



SD428 MWWTP Oxygen Plant Rehabilitation

Pre-Bid Conference

July 30, 2024

9:00am – 11:00am

EBMUD Project Number:

2014270

2020260:32

- **Work at the O2 Plant**
 - Important facility used to produce oxygen for treatment of wastewater
 - Two-year project with many constraints and outages
- **District and Consultant team for CM and inspection**
- **Work includes:**
 - Controls upgrades, MAC motor replacement, DCS work, electrical testing, fire and fall protection improvements, replacement of perlite and vermiculite, and coating for lower part of cold boxes
- **Key administrative requirements for bidding and details for work on the project will also be covered**

- **Construction Manager**
 - ❖ Dominic La Marche, (510) 882-6897
 - ❖ John Law, (510) 287-7186 (ESDC)
- **Construction Inspector**
 - ❖ Don Pluth, (510) 908-0970
 - ❖ Ryann Warren, (510) 920-6873
 - ❖ Bill Chaffer, (510) 915-7543 (supervising inspector)
- **Contract Equity Administrators**
 - ❖ Beverly Johnson, (510) 287-0142
 - ❖ Carlynn Wooten, (510) 287-0152

- **Refer to Specification Section (SS) 00 43 39**
 - ❖ Good Faith Outreach Efforts
 - ❖ Equal Employment Opportunity
 - ❖ Contract Compliance
- **Submit P-025 (Employment Data & Certification) and P-046 (Designation of Subcontractors) with bid**
- **Apparent low bidder must submit P-025, P-040, P-041, P-042, and Good Faith Outreach Efforts within 48 hours after bid opening**
- **Apparent low and second low bidders must submit P-040 and P-042 within 48 hours after bid opening**

BID AND AWARD SCHEDULE



BID ADVERTISED:	Friday, July 19, 2024
BIDS DUE:	Wednesday, September 11, 2024 at 1:30 PM To: EBMUD, Purchasing Division 375 11 th Street, <u>First</u> Floor Oakland, CA 9467
BID OPENING:	Immediately following bid deadline at: EBMUD Board Room 375 11 th Street, <u>Second</u> Floor Oakland, CA 9467
ANTICIPATED BOARD AWARD:	October 22, 2024
ANTICIPATED Notice-To-Proceed (NTP):	January 2025
ANTICIPATED MOBILIZATION:	April – May 2025

- **Self-printed hardcopies are allowed. Forms must still be wet signed.**
- **Bid Documents**
 - ❖ SS 00 21 13 – Bidder’s Checklist (48-hour Docs)
 - ❖ SS 00 41 02 – Bid Form
 - ❖ SS 00 41 05 – Proposal, SS 00 43 13 – Bidder’s Bond, SS 00 45 19 – Declaration of Noncollusion, SS 00 45 46 – Dec to Work on Public Works, CEP forms
 - ❖ SS 00 45 13.01 – Supplementary Bidder’s Qualifications
 - ❖ Perlite removal/cleaning firm
 - ❖ Perlite supplier
 - ❖ Perlite installer (A or C-2)
 - ❖ Main Air Compressor Motor installer
 - ❖ Coatings firm (C-33)

- **Bid Documents**

- ❖ SS 01 75 17 – Cryogenic oxygen specialist
- ❖ SS 21 13 00 – Fire protection installer qualifications (C-16)
- ❖ SS 40 81 00 – System Integrator qualifications
- ❖ Addenda Acknowledgement

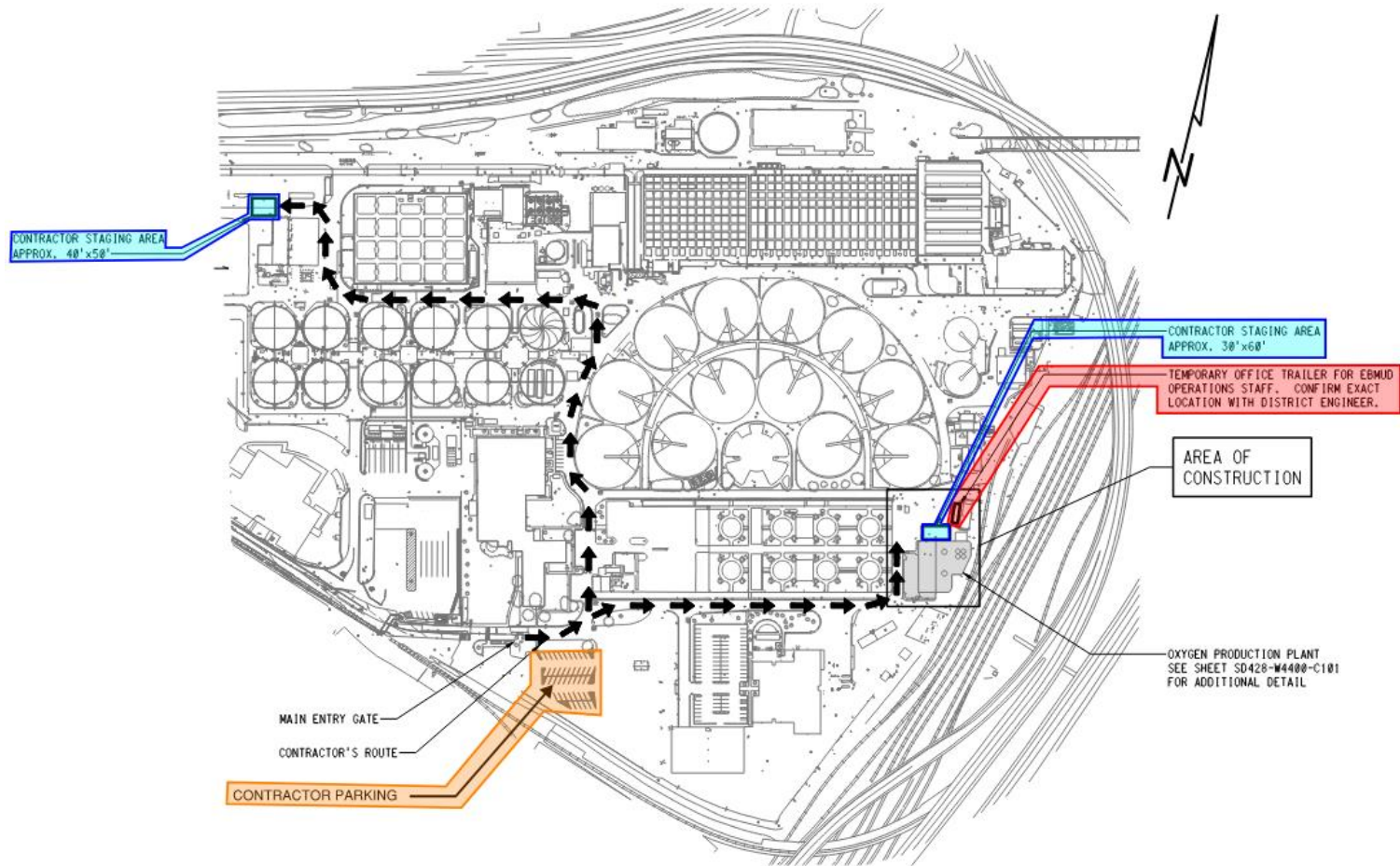
PROJECT DESCRIPTION



- **BID FORM (00 41 02)**
 - Mobilization and demobilization
 - Other work: fire protection and alarm, seismic retrofit of panels, etc.
 - Oxygen plant 1 controls
 - Oxygen plant 2 controls
 - Cold box coatings (per plant, 2 total)
 - Main air compressor motor installation (per motor, 4 total)
 - Perlite work (per plant, 2 total)
 - Leak testing and oxygen pipe cleaning
 - Allowances
 - Partnership, unforeseen site conditions, additional hazardous materials, final record drawings, correcting electrical, relocating items

PROJECT DESCRIPTION

- **MOBILIZATION**



SITE PLAN
NOT TO SCALE

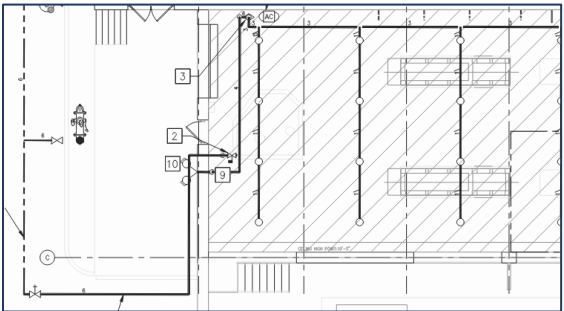
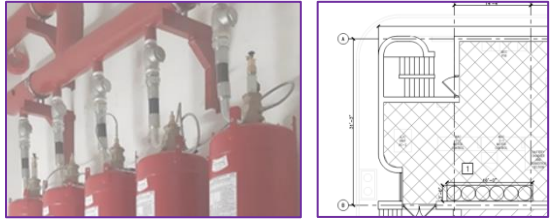
- **Red** – temporary trailer for EBMUD Ops
- **Blue** – Contractor staging
- **Orange** – Contractor parking

PROJECT DESCRIPTION

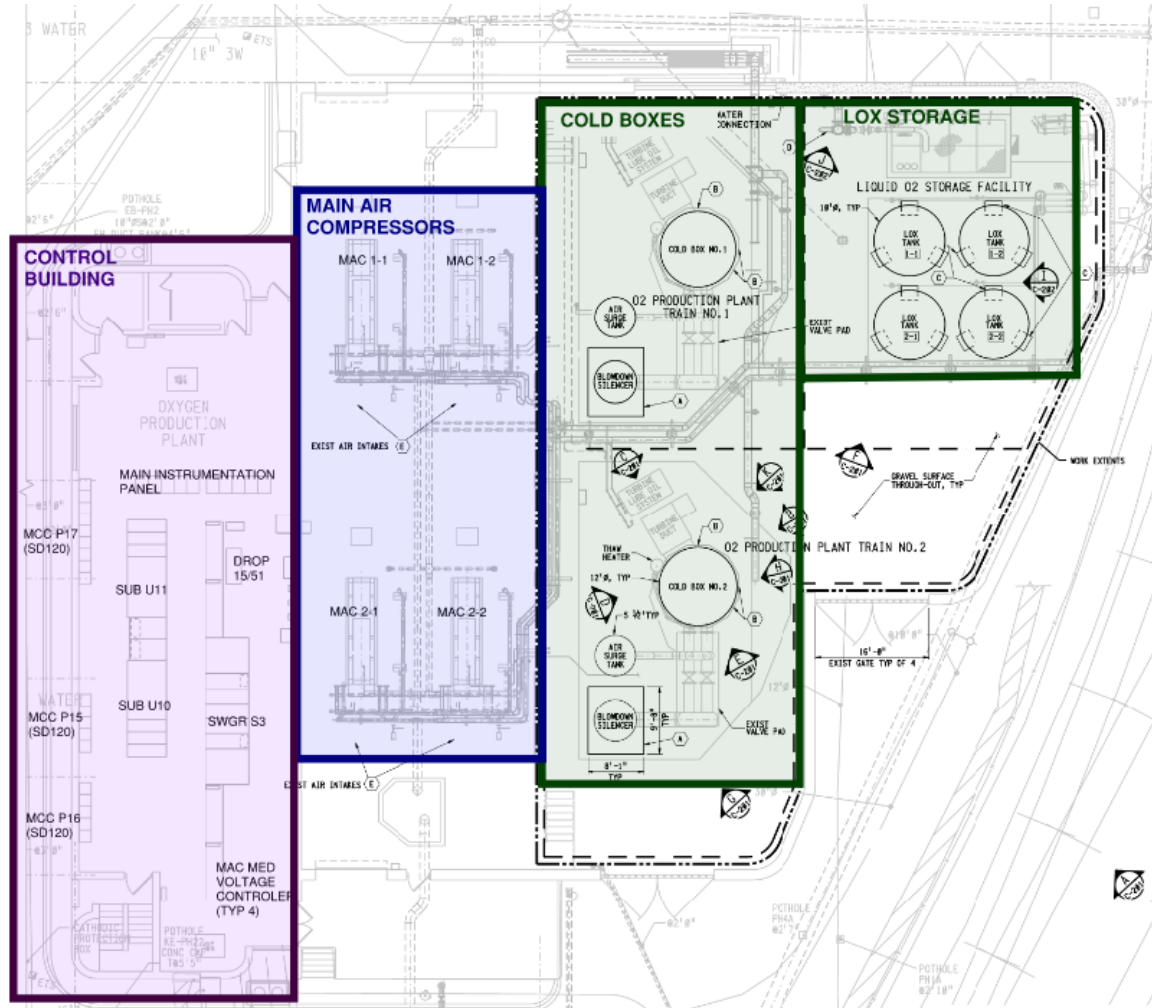
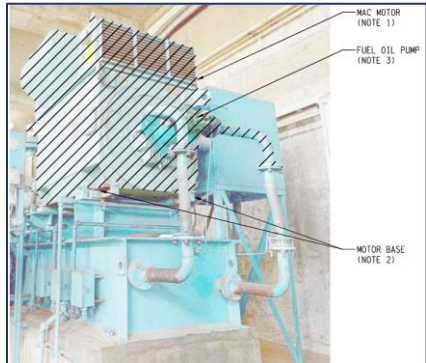


- SCOPE OF WORK

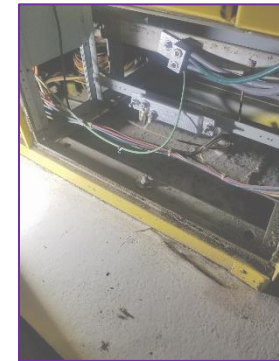
Fire protection



MAC motors upsize



Electrical enclosures bracing



Breaker testing, thermographic survey



- **PRECONSTRUCTION MEETINGS AND HANDOFFS**
 - Demolition of cold box controls
 - Coatings
 - Cold box perlite and vermiculite removal
 - Main air compressor (MAC) motor replacement
 - **HANDOFF:** four MAC motors, half couplings, triaxial accelerometers (01 64 01)
 - DCS equipment and system integration
 - **HANDOFF:** DCS hardware, bill of materials TBD (01 64 03)
 - O2 Plant performance testing and 90-day commissioning test
 - **HANDOFF:** demoed cold end check valves (District to refurbish, 01 35 13)

- **OXYGEN SERVICE SAFETY**

- Pipe cleaning

- All high purity oxygen and liquid oxygen piping that is taken out of service needs to be cleaned in accordance with ASTM-G93-03 (01 35 13)

- Welding

- Monitor atmosphere when doing any welding near cold boxes (05 05 24)
 - Notify District to shut off running O2 plant

- Leak testing

- Need to leak test isolated systems and entire system before returning processes to service (01 75 17)

- Leak repair

- Existing leaks or old valves – by allowance
 - Damage by Contractor – by Contractor

PROJECT CONSTRAINTS



- **Critical Submittals Required Following NTP:**
 - ❖ Safety Records for past 3 years (00 73 05)
 - ❖ Schedule of Costs, following approval of schedule (01 29 00)
 - ❖ CPM Construction Schedule (01 32 00)
 - ❖ Schedule of Submittals (01 33 00)
 - ❖ Project Safety and Health Plan (01 35 24)
 - ❖ Water Control and Disposal Plan, Spill Prevention and Response Plan and Dust Control and Monitoring Plan (01 35 44)
 - ❖ Contractor Badge Request Forms (01 35 53)
 - ❖ Certified Payroll (01 31 23.15)
 - ❖ Notice to commence field work will be issued 60 calendar days after NTP
 - ❖ Handoff of O2 Plant 2 begins 1-year construction duration – Contractor to let us know when to handoff

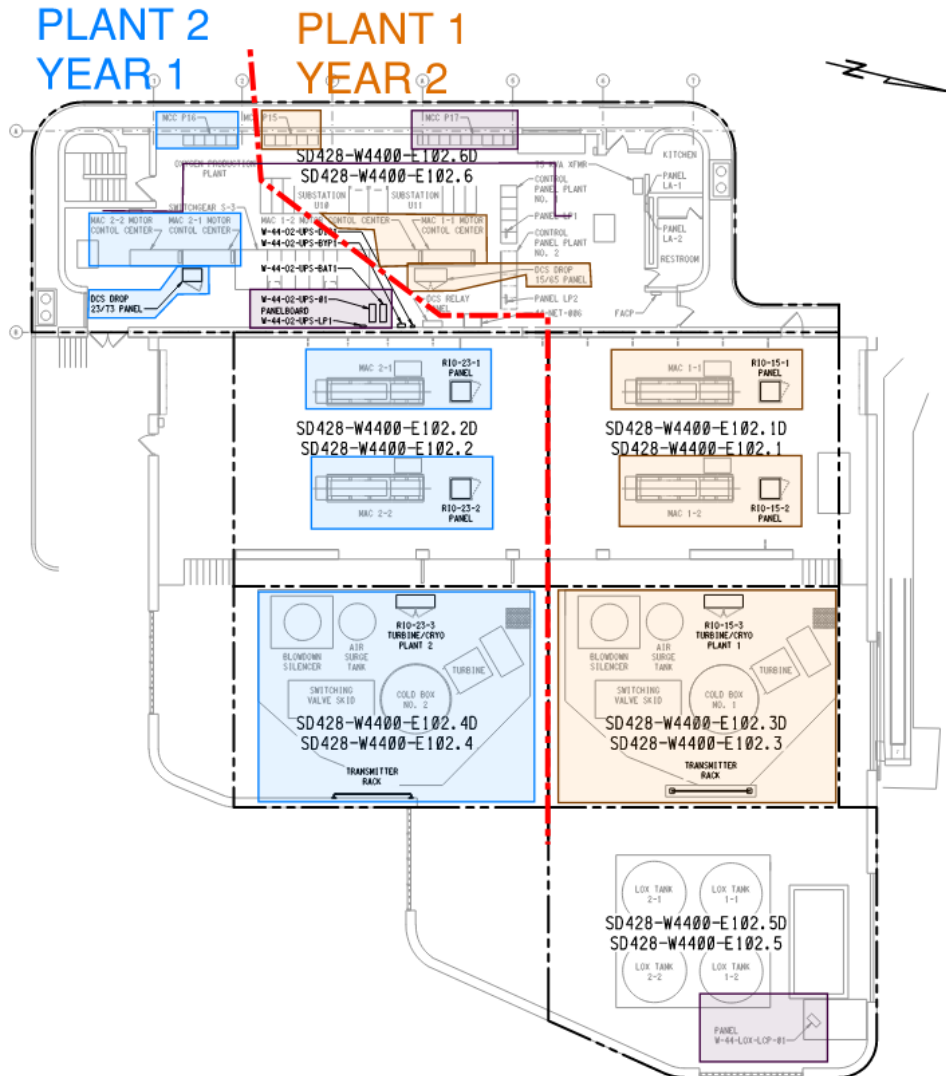
- **Refer to Supplementary Requirements (00 73 05)**
- **Milestones Following NTP:**
 - ❖ Ready for Integration Programming = 365 calendar days
 - ❖ Operational Completion = 730 calendar days
 - ❖ Contract Final Completion = 790 calendar days
 - ❖ Bid shall include sufficient overhead for full contract duration
- **Liquidated Damages (LD's):**
 - ❖ \$8,000/day for “ready for integration programming” and operational completion (LD's for each plant)
 - ❖ Cost of liquid oxygen deliveries for O2 plant turnarounds (typ. 6 trucks/day for 5 days)
 - ❖ \$4,000/day for final contract completion, until Final Acceptance

- **Work Restrictions (01 14 00)**
 - ❖ Work Hours: Monday – Friday, 7:00 AM to 3:30 PM
 - ❖ No work on District Holidays (14 per year)
 - ❖ Overtime work that is requested by the Contractor will incur District inspection cost at the Contractor's expense. Refer to cost table in specifications
 - ❖ Coordination around other projects at MWWTP is required
- **System Outage Request (SOR) is required for O2 Plant Handoff, MAC handoff, LOTO and road closures**

- **Outage Limitations (01 35 13):**
 - ❖ Five days minimum notification for temporary road or access closures
 - ❖ SOR due two weeks (or more) before any shut downs
 - ❖ Maximum duration of any outages shall be **four** hours unless specified otherwise
 - ❖ Outages shall not occur on consecutive days and shall be limited to 2 in any given 7 day period
 - ❖ See critical list of SORs in Paragraphs 1.3 and 1.4

SPECIAL PROJECT PROCEDURES

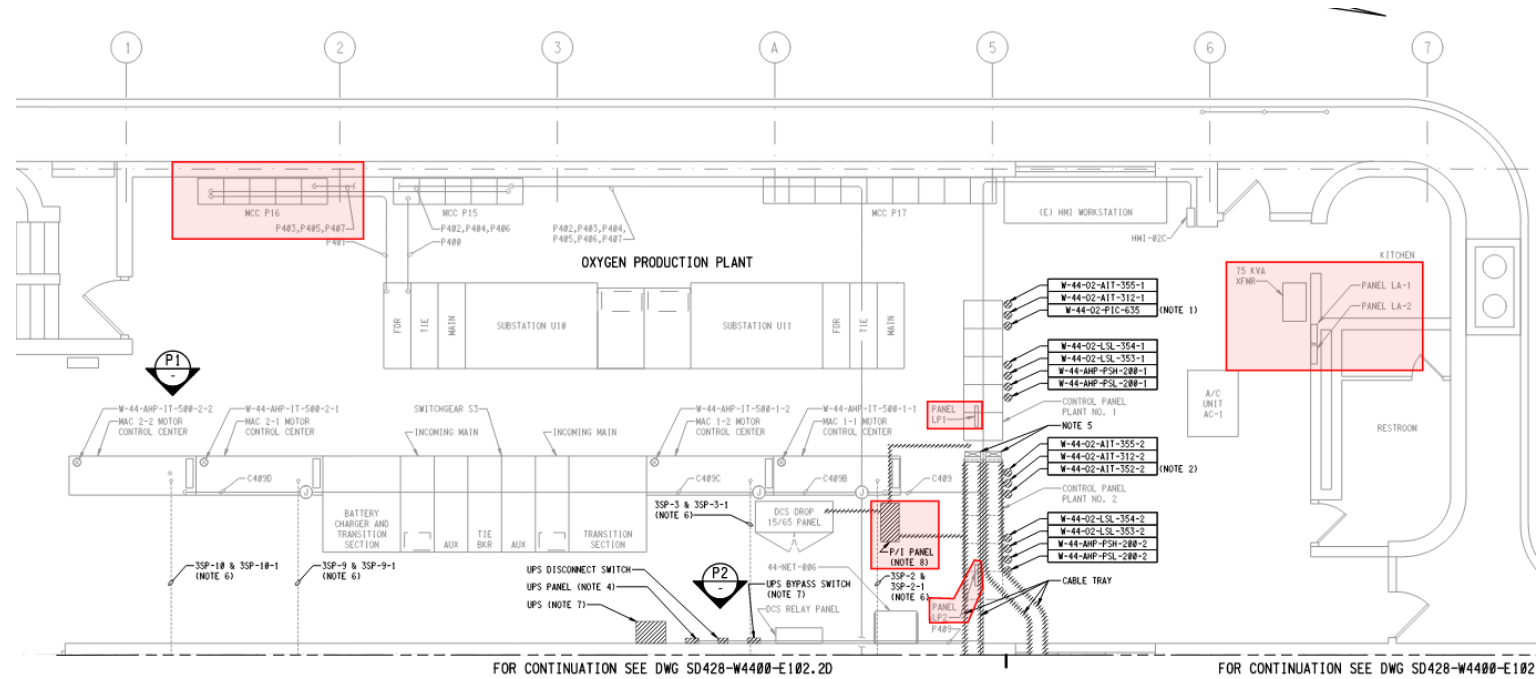
- **SEQUENCING**



- Outage: 365 days for each Plant
- Start with Plant 2 first:
 - MCC P16
 - MAC 2-1, 2-2 (one at a time)
 - Drop 23/73
- Plant 1 after:
 - MCC P15
 - MAC 1-1, 1-2 (one at a time)
 - Drop 15/65
- After bulk controls complete:
 - MCC P17 (night work only)
 - LOX single loop backup controller
- Flexible
 - Fire protection, UPS

SPECIAL PROJECT PROCEDURES

- **FIELD VERIFY BEFORE DEMO**



- Protect P/I panel wires to Main Control Panel 1 during Plant 2 work
- Protect controls for Plant 1 until start-up of Plant 2 complete
- Provide temporary power if equipment can't be taken out of service for extended durations
- Maintain access to bathroom, control panel

- Verify power sources to Main Control Panel 1

- **Contractor superintendent must be technically qualified and English-speaking, and shall be on-site at all times and shall have authority to act on behalf of Contractor.**
- **Field Testing and Startup:**
 - ❖ Submit a detailed Facilities Startup Plan not less than 90 days prior to initial equipment or system start up (01 75 17)
 - ❖ Contractor must perform functional, performance, and operational testing for all installed equipment (01 75 17)
 - ❖ Perform training of District personal for furnished or installed equipment, systems and facilities operation (01 79 00)
 - ❖ Coordinate with District's Equipment Prepurchase vendors

OTHER REQUIREMENTS



- Prevailing Wages (00 72 00, Article 12)
- Insurance Requirements (00 62 00)
- Submittal Procedures (01 33 00)
- Construction Management Info System: Kahua (01 31 23.10)
- Job Hazard Analysis (01 35 24)
- Use LCPtracker for Certified Payroll (01 31 23.15)
- Daily Sign-In Log submittal to District Daily (01 35 53)
- Standard District Forms (RFI, SOR, COR, Safe Work Permit, Hot Work Permit)

- **Please:**
 - ❖ Wear closed-toe shoes
 - ❖ Complete the photo confidentiality agreement
 - ❖ Complete the voluntary assumption of risk and indemnity agreement
 - ❖ No photos, EBMUD will take photos and make photos available to attendees
 - ❖ Not allowing anyone to climb up to top of cold boxes

BIDDER'S QUESTIONS

EMAIL questions to
jlaw@ebmud.com

WRITE questions down at
end of site walk



**FLOWING
INTO
THE
FUTURE**