: BZ-150 or equal	Ceiling mounted occupancy sensor w/ power pack

Symbol	Type	Qty	Note	Description
	Photosensor	2		Ceiling mounted dimming photosensor, Legrand or equal.
	Photosensor Remote	1		Remote control for photosensor shipped loose (Factory standard)
	Receptacle	15		20a/120v Duplex w/ cover plate mtd. 18" a.f.f. (Factory standard)
	GFCI Receptacle	1		20a/120v GFCI protected w/ cover plate mtd. 42" a.f.f. (Factory standard)
	GFCI WR Receptacle	1		20a/120v GFCI WR rated exterior receptacle with weatherproof in-use cover mtd. 18" a.f.f. (Factory standard)
	Ded GFCI Receptacle	3		20a/120v Dedicated GFCI duplex w/ cover plate mtd. 42" a.f.f. (Factory standard)
	J-Box	9	3/4" Conduit stubbed above ceiling	4x4 Empty box w/ sngl. gang mud ring, and blank cover plate mtd. 18" a.f.f. for future phone/date (Factory standard)
	J-Box	1	Future inlet	6x6x6 Empty semi-recessed NEMA-3R box w/ metal cover and 3/4" conduit stubbed above ceiling mtd. 18" a.f.f. (Factory standard)
	Exhaust Fan	1	SSI: BFV150JQ-BV-D or equal	150 CFM Ceiling mounted / vent thru roof
	T-Stat	2	White Rogers: 1F951277	Programmable T-Stat(s) mtd. 46" a.f.f.
	Device Color	1		Color to be: (WHITE) / Exterior device(s) and masonry boxes with metal cover plate as applicable

- NOTE:**
- ALL A.F.F. DIMENSIONS ARE TO THE CENTER OF THE DEVICE BOX UNLESS NOTED OTHERWISE (REFER TO SCHEDULE AND PLANS FOR HEIGHTS).
  - ALL ELECTRICAL ITEMS ARE FACTORY STANDARD UNLESS NOTED OTHERWISE.
  - BLANK COVERS WILL BE PROVIDED ON J-BOXES UNLESS NOTED OTHERWISE.
  - ALL EXTERIOR ELECTRICAL DEVICES TO BE WEATHERPROOF.

Main Breaker: 22kAIC		125 AMP 120/240V 1 PHASE				EXTERIOR: NEMA 3R		
Branch Breakers: 10kAIC		PANEL WITH 125 AMP MAIN BREAKER						
WS	Description	Circuit	BRK	A	B	BRK	Description	WS
12	Space	1	20	6360		60	3 Ton HP Unit w/ 9KW	6
12	Receptacles	3	20	1080	2	4		
12	Receptacles	5	20	540	30	6	40 Gal Water Heater	10
12	Ded. Recept	7	20	1800	2	8		
12	Ded. Recept	9	20	2250		10	Space	
12	Space	11				12	Space	
				10950	11490	Total		
				91	96	Total		

**ELECTRICAL CALCULATION:**  
GENERAL LIGHTING:  
0 LIGHTS x 125% = 0 watts  
9 RECEPTACLES = 1620 watts  
1 HVAC UNITS = 12720 watts  
1 WH. x 125% = 5625 watts  
2 DED. RECEPT = 3600 watts

TYPE OF PANEL: LOAD CENTER

23555 watts divide by 240 volts = 98 AMPS TOTAL

Main Breaker: 22kAIC		125 AMP 120/240V 1 PHASE				EXTERIOR: NEMA 3R		
Branch Breakers: 10kAIC		PANEL WITH 125 AMP MAIN BREAKER						
WS	Description	Circuit	BRK	A	B	BRK	Description	WS
12	Lights	1	20	741		60	3 Ton HP Unit w/ 9KW	6
12	Receptacles	3	20	12720	2	4		
12	Receptacles	5	20	720	30	6	Space	
12	Ded. Recept (Fridge)	7	20	1200		8	Space	
12	Space	9				10	Space	
12	Space	11				12	Space	
				7821	8280	Total		

**ELECTRICAL CALCULATION:**  
GENERAL LIGHTING:  
741 LIGHTS x 125% = 926 watts  
8 RECEPTACLES = 1440 watts  
1 HVAC UNITS = 12720 watts  
1 FUTURE FRIDGE = 1200 watts

TYPE OF PANEL: LOAD CENTER

16286 watts divide by 240 volts = 68 AMPS TOTAL

**PHOENIX MODULAR**  
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MODULAR BUILDING CONCEPTS

PROJECT:  
LAKE FOREST OFFICE

STATES:  
CA

SERIAL NUMBERS:  
PMI-5317-2480

DRAWN BY:  
RMIAP

PLOT DATE:  
1/24/2022

REV # / DATE:  
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SHEET:  
**3**  
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**8**

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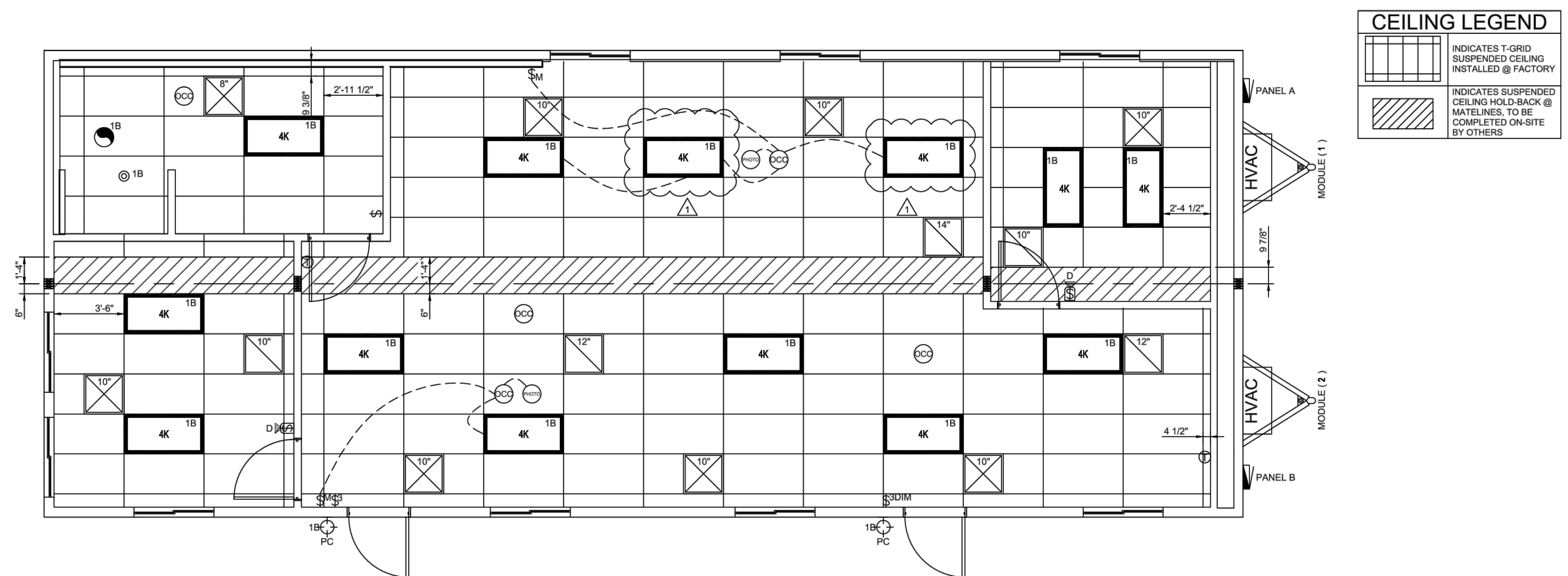
DATE	
ENGINEER	JOSEPH L. GUTARRIZ RCE 55604
DISTRICT ENGINEER	LORRIE LAUSTEN RCE 67027

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

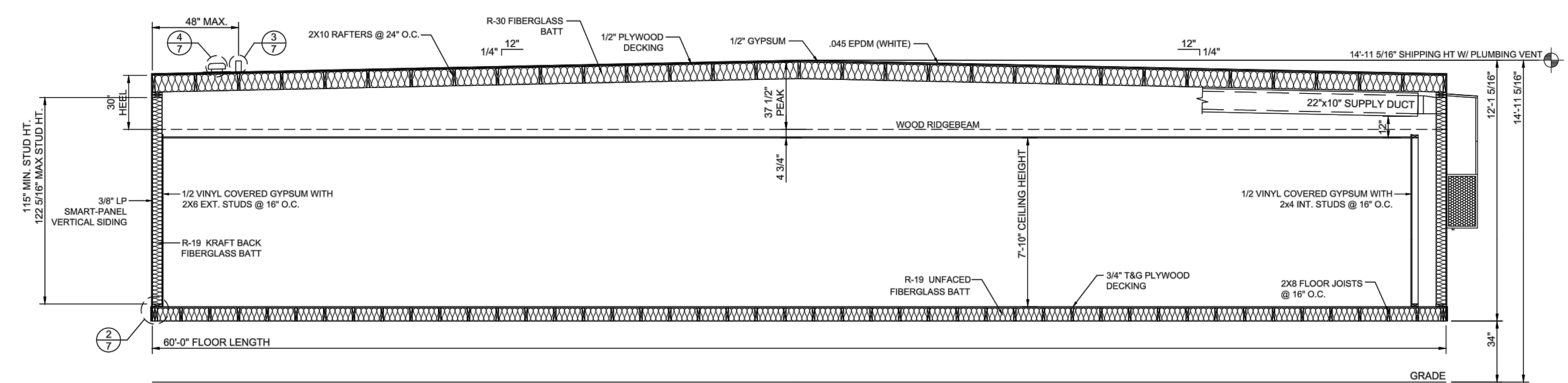
PREPACKAGED MODULAR TRAILER  
ELECTRICAL PLAN, ELECTRICAL  
SCHEDULE, ELECTRICAL PANEL  
SCHEDULE, ELECTRICAL NOTES

A-03  
SHEET  
7  
OF  
18

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**1 REFLECTED CEILING PLAN**  
1/4"=1'-0"



**2 BUILDING CROSS SECTION**  
1/4"=1'-0"

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MODULAR BUILDING CONCEPTS

**PROJECT:**  
LAKE FOREST OFFICE

**STATES:**  
CA

**SERIAL NUMBERS:**  
PMI-5317-2480

**DRAWN BY:**  
RMIAP

**PLOT DATE:**  
1/24/2022

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**SHEET:**  
**4**  
OF  
**8**

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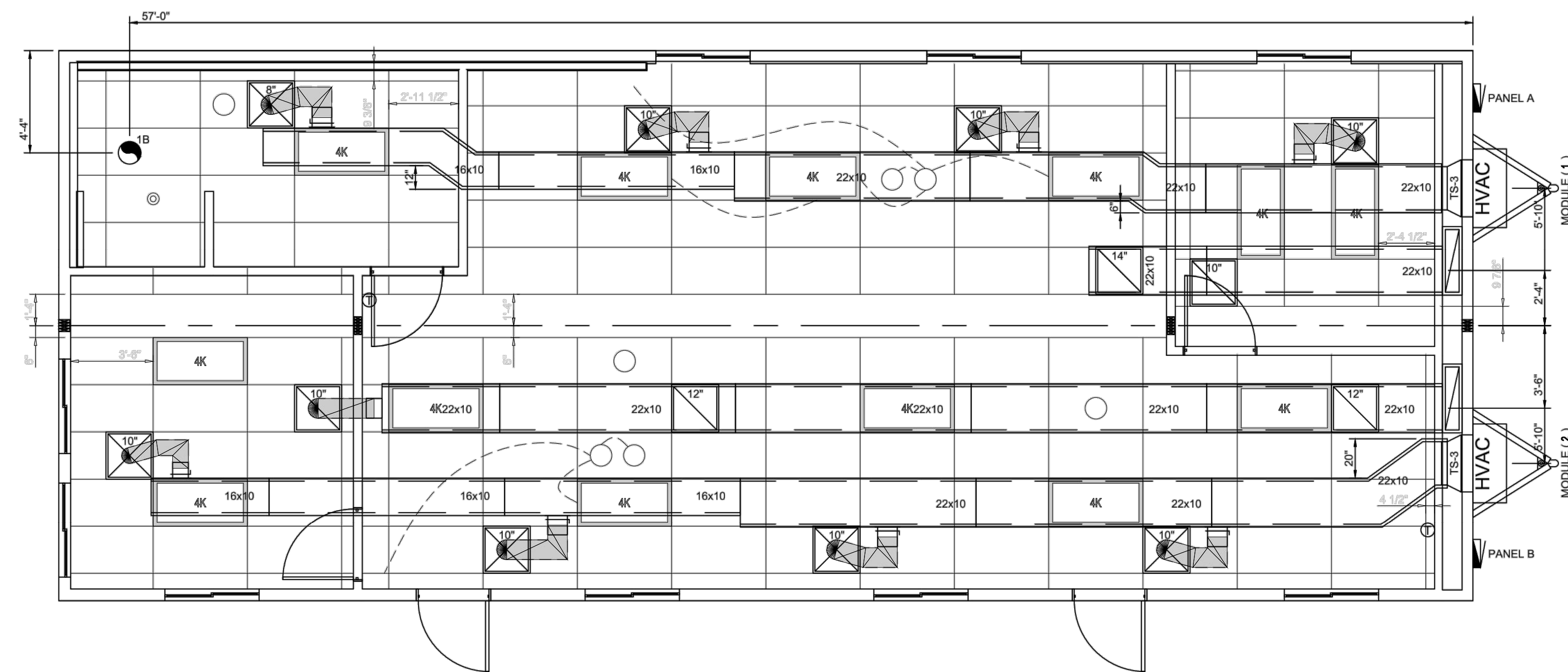
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DRAWN: KN		RCE 55604	
CHECKED: JG		DISTRICT ENGINEER	
		RCE 67027	

**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
**PROJECT NO.**

**PREPACKAGED MODULAR TRAILER**  
**REFLECTED CEILING PLAN, BUILDING**  
**CROSS SECTION**

**A-04**  
SHEET  
**8**  
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**18**

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**1 HVAC PLAN**  
1/4"=1'-0"

Symbol	Type	Qty	Note	Description
	Heat Pump HVAC Unit	2	FAD - Smoke Duct Detector	3 Ton heat pump with 5KW heat strip 11 EER end mount unit / Model: W36HB-A05 or equal
	Duct Sleeve	2		29"x9" To 22"x10" Galvanized sleeve, 16" long
	Return Air Plenum	2		32"x7" Return air plenum w/ 28"x14"x6" tap-in
	Fiberglass Duct	5		16"x10"x10'-0" Fiberglass
	Fiberglass Duct	13		22"x10"x10'-0" Fiberglass
	Supply Diffusers	7	10"	24" x 24" 4-way throw diffuser with start collar, collar w/ scoop and damper, and flex (Factory standard)
	Supply Diffusers	1	8"	24" x 24" 4-way throw diffuser with start collar, collar w/ scoop and damper, and flex (Factory standard)
	R/A Grille	1	14"	24" x 24" Perforated lay-in with start collar, collar, and flex (Factory standard)
	R/A Grille	2	12"	24" x 24" Perforated lay-in with start collar, collar, and flex (Factory standard)
	R/A Grille	2	10"	24" x 24" Perforated lay-in with start collar, collar, and flex (Factory standard)
	Duct type	1		R-4.2 Fiberglass insulation. Flex duct not to exceed 5'

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SHEET:  
**5**  
OF  
**8**

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NO.	DATE	REVISIONS

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DRAWN: KN	ENGINEER: JOSEPH T. GUTARREZ RCE 55604
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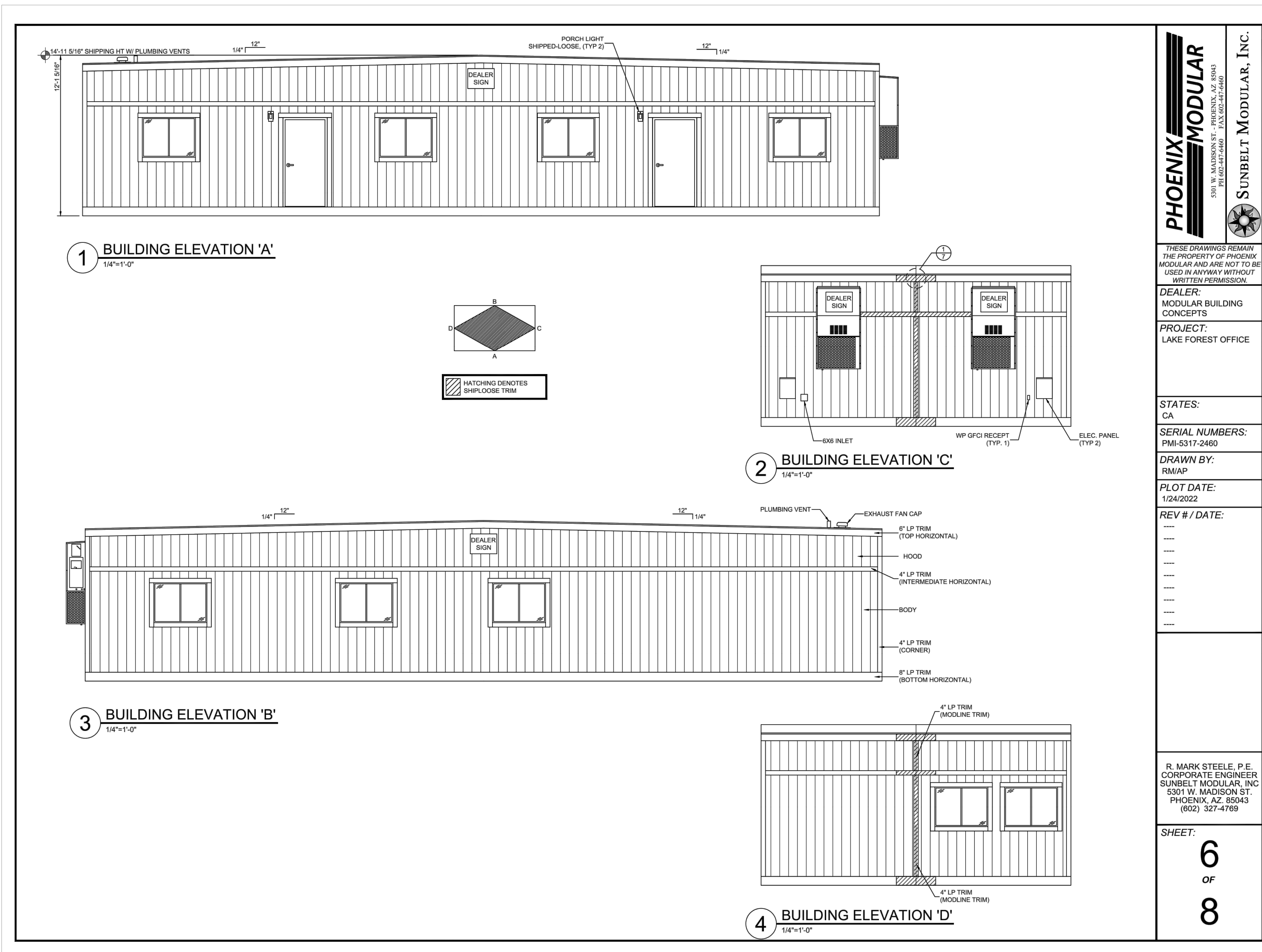
**TRABUCO CANYON WATER DISTRICT**  
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER PROJECT NO.

**PREPACKAGED MODULAR TRAILER HVAC PLAN AND SCHEDULE**

A-05  
SHEET 9 OF 18

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MODULAR BUILDING CONCEPTS

**PROJECT:**  
LAKE FOREST OFFICE

**STATES:**  
CA

**SERIAL NUMBERS:**  
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**DRAWN BY:**  
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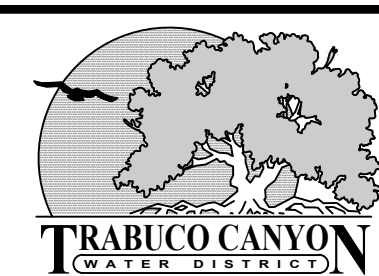
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CHECKED: JG	DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027



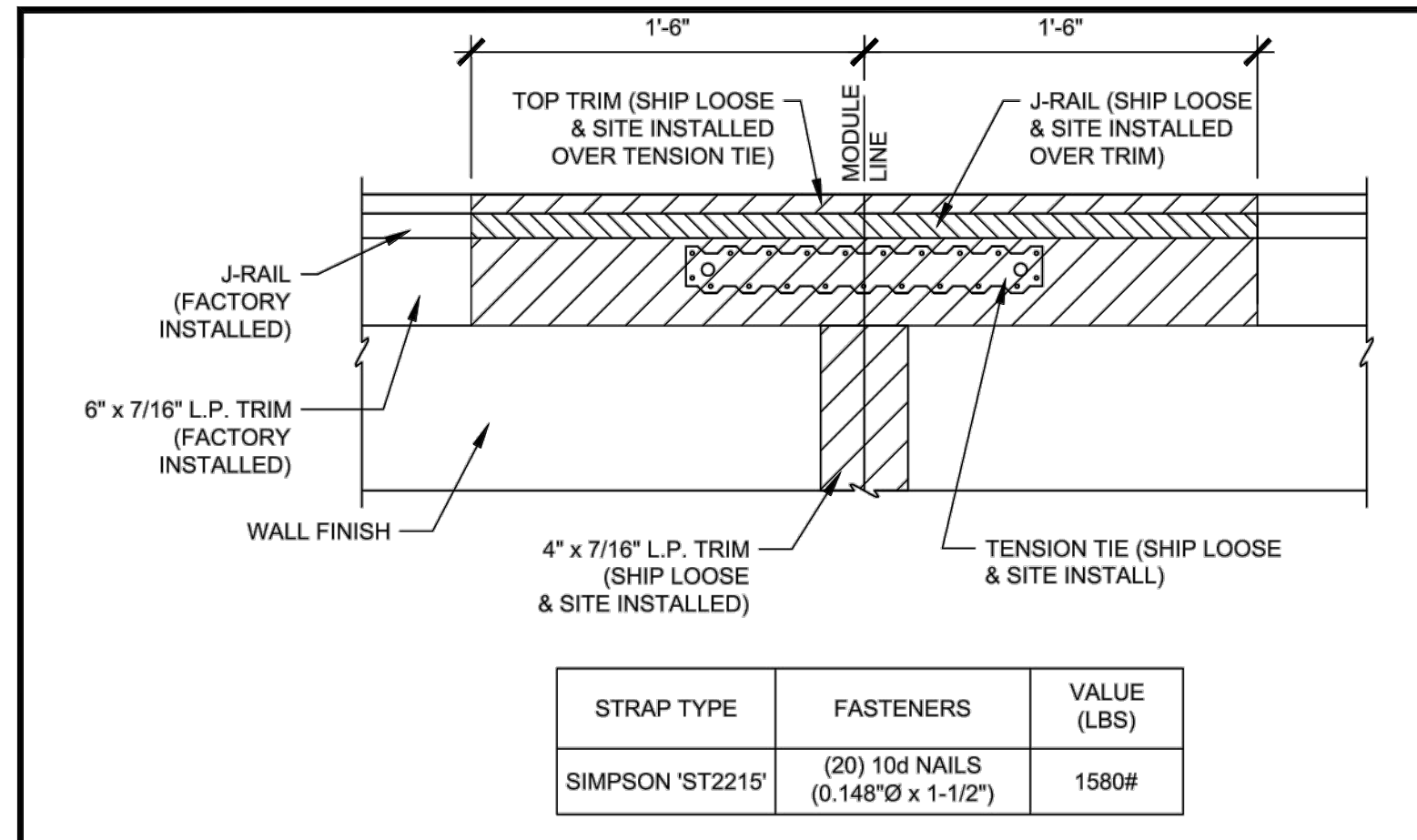
**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
**PROJECT NO.**

**PREPACKAGED MODULAR TRAILER**  
**BUILDING ELEVATIONS**

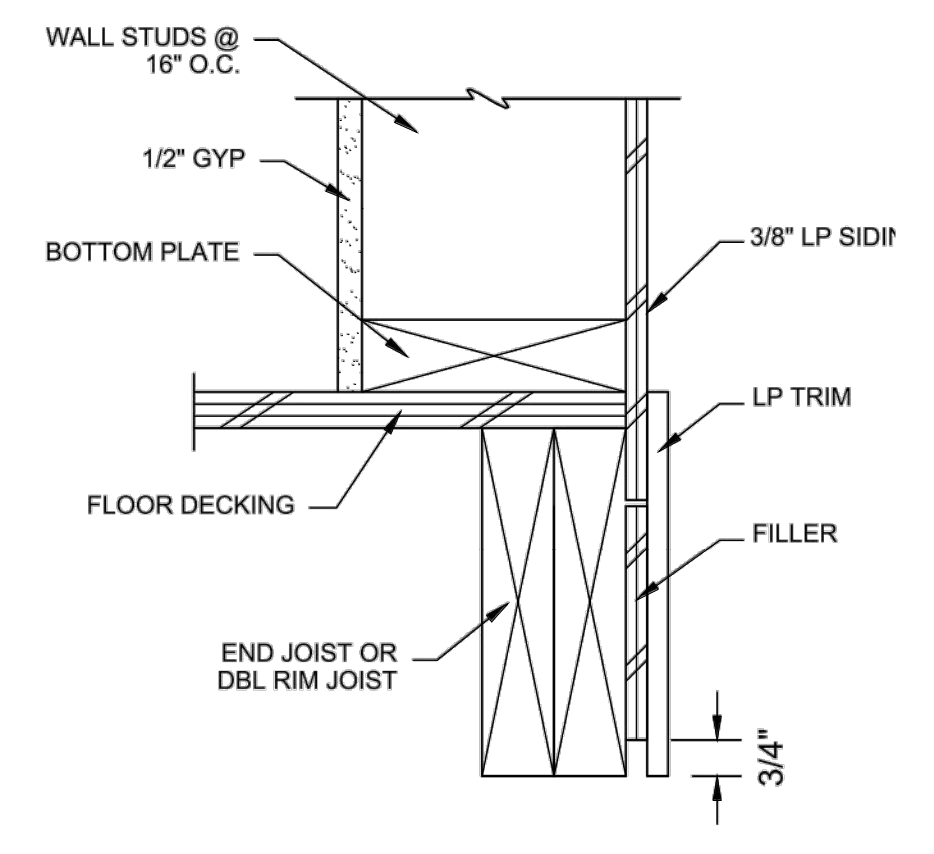
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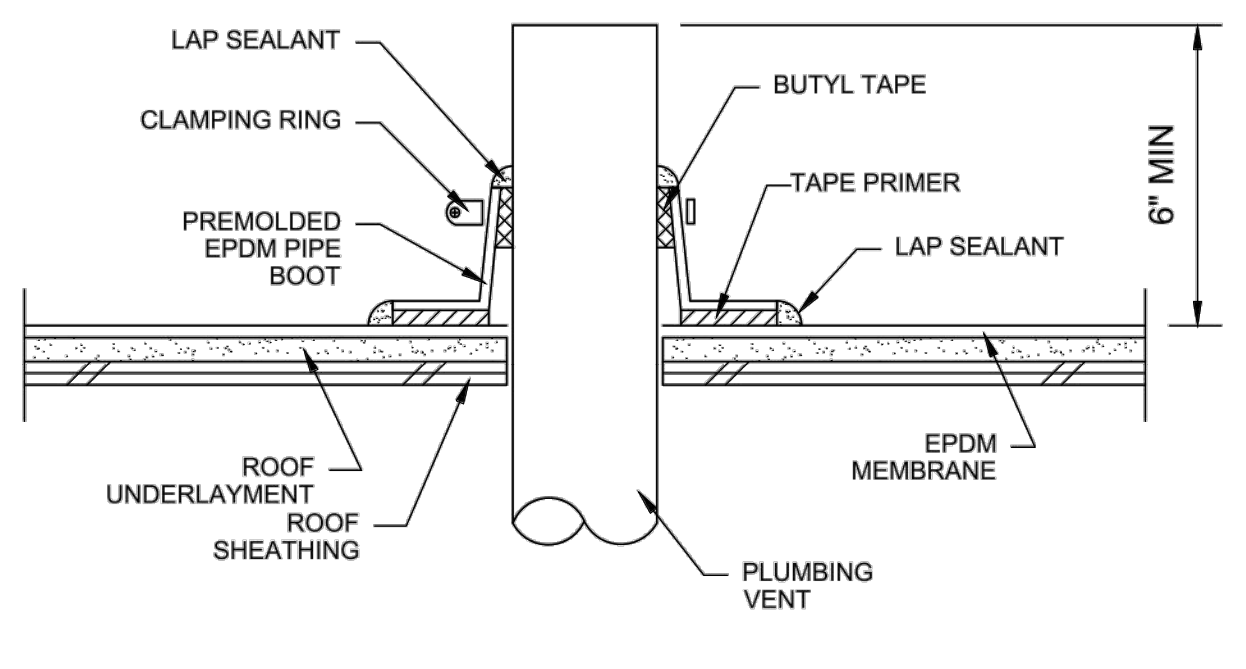
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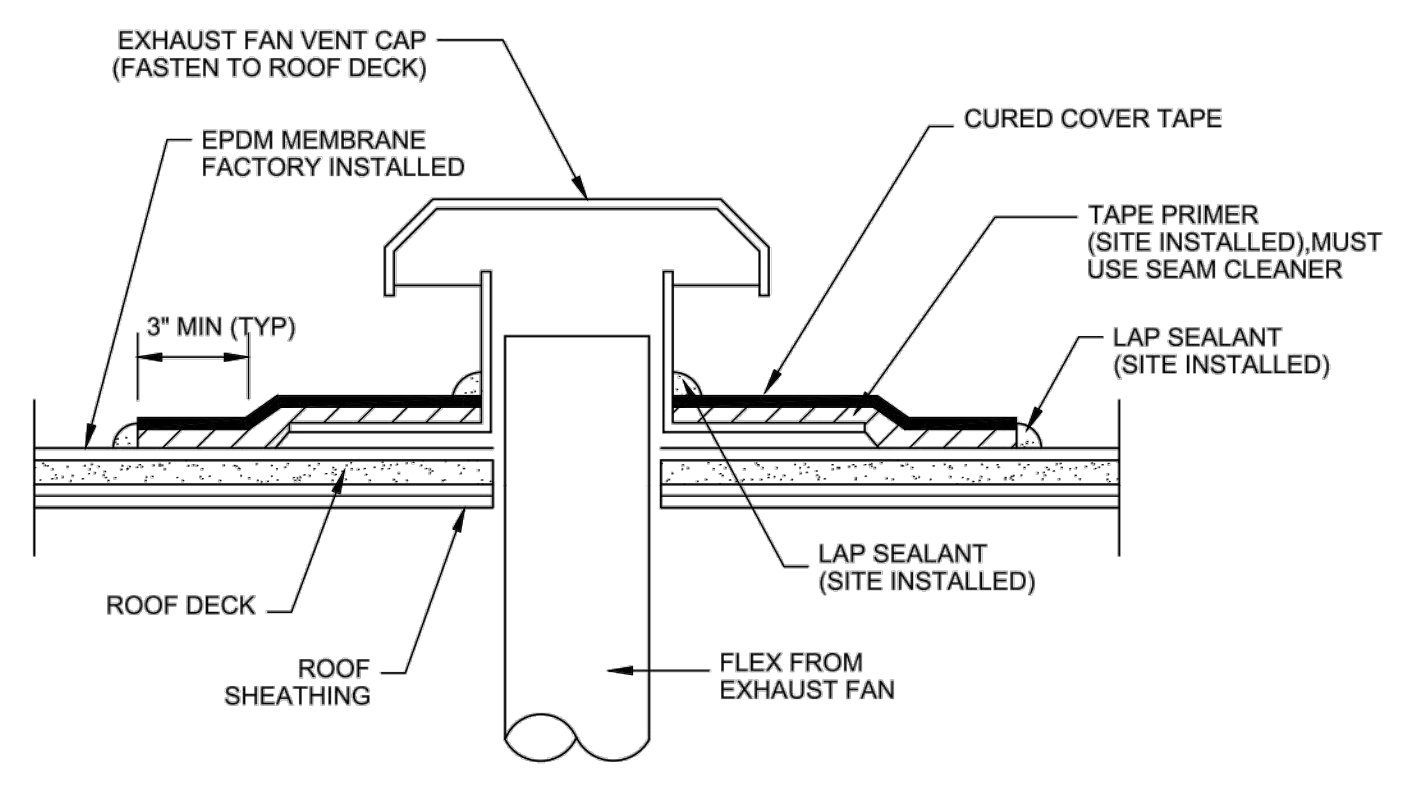
1 ROOF DIAGHPRAGM MODLINE CHORD TIE  
N.T.S.



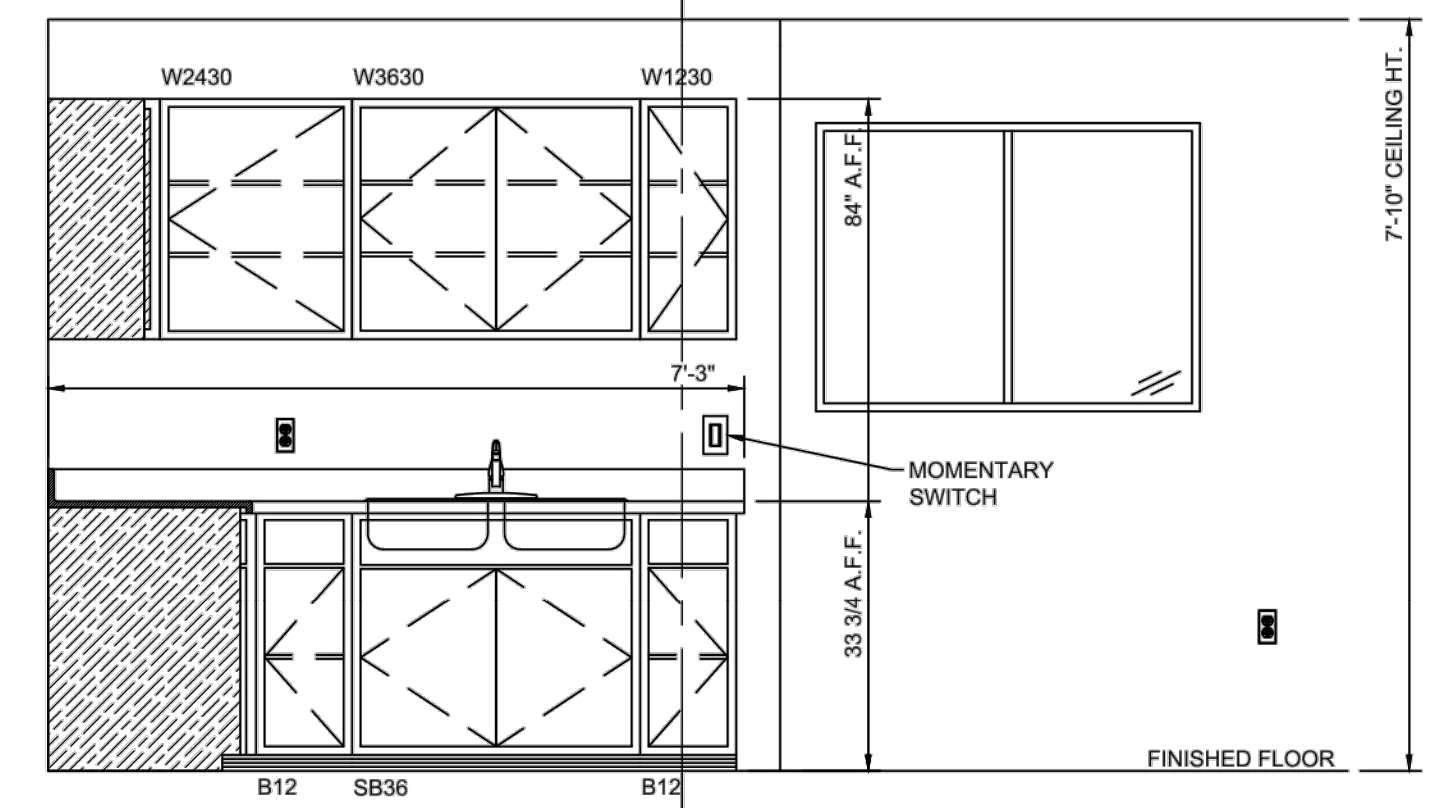
2 WALL FINISH @ FLOOR  
N.T.S.



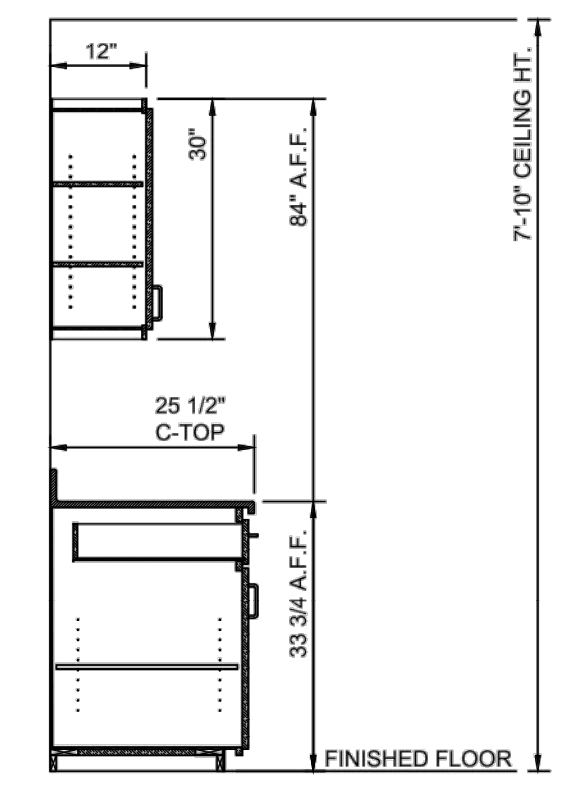
3 PLUMBING VENT  
N.T.S. FACTORY INSTALLED



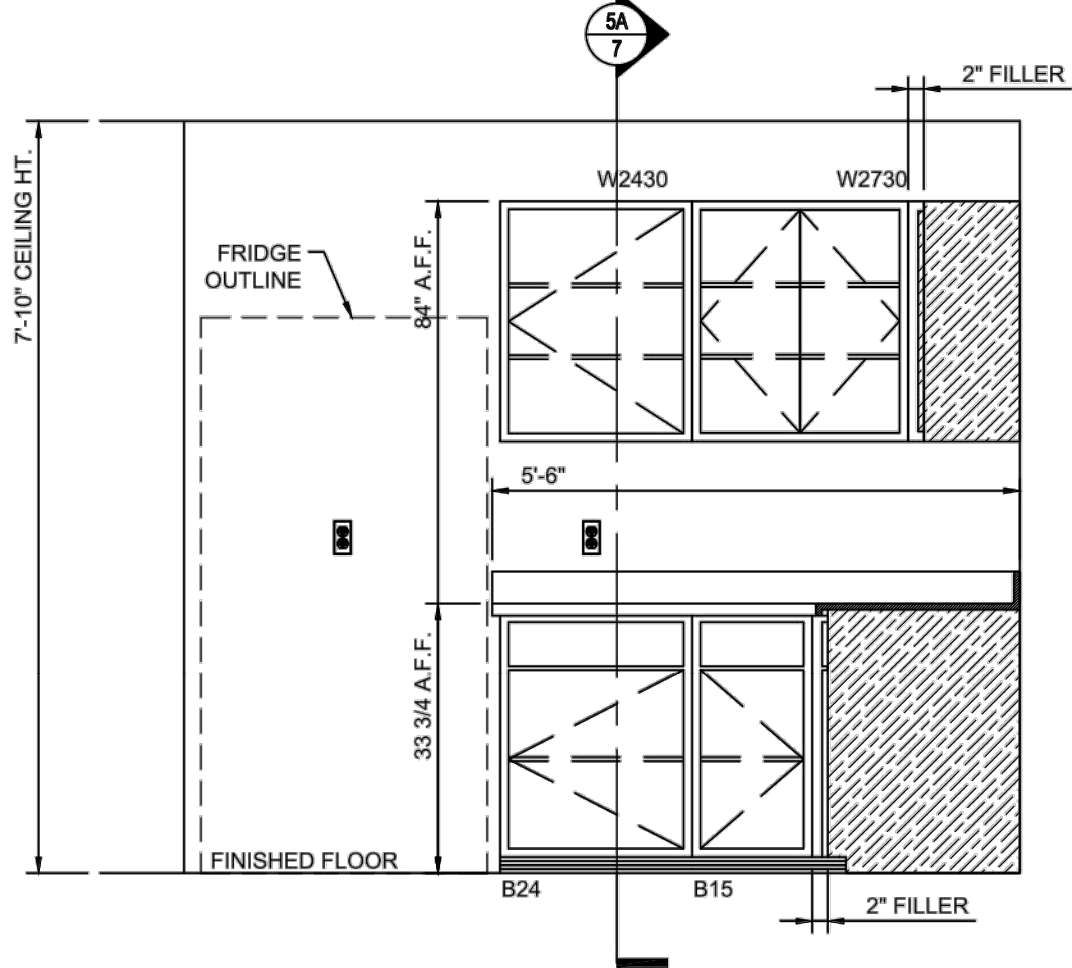
4 EXHAUST FAN CAP  
N.T.S. FACTORY INSTALLED



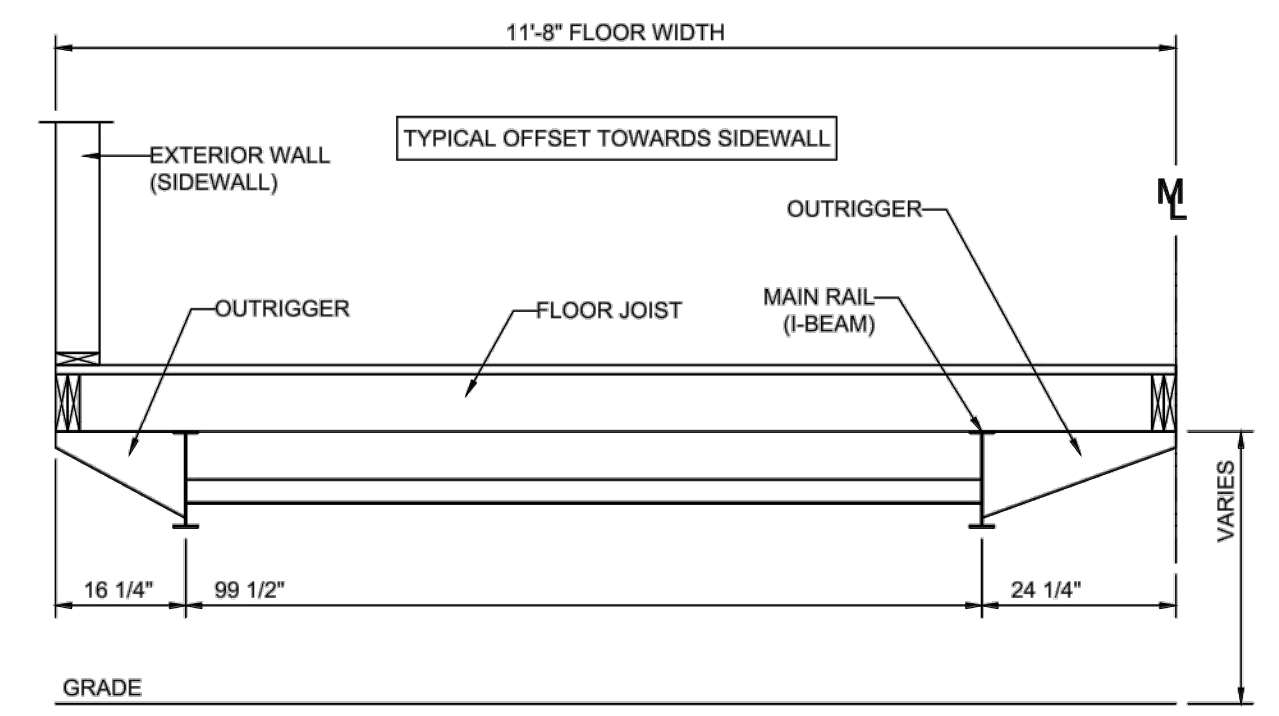
5 CABINET ELEVATION  
1/2" = 1'-0"



5A SECTION VIEW  
1/2" = 1'-0"



6 CABINET ELEVATION  
1/2" = 1'-0"



7 AXLE OFFSET  
1/2" = 1'-0" MODULE '1'

**PHOENIX MODULAR**

5301 W. MADISON ST. - PHOENIX, AZ 85043  
PH 602-447-6460 FAX 602-447-6460

**SUNBELT MODULAR, INC.**

THESE DRAWINGS REMAIN THE PROPERTY OF PHOENIX MODULAR AND ARE NOT TO BE USED IN ANYWAY WITHOUT WRITTEN PERMISSION.

DEALER:  
MODULAR BUILDING CONCEPTS

PROJECT:  
LAKE FOREST OFFICE

STATES:  
CA

SERIAL NUMBERS:  
PMI-5317-2480

DRAWN BY:  
RMIAP

PLOT DATE:  
1/24/2022

REV # / DATE:  
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R. MARK STEELE, P.E.  
CORPORATE ENGINEER  
SUNBELT MODULAR, INC  
5301 W. MADISON ST.  
PHOENIX, AZ 85043  
(602) 327-4769

SHEET:  
**7**  
OF  
**8**

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**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

**TRABUCO CANYON WATER DISTRICT**

DATE

ENGINEER: JOSEPH L. GUTIERREZ RCE 55604

DISTRICT ENGINEER: LORRIE LAUSTEN RCE 67027

**TRABUCO CANYON WATER DISTRICT**

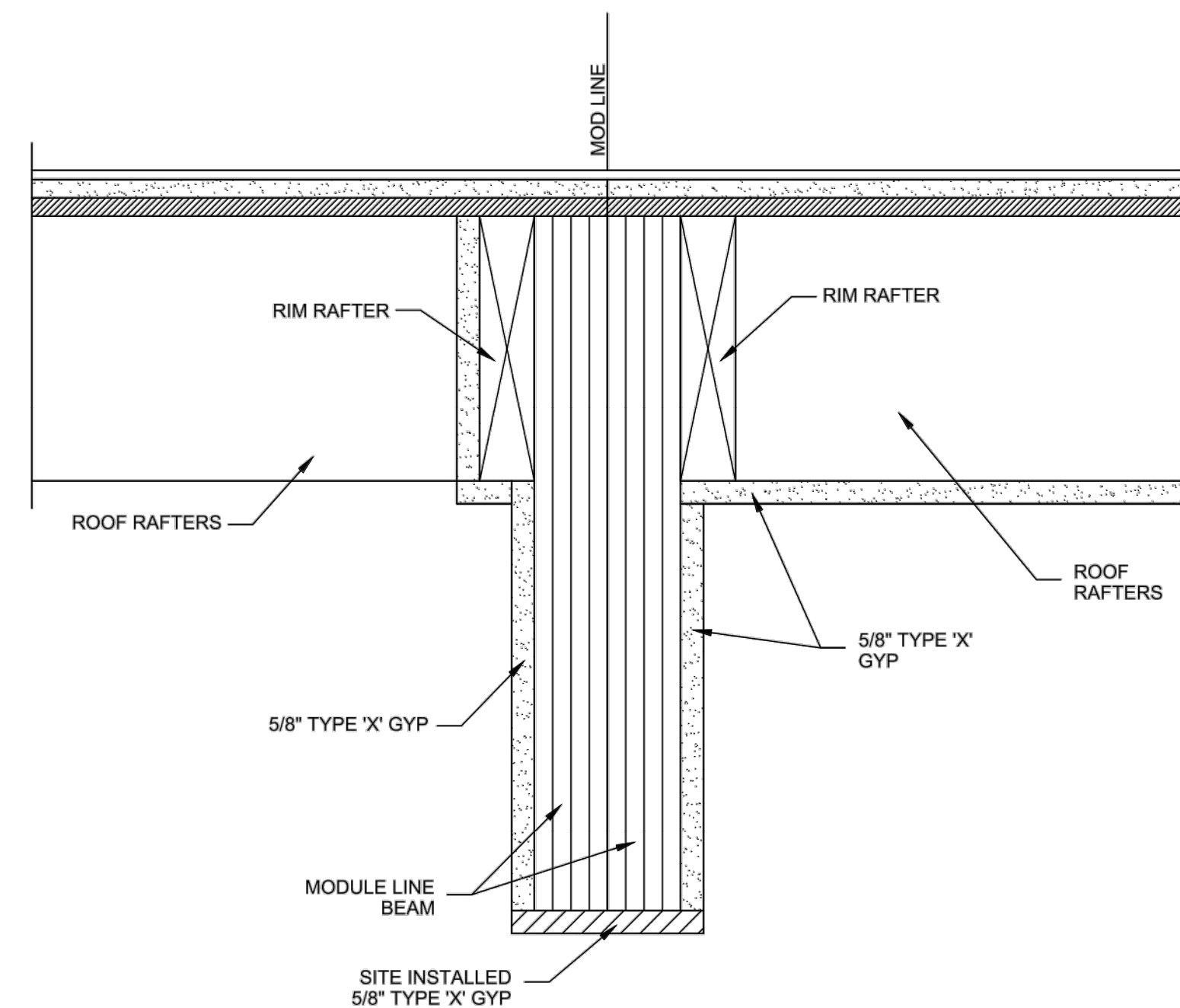
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER PROJECT NO.**

**PREPACKAGED MODULAR TRAILER CABINET ELEVATIONS, DETAILS**

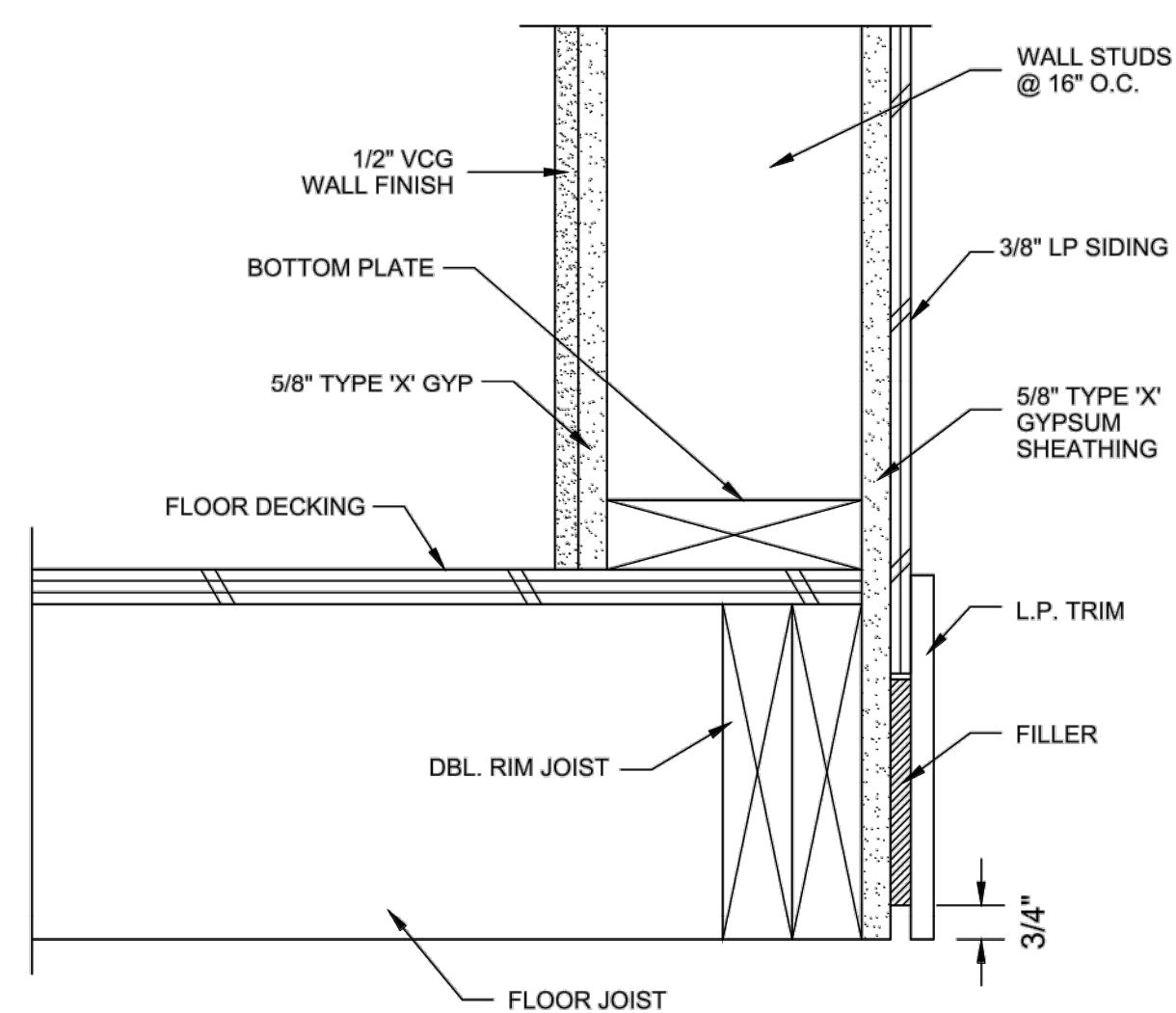
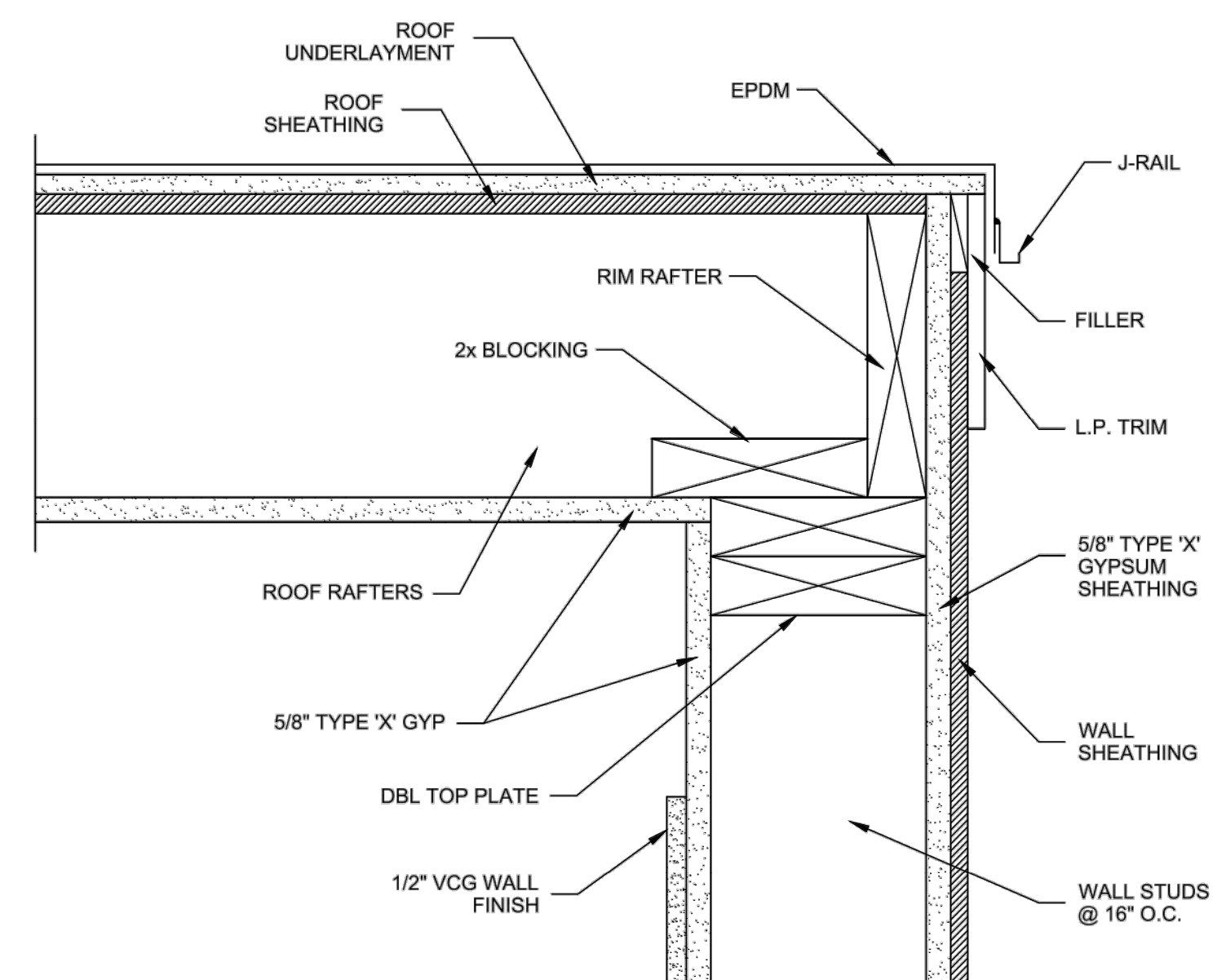
A-07 SHEET 11 OF 18

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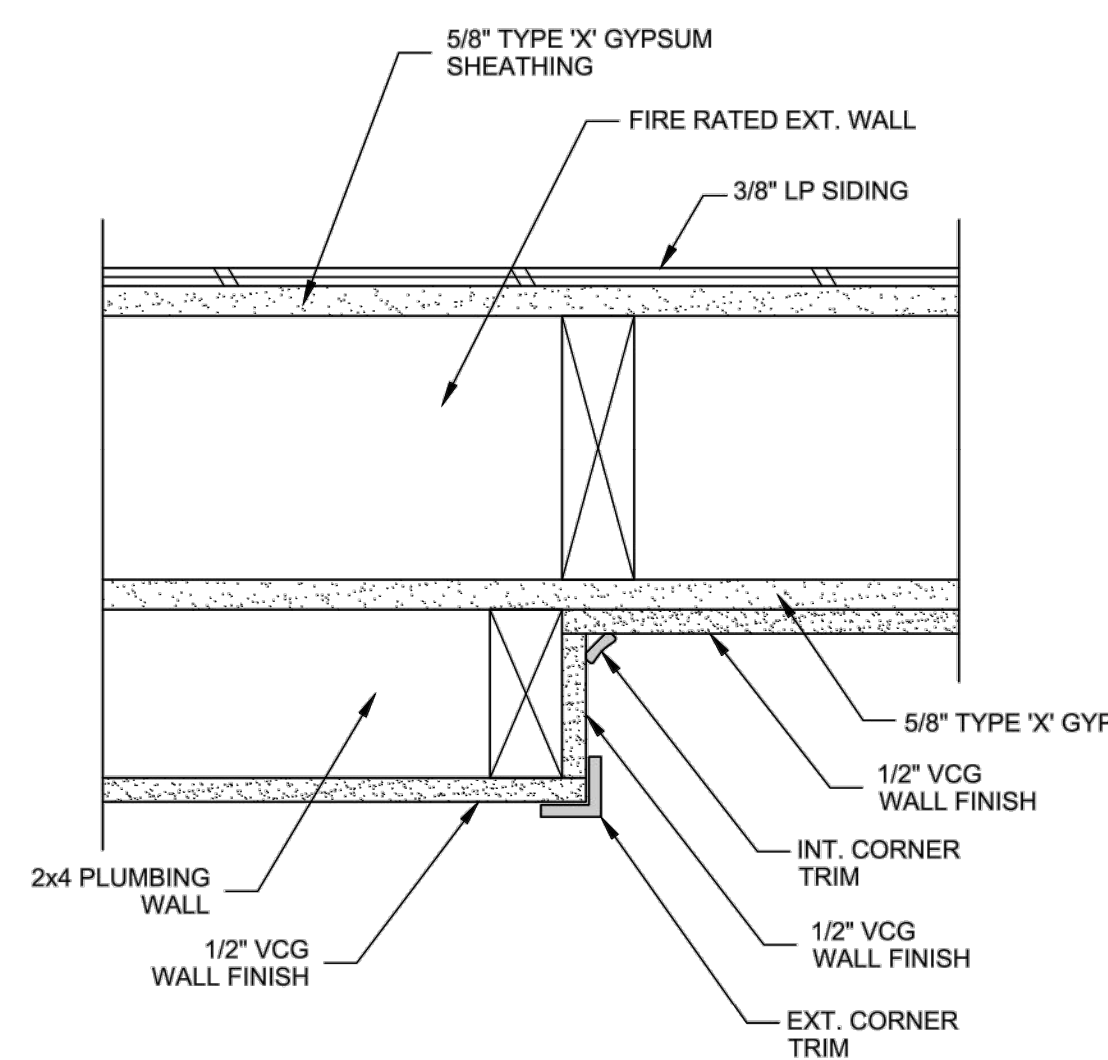
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**1** ROOF/EXT. WALL  
3" = 1'-0" 1-HR FIRE RATED WALL



**2** FLOOR/EXT. WALL  
3" = 1'-0" 1-HR FIRE RATED WALL



**3** PLUMBING WALL/FIRE RATED WALL TRANSITION  
3" = 1'-0" 1-HR FIRE RATED WALL

**PHOENIX MODULAR**  
5301 W. MADISON ST. - PHOENIX, AZ 85043  
PH 602-417-6460 FAX 602-417-6460

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DEALER:  
MODULAR BUILDING CONCEPTS

PROJECT:  
LAKE FOREST OFFICE

STATES:  
CA

SERIAL NUMBERS:  
PMI-5317-2480

DRAWN BY:  
RMIAP

PLOT DATE:  
1/24/2022

REV # / DATE:  
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R. MARK STEELE, P.E.  
CORPORATE ENGINEER  
SUNBELT MODULAR, INC.  
5301 W. MADISON ST.  
PHOENIX, AZ 85043  
(602) 327-4769

SHEET:  
**7.1**  
OF  
**8**

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**JIG CONSULTANTS**  
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NO.	DATE	REVISIONS

DESIGN: KN  
DRAWN: KN  
CHECKED: JG

**TRABUCO CANYON WATER DISTRICT**

DATE

JOSEPH L. GUTARRAZ RCE 55604 ENGINEER

LORRIE LAUSTEN RCE 67027 DISTRICT ENGINEER

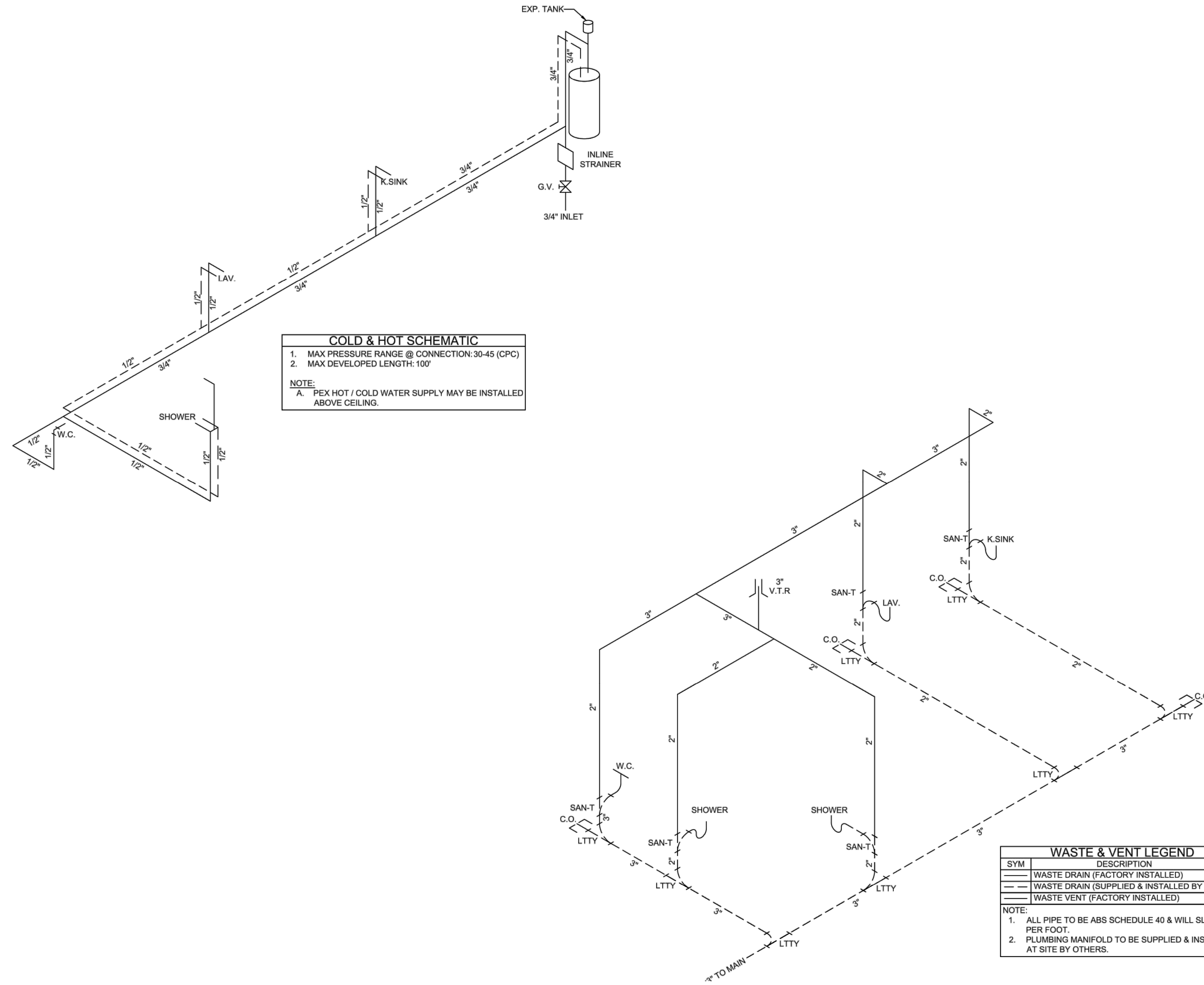
**TRABUCO CANYON WATER DISTRICT**  
**DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER**  
PROJECT NO.

**PREPACKAGED MODULAR TRAILER**  
**FIRE RATED WALL & ROOF DETAILS**

**A-08**  
SHEET  
**12**  
OF  
**18**

**NOTE TO CONTRACTOR:**  
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**COLD & HOT SCHEMATIC**  
 1. MAX PRESSURE RANGE @ CONNECTION: 30-45 (CPC)  
 2. MAX DEVELOPED LENGTH: 100'  
 NOTE:  
 A. PEX HOT / COLD WATER SUPPLY MAY BE INSTALLED ABOVE CEILING.

**WASTE & VENT LEGEND**

SYM	DESCRIPTION
---	WASTE DRAIN (FACTORY INSTALLED)
---	WASTE DRAIN (SUPPLIED & INSTALLED BY OTHERS)
---	WASTE VENT (FACTORY INSTALLED)

NOTE:  
 1. ALL PIPE TO BE ABS SCHEDULE 40 & WILL SLOPE 1/4 PER FOOT.  
 2. PLUMBING MANIFOLD TO BE SUPPLIED & INSTALLED AT SITE BY OTHERS.

**PHOENIX MODULAR**

5301 W. MADISON ST. - PHOENIX, AZ 85043  
 PH 602-447-6460 FAX 602-447-6460

**SUNBELT MODULAR, INC.**

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**DEALER:**  
MODULAR BUILDING CONCEPTS

**PROJECT:**  
LAKE FOREST OFFICE

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**STATES:**  
CA

**SERIAL NUMBERS:**  
PMI-5317-2480

**DRAWN BY:**  
RMIAP

**PLOT DATE:**  
1/24/2022

**REV # / DATE:**  
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R. MARK STEELE, P.E.  
CORPORATE ENGINEER  
SUNBELT MODULAR, INC  
5301 W. MADISON ST.  
PHOENIX, AZ 85043  
(602) 327-4769

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**SHEET:**  
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**DIG ALERT** 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.

TWO WORKING DAYS BEFORE YOU DIG  
Underground Service Alert

JIG

CONSULTANTS

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

DESIGN: KN	ENGINEER	DATE
DRAWN: KN	JOSEPH A. GUTIERREZ RCE 55604	
CHECKED: JG	LORRIE LAUSTEN RCE 67027	DISTRICT ENGINEER

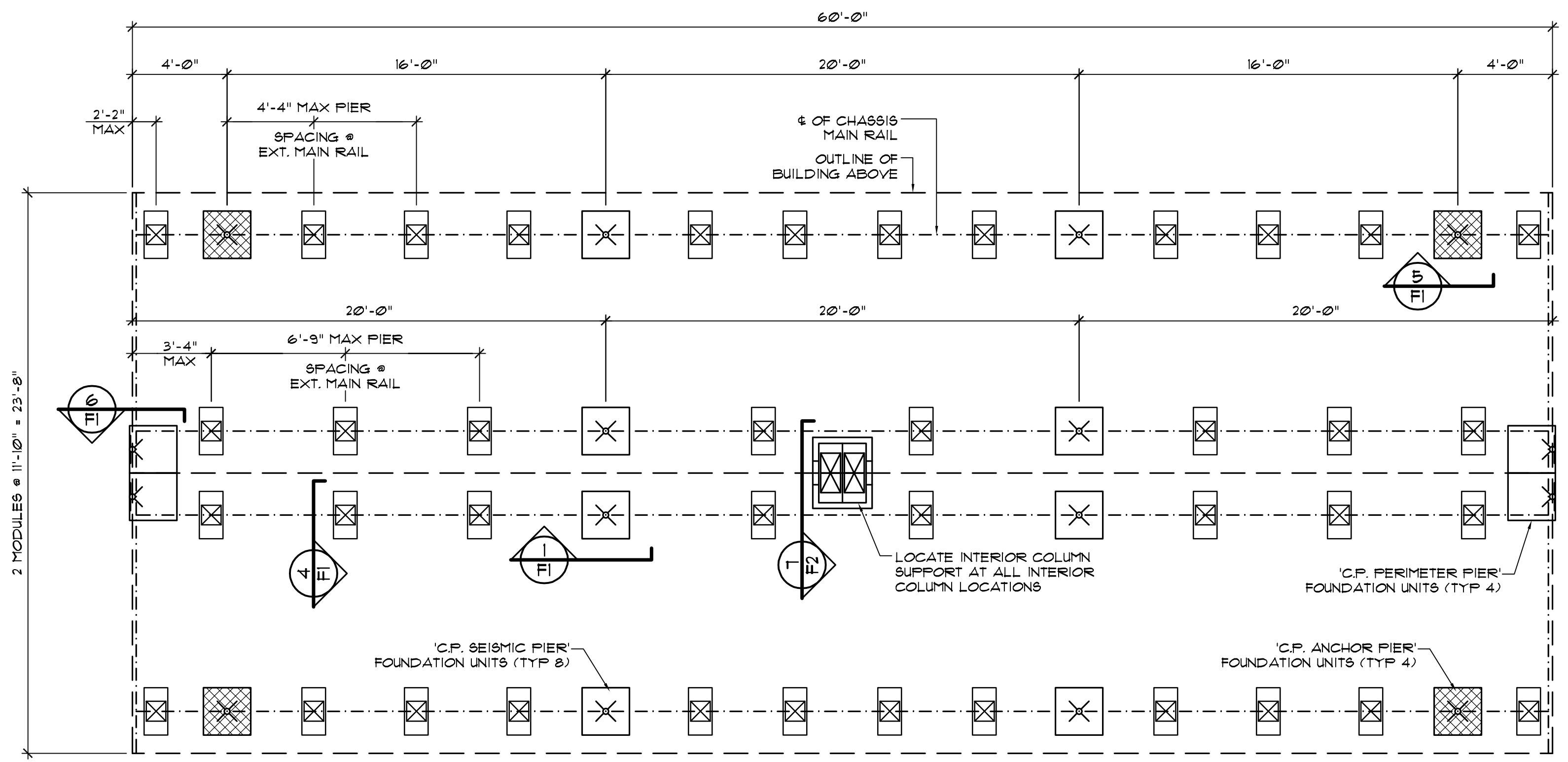
TRABUCO CANYON WATER DISTRICT  
 DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER  
 PROJECT NO.

PREPACKAGED MODULAR TRAILER  
 PLUMBING ISOMETRICS

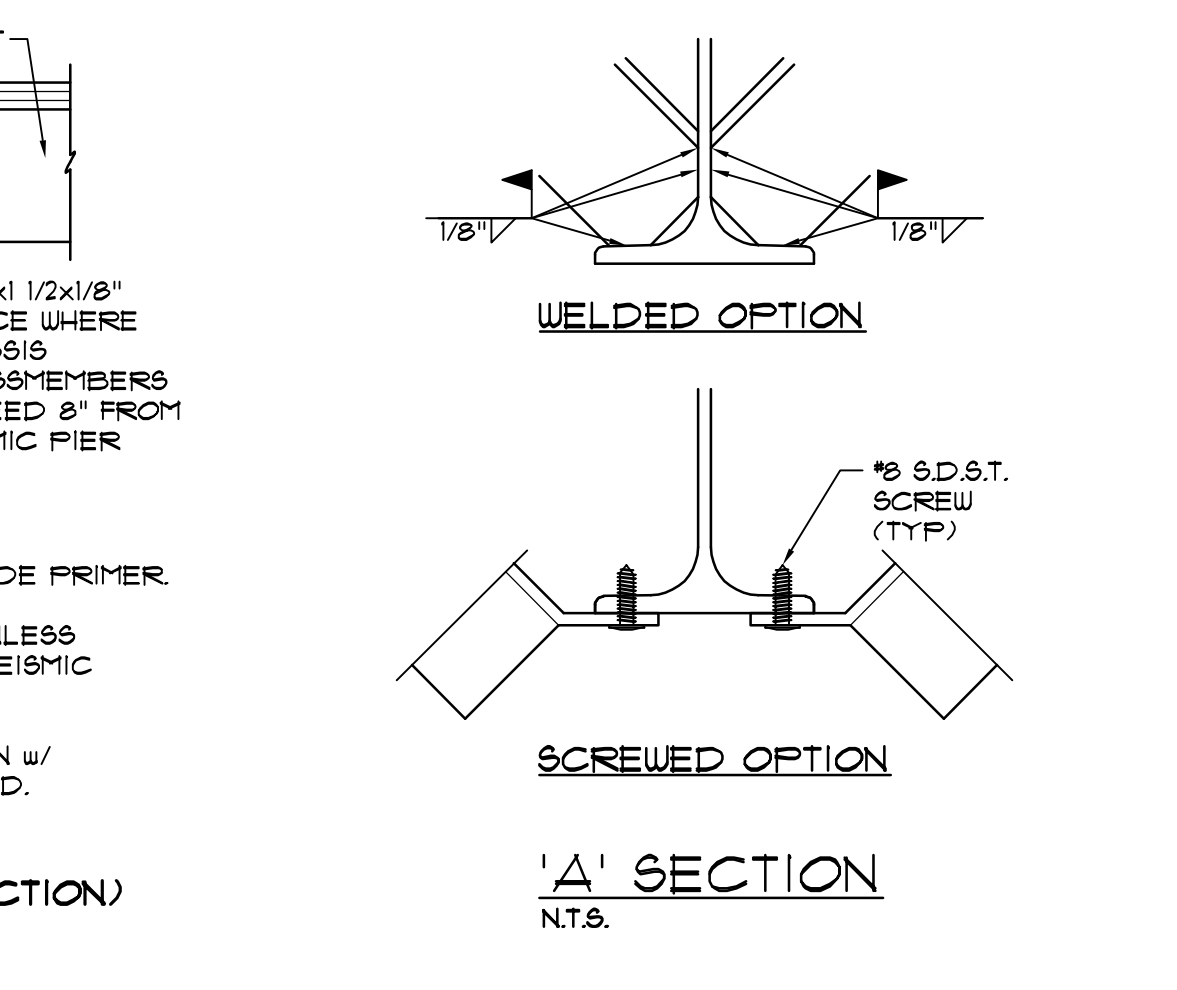
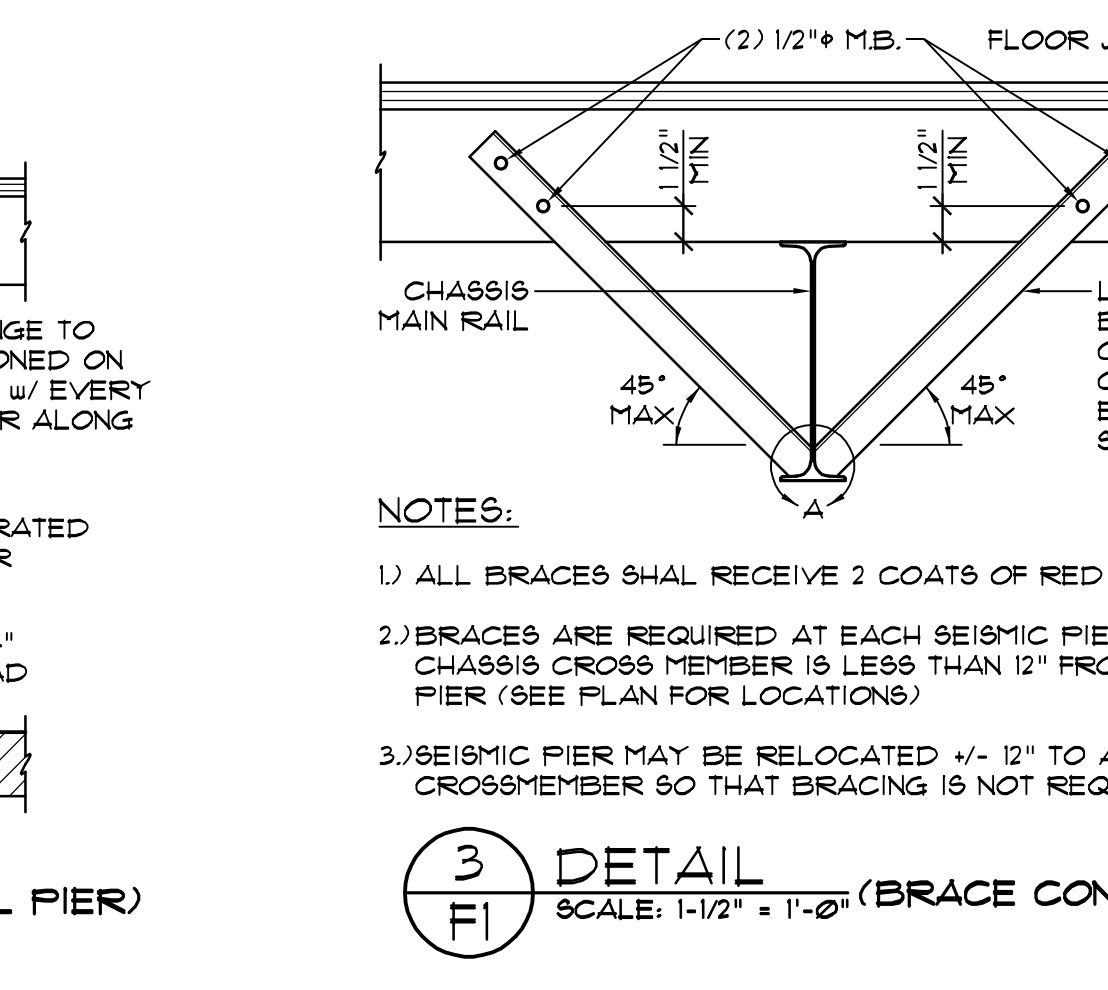
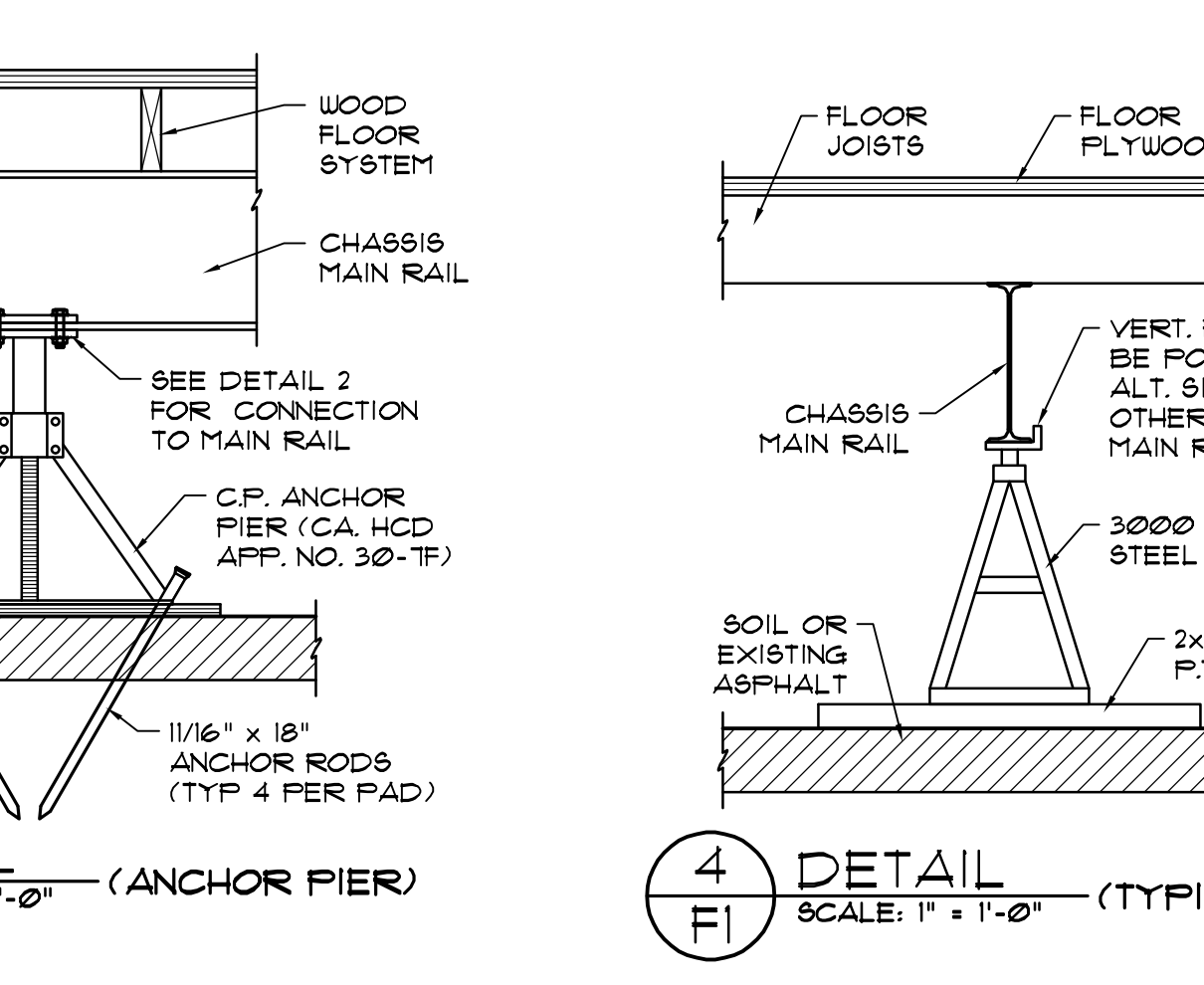
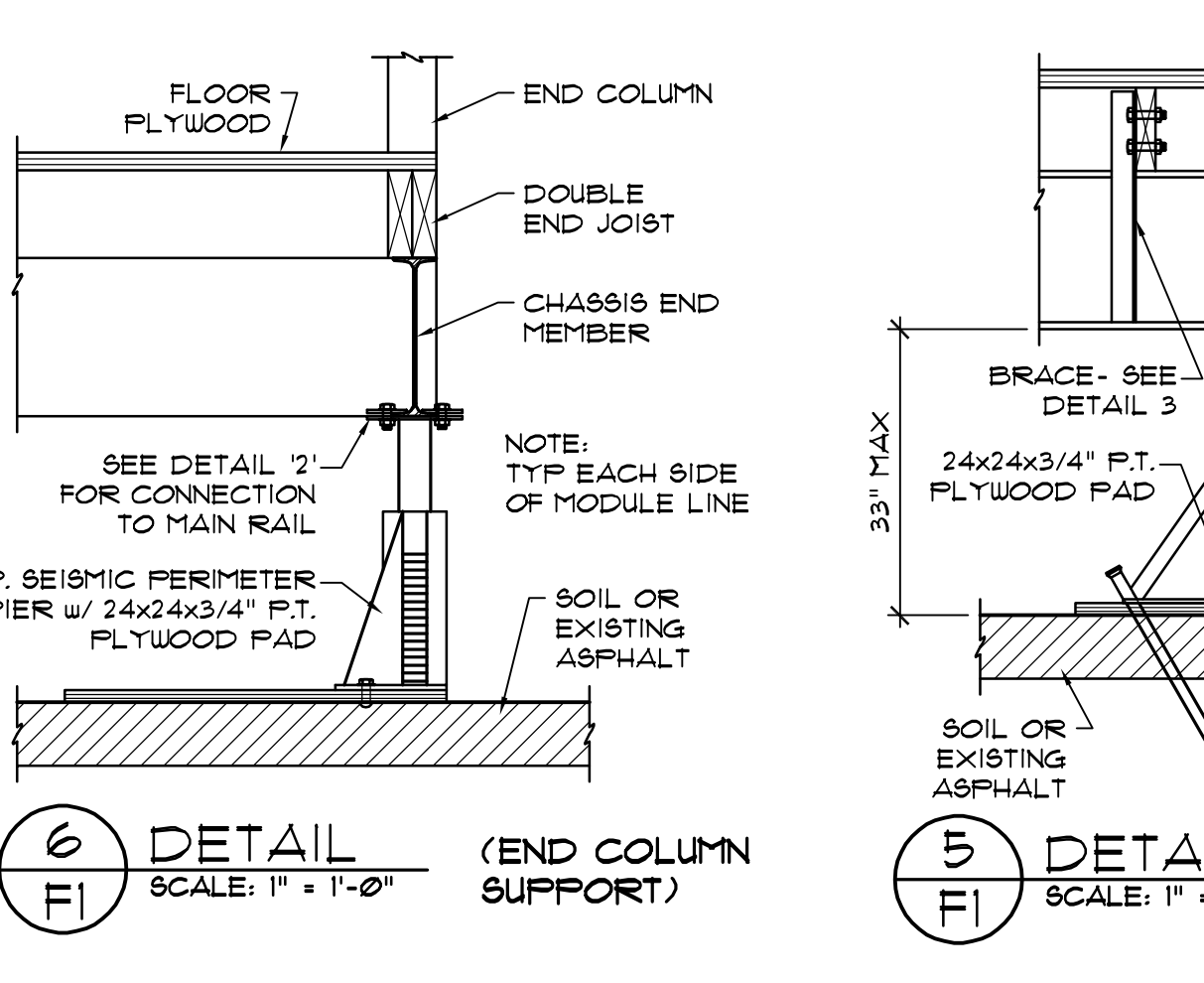
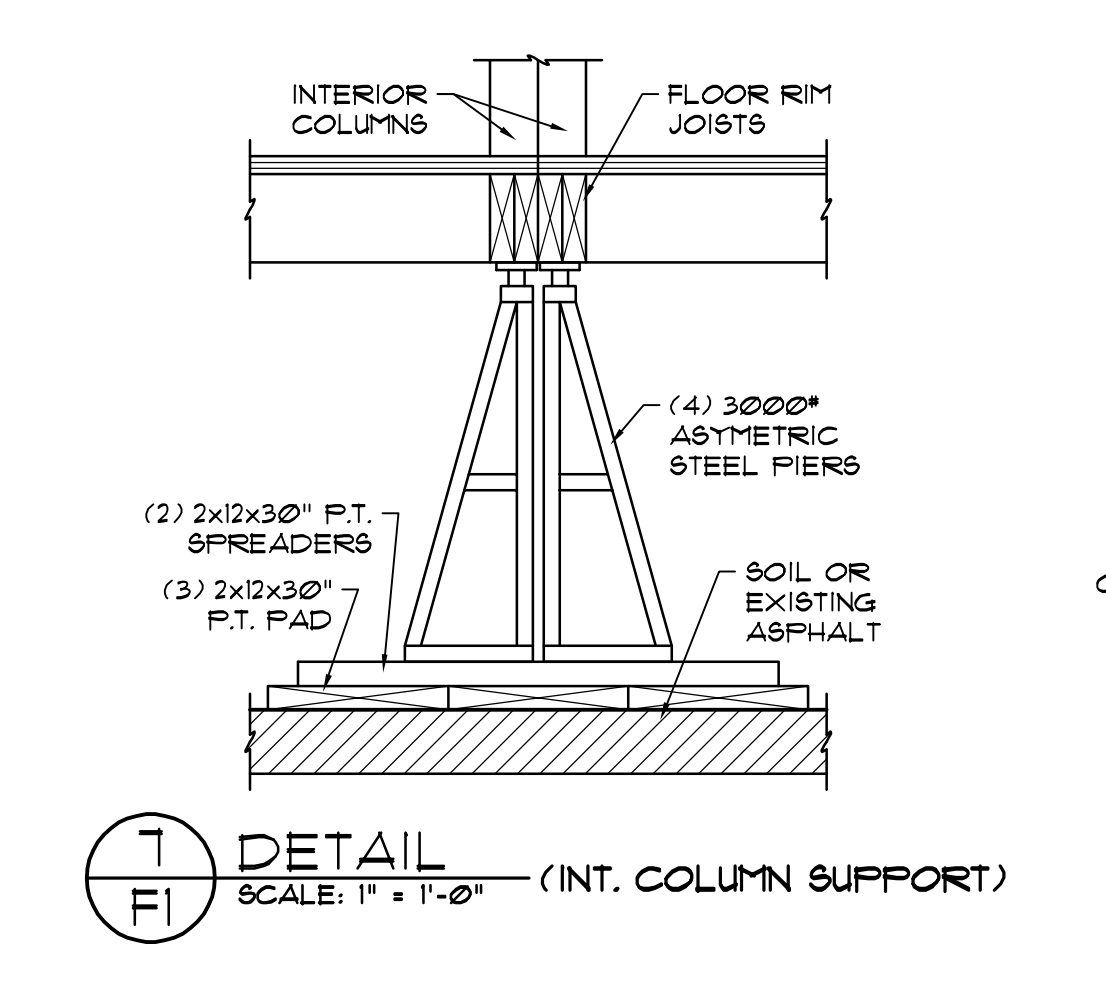
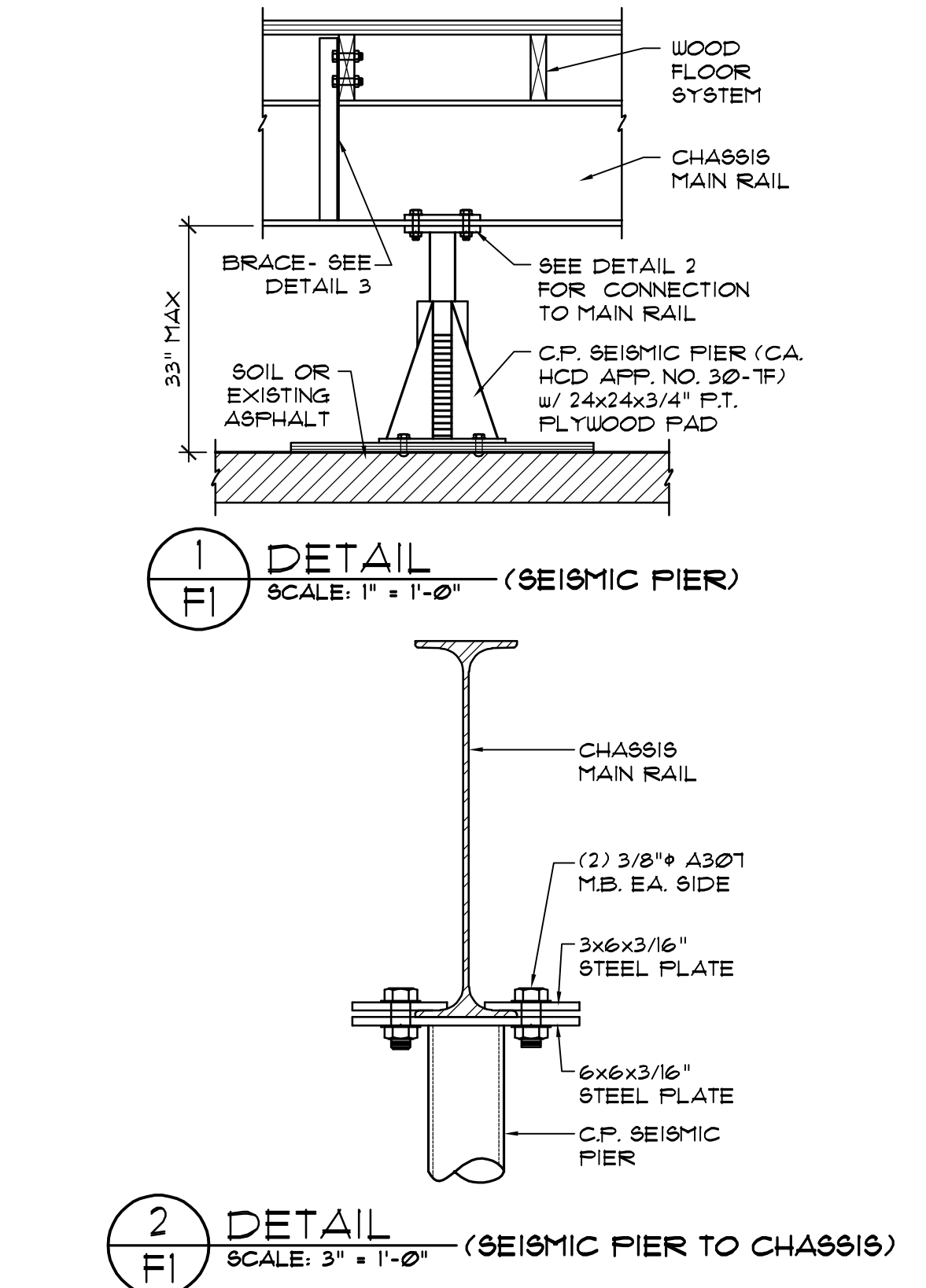
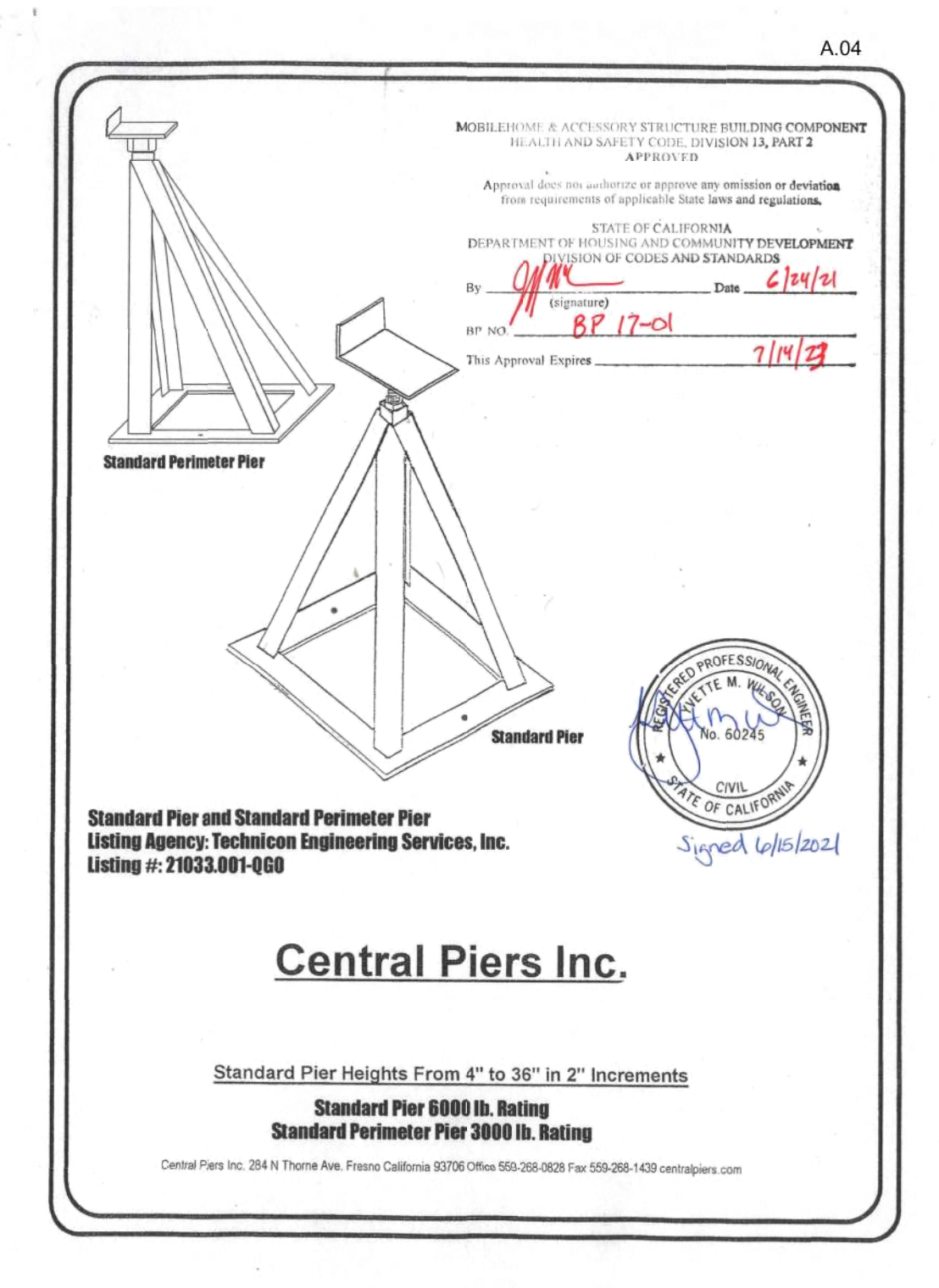
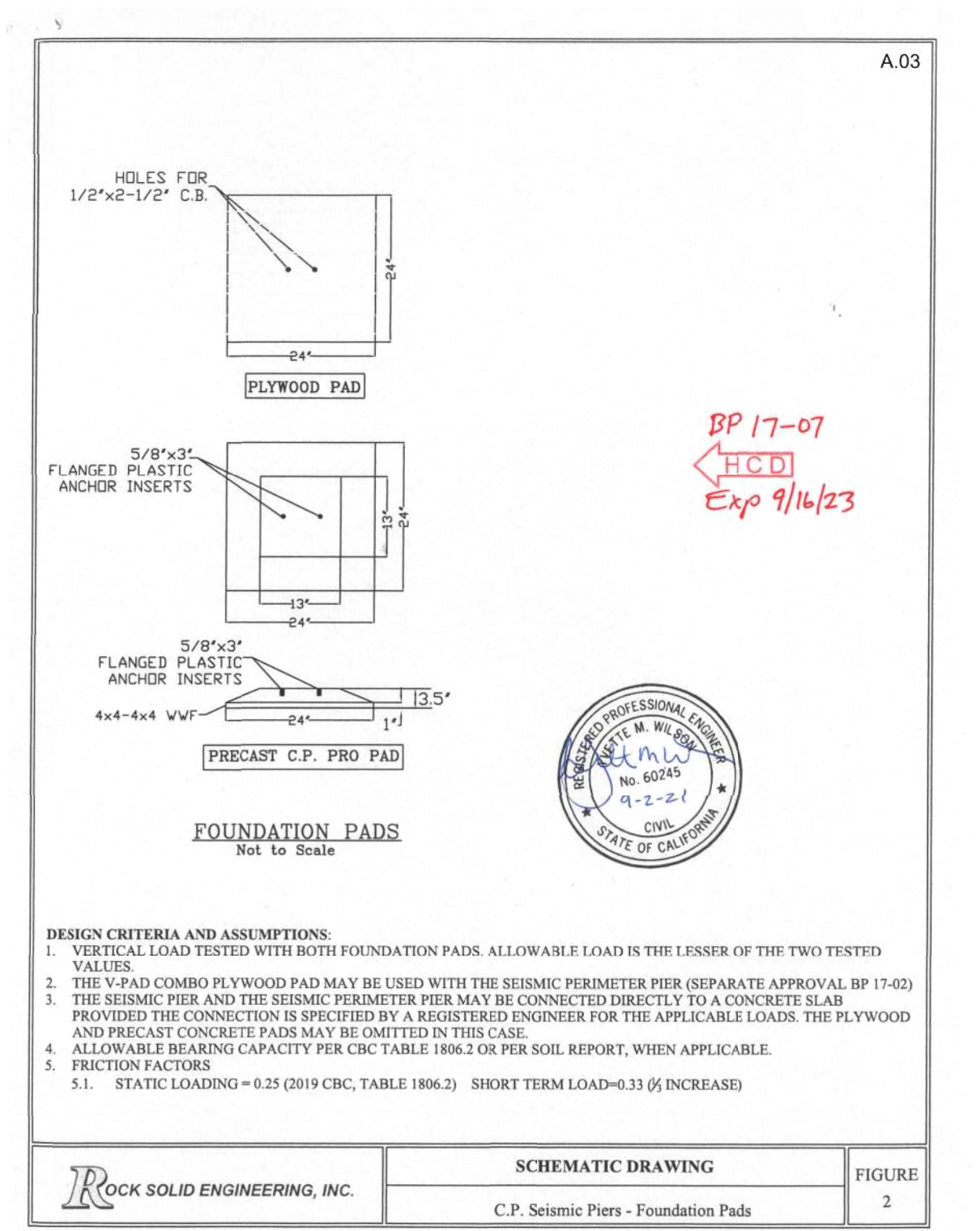
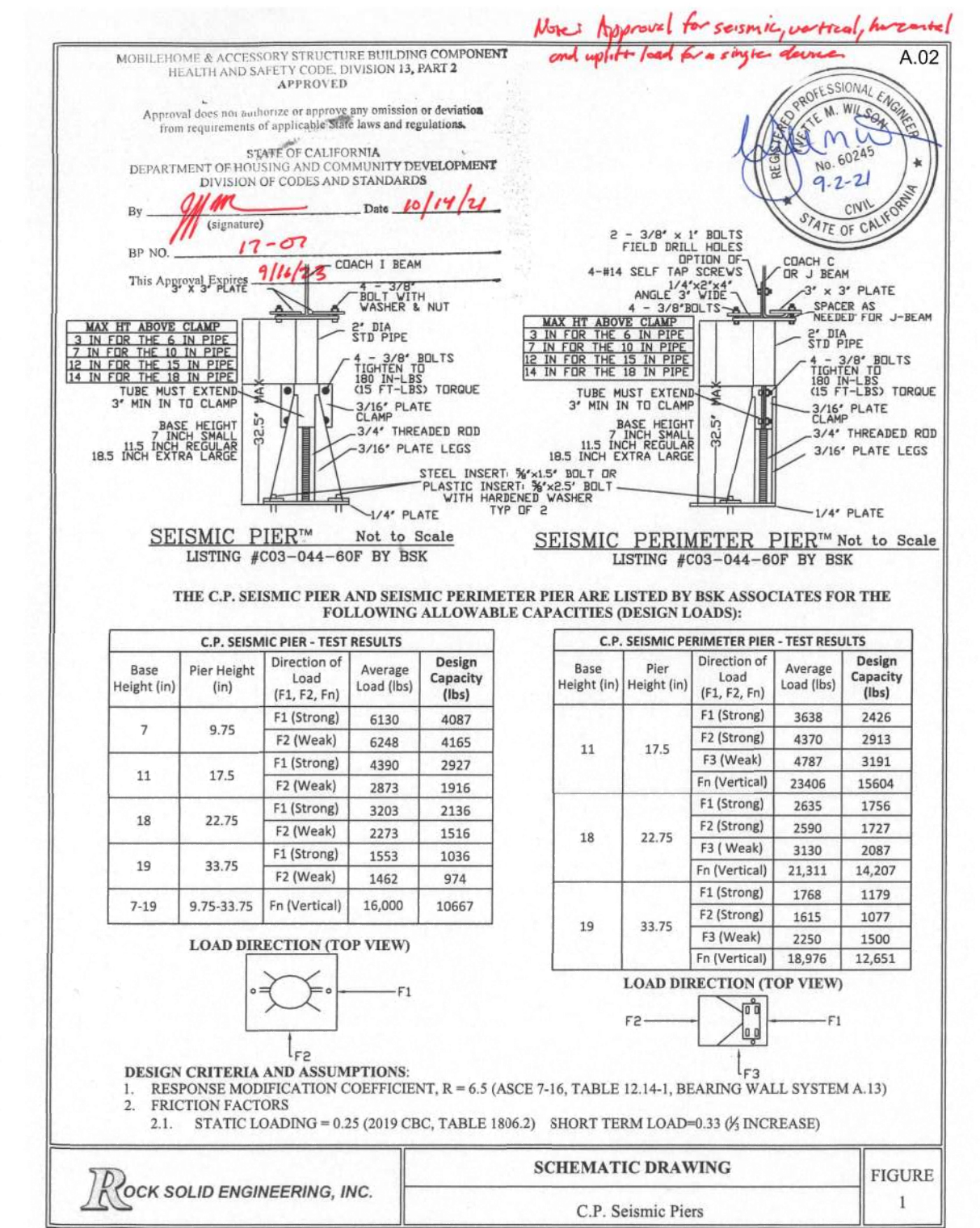
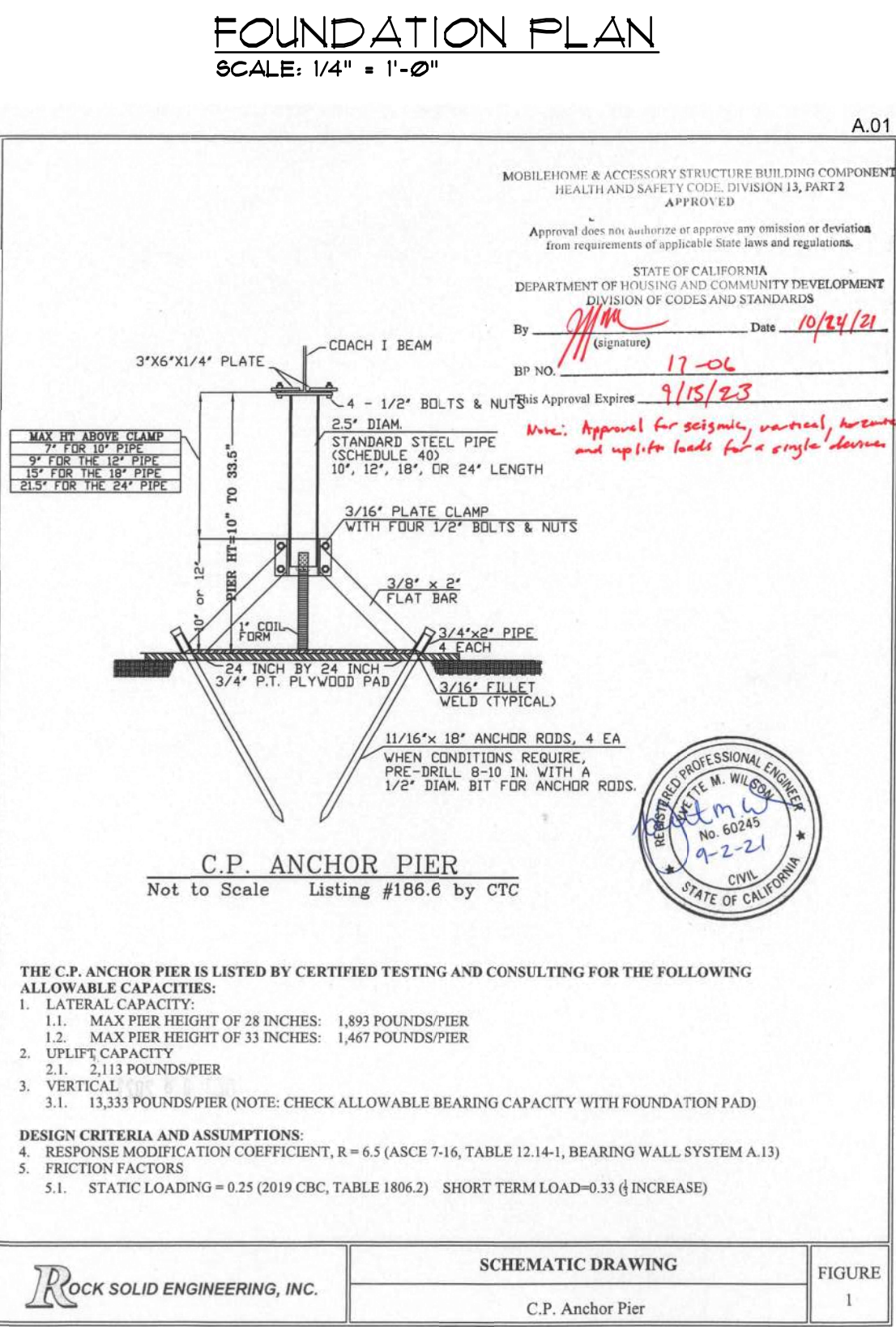
A-09  
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 13  
 OF  
 18

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- ### CONSTRUCTION NOTES:
- FOUNDATION DESIGN LOADS:  
 ROOF LIVE LOAD = 20 PSF  
 FLOOR LIVE LOAD = 50 PSF  
 ULT. WIND LOAD = 115 MPH, EXP. C'  
 EARTHQUAKE DESIGN DATA:  
 a.) SEISMIC IMPORTANCE FACTOR: 1.00  
 RISK CATEGORY: III  
 b.) MAPPED SPECTRAL RESPONSE ACCELERATIONS: S<sub>s</sub> = 1.500g (PER ASCE 7-16 SECTION 12.4.8) D' (DEFAULT)  
 S<sub>D5</sub> = 1.400 S<sub>D1</sub> = 0.600  
 c.) SITE CLASS: D'  
 d.) SPECTRAL RESPONSE COEFFICIENTS: 0.5  
 e.) SEISMIC DESIGN CATEGORY: I  
 f.) BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAMED (WOOD) WALLS WITH STRUCTURAL WOOD SHEAR PANELS  
 2" x 12" W/ C<sub>s</sub> = 0.215 R = 6.5 EQUIVALENT LATERAL FORCE ANALYSIS  
 g.) DESIGN BASE SHEAR: 13  
 h.) SEISMIC RESPONSE COEFFICIENT: 1.0  
 i.) RESPONSE MODIFICATION FACTOR: 1.3  
 j.) ANALYSIS PROCEDURE USED: 13  
 k.) REDUNDANCY FACTOR USED: 1.3
  - ALL WORK SHALL CONFORM TO 2019 CBC AND/OR LOCAL BUILDING CODES.
  - ACUMEN ENGINEERING HAS NOT INVESTIGATED THE SOILS SUPPORTING THIS BUILDING. THE ALLOWABLE BEARING CAPACITY IS ASSUMED TO BE 1500 PSF. IF ACTUAL SOIL CONDITIONS AT THIS SITE ARE KNOWN TO VARY FROM THESE ASSUMPTIONS, THEN ACUMEN ENGINEERING MUST BE NOTIFIED IMMEDIATELY.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON PLANS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
  - THIS DESIGN IS BASED ON THE FLOOR & ROOF ASSEMBLIES ACTING AS CONTINUOUS DIAPHRAGMS TO DISTRIBUTE LATERAL LOADS. REFER TO BUILDING MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR PROPER INTER-MODULE CONNECTIONS.
  - ALL LUMBER IN CONTACT WITH OR WITHIN 8" OF SOIL TO BE PRESERVATIVE TREATED.
  - ALL FASTENERS USED IN FOUNDATION MUST BE CORROSION RESISTANT.
  - ADJACENT GROUND SURFACES SHOULD BE SLOPED AWAY FROM STRUCTURE AT 5% FOR A MINIMUM DISTANCE OF 10 FEET. DRAINAGE OF SURROUNDING AREA SHALL BE PROVIDED TO PREVENT ACCUMULATION OF SURFACE WATER.
  - SKIRTING (IF USED) MUST BE SELF SUPPORTING AND MAY NOT TRANSFER ANY LOAD.
  - IF SKIRTING IS USED, UNDER FLOOR AREA MUST BE VENTILATED AT 1 SQ. FT. FOR EACH 150 SQ. FT. OF FLOOR AREA. OPENING MUST BE COVERED W/ CORROSION RESISTANT MESH WITH OPENINGS OF 1/4" INCH.
  - IF SKIRTING IS USED, AN ACCESS OPENING WITH DIMENSIONS NOT LESS THAN 18"x24" SHALL BE PROVIDED WITH HASP AND LOCK.
  - HEIGHT OF FINISHED FLOOR ABOVE GRADE SHALL NOT EXCEED 32".
  - ALL UTILITY/RAMP/STAIR DESIGN AND SITE/UTILITY/GRADING DESIGN BY OTHERS.
  - PRE-FABRICATED SEISMIC PIER FOUNDATION UNITS SHALL BE 'C.P. SEISMIC PIER' COMMERCIAL MOBILE FOUNDATION (CALIFORNIA HCD STATE APPROVAL NO. BP 17-06 & BP 17-07) MANUFACTURED BY CENTRAL PIERS, INC.
  - SEISMIC PIER FOUNDATION UNITS SHALL BE FIRMLY SET ON FINISHED GRADE SO THAT REASONABLY FIRM BEARING IS ACHIEVED.
  - IF DIFFERENTIAL SETTLEMENT EXCEEDS 1/4", THE PIERS SHALL BE READJUSTED TO PROVIDE PROPER SUPPORT.
  - STEEL PIERS TO BE MANUFACTURED BY CENTRAL PIERS, INC. OR APPROVED EQUAL (CALIFORNIA HCD STATE APPROVAL NO. BP 17-07) PIER DESIGN CAPACITY TO BE 3000 LBS OR GREATER (UNLESS NOTED OTHERWISE).
  - THE MANUFACTURER'S INSTRUCTIONS MUST BE STRICTLY ADHERED TO WHEN INSTALLING PIERS.
  - ALL UTILITY CONNECTIONS AT ENTRANCE TO BUILDING SHALL BE MADE WITH FLEXIBLE TYPE CONNECTORS.
  - MODULAR BUILDING TO BE CALIFORNIA HCD APPROVED COMMERCIAL COACH.
  - ACUMEN ENGINEERING WILL NOT INSPECT THE INSTALLED FOUNDATION SYSTEM. THE OWNER OF THIS BUILDING AGREES TO INDEFINITE ACUMEN ENGINEERING FOR DAMAGES ARISING FROM IMPROPER INSTALLATION.



REVISIONS	
DATE	BY

**ACUMEN ENGINEERING DESIGN, LLC**  
 12005 NORTH 144TH AVENUE  
 SURPRISE, ARIZONA 85379  
 (800) 571-9877

**Modular Building Concepts, Inc.**  
 12580 STOTLER COURT  
 POWAY, CA 92064  
 (858) 673-1105

COMMERCIAL MODULAR FOUNDATION DESIGN  
 (STATE APPROVAL 17-06, 17-07 & 17-09)

(1) 24' x 60' MODULAR OFFICE BUILDING  
 TRABUCO CANTON WATER DISTRICT  
 WATER TREATMENT PLANT  
 40504 DIMENSION DRIVE  
 LAKE FOREST, CALIFORNIA 92530

REGISTERED PROFESSIONAL ENGINEER  
 M. M. Nieminen  
 C 91181  
 Civil Engineer  
 12/21/2021

SEAL  
 THE SEAL IS ONLY VALID FOR SITE ADDRESS SHOWN IN THE TITLE BLOCK  
 THE SEAL IS ONLY VALID WHEN RED WITH BLUE SIGNATURE

DATE: 12/20/21  
 SCALE: SHOWN  
 DWN: AN.  
 JOB: 211228  
 SHEET: S-01  
 14 OF 18

GENERAL ELECTRICAL NOTES

- THE INTENT OF THESE DRAWINGS IS TO DESCRIBE A COMPLETE AND OPERABLE SYSTEM. BRING ANY QUESTIONS TO THE ENGINEER'S 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 RGS.
  - ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S 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 EQUIPPED 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, PADS, 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 SNEEPS 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" 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. WHEN SHOWN ON CIVIL DRAWINGS, PROVIDE A PULL BOX PER FIXTURE AND 1-1/2"Ø-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 "SW".
  - NOTE: DANGER**  
ALL CUSTOM CONTROL PANELS OR PLC'S MUST BE DESIGNED, CONSTRUCTED, PROGRAMMED AND TESTED BY A U.L. 508A 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 ANS/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 CONTAMINATION 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 EQUAL:
- ESEC, SAN FAZSACKET (562) 929-1871
  - ACCESSIBLE CONSULTING ENGINEERING, IRAJ MASROULAH, (714) 544-8444
  - NOTATCH ENGINEERING SERVICES, INC., CARLOS MONAS, (562) 941-3783
  - TRANSPOWER, FRANK SHARSH, (949) 235-3215
  - 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.
- ALL SPLICES OR TAPS INSTALLED IN U.G. PULLBOXES SHALL BE LISTED FOR WET LOCATIONS PER N.E.C. - 300.5 (B).

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
CAB	CABINET	MIN	MINIMUM	SM	SURFACE MOUNTED
CB	CIRCUIT BREAKER	MISC	MISCELLANEOUS	SQ	SQUARE
CKT	CIRCUIT	MSB	MAIN SWITCHBOARD	SQ FT	SQUARE FEET
CLF	CURRENT LIMITING FUSE	N	NEUTRAL	SS	STAINLESS STEEL
CONN	CONNECTION	N.C.	NORMALLY CLOSED	SWG	SWITCHGEAR
CP1	CONTROL PANEL #	NEC	NATIONAL ELECTRICAL CODE	TC	TIMECLOCK
		NEMA	NATIONAL ELECTRICAL MFGR'S ASSOC.	TELE	TELEPHONE
DIA	DIAMETER	NIC	NOT IN CONTRACT	TYP	TYPICAL
DN	DOWN	N.O.	NORMALLY OPEN	UG	UNDERGROUND
DWG	DRAWING	NTS	NOT TO SCALE	UGPS	UNDERGROUND PULL SECTION
ELECT	ELECTRICAL	OH	OVERHEAD	UL	UNDERWRITERS LABORATORY
ENGR	ENGINEER	OL	OVERLOAD	UNO	UNLESS NOTED OTHERWISE
EQUIP	EQUIPMENT	P	POLE	WP	WEATHERPROOF WRAPPED
F	FLUSH	PB	PULL BOX	WR	WRAPPED
FBO	FURNISHED BY OTHERS	PC	PHOTOCELL	XFMR	TRANSFORMER
FDN	FOUNDATION	PNL	PANEL	1P,2P...	1 POLE, 2 POLE, ETC
FUT	FUTURE	PP	PAY PHONE		
G	GROUND	PP#	POWER POLE #		
GFI	GROUND FAULT INTERRUPTER	PRI	PRIMARY		
GND	GROUND	PS	PRESSURE SWITCH		
GRD	GRADE	PT	PRESSURE TRANSMITTER		
HOA	HAND-OFF-AUTO	QTY	QUANTITY		
HP	HORSEPOWER	R	RELAY		
HS	HOUSE SIDE SHIELD	REL	RELAY		
IBC	INSTALLED BY CONTRACTOR	RGS	RIGID GALVANIZED STEEL		
IRR CONT	IRRIGATION CONTROLLER				

STANDARD SYMBOLS LIST -- SINGLE LINE DIAGRAMS

SYMBOL	DESCRIPTION
	UTILITY METER, 200A OR LESS, AND 400A OR MORE, RESPECTIVELY
	CIRCUIT BREAKER
	FUSED SWITCH
	STARTER
	PLUG IN DEVICE
	POWER TRANSFORMER, PROVIDE GROUNDING ELECTRODE, CONDUCTOR AND BONDING CONDUITS CONDUCTOR
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
	TYPICAL SWITCHGEAR LOADS
	MISCELLANEOUS LOAD
	MOTOR LOAD
	PACKAGE UNIT LOAD (MECHANICAL)
	PANEL LOADS
	LIGHTING LOADS
	HEATING LOADS

STANDARD SYMBOLS - GENERAL

SYMBOL	DESCRIPTION
	LIGHTING FIXTURE SCHEDULE CALLOUT
	PLAN OR DETAIL CALLOUT
	TITLE UNDER PLAN/DETAIL
	SECTION OR VIEW CALLOUT
	GENERAL OR SPECIFIC NOTES PERTAINING TO ONE SHEET/PLAN
	PLAN CALLOUT FOR PLAN NOTE
	EQUIPMENT NUMBER CALLOUT
	CONDUIT NUMBER CALLOUT, SEE CONDUIT SCHEDULE
	ROOM NUMBER PER ARCHITECTURAL PLAN
	MISCELLANEOUS CALLOUT PER PLAN
	CONDUIT AND WIRE, SURFACE MOUNTED
	UNDERGROUND CONDUIT
	CONDUIT TERMINATION OR DIRECTION CHANGE
	HOMERUN PER PLAN CALLOUT

STANDARD SYMBOLS - POWER & LIGHTING

SYMBOL	DESCRIPTION
	SWITCH, 20A, 1P, PER EACH LETTER, EACH IN SINGLE GANG BOX
	FLUORESCENT STRIPLIGHT PER FIXTURE SCHEDULE
	RECESSED INTERIOR OR EXTERIOR DOWNLIGHT, RESPECTIVELY
	EXIT SIGN
	NEW POLE MOUNTED AREA LIGHT FIXTURE
	EXISTING POLE MOUNTED FIXTURE
	EXISTING STREET LIGHTING POLE FIXTURE
	WALL MOUNTED FIXTURE, PER SCHEDULE
	FLOOD LIGHT OR TRACK FIXTURE PER SCHEDULE
	STANDARD PARKING LOT FIXTURE
	PHOTOCELL
	STANDARD DUPLEX OR QUAD RECEPTACLE
	DISCONNECT SWITCH, FUSED PER U.L. NAMEPLATE RATING
	COMBINATION STARTER AND FUSED DISCONNECT SWITCH
	STARTER ONLY
	J BOX
	NON-STANDARD J-BOX (J) OR PULL BOX AS NOTED ON PLAN
	SURFACE MOUNTED OR RECESSED PANEL, PER SCHEDULE
	PUSHBUTTON
	TELEPHONE BACKBOARD PER PLAN

STANDARD SYMBOLS - CONTROL

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	MOTOR, M = HP		N.O., N.C. SWITCH
	RELAY COIL		LIMIT SWITCH
	SOLENOID VALVE		PUSHBUTTON
	INDICATOR LIGHT		TIMER SWITCH
	N.C., N.O. CONTACTS		TIMER SWITCH
	2 POLE, 3 POLE CIRCUIT BREAKERS		CONTROL POWER TRANSFORMER
	2 POLE, 3 POLE SWITCHES		SIMPLE HAND-OFF-AUTO SWITCH

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

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

**JIG CONSULTANTS**

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

REGISTERED PROFESSIONAL ENGINEER  
LARRY D. MULLEN  
ELECTRICAL  
EXP. 09/30/22  
STATE OF CALIFORNIA

**M&A MULLEN & ASSOCIATES INCORPORATED**  
ELECTRICAL ENGINEERS  
Project Number 2021014  
1200 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714) 638-0620  
THESE ARCHITECTURAL DRAWINGS AND ELECTRICAL DOCUMENTS WERE PREPARED BY AUTHORIZED PERSONNEL OF MULLEN & ASSOCIATES, INC. FOR THE PROJECT AND ONLY FOR THE PARTICULAR USE AND PURPOSE FOR WHICH THEY WERE PREPARED. ANY USE OF THESE DOCUMENTS IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF MULLEN & ASSOCIATES, INC. IS PROHIBITED. ANY USE OF THESE DOCUMENTS ON ANY OTHER SITE OR FOR ANY OTHER PURPOSE IS PROHIBITED BY LAW.

NO.	DATE	REVISIONS

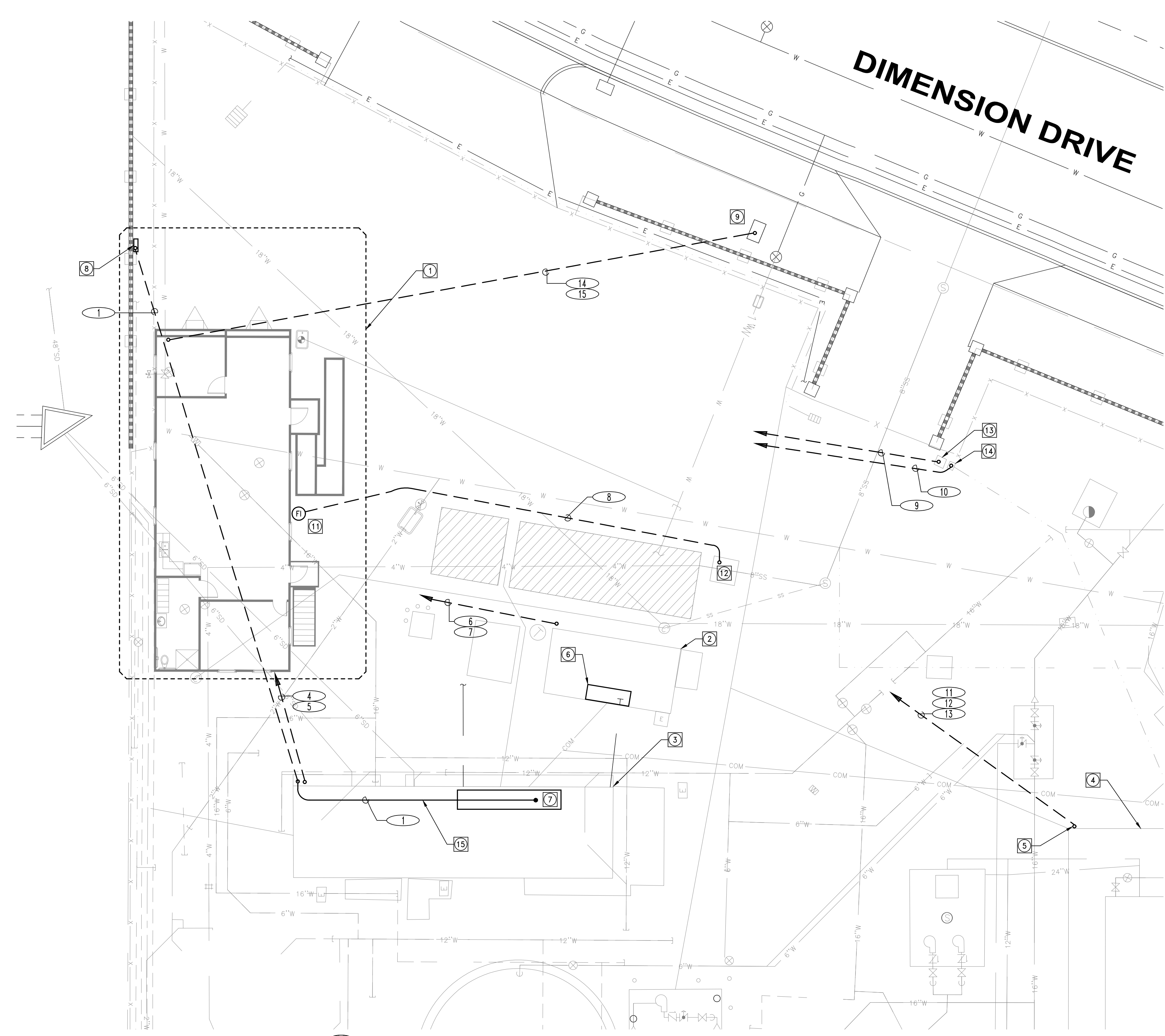
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CHECKED:	LDM

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

**TRABUCO CANYON WATER DISTRICT**  
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER  
PROJECT NO.

ELECTRICAL SYMBOLS AND NOTES	E-01
	SHEET 15
	OF 18

# DIMENSION DRIVE



- ### 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 NOT USED
  - ⑩ NOT USED
  - ⑪ RELOCATED FLOW INDICATOR, MOUNT ON TRAILER +5' AFG
  - ⑫ EXISTING FLOWMETER VAULT
  - ⑬ EXISTING SUMP PUMP, RECONNECT
  - ⑭ EXISTING GATE CONTROL BOX, RECONNECT
  - ⑮ ROUTE CONDUIT OVERHEAD, SUPPORT FROM CEILING

A
-
**ELECTRICAL SITE PLAN**  
 1"=10'

**DIALERT**  
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.

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CONSULTANTS

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REGISTERED PROFESSIONAL ENGINEER  
LARRY D. MULLEN  
ELECTRICAL  
EXP. 09/30/22  
STATE OF CALIFORNIA

**MULLEN & ASSOCIATES INCORPORATED**  
ELECTRICAL ENGINEERS  
Project Number **2021014**  
1200 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714)632-8820

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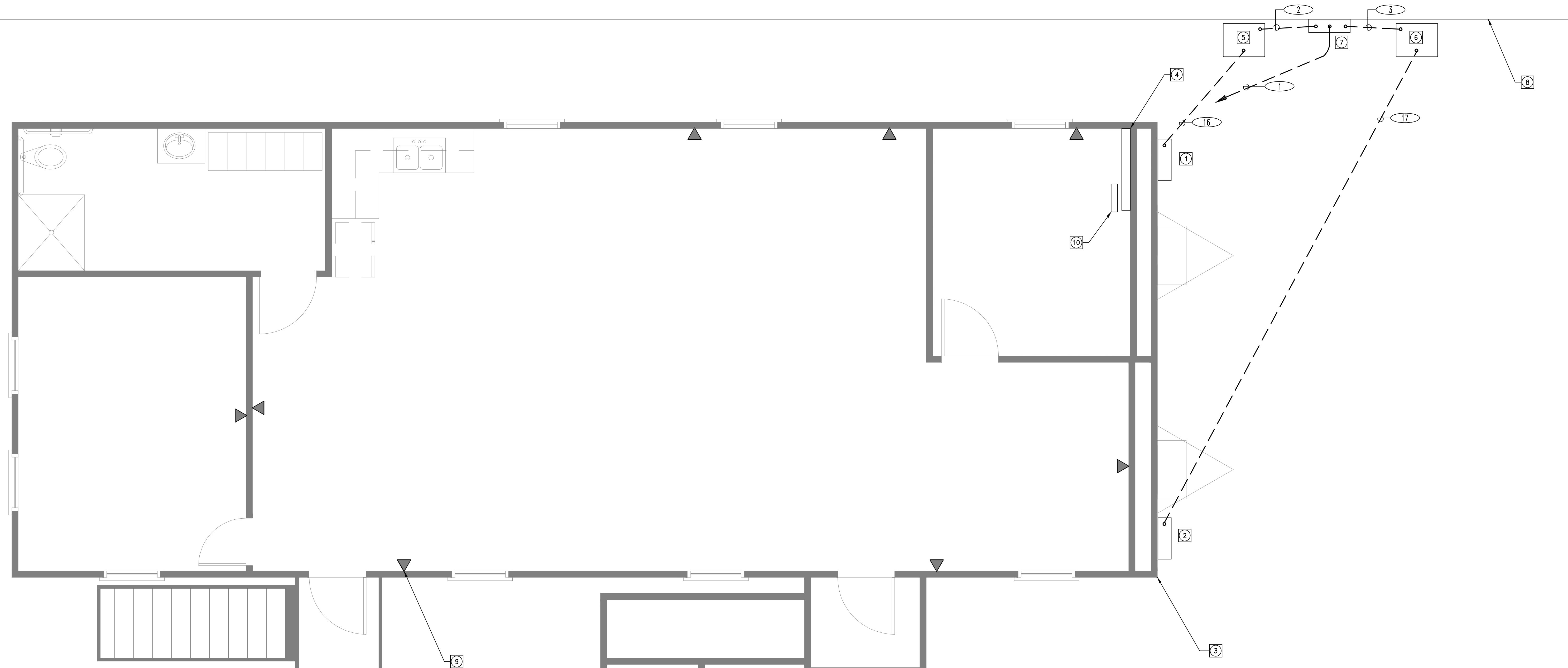
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**TRABUCO CANYON**  
WATER DISTRICT

 JOSEPH L. GUTIERREZ RCE 55604 ENGINEER	 LORRIE LAUSTEN RCE 67027 DISTRICT ENGINEER
--	--

**TRABUCO CANYON WATER DISTRICT**  
 DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER  
 PROJECT NO.

ELECTRICAL SITE PLAN



**SHEET NOTES**

- ① NEW PANEL "A"
- ② NEW PANEL "B"
- ③ SEE SHEET 7 FOR TRAILER ELECTRICAL
- ④ 4' X 8' PLYWOOD TELEPHONE BACKBOARD
- ⑤ NEMA 3R TRANSFORMER TA WITH 4" RAISED CONCRETE PAD
- ⑥ NEMA 3R TRANSFORMER TB WITH 4" RAISED CONCRETE PAD
- ⑦ NEMA 3R PANEL H MOUNT ON UNISTRUT FRAME, SEE DETAIL 2, SHEET E-04
- ⑧ EXISTING WALL/PROPERTY LINE
- ⑨ INSTALL 2 - RJ45 JACKS ON TRAILER MFG. PROVIDED MUD RING  
 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.

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

**DIGALERT** CALL TOLL FREE 811  
 UNDERGROUND SERVICE ALERT  
 TWO WORKING DAYS BEFORE YOU DIG

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

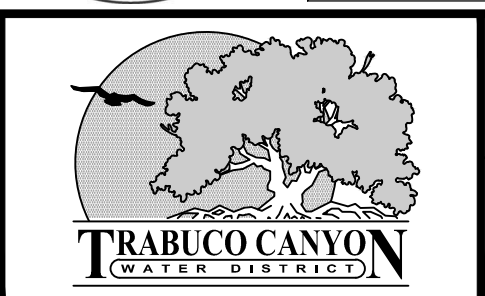
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 ORANGE, CA 92867  
 (714) 978-4407  
 www.jigconsultants.com

REGISTERED PROFESSIONAL ENGINEER  
 LARRY D. MULLEN  
 ELEC719  
 ELECTRICAL  
 EXP: 09/30/22  
 STATE OF CALIFORNIA

**M&A MULLEN & ASSOCIATES INCORPORATED**  
 ELECTRICAL ENGINEERS  
 Project Number 2021014  
 1200 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714)632-6620

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DATE	
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DISTRICT ENGINEER	LORRIE LAUSTEN RCE 67027

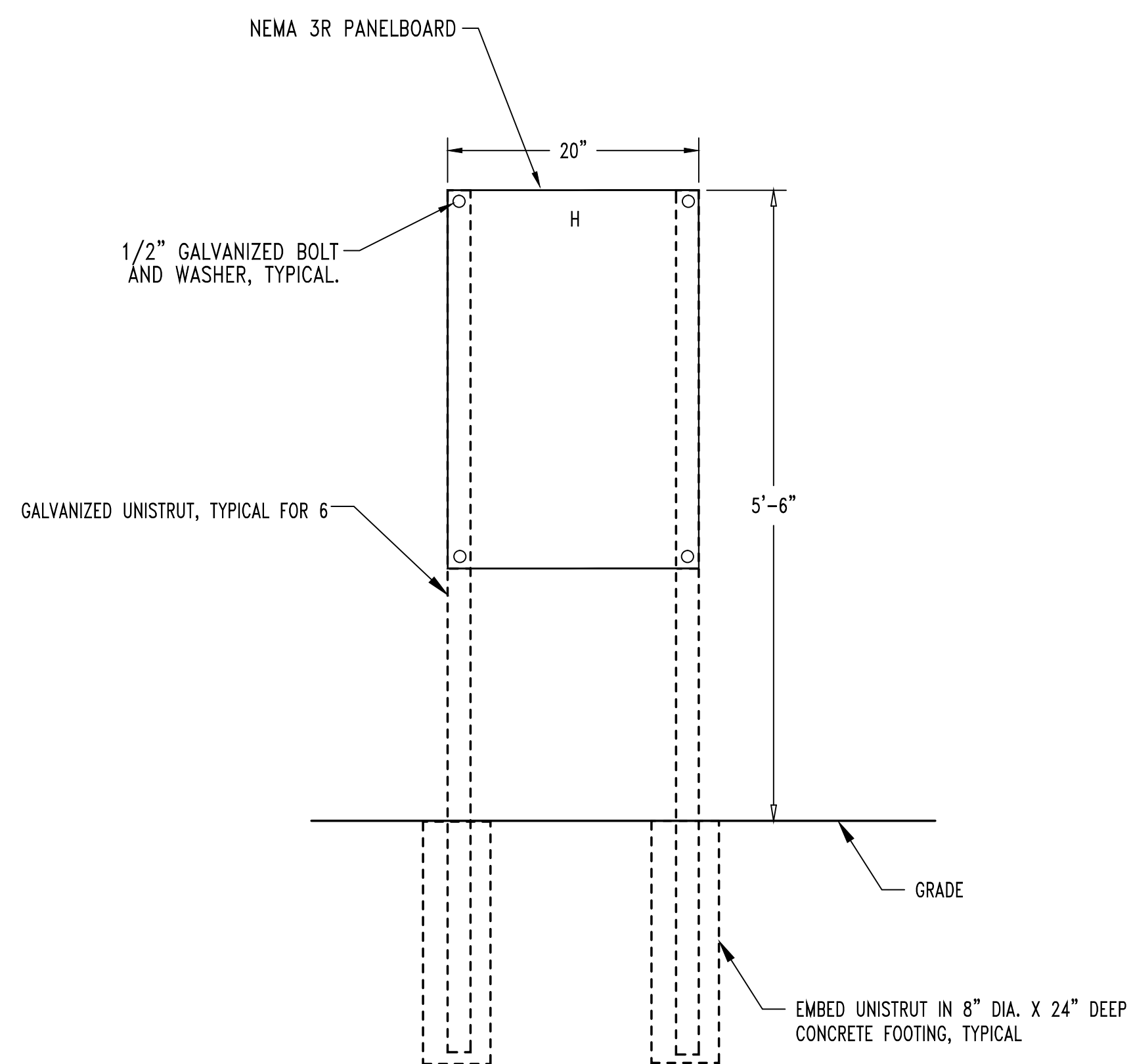
**TRABUCO CANYON WATER DISTRICT**  
 DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER  
 PROJECT NO.

OFFICE TRAILER ELECTRICAL PLAN

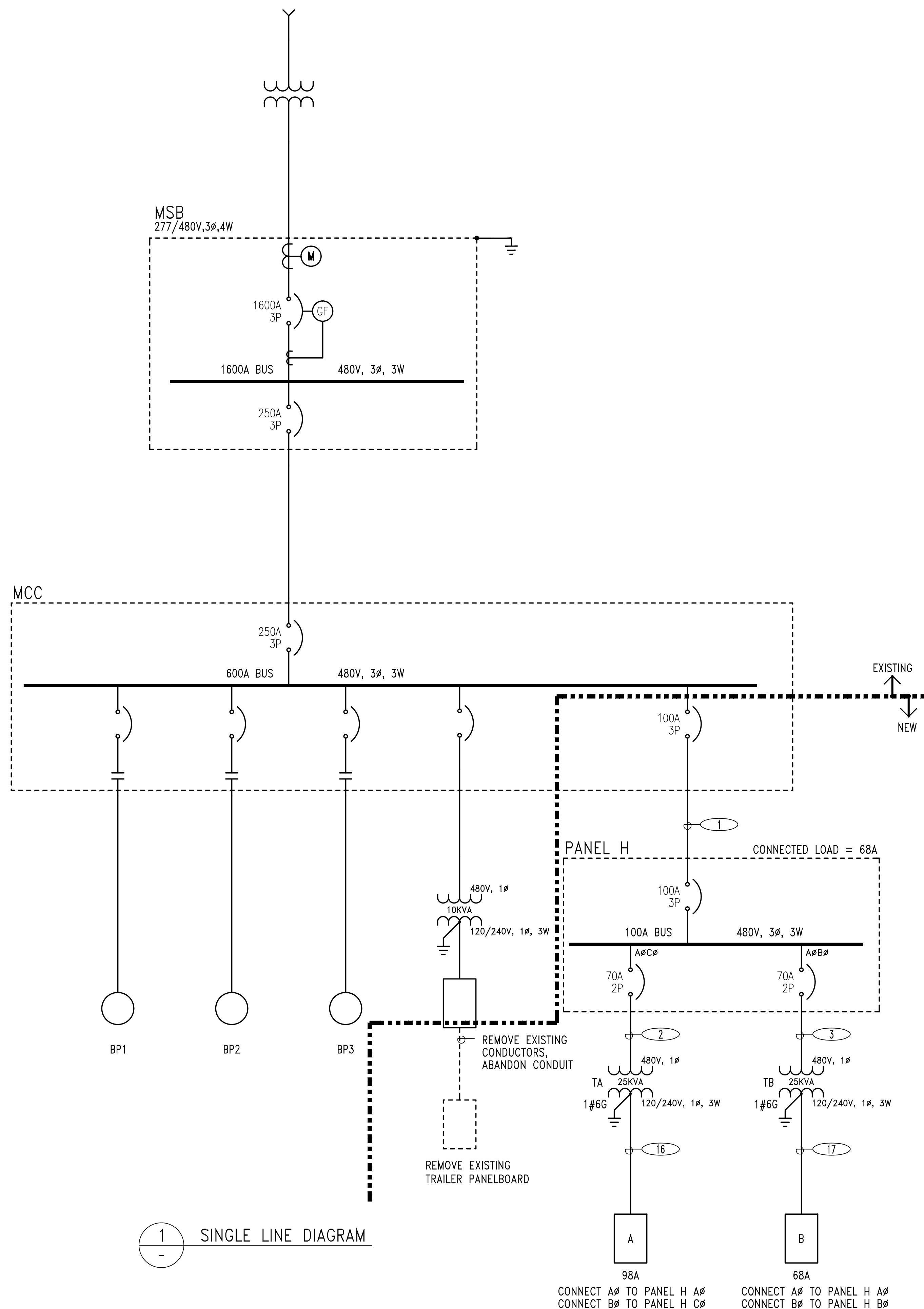
E-03  
 SHEET 17  
 OF 18

CONDUIT SCHEDULE

PLAN SYMBOL	CONDUIT		WIRE		DESCRIPTION	LOCATION		REMARKS
	Qty	Size	Qty	Size		From	To	
1	1	1 1/2"	3#1,1#6G		POWER	MOTOR CONTROL CENTER	PANEL H	
2	1	1"	2#4,1#8G		POWER	PANEL H	TRANSFORMER TA	
3	1	1"	2#4,1#8G		POWER	PANEL H	TRANSFORMER TB	
4	1	1"	2 - CAT6		CONTROL	MAINTENANCE BUILDING	TRAILER TELEPHONE BACKBOARD	CONNECT 1 TO E-NET SWITCH
5	1	1"	CONDUIT ONLY		CONTROL	MAINTENANCE BUILDING	TRAILER TELEPHONE BACKBOARD	SECURITY SYSTEM
6	1	1"	2 - CAT6		CONTROL	MAIN ELECTRICAL SERVICE BUILDING	TRAILER TELEPHONE BACKBOARD	CONNECT 1 TO E-NET SWITCH
7	1	1"	CONDUIT ONLY		CONTROL	MAIN ELECTRICAL SERVICE BUILDING	TRAILER TELEPHONE BACKBOARD	
8	1	1"	FLOWMETER CABLE		CONTROL	FLOWMETER VAULT	FLOW INDICATOR	VERIFY CABLE TYPE
9	1	1"	2#12, 1#12G		POWER	PANEL B, CIRCUIT #6 (B#)	SUMP PUMP	
10	1	1"	BELDEN CABLE		CONTROL	GATE CONTROL BOX	TRAILER TELEPHONE BACKBOARD	MATCH EXISTING
11	1	1"	CONDUIT ONLY		CONTROL	FILTER BUILDING	TRAILER TELEPHONE BACKBOARD	COX INTERNET
12	1	1"	2 - CAT 6		CONTROL	FILTER BUILDING	TRAILER TELEPHONE BACKBOARD	CONNECT 2 TO E-NET SWITCH
13	1	1"	CONDUIT ONLY		CONTROL	FILTER BUILDING	TRAILER TELEPHONE BACKBOARD	SECURITY SYSTEM
14	1	2"	CONDUIT ONLY		CONTROL	PULLBOX - COX POINT OF CONNECTION	TRAILER TELEPHONE BACKBOARD	VERIFY P.O.C.
15	1	1"	CONDUIT ONLY		CONTROL	PULLBOX - TELEPHONE CO. POINT OF CONNECTION	TRAILER TELEPHONE BACKBOARD	VERIFY P.O.C.
16	1	1"	3#1/0,1#6G		POWER	TRANSFORMER TA	PANEL A	
17	1	1"	3#1/0,1#6G		POWER	TRANSFORMER TB	PANEL B	



2 PANEL H ELEVATION  
NTS



1 SINGLE LINE DIAGRAM

**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.

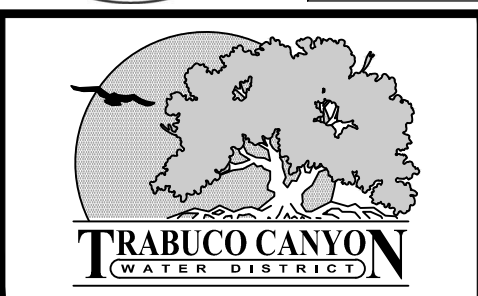
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ELECTRICAL  
EXP. 09/30/22  
STATE OF CALIFORNIA

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1200 N. Jefferson St., Unit D Anaheim, Cal. 92807 (714)632-6820

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

**TRABUCO CANYON WATER DISTRICT**  
DIMENSION WATER TREATMENT PLANT OPERATIONS TRAILER  
PROJECT NO.

SINGLE LINE DIAGRAM

E-04  
SHEET 18  
OF 18

**ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS**

**TRABUCO CANYON WATER DISTRICT**

**DIMENSION WATER TREATMENT PLANT  
OPERATIONS TRAILER**

**PROJECT NO.**

Item No.	Description	Size-Qty	Unit	Unit Price	Item Total
1	Mobilization/Demobilization	1	Lump Sum	\$ 20,000	\$ 20,000
2	Structural, Mechanical and Electrical Demolition	1	Lump Sum	\$ 16,000	\$ 16,000
3	Furnish and Construct Prepackaged Double Wide Trailer	1	Lump Sum	\$ 330,000	\$ 330,000
4	Extend Water Service and Connect to Trailer Water System Stub	1	Lump Sum	\$ 5,000	\$ 5,000
5	Extend Sewer Line and Connect to Trailer Sewer System	1	Lump Sum	\$ 10,000	\$ 10,000
6	Construct Miscellaneous Electrical and Communication Improvements	1	Lump Sum	\$ 55,000	\$ 55,000
7	All Other Work	1	Lump Sum	\$ 7,000	\$ 7,000
8	Allowance for Trailer Interior Furnishings and Upgrades	1	Allowance	\$ 10,000	\$ 10,000
<b>Total</b>					<b>\$ 453,000</b>

**COST ESTIMATE IN BID FORM**

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | MARCH 2, 2022**

**ENGINEERING MATTERS**

**ITEM 3: DISCUSSION AND POSSIBLE ACTION(S) CONCERNING BELL CANYON SEWER LIFT STATION REHABILITATION PROJECT**

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

September 2019 the Station failed and it was rehabilitated/replaced over the course of two years. The final construction report is attached as Exhibit 1. The following are the final project costs:

<b>BELL CANYON LIFT STATION REHABILITATION PROJECT COSTS-UPDATED</b>		
<b>ITEM</b>	<b>TASK DESCRIPTION</b>	<b>BUDGET</b>
1	Construction Contract – Ferreira Construction (FINAL)	<b>\$1,578,695</b>
2	Geotechnical Services/Vibration Monitoring - GMU Geotechnical	<b>\$13,250</b>
3	Engineering Design/Services During Construction – JIG Consultants	<b>\$141,765</b>
4	Construction Management/Inspection-Butier	<b>\$180,830</b>
5	Design Site Survey/Construction Monitoring – DMc Engineering	<b>\$28,280</b>
6	Easement Procurement - DMc Engineering/CPSI Right-of-Way Services	<b>*\$7,500</b>
7	Service/Meter Plan/Arc Flash Study - SCE	<b>\$4,313</b>
Total:		<b>\$1,954,633</b>

*\*Estimated*

**FUNDING SOURCE:**

Emergency Reserves

**FISCAL IMPACT:**

*\$1,955,000*

**ENVIRONMENTAL COMPLIANCE:**

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

**RECOMMENDED ACTION:**

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

**EXHIBIT(S):**

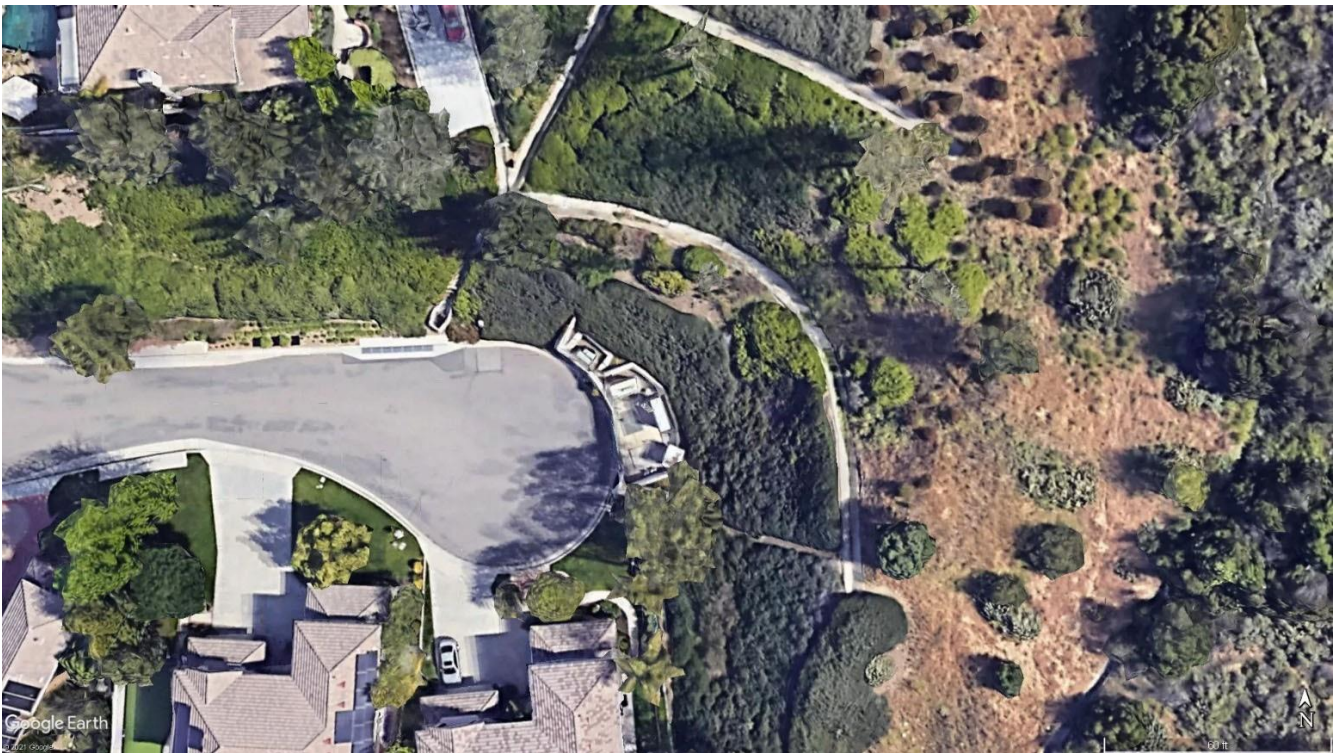
1. Monthly/Final Construction Report

**CONTACTS (staff responsible): LAUSTEN**

# Bell Canyon Lift Station Rehabilitation Project

## TCWD Project No. 1920-022

Construction Report  
January - February 2022  
Final Report



**I. GENERAL PROJECT INFORMATION**

<i>Contract</i>	Bell Canyon Lift Station Rehabilitation Project
<i>Contractor</i>	FERREIRA Construction
<i>Contract Time</i>	
Original Calendar Days:	180 Calendar Days from Notice to Proceed
Notice of Award:	June 15, 2019
Notice to Proceed:	June 29, 2020
Original Contract Completion Date:	December 26, 2020
Allowed Calendar Days via Change Orders:	217 Days
Revised Completion Date via Change Orders:	July 31, 2021
Weather-Related Delay Days:	5 Days
 <i>Contract Price</i>	
Original Contract Amount:	\$1,496,228.00
Approved Change Order Amount:	\$82,467.00
Revised Contract Amount:	\$1,578,695.00

## **II. CONSTRUCTION MANAGER SUMMARY**

This report provides a summary of activities for the month of January and February 2022 for the Bell Canyon Lift Station Project.

Within January 2022, FERREIRA Construction (FERREIRA) completed efforts to install the 10-foot swing gate and replacement of the fence panels adjacent to the transformer and generator; and replacement of the mesh screen on the double swing gate to adhere to contract plans and specifications.

Additionally, within the work to replace the 10-foot man gate included, adding L-Brackets to existing posts and masonry walls, removing the existing post and foundation, and extending post adjacent to masonry wall and constructing a new deeper post to accommodate the extended gate.

Through the end of February 2022, FERREIRA continued to finalize items at the Bell Canyon Lift Station to include remediating the welding of a few locations such as the hinges to the 10-ft gate, hinges at the existing swing gate, and hasp lock connection points. Additionally, FERREIRA finished the touch up paint on the fence and gates, completed the remaining punch list items, clean-up, and demobilization.

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

The following work activities were performed during this reporting period:

- Replace swing gate to 10-foot height
- Replacement of Existing 6-inch square post with new post to match gate and perimeter fence
- Remove existing post foundation and construct new post surrounded by 2500 psi concrete
- Extend existing 6-inch post to height to match perimeter fence adjacent to masonry wall
- Replace side fence to match height of back fence
- Secure posts to existing masonry walls
- Replace perforated metal screen to conform to project plans and specifications
- Install Metal TCWD Sign on Gate
- Remediation of Concrete Patch at New Gate Post
- Final Touch-up Paint on Fencing & Gates
- Final Punch List Items
- Final Clean-Up and Demobilization

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

No work activities anticipated in the next reporting period.

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**V. CONTRACTOR SUBMITTALS**

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

	Lift Station
Prior Submittals	70
Submittals Received This Period	2
<b>TOTAL SUBMITTALS</b>	<b>72</b>

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

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

	Lift Station
Prior RFIs	37
RFIs Received This Period	0
<b>TOTAL RFIs</b>	<b>37</b>

**VII. CHANGE ORDERS**

No approved change orders were issued to FERREIRA during this reporting period. However, since the last monthly report TCWD has approved a Change Order Request for the modification to the wrought iron gate in front of the generator, which was an HOA request. Additionally, TCWD approved a Change Order Request for the additional rental of the sewer bypass equipment and de-ragging efforts while the Bell Canyon Lift Station was under construction. No additional contract duration was added with these change orders.

**VIII. SCHEDULE**

Substantial completion of the project was July 31<sup>st</sup>, 2021. The work that occurred this month was change order work and final punch list repair items.

**IX. PHOTOS**

Construction photos documenting the FERREIRA's activities and progress during this reporting period are provided in **Appendix A**.

**X. BELL CANYON MONITORING**

Vibration Monitoring at the residence of 95 Bell Canyon was performed by GMU Geotechnical on January 12<sup>th</sup>, 2022, to ensure construction activities did not produce any vibration disturbances to the residences during demolition activities. Monitoring field surveys are being performed by DMC Engineering on a periodic basis through the duration of the Project. Monitoring surveys were performed on February 26<sup>th</sup>-, March 10<sup>th</sup>-, March 17<sup>th</sup>-, April 14<sup>th</sup>-, and April 23<sup>rd</sup>-2021. The results between these dated Surveys reflected between +0.03-foot and -0.02-foot on established points, and a Monitoring Survey Exhibit is provided in **Appendix B**.

## **APPENDIX A**

### **Construction Photos**



**Project Overview as of January 11, 2022**



**FERREIRA Removing Existing Swing Gate to Replace Perforated Metal Screen and Powder Coat**



**GMU Placing Vibration Monitoring at 95 Bell Canyon**



**FERREIRA Removing Existing Swing Gates**



**Removing Existing Pole to Deepen Foundation**



**Installation of 10-foot Man Gate**



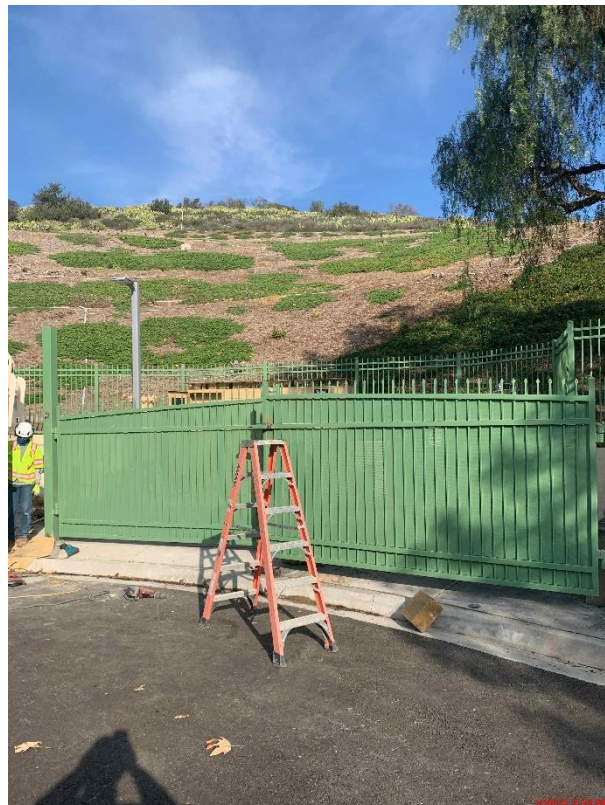
**Welding Hasp Lock and Slide Bolts to Man Gate**



**Swing Gates Re-installed with New Perforated Metal Screens**



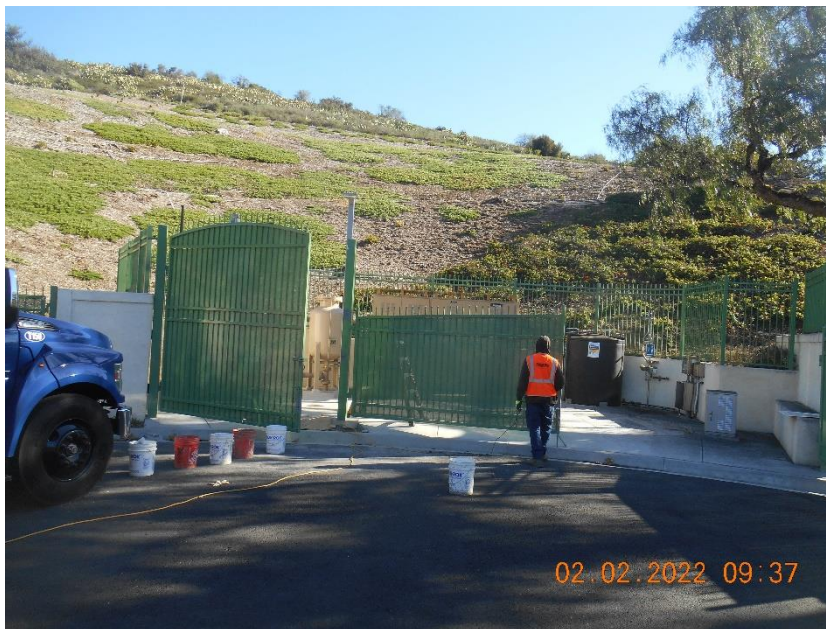
**Gates Installed and Post Extended**



**Swing Gate Installation Complete**



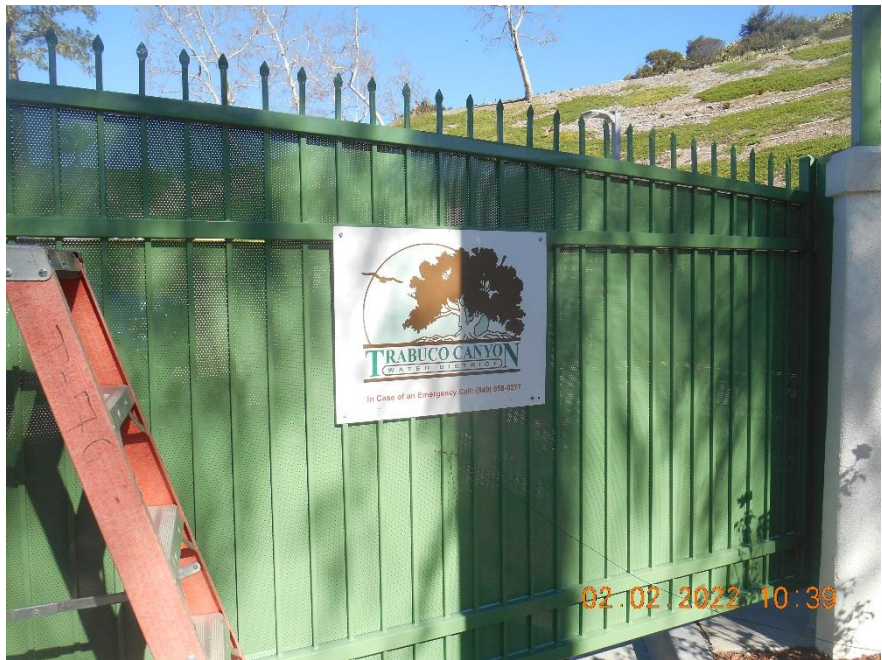
**Concrete Apron Remediation Complete Around New Post**  
– Broom Finished to Match Existing



**Contractor Touching Up Paint at Gates and Fence**



**Contractor Final Clean Up of Site**



**TCWD Metal Sign Installed on Swing Gate**

## APPENDIX B

### Monitoring Survey Exhibit

# EXHIBIT "A"

## BELL CANYON MONITORING POINTS

PREPARED FOR:

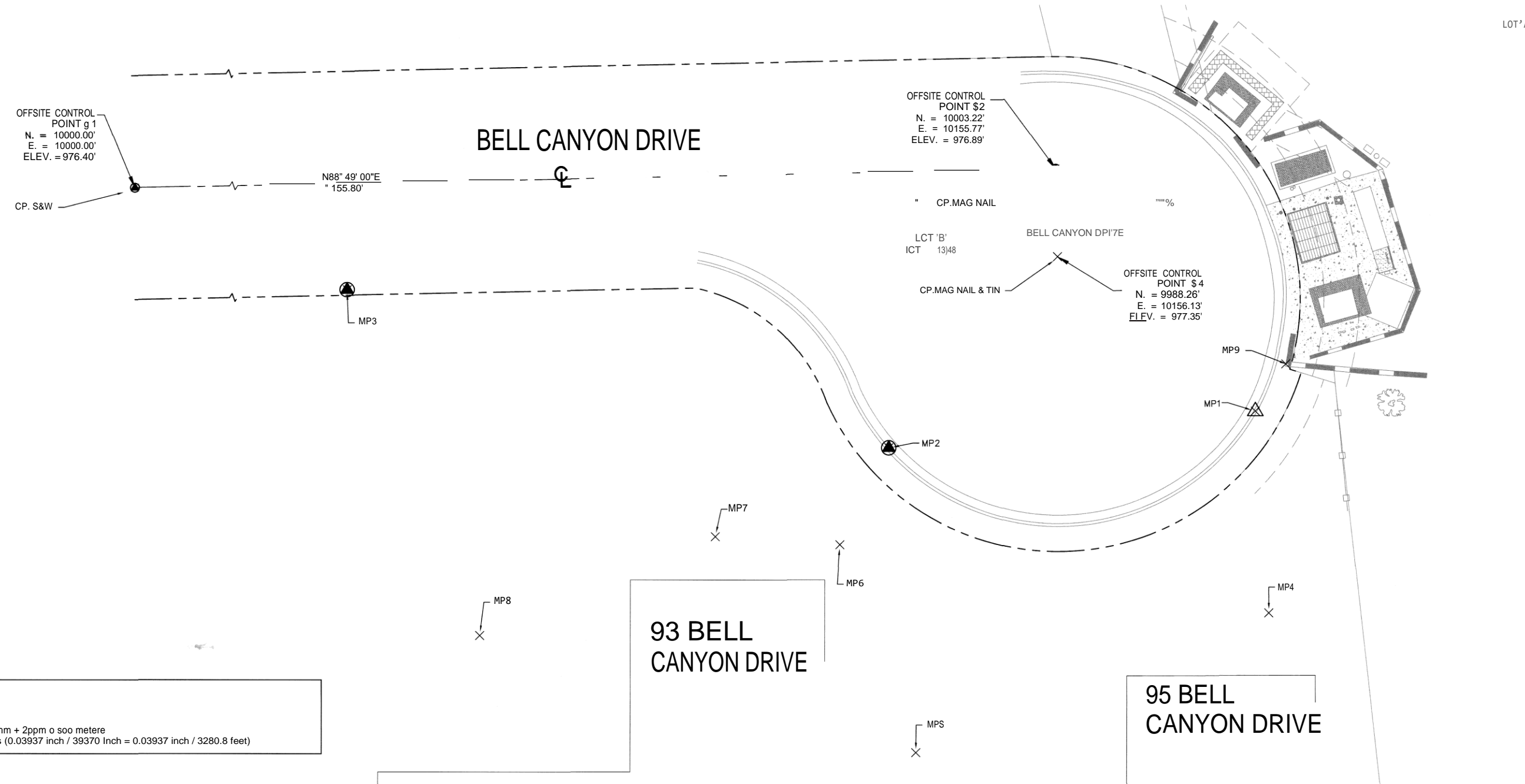
## TRABUCO CANYON WATER DISTRICT

32003 DOVE CANYON DRIVE  
TRABUCO CANYON, CA 92679

PHONE: (949) 858-0277

FAX: (949) 858-3025

OFFSITE CONTROL POINT #3  
N. = 10051.63'  
E. = 10204.14'  
ELEV. = 997.37'  
60d SPKE NEXT TO V GUTTER



**LEGEND**

**SYMBOLS**

△ SCMBED 'X' IN TC  
● FO 'X' IN TC

**LINE TYPES**

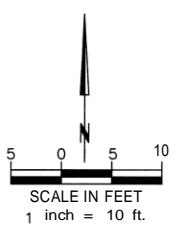
— PROPER LINE  
- - - CENTERLINE

**ABBREVIATIONS**

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

**SURVEY INSTRUMENT USED:**  
LEICA TC RP 1203T R400  
SERIAL NO. 269016  
ACCURACY — atd. dev. ISO 17123—4: 2mm + 2ppm o soo metere  
ppm = parts per million = mm/1000 metefs (0.03937 inch / 39370 Inch = 0.03937 inch / 3280.8 feet)

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



PREPARED BY:

**DMc ENGINEERING**  
21UL n SURVEYING n BLAMINE n CONSTRUCTION  
18 Technology Drive, Suite 100, Irvine, CA 92618  
E-Mail: dmc@dmcceng.com (949) 753-9393

05.25.21  
04.27.21  
04.16.21  
03.16.21  
03.13.21  
03.01.21

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | MARCH 2, 2022**

**ENGINEERING MATTERS**

**ITEM 4: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES**

---

1. Golf Club Lift Station Motor Control Center Upgrade
2. Saddleback Meadows Development
3. Saddlecrest Development
4. 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 | MARCH 2, 2022**

**OPERATIONAL MATTERS**

**ITEM 5: WATER SYSTEM UPDATES**

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The following is a brief report of the water system for **February 2022**.

**Projects and Repairs**

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

1. Repaired a one-inch service line on Rose Canyon located in the Canyon Community.
2. Replaced a customer curb stop on Long Ridge Drive in the Trabuco Highlands Community.
3. Worked with Ferreira Construction to replace a 3-valve cluster on Long Ridge Drive and Lark Grove Circle in the Trabuco Highlands Community.
4. Worked with the Meter department to replace a three-inch meter to O'Neil Park.

**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													
<b>DIMENSION WTP</b>													
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
SAC METER AC/FT													0
BACKWASH AC/FT	4												4
FLUSHWATER AC/FT	6												6
WTP EFFLUENT AC/FT	141												141
<b>WELLS</b>													
TRABUCO CREEK GWTF	0												0
US WELL AC/FT	0												0
<b>AMP WATER</b>													
SMWD AC/FT	0												0
IRWD AC/FT	3												3
<b>TOTAL SUPPLY</b>													
AC/FT	144												144
CFS DAILY AVERAGE	2.3												2.3
AC/FT PER DAY	4.6												4.6
<b>OPERATIONS in GAL.</b>													
WTP DOMESTIC	38,672												38,672
WWTP DOM	710												710
<b>OPERATIONS (AF)</b>													
SUPPLEMENT TO RW	0												0
<b>LOSSES in GAL.</b>													
FLUSHING (gal.)	0												0
SEWER CLEANING (gal.)	5,000												5,000
LINE BREAKS (gal.)	100,000												100,000
<b>SYSTEM DEMAND **</b>													
CFS DAILY AVERAGE	2.3												2.3
AC/FT PER DAY	4.6												4.6
<b>RESERVOIR STORAGE</b>													
MONTHLY AVG (MG)	8.8												9
DAYS OF STORAGE	3												3
<b>ZONES (AF)</b>													
RIDGELINE PS	130												130
EL TORO P.S.	3												3
TOPANGA	2												2
FALCON	0.4												0
ROSE PRV/ OAKS	3												3
CANYON CREEK	0.2												0
ROSE P.S.	0.4												0
ROBINSON RANCH	32												32
DOVE CANYON	59												59
PORTOLA HILLS	10												10
* Usage estimated new meter installed													
** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)													

**TRABUCO CANYON WATER DISTRICT  
ENGINEERING/OPERATIONAL COMMITTEE MEETING | MARCH 2, 2022**

**OPERATIONAL MATTERS**

**ITEM 6: WASTEWATER SYSTEM UPDATES**

The following is a brief report of the wastewater system for **February 2022**.

**Projects and Repairs**

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

1. Replaced the worn chlorine lines and valves for the recycled effluent disinfection located in the chloring building at the Robinson Ranch Wastewater Plant.
2. Installed a Reverse Osmosis system to create distilled water for lab procedures at the Robinson Ranch Wastewater Plant.
3. Repaired a four-inch reclaim main line to the Robinson Ranch Wastewater Plant.
4. Worked with TESCO to upgrade and test the emergency call out system.

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

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

<b>Sewer System Management Plan (SSMP) Monthly Update</b>	
Total Sewer Line, Feet*	210,495
<b>Total Sewer Line Cleaned (Ft) – Month</b>	<b>10,562</b>
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	108,195
Cleaning Cycle Period (Mos.) [Start date: 8/9/21]	5
<b>Total Sewer Line Cleaned, %</b>	<b>51%</b>
The Oaks at Trabuco – Pumping Frequency for the Month	12
O’Neill Park Sewer System Status	Ok
O’Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	1Q 2022
SSMP Program Audit – <i>Next Audit Report**</i>	March 2022

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

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

**Monthly Recycled Water System Operations Summary**

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

**RECOMMENDED ACTION:**

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

**EXHIBITS**

1. Monthly Recycled Water System Operations Summary

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

**TRABUCO CANYON WATER DISTRICT | NON-DOMESTIC WATER SYSTEM SUMMARY - 2022**

<b>RECYCLED WATER SUPPLY</b>															
	MAX	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	49.9												49.9	534.4
Reclaimed Reservoir Level, FT	1274.5	1,273.8												-	-
Reclaimed Reservoir Free Board, FT	25.5	0.7												-	-
Reclaimed Reservoir Storage, AF	145.5	138.6												-	-
Supplemental Domestic Water Added, AF	N/A	0.0												0.0	44.5

<b>RECYCLED WATER SYSTEM DEMAND</b>															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.2												0.2	2.3%
Dove Canyon Golf Course	106.7	5.8												5.8	5.5%
Dove Canyon Master Association	279.3	13.0												13.0	4.7%
Robinson Ranch	80.2	0.8												0.8	1.0%
Trabuco Highlands	159.7	1.2												1.2	0.8%
City of RSM	0.1	0.01												0.01	3.8%
Construction Water	N/A	0.0												0.0	N/A
Sakaïda Nursery	1.1	0.0												0.0	0.0%
SMWD	N/A	0.0												0.0	N/A
TY Nursery	17.9	0.0												0.0	0.0%
<b>TOTAL, AF</b>	<b>653.2</b>	<b>21.1</b>												<b>21.1</b>	<b>3.2%</b>
<b>PERCENTAGE OF NDW ALLOCATION/YEAR</b>		<b>3.2%</b>													
<b>TOTAL ANNUAL AVG. NDW AVAILABLE**</b>	<b>774.36</b>														

<b>URBAN RUNOFF CAPTURE AND REUSE</b>															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.01												0.01	14.2
Dove   Tick Creek Production*	Dry Season	7.4												7.4	58.8
	TCWD Portion	7.4												7.4	-
	SMWD Portion	0.0												0.0	-
Dove Lake Water Pumped		0.0												0.0	185.8
Dove Lake Free Board, Ft		3.9												-	-
Dove Lake Storage, AF		161.0												-	-
Total Rainfall, In.		0.0												0.0	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 | MARCH 2, 2022**

**OPERATIONAL MATTERS**

**ITEM 7: MAINTENANCE DEPARTMENT UPDATES**

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The following is a brief report of the wastewater system for **February 2022**.

**Projects and Repairs**

Maintenance staff performed and/or completed the following tasks and projects:

1. Delivered the new service truck to the Water department.
2. Performed various upgrades to service truck #6.
3. Conducted annual preventative maintenance on the emergency generator's with Duthie Power Services.
4. Assisted Hydrotech Electric with troubleshooting the Canyon Creek Booster Pump Station hydropneumatics system.
5. Worked with TESCO Controls on communication towers.
6. Assisted the Sanitation department on the recycled supply pipeline repair at the Robinson Ranch Wastewater Treatment Plant.

**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 | MARCH 2, 2022**

**REGULATORY AND OTHER MATTERS**

**ITEM 8: OTHER MATTERS/REPORTS**

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

**RECOMMENDED ACTION:**

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

**EXHIBITS**

None

**CONTACTS (staff responsible): PALUDI**