

# WESTHAVEN COMMUNITY SERVICES DISTRICT

P.O. Box 2015 (446 B 6th Ave. Westhaven) Trinidad CA 95570 (707) 677-0798 wcsd@suddenlinkmail.com

## SPECIAL BOARD MEETING AGENDA

A *Special Meeting* of the Board of Directors of the Westhaven Community Services District will be held **Tuesday, August 29th**, at **6:30 p.m.** the meeting will be a hybrid meeting: in person at the **Westhaven Fire Hall** and via **Zoom** videoconferencing. **By ZOOM meeting:**

Topic: Special Meeting of WCSD

Time: Aug 29, 2023 06:30 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://humboldtstate.zoom.us/j/81962452844>

Meeting ID: 819 6245 2844

Passcode: 689753

Audio only:

Dial:+1 669 900 6833 US (San Jose)

Enter Meeting Number (if requested) and Passcode (if required)

**1. CALL TO ORDER**

**2. PUBLIC COMMENT**

Members of the public are invited to comment on any matter within the authority of the WCSD. Board discussion of matters not appearing on the published agenda is prohibited by law.

**3. Items Relevant to Adoption of the Pace engineering contract for the Surface Water Treatment Plant project.**  
3.1 Adoption of contract with Pace Engineering **Discussion/approval.**

**4. PRESENTATION BY PACE ENGINEERING ABOUT THE NEW SURFACE WATER TREATMENT PLANT**

4.1 Questions about the Zoom Presentation by Tom Warnock district engineer (Pace Engineering) for an overview of the new Surface Water Treatment Plant component **Discussion/approval.**

4.2 Questions regarding the Expedited Drinking Water Grant Program funding component of the Surface Water Treatment Plant Project. **Discussion/approval.**

**5. ADJOURN**

Regular Meetings of the Board occur on the 3<sup>rd</sup> Wednesday of the month. The next Regular Meeting will be Wednesday, September 20<sup>th</sup> 2023, and will be held at the Fire hall unless otherwise posted. The agenda for that meeting will be posted pursuant to the provisions of the Government Code commencing at Section 54950. Posting locations are: 1) WCSD Office; 2) Westhaven Fire Hall and the Westhaven CSD website @ [westhavencsd.org](http://westhavencsd.org)

The Westhaven CSD will make reasonable effort to accommodate the participation of persons with disabilities. If you require such accommodation, contact the WCSD office at 677-0798 at least 48 hours prior to the meeting.



Phone: (530)244-0202

Consultant Job No.: 2973.04
Project Manager: TWW
Billing Manager: TWW
Billing Code: PD
Date File Opened:

ENGINEERING AGREEMENT

This agreement has been entered into at Redding, California on the CLIENT signature date set forth below and is by and between the CLIENT as listed below and PACE Engineering, Inc., hereinafter called the CONSULTANT.

CLIENT: Westhaven Community Services District (WCSD) PHONE: 530-677-0798

ATTENTION: Paul Rosenblatt, General Manager EMAIL: Prosenblatt.wcsd@suddenlink mail.com

ADDRESS: P.O. Box 2015, 446B Sixth Avenue, Trinidad CA 95570-2015

PROJECT TITLE: Disinfection Byproduct Reduction Project Final Design & Services During Construction

PROJECT DESCRIPTION: The State Water Boards have granted WCSD an Expedited Drinking Water Grant, Agreement No. D2202053, Project No. EDWG-1210024-004C to complete the design and provide services during construction of: 1) surface water treatment plant, 2) emergency power generator, 3) convert existing Tank #2 into a backwash recycle/sludge containment tank, 4) 200,000-gallon glass-fused bolted steel tank, 5) high-pressure zone pump station, 6) 2,100 feet of 4" diameter PVC pipe and 700 Ft of 6" PVC pipe, 7) SCADA system, 8) replace slow sand filter media and add piped bypass, 9) remove Humboldt crossing in Two Creek, 10) septic system, and 11) 480V/3-phase PG&E service connection. The Project addresses Compliance Order No. 01-01-17(R)-004 for exceedances of the maximum contaminant level (MCL) for disinfection byproducts (DBPs), in addition to meeting maximum day demand and fire flow requirements.

SCOPE OF SERVICES BY CONSULTANT:

Table with 2 columns: Service Item, Amount. Rows include Final Design (\$761,400), Services During Bidding (\$47,861), Construction Management (\$697,340), Construction Observation (\$704,809), Construction Observer Per Diem (\$47,792), Construction Surveying (\$14,000), O&M Manual (\$40,000), Record Drawings (\$22,842), Prevailing Wage Monitoring (\$27,250), Project Performance Report (\$40,000), Permitting & Environmental Compliance During Construction (\$40,000), Startup/Operator Training (\$50,000), Total (\$2,493,294).

The CONSULTANT agrees to perform the above-described services for the CLIENT. The CLIENT agrees to compensate CONSULTANT for such services as follows:

- Options for compensation: A lump-sum amount of \$..., payable per Item 21. At the CONSULTANT'S STANDARD RATES. (See attached Exhibit A and A-1) Estimated Fee \$ 2,493,294.00. Other. Describe: Special Billing Instructions:

This Agreement is subject to the Standard Provisions 1 through 50 contained herein and the terms and conditions contained in exhibits attached herewith and made a part hereof. Other exhibits not identified above are as follows:

IN WITNESS WHEREOF, the parties hereto have accepted, made, and executed this Agreement upon the terms, conditions, and provisions hereinafter stated on pages 1 through 4 and on the referenced attached exhibits.

CONSULTANT:

License No.: 45008
By:
Name/Title: Thomas W. Warnock, Principal Engineer
Date: August 21, 2023

CLIENT:

By:
Print Name: Paul Rosenblatt
Title: General Manager Date:
Westhaven Community Services District
Form of doing business:

## Standard Provisions of Agreement

1. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of Client and Consultant.
2. This Agreement shall not be assigned by either Client or Consultant without the prior written consent of the other.
3. This Agreement contains the entire Agreement between Client and Consultant relating to the project and the provision of services to the project. Any prior agreement, promises, negotiations or representations not expressly set forth in this Agreement are of no force or effect. Subsequent modifications to this Agreement shall be in writing and signed by both Client and Consultant.
4. Consultant's waiver of any term, condition, or covenant, or breach of any term, condition, or covenant, shall not constitute the waiver of any other term, condition, or covenant, or the breach of any other term, condition, or covenant.
5. If any term, condition, or covenant of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions of this Agreement shall be valid and binding on Client and Consultant.
6. This Agreement shall be governed by and construed in accordance with the laws of the State of California.
7. Consultant shall only act as an advisor in all governmental relations.
8. All original papers, documents, drawings and other work product of Consultant, and copies thereof, produced by Consultant pursuant to this Agreement shall remain the property of Consultant and may be used by Consultant without the consent of Client. Upon request and payment of the costs involved, Client is entitled to a copy of all papers, documents, and drawings provided Client's account is paid current.
9. Client acknowledges that its right to utilize the services and work product provided pursuant to this Agreement will continue only so long as Client is not in default pursuant to the terms and conditions of this Agreement. Client further acknowledges that Consultant has the unrestricted right to use the services provided pursuant to this Agreement as well as all work product provided pursuant to this Agreement.
10. Client and Consultant agree to cooperate with each other in every way on the project.
11. Upon request, Client shall execute and deliver, or cause to be executed and delivered, such additional instruments, documents, governmental fees and charges which are necessary to perform the terms of this Agreement.
12. Consultant makes no representations concerning soil conditions unless specifically included in writing in this Agreement, and he is not responsible for any liability that may arise out of the making or failure to make soil surveys, or sub-surface soil tests, or general soil testing.
13. Client agrees not to use or permit any other person to use plans, drawings, or other work product prepared by Consultant, which plans, drawings, or other work product are not final and which are not signed, and stamped or sealed by Consultant. Client agrees to be liable and responsible for any such use of nonfinal plans, drawings, or other work product not signed and stamped or sealed by Consultant and waives liability against Consultant for their use. Client further agrees that final plans, drawings or other work product are for the exclusive use of Client and may be used by Client only for the project described on the face hereof. Such final plans, drawings or other work product may not be changed nor used on a different project without the written authorization or approval by Consultant. If Consultant's work product exists in electronic or computerized format, or is transferred in electronic or computerized format, the stamp, seal and signature shall be original and may not be a computer-generated copy, photocopy, or facsimile transmission of the original.
14. Consultant has a right to complete all services agreed to be rendered pursuant to this contract. In the event this Agreement is terminated before the completion of all services, unless Consultant is responsible for such early termination, Client agrees to release Consultant from all liability for services performed. In the event all or any portion of the services or work product prepared or partially prepared by Consultant be suspended, abandoned, or terminated, Client shall pay Consultant for all fees, charges, and services provided for the project, not to exceed any contract limit specified herein. Client acknowledges if the project services are suspended and restarted, there will be additional charges due to suspension of the services which shall be paid for by Client as extra services.
15. If the scope of services to be provided by Consultant pursuant to the terms of this agreement includes an ALTA survey, Client agrees that Consultant may sign one of the two ALTA Survey Statements attached hereto and incorporated herein by reference. In the event that Consultant is required to sign a statement or certificate which differs from the ALTA Survey Statements contained in the attachment, Client hereby agrees to indemnify and hold Consultant harmless from any and all liability arising from or resulting from the signing of any statement which differs from those statements contained in the attachment.
16. If the scope of services to be provided by Consultant pursuant to the terms of this Agreement include the preparation of grading plans but exclude construction staking services, Client acknowledges that such staking services normally include coordinating civil engineering services and the preparation of as-built drawings pursuant to Uniform Building Code Appendix, Chapter 33 or local grading ordinances and Client will be required to retain such services from another Consultant or pay Consultant pursuant to this Agreement for such services as extra work in accordance with Provision 26.
17. Consultant shall be entitled to immediately, and without notice, suspend the performance of any and all of its obligations pursuant to this Agreement if Client files a voluntary petition seeking relief under the United States Bankruptcy Code or if there is an involuntary bankruptcy petition filed against Client in the United States Bankruptcy Court, and that petition is not dismissed within fifteen (15) days of its filing. Any suspension of services made pursuant to the provisions of this paragraph shall continue until such time as this Agreement has been fully and properly assumed in accordance with the applicable provisions of the United States Bankruptcy Code and in compliance with the final order or judgment issued by the Bankruptcy Court.
18. This Agreement shall not be construed to alter, affect or waive any lien or stop notice right which Consultant may have for the performance of services pursuant to this Agreement. Client agrees to separately provide to Consultant the present name and address of the record owner of the property on which the project is to be located. Client also agrees to separately provide Consultant with the name and address of any and all lenders who would loan money on the project and who are entitled to receive a preliminary notice.
19. If payment for Consultant's services is to be made on behalf of Client by a third-party lender, Client agrees that Consultant shall not be required to indemnify the third-party lender, in the form of an endorsement or otherwise, as a condition of receiving payment for services.
20. If Client fails to pay Consultant within thirty (30) days after invoices are rendered, Client agrees Consultant shall have the right to consider such default in payment a material breach of this entire Agreement, and upon written notice, the duties, obligations, and responsibilities of Consultant under this Agreement are suspended or terminated. In such event, Client shall promptly pay Consultant for all fees, charges, and services provided by Consultant.

**21.** All fees and other charges will be billed monthly and shall be due at the time of billing unless otherwise specified in this Agreement. For lump sum work the amount due shall be based upon the Consultant's estimate of the percent complete at the time that the invoice is prepared.

**22.** Client agrees that the periodic billings from Consultant to Client are correct, conclusive, and binding on Client unless Client, within ten (10) days from the date of receipt of such billing, notifies Consultant in writing of alleged inaccuracies, discrepancies, or errors in the billing.

**23.** Client agrees to pay a monthly late payment charge, which will be the lesser of, one and one-fourth percent (1¼%) per month or a monthly charge not to exceed the maximum legal rate, which will be applied to any unpaid balance commencing thirty (30) days after the date of the original billing.

**24.** If Consultant, pursuant to this Agreement, produces plans, specifications, or other documents and/or performs field services, and such plans, specifications, and other documents and/or field services are required by one or more governmental agency, and one or more such governmental agency changes its ordinances, policies, procedures or requirements after the date of this Agreement, any additional office or field services thereby required shall be paid for by Client as extra services.

**25.** In the event Consultant's fee schedule changes due to any increase of costs such as the granting of wage increases and/or other employee benefits to field or office employees due to the terms of any labor agreement, or rise in the cost of living, during the lifetime of this Agreement, a percentage increase shall be applied to all remaining compensation.

**26.** Client agrees that if Client requests services not specified pursuant to the scope of services description within this Agreement, Client agrees to pay for all such additional services as extra work.

**27.** In the event the staking is destroyed, damaged or disturbed by an act of God or parties other than Consultant, the cost of restaking shall be paid for by Client as extra services.

**28.** Client acknowledges that the design services performed pursuant to this Agreement are based upon field and other conditions existing at the time these services were performed. Client further acknowledges that field and other conditions may change by the time project construction occurs and clarification, adjustments, modifications and other changes may be necessary to reflect changed field or other conditions. If the scope of services pursuant to this Agreement does not include construction staking services by Consultant for this project, or if subsequent to this Agreement Client retains other persons or entities to provide such staking services; or if the scope of services pursuant to this Agreement does not include onsite construction review, construction management, observation of construction of engineering structures, or other construction services for this project, or if subsequent to this Agreement Client retains other persons or entities to provide such construction services, then Client acknowledges that such services will be performed by others, and that Client will defend, indemnify, and hold Consultant harmless from any and all claims arising from or resulting from the performance of such services by other persons or entities except claims caused by the sole negligence or willful misconduct of Consultant; and from any and all claims arising from or resulting from clarifications, adjustments, modifications or other changes which may be necessary to reflect changed field or other conditions except claims caused by the sole negligence or willful misconduct of Consultant.

**29.** Client shall pay the costs of checking and inspection fees, zoning and annexation application fees, assessment fees, soils engineering fees, soils testing fees, aerial topography fees, and all

other fees, permits, bond premiums, applicable taxes on professional services, title company charges, blueprints and reproductions, and all other charges not specifically covered by the terms of this Agreement.

**30.** Client acknowledges and agrees that if Consultant provides surveying services, which services require the filing of a Record of Survey in accordance with Business and Professions Code Section 8762, that all of the costs of preparation, examination and filing for the Record of Survey will be paid by Client as extra work in accordance with Provision 26.

**31.** Consultant is not responsible for delay caused by activities or factors beyond Consultant's reasonable control, including but not limited to, delays by reason of strikes, lockouts, work slowdowns, or stoppages, accidents, acts of God, failure of Client to furnish timely information or approve or disapprove of Consultant's services or work product promptly, faulty performance by Client or other contractors or governmental agencies. When such delays beyond Consultant's reasonable control occur, Client agrees Consultant is not responsible in damages nor shall Consultant be deemed to be in default of this Agreement.

**32.** Consultant shall not be liable for damages resulting from the actions or inactions of governmental agencies including, but not limited to, permit processing, environmental impact reports, dedications, general plans and amendments thereto, zoning matters, annexations or consolidations, use or conditional use permits, project or plan approvals, and building permits. The Client agrees that it is the responsibility of the Client to maintain in good standing all government approvals and permits and to apply for any extensions thereof.

**33.** Consultant makes no representation concerning the estimated quantities and probable costs made in connection with maps, plans, specifications, reports or drawings other than that all such costs are estimates only and actual costs will vary. It is the responsibility of Client to verify costs.

**34.** Client acknowledges that Consultant is not responsible for the performance of work by third parties including, but not limited to, the construction contractor and its subcontractors.

**35.** Consultant makes no warranty, either expressed or implied, as to his findings, recommendations, plans, specifications, or professional advice except that the services or work product were performed pursuant to generally accepted standards of practice in effect at the time of performance.

**36.** Estimates of land areas provided under this Agreement are not to be considered precise unless Consultant specifically agrees to provide the precise determination of such areas.

**37.** In the event the Client agrees to, permits, authorizes, constructs or permits construction of changes in the plans, specifications and documents or does not follow recommendations or reports prepared by Consultant pursuant to this Agreement, which changes are not consented to in writing by Consultant, Client acknowledges that the changes and their effects are not the responsibility of Consultant and Client agrees to release Consultant from all liability arising from the use of such changes and further agrees to defend, indemnify and hold harmless Consultant, its officers, directors, principals, agents and employees from and against all claims, demands, damages or costs arising from the changes and their effects.

**38.** Client agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property; that this requirement shall be made to apply continuously and not be limited to normal working hours.

**39.** In the event Client discovers or becomes aware of changed field or other conditions which necessitate clarification, adjustments, modifications or other changes during the construction phase of the project, Client agrees to notify Consultant and engage Consultant to prepare the necessary clarifications, adjustments, modifications or other changes to Consultant's services or work product before construction activities commence or further activity proceeds. Further, Client agrees to have a provision in its construction contracts for the project which requires the contractor to notify Client of any changed field or other conditions so that Client may in turn notify Consultant pursuant to the provisions of this paragraph.

**40.** Client agrees to limit the liability of Consultant, its principals, employees and their subconsultants, to Client and to all contractors and subcontractors on the project, for any claim or action arising in tort, contract or strict liability, to the sum of \$50,000 or Consultant's fee, whichever is greater. Client and Consultant acknowledge that this provision was expressly negotiated and agreed upon.

**41.** Client agrees to purchase and maintain, during the course of construction, builder's risk "all risk" insurance which will name Consultant as an additional insured as their interest may appear.

**42.** Client acknowledges that Consultant's scope of services for this project does not include any services related in any way to asbestos and/or hazardous or toxic materials. Should Consultant or any other party encounter such materials on the job site, or should it in any other way become known that such materials are present or may be present on the job site or any adjacent or nearby areas which may affect Consultant's services, Consultant may, at its option, terminate work on the project until such time as Client retains a specialist contractor to abate and/or remove the asbestos and/or hazardous or toxic materials and warrant that the job site is free from any hazard which may result from the existence of such materials.

**43.** The Client hereby agrees to bring no claim for negligence, breach of contract, strict liability, indemnity, delays or otherwise against the Consultant, its principals, employees, and agents if such claim, in any way, would involve the Consultant's services for the investigation, detection, abatement, replacement, use or specification, or removal of products, materials or processes containing asbestos, asbestos cement pipe, and/or hazardous or toxic materials. Client further agrees to defend, indemnify and hold harmless Consultant, its officers, directors, principals, employees and agents from any asbestos and/or hazardous or toxic material related claims that may be brought by third parties as a result of the services provided by the Consultant pursuant to this Agreement except claims caused by the sole negligence or willful misconduct of the Consultant.

**44.** If any action at law or equity, including an action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement or in any way connected with the performance of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, which fees may be set by the court in the same action or in a separate action brought for that purpose, in addition to any other relief to which he may be entitled.

**45.** Client agrees that in the event Client institutes litigation to enforce or interpret the provisions of this Agreement, such litigation is to be brought and adjudicated in the appropriate court in the county in which Consultant's principal place of business is located, and Client waives the right to bring, try or remove such litigation to any other county or judicial district.

**46.** (a) Except for the provision of subdivision (b) and subdivision (c), and in an effort to resolve any conflicts that arise during the

design or construction of the project or following the completion of the project, the client and the Consultant agree that all disputes between them arising out of or relating to this Agreement shall be submitted to nonbinding mediation or other form of Alternative Dispute Resolution as agreed to by the parties.

The Client and the Consultant further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and with other successive third parties including but not limited to construction contractors, lenders and homeowner associations and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, subconsultants, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

(b) Subdivision (a) does not preclude or limit consultant's right to elect to file an action for collection of fees if the amount in dispute is within the jurisdiction of the small claims court.

(c) Subdivision (a) does not preclude or limit consultant's right to elect to perfect or enforce applicable mechanics lien remedies.

**47.** (a) Notwithstanding any other provision of this Agreement and except for the provisions of (b) and (c), if a dispute arises regarding Consultant's fees pursuant to this contract, and if the fee dispute cannot be settled pursuant to Provision 46, such dispute shall be settled by binding arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

(b) Subdivision (a) does not preclude or limit Consultant's right to elect to file an action for collection of fees if the amount in dispute is within the jurisdiction of the small claims court.

(c) Subdivision (a) does not preclude or limit Consultant's right to elect to perfect or enforce applicable mechanics lien remedies.

**48.** Client agrees to reimburse the Consultant for any time and expense incurred for depositions or appearances at any legal proceedings requested by Client or duly authorized attorney, or when required by a subpoena or court action, as may be required from the Consultant performing work under this Agreement. Client agrees to indemnify and reimburse the Consultant for costs and expenses that may result in legal actions taken against the Consultant unless it is determined by a court of law that the Consultant was negligent in his services leading to such action. Consultant shall be paid by Client for such time and expense at his normal charge-out rate for professional services applicable at the time.

**49.** Any applicable statute of limitations pertaining to all causes of action, latent or patent, shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of Substantial Completion.

**50.** In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed underground conditions may occur that could affect total project cost and/or execution. These conditions and cost/execution effects are not the responsibility of Consultant.



# WESTHAVEN COMMUNITY SERVICES DISTRICT DISINFECTION BYPRODUCT REDUCTION PROJECT

ENPLAN



August 23, 2023



South Collector

# Topics of Discussion

- SWRCB DDW Compliance Order
- Pilot Study
- Recommended Project
- Project Cost
- Expedited Drinking Water Grant Funding
- Schedule





Slow Sand Filter



Tank No. 2



Tank No. 1







4<sup>th</sup> Ave. Well

Groundwater

TOC = 0.29–0.36 ug/L

DOC = 0.27 ug/L

WCSD would need to have a 2.6:1 groundwater to surface water dilution ratio to produce water with DBPs just below the MCLs with HAA5 being the limiting contaminant of concern. The potentially available groundwater supply of 18 GPM, when coupled with the proportionately allowed 6.9 GPM of surface water, equates to 25.9 GPM, which is not an adequate supply to meet the historic MDD of 36.6 GPM.





Unfortunately, the lab, chemical storage, and sodium hypochlorite dosing station are located inside the wood-framed building, which does not provide enough space to maintain safe, code-compliant clearance (2019 CEC, Article 110.26) in front of the power panels. In addition, sodium hypochlorite off gases and contributes to a corrosive environment for all power equipment, especially sensitive electrical equipment such as the variable frequency drive pump controller. This shortens the life cycle and increases operating costs.





Summer Dry Pilot Study  
10/20/20 – 10/24/20

This image shows two white buckets on a metal grate. The top bucket is filled with a light green, slightly turbid liquid. The bottom bucket is empty. The background consists of a dark, textured metal grate with some dry leaves and twigs scattered around.



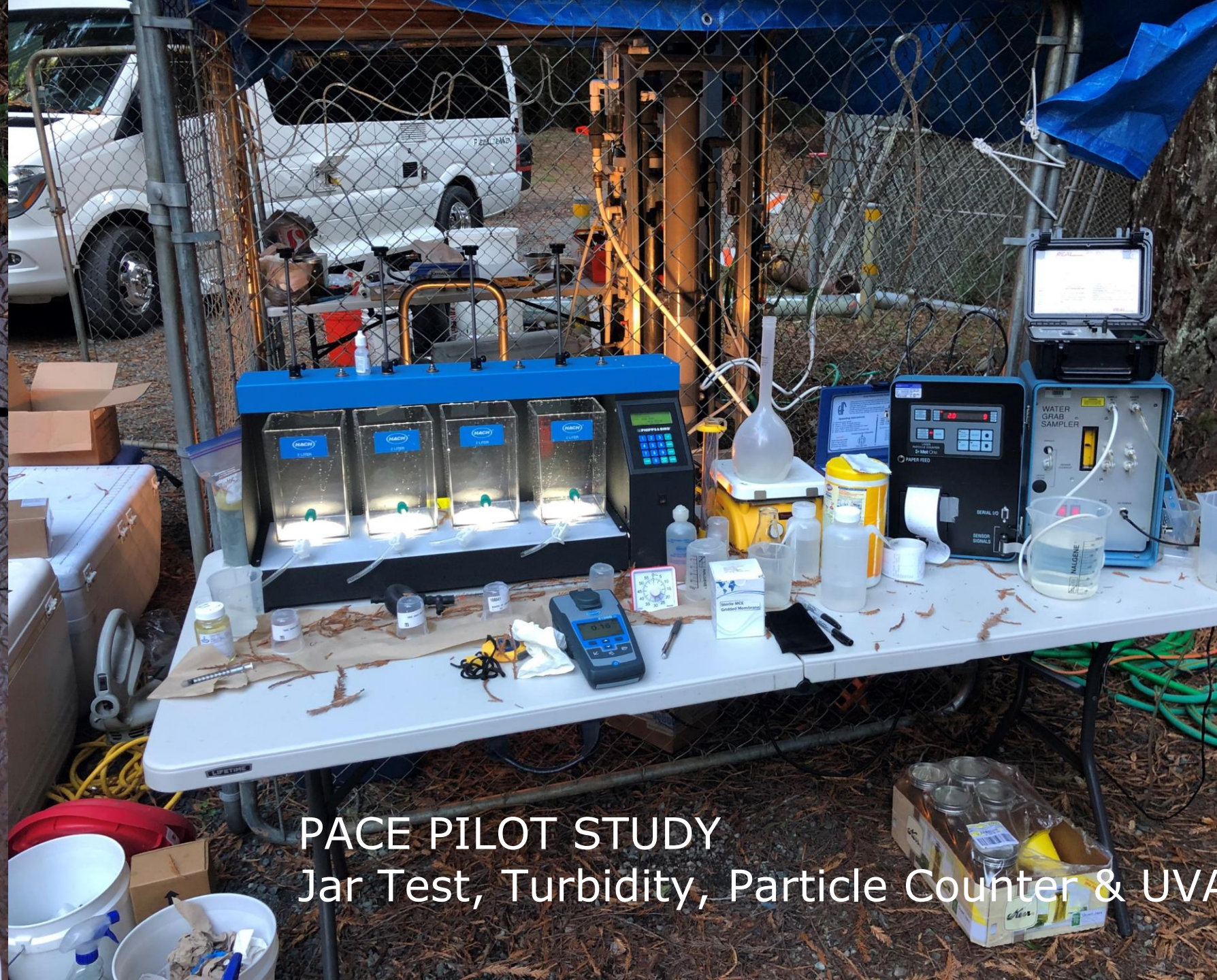
Winter Wet Pilot Study  
1/31/21 – 2/3/21

This image shows two white buckets on a metal grate. The top bucket is filled with a dark brown, turbid liquid. The bottom bucket is empty. The background consists of a dark, textured metal grate with some green moss or ferns visible on the left side.





SSF Effluent Sample  
Sent to Guy Schott  
DDW, Santa Rosa



PACE PILOT STUDY  
Jar Test, Turbidity, Particle Counter & UVA





Adsorption  
Clarifier

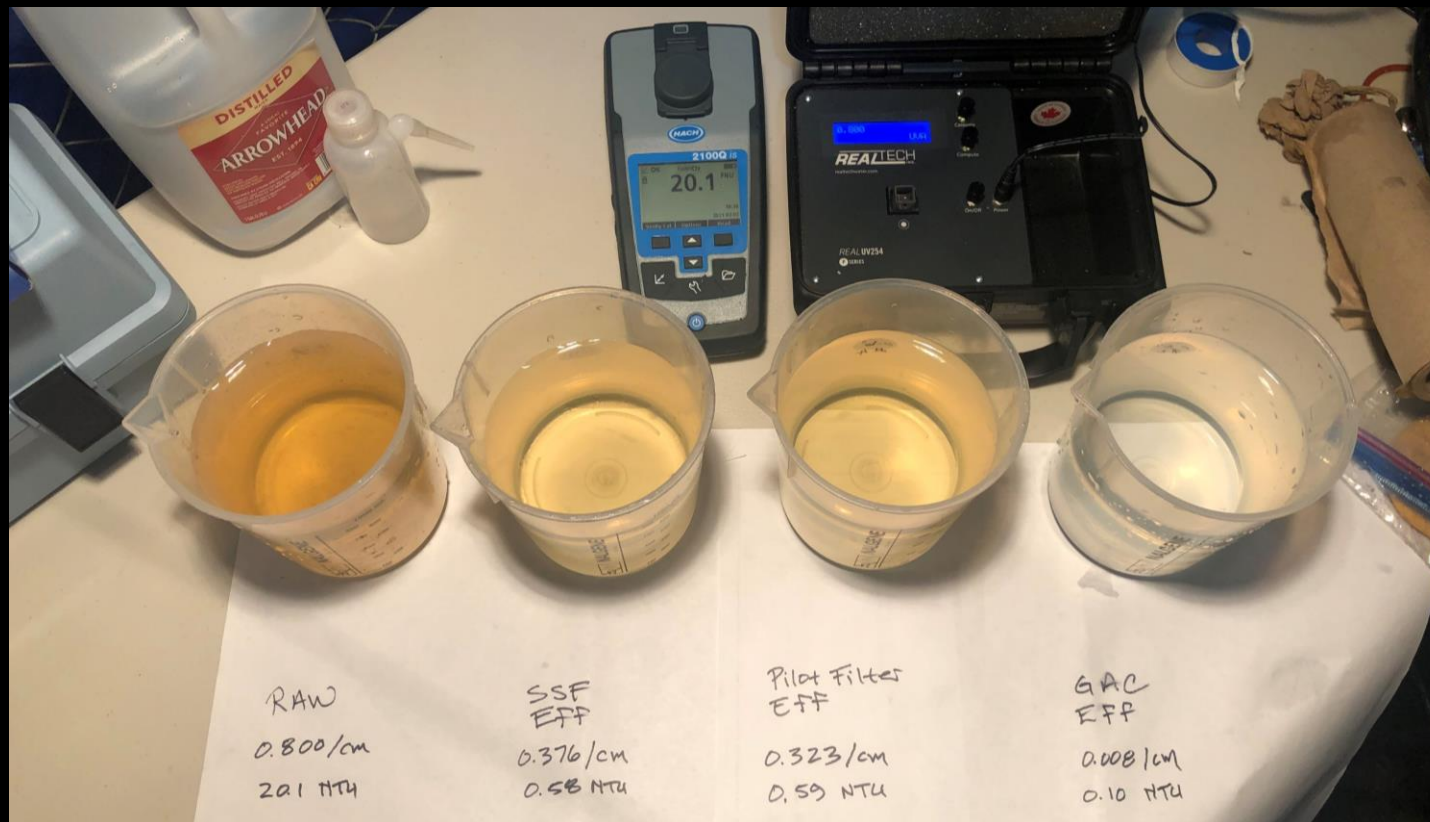
Tri-media  
Filter

Coagulant  
Addition





Wet Weather Filter Run	Average Turbidity (NTU)				Average UVA ( $\text{cm}^{-1}$ )						
	Raw	Post SSF	Post Filter	Post GAC	Raw	Post SSF	% Removal	Post Filter	% Removal	Post GAC	% Removal
3	4.33		0.59	0.54	0.324			0.036	89%	0.015	59%
4	2.54	0.18	0.70	0.24	0.318	0.419	-32%	0.171	59%	0.064	63%
5	11.24	0.23	0.44	0.12	0.769	0.380	51%	0.242	36%	0.016	93%





**Table 25 – Wet Weather PF Runs**

Pilot Filter Run/Water Source	TOC (mg/L)						
	Raw	Post SSF	Post Filter	% Removal	Post GAC	% Removal	% Total Removal
3/Raw	5.9	8.6	1.6	73%	1.2	25%	80%
4/SSF Eff	7.4	8.6	1.6	81%	0.37	77%	96%
Pilot Filter Run/Water Source	DOC (mg/L)						
	Raw	Post SSF	Post Filter	% Removal	Post GAC	% Removal	% Total Removal
3/Raw	6.0	8.3	1.4	77%	1.0	29%	83%
4/SSF Eff	7.2	8.3	0.98	88%	0.38	61%	95%

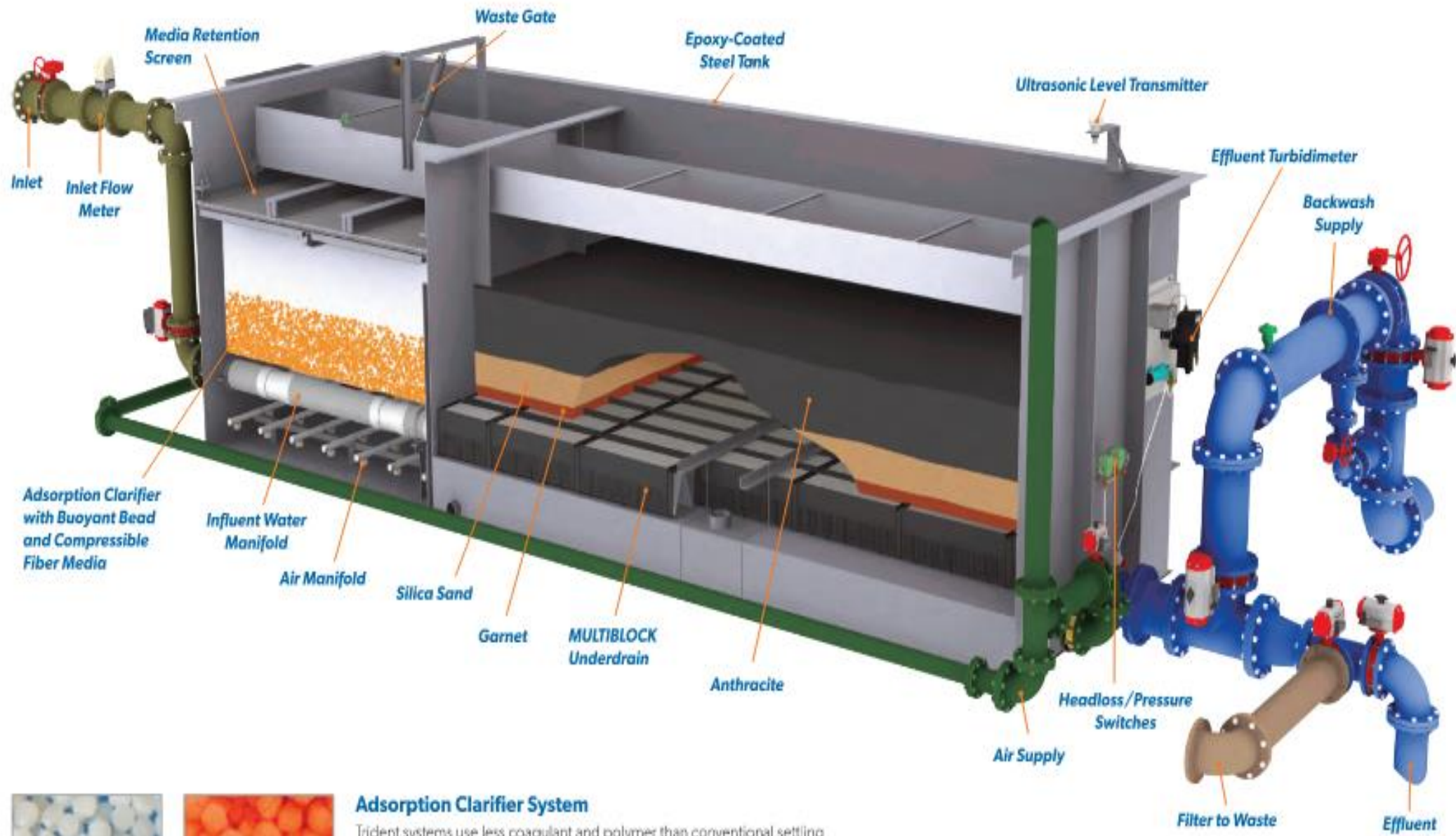
Coagulation/adsorption clarification and tri-media filtration under dry weather conditions proved effective at reducing TOC/DOC contaminants to levels that should result in DBPs below the MCLs. Under wet weather conditions, it was found that coagulant optimization was temperamental given major rain events and that GAC should be added to the treatment process to provide an added backstop to further reduce TOC/DOC.

## Settled Backwash Sludge



On average the proposed water treatment plant will generate upwards of 1,200 gallons per month of concentrated 2-3% backwash solids. Project currently budgets disposal of this material at the Eureka Wastewater Treatment Plant.





WesTech TriMite Adsorption Clarifier & Tri-Media Filter



## **Table 17 – System Deficiencies, Project Needs, and Objectives**

Compliance Order No. 01-01-17(R)-004 was issued by Division of Drinking Water pursuant to CCR, Title 22, Section 64533(a), Maximum Contaminant Levels for Disinfection Byproducts.

- 1) Comply with DBP MCLs under Title 22, CCR, Section 64533(a);
- 2) Provide Public Notification in accordance with Section 64463.4(c)(1);
- 3) Submit DBP Violation Public Notifications to DDW;
- 4) Provide a Corrective Action Plan that will a) provide an alternate source, such as groundwater having low DBP precursors, b) provide treatment of the drinking water through treatment or blending to produce water with DBP under the MCL, and/or c) consolidate with a neighboring water system; and
- 5) Continue to operate the water treatment plant as diligently as possible to produce the best possible water quality. In order to comply with CO No. 01-01-17(R)-004 and build resiliency in its capacity to deliver safe drinking water, the District needs to implement more than one of the proposed CAP alternatives by improving its groundwater source, surface water treatment, and distribution system.

## Table 17 – System Deficiencies, Project Needs, and Objectives

- Adoption of Stages 1 and 2 Disinfectants and Disinfection Byproducts Rules in 1998 and 2006 imposed new regulations pertaining to DBPs.
- Between 2006 and 2020, the District exceeded the TTHM RAA of 80 µg/L 24 times or 44% of the time and exceeded the HAA5 60 µg/L RAA a total of 47 times or 87% of the time.
- WCSD has collected sufficient DBP data that confirms it cannot rely upon slow sand filtration to remove organic DBP precursors to levels that would reliably reduce DBPs below the MCLs.
- While the existing SSF media depth is less than the recommended 2 feet, the technology by itself is not capable of removing enough TOC to reliably reduce DBP formation below the MCLs.
- WCSD needs a surface WTP that adequately removes DBP precursors so as not to create DBPs in excess of the MCLs.



## Table 17 – System Deficiencies, Project Needs, and Objectives

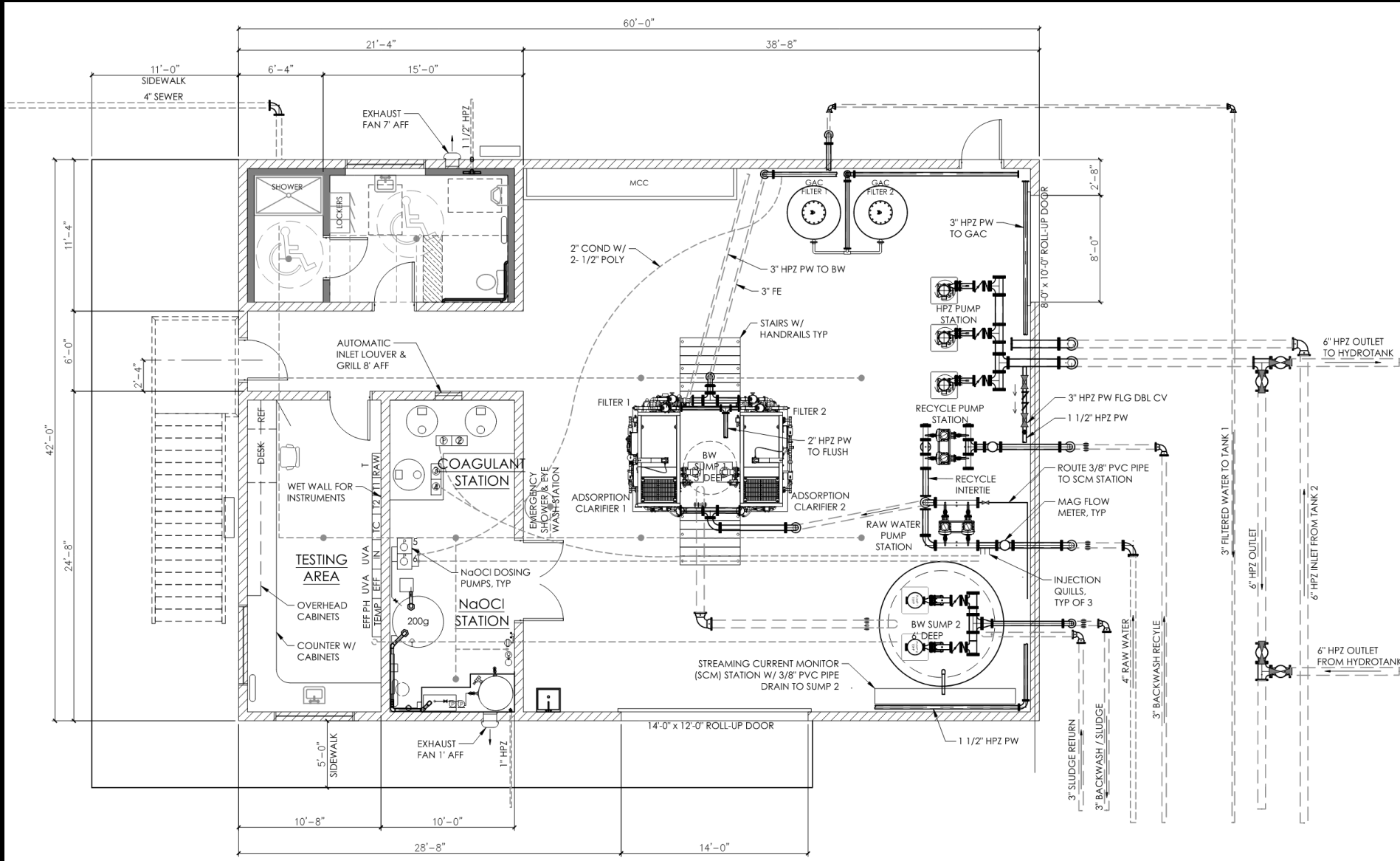
- The combination of the three existing surface water collectors supplies on average 40 GPM, which is 10% greater than the historic MDD of 36.6 GPM over the past 10 years. The combination of available head from the three collectors through the SSFs and into Tank 1 limits the available average flow of 40 GPM to only 20 GPM.
- The reduced surface water production capacity of 20 GPM in combination with 6 GPM from the District's 4th Avenue Well, is less than the 10-year historic MDD of 36.6 GPM. Thus, the District cannot meet the requirements of Title 22, Section 64554, New and Existing Source Capacity, wherein at all times, a public water system's water source(s) shall have the capacity to meet the system's MDD.
- WCSD needs to increase its firm water production capacity and treatment capacity to at least meet the historic 10-year average MDD of 36.6 GPM (52,700 GPD) plus enough capacity to serve 70 existing residences that are within the service area boundary through a combination of improvements to the surface water production facilities and by drilling additional wells.
-

**A. Project Alternative 3 – Recommended Project:** The recommended Project addresses SWRCB DDW Compliance Order No. 01-01-17R-004 and includes construction of the following major improvements:

1. Surface Water Treatment Plant with emergency power generator and photovoltaic system.
2. A 480V/3 Phase PG&E power extension is required to serve the new treatment facilities.
3. Conversion of the existing Tank 2 into a backwash decant/sludge containment tank.
4. Rebuild SSF and keep in service to reduce peak turbidity loads during winter storm events.
5. Disposal of concentrated sludge at Eureka WWTP.
- ~~6. Purchase of a sludge vac truck~~
7. Addition of a 200,000-Gallon, glass-fused bolted steel storage tank.
8. Replacement of the HPZ Pump Station
9. Installation of 2,100 Ft of 4-Inch, Schd 80 PVC diameter pipe from the 4<sup>th</sup> Avenue Well to the Water Treatment Plant to blend surface and groundwater prior to treatment.
10. Installation of 700 Ft of 6-Inch transmission main from the 4th Avenue Well to Railroad Avenue with two valved connections to existing distribution mains, two fire hydrants, and one section valve to replace a failed 4-inch AC pipe.



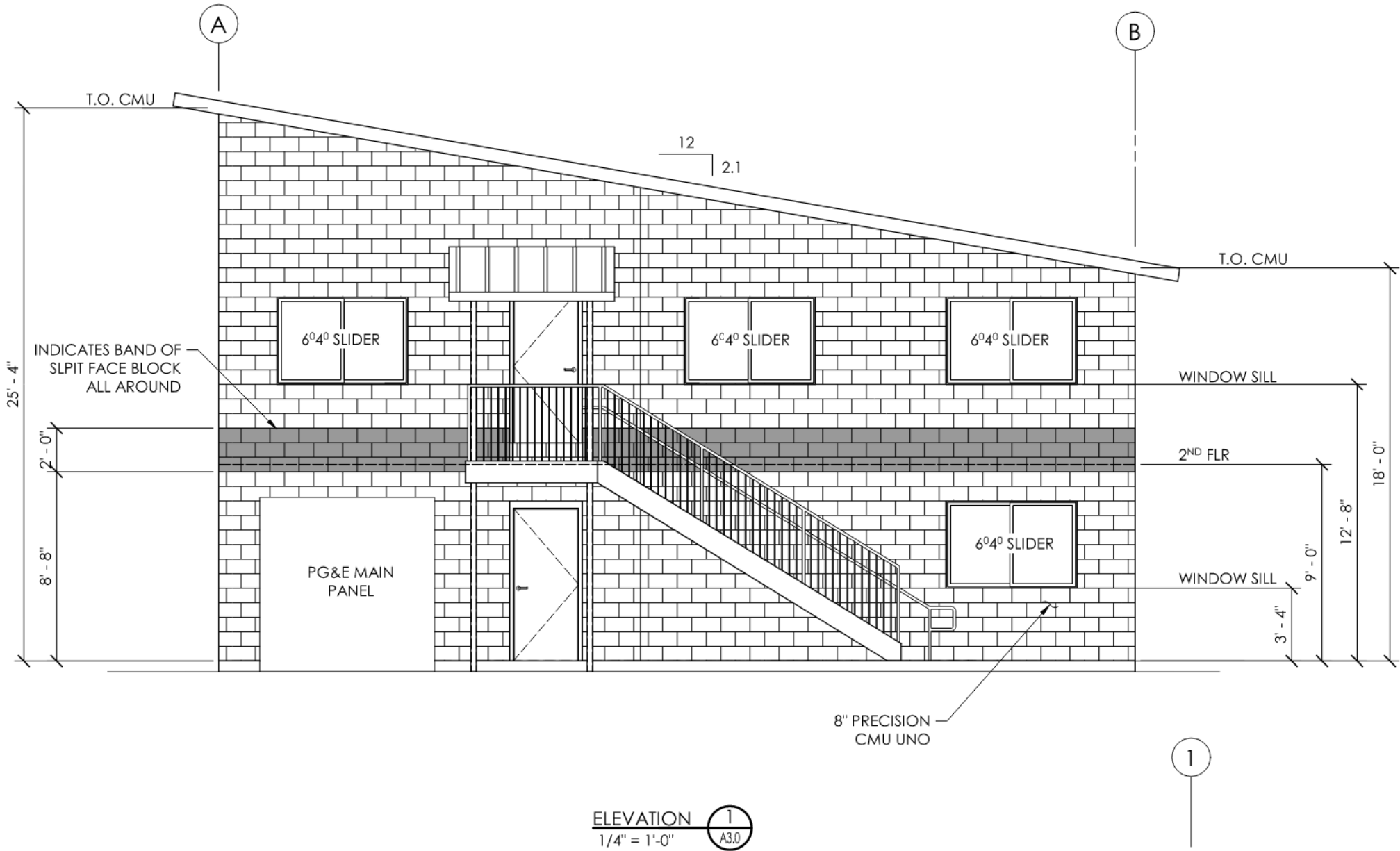
# Proposed Water Treatment Plant



MECHANICAL FLOOR PLAN  
1/4"=1'-0"

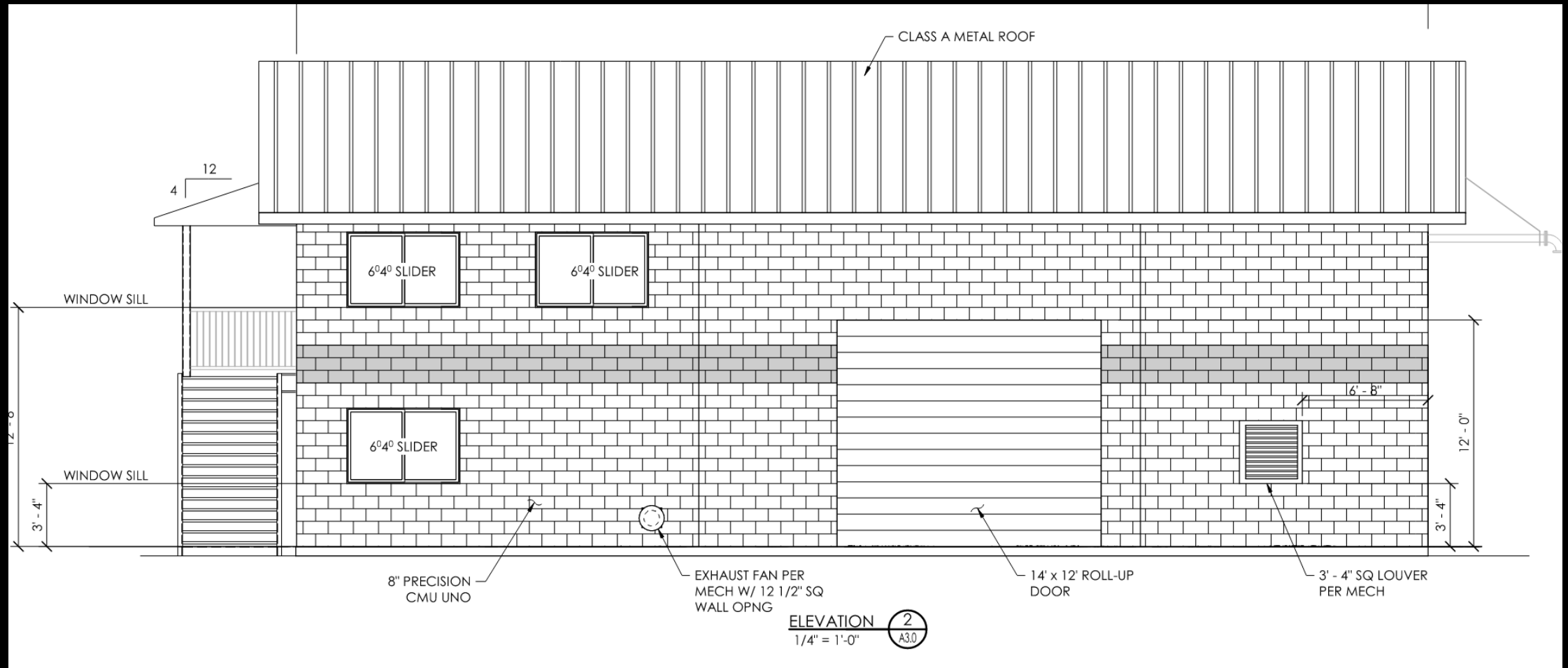


90% SET

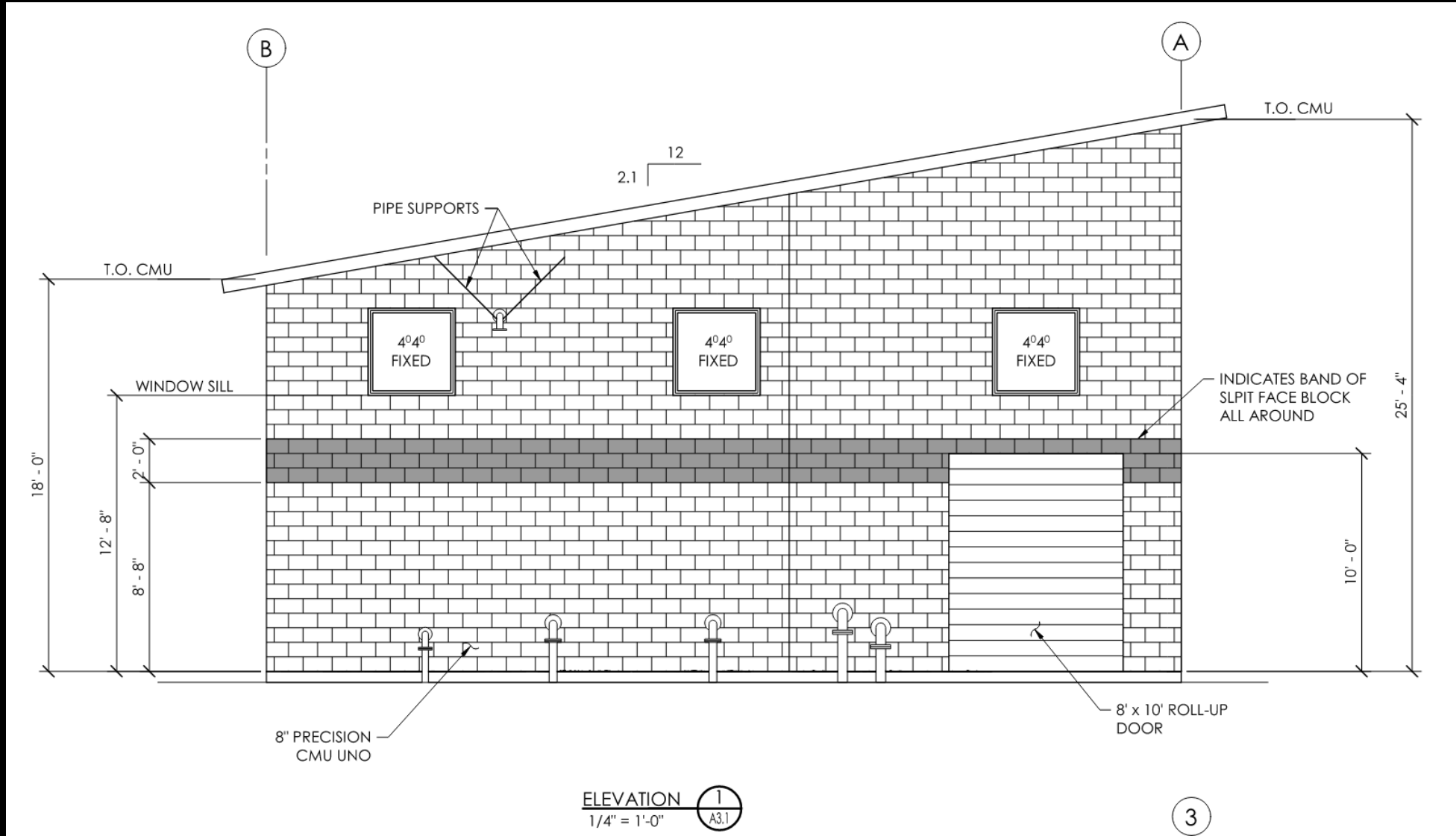


West Elevation



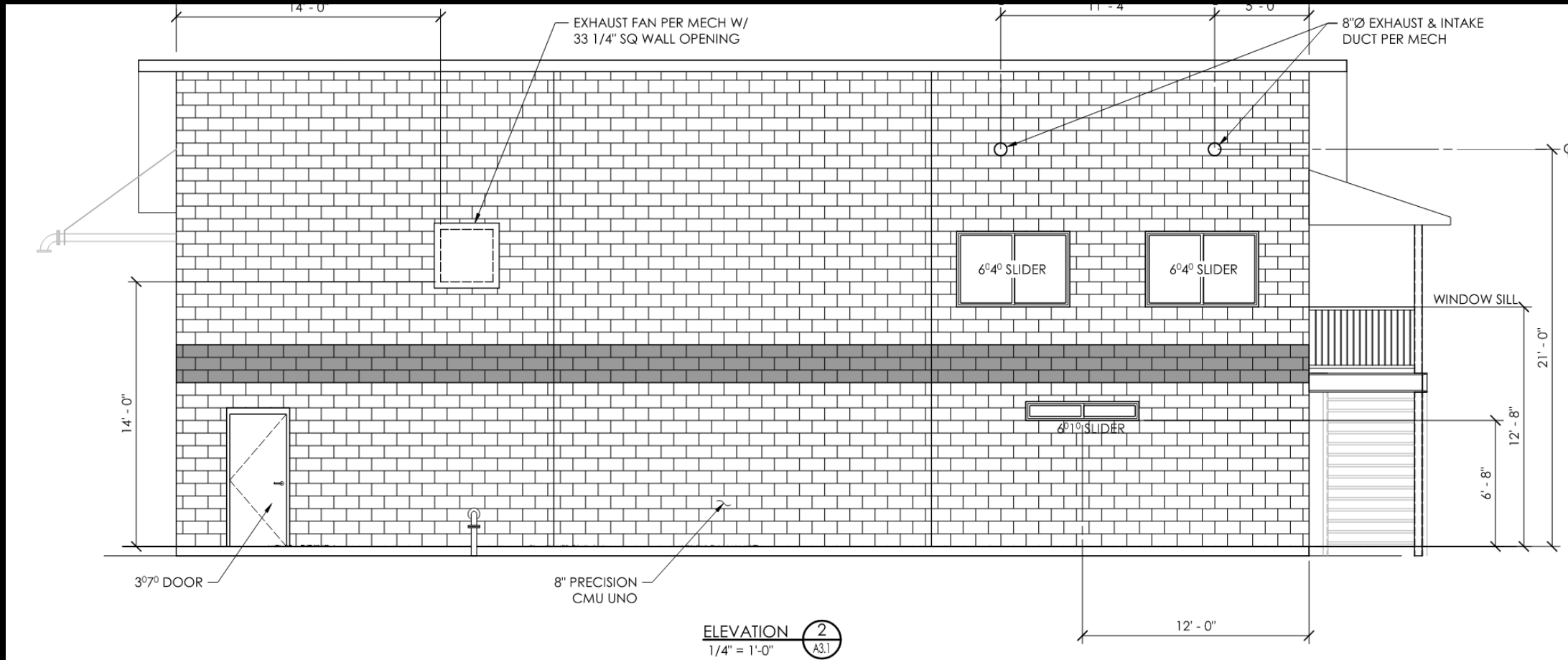


South Elevation



East Elevation





North Elevation



*Standard Tri-Mite<sup>®</sup> system depicted. May not entirely reflect unit quoted.*

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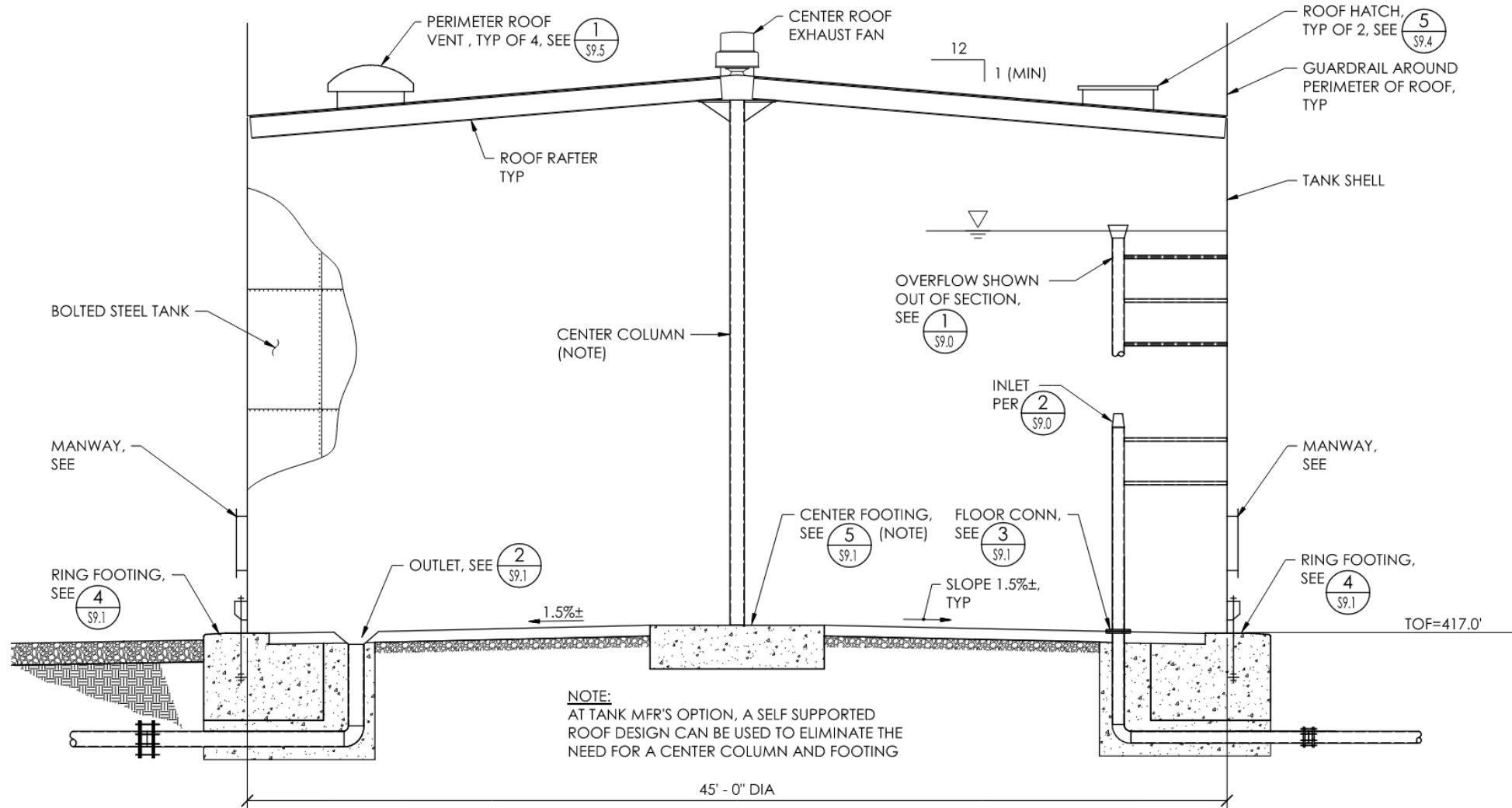
### Tankage Scope of Supply

---

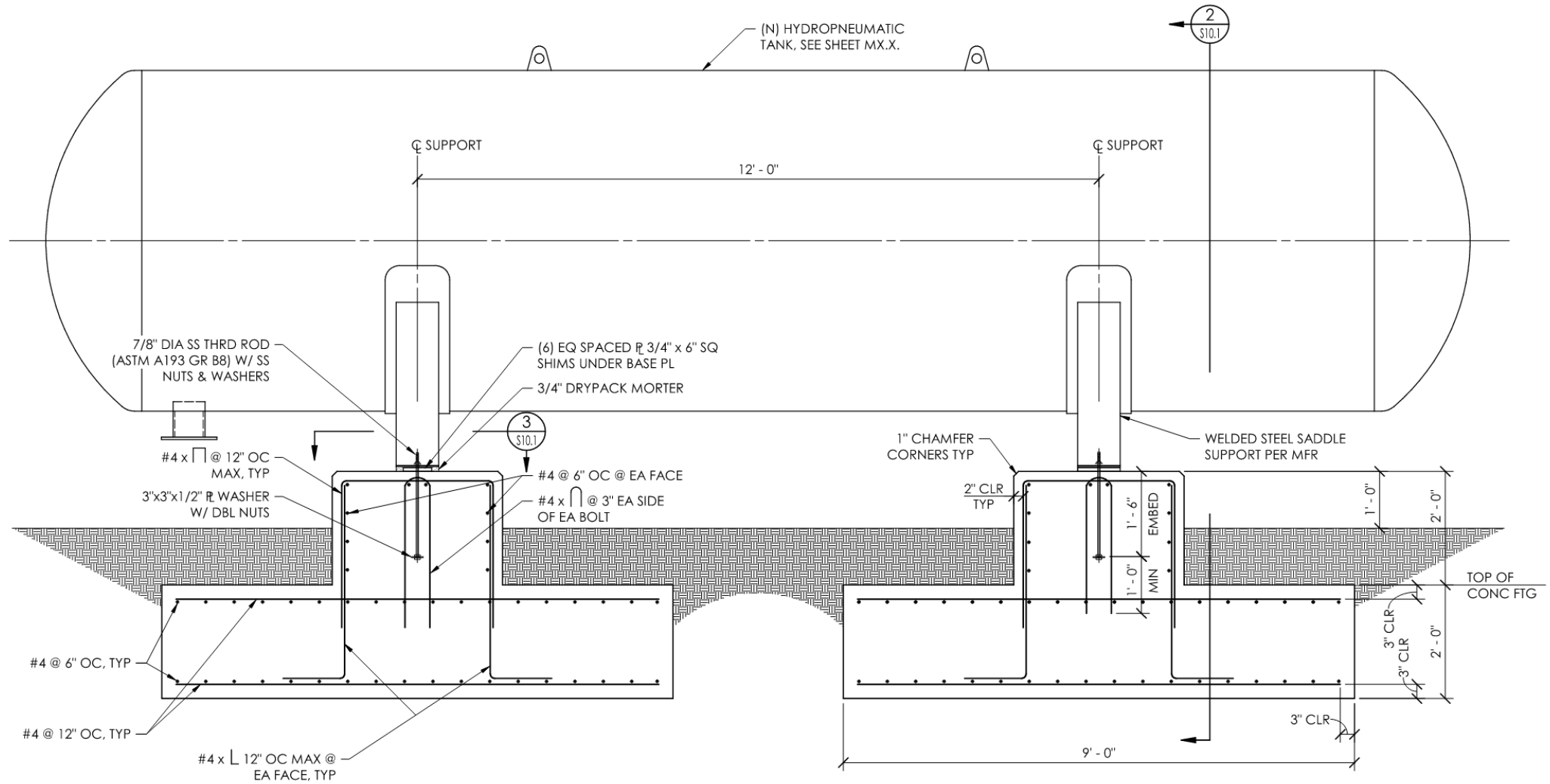
Item	Size
Tank Material	Carbon Steel
Shipping Dimensions	9'-0" Long x 5'-8" Wide x 8'-5" High
Tank Dimensions	7'-1" Long x 3'-3" Wide x 7'-6" High

---





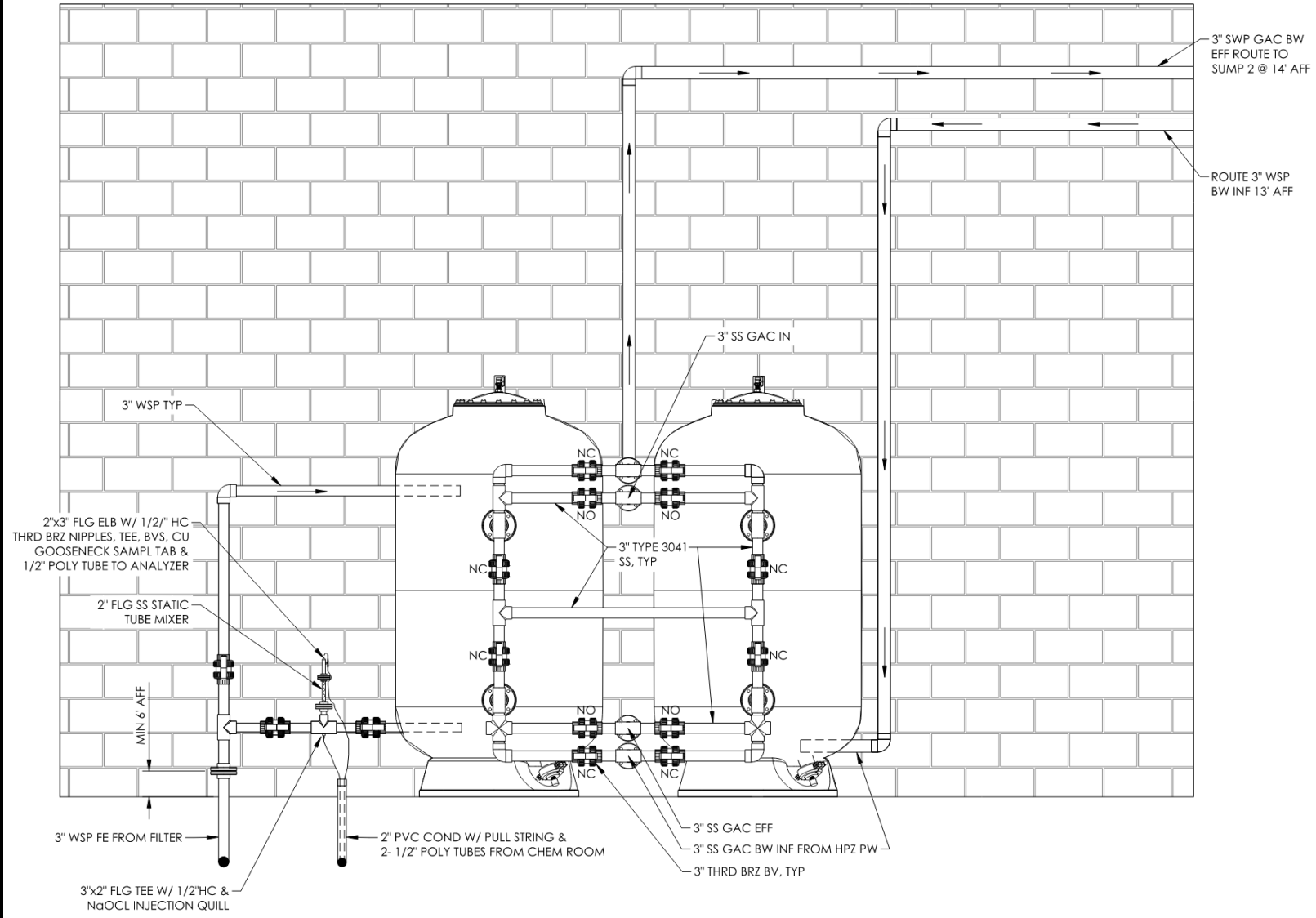
SECTION  $\textcircled{A}$   
NTS S9.0



HYDROPNEUMATIC TANK FOUNDATION  
 3/4" = 1' - 0"

1  
 S10.1





GAC Pressure Filtration



Tank 2 Replacement Roof



<b>Item</b>	<b>Design Criteria</b>	<b>Current</b>	<b>Design</b>
<b>1</b>	Number of Current Active Service Connections	232	302
<b>2</b>	Population Served	490	638
<b>3</b>	Average Number of Active Connections in 2020	211	275
<b>4</b>	Average Annual Water Production Years 2010-2020 (MG)	11.7	15.2
<b>5</b>	Average Annual Water Production Years 2010-2020 (GPM)	22.2	28.9
<b>6</b>	Annual Surface Water Right (MG)	44	44
<b>7</b>	Average Annual Surface Water Available (MG)	21	27
<b>8</b>	Average Day Surface Water Available (GPM)	40	40
<b>9</b>	Average Annual Groundwater Available (GPM)	6	182
<b>10</b>	Average Day Water Available (GPM)	46	52
<b>11</b>	Average Day Demand (GPD)	32,000	42,000
<b>12</b>	Average Day Demand (GPM)	22	29
<b>13</b>	Maximum Day Demand [August 2020] (GPD)	52,700	75,000
<b>14</b>	Maximum Day Demand (GPM)	37	52
<b>15</b>	Peak Hour Demand (GPM) [1.5 x MDD]	55	78
<b>16</b>	ADD/Active Connection (GPD/Connection)	152	153
<b>17</b>	MDD/Active Connection (GPD/Connection)	250	250

<b>18</b>	Min Required Regulatory Storage Volume = Max Day Demand (Gallons)	52,700	75,000
<b>19</b>	Required Fire Storage Volume (Gallons)	180,000	180,000
<b>20</b>	Required CT Storage Volume (Gallons)	30,000	30,000
<b>21</b>	Total Required Storage Volume (Gallons) [Fire+CT+MDD]	262,700	285,000
<b>22</b>	Tank 1 Volume (Gallons)	87,500	87,500
<b>23</b>	Tank 2 Volume (Gallons)	100,000	200,000
<b>24</b>	Available Storage Capacity (Gallons)	160,857	287,500
<b>25</b>	Max Surface Water Treatment Plant Capacity (GPM)	80	100
<b>26</b>	Max Surface Water Treatment Plant Capacity (GPD)	91,200	114,000
<b>27</b>	Firm Surface Water Treatment Plant Capacity (GPM)	40	50
<b>28</b>	Firm Surface Water Treatment Plant Capacity (GPD)	45,600	57,000
<b>29</b>	Number of Surface Water Treatment Filters	2	2
<b>30</b>	Adsorption Clarifier Surface Loading Rate (GPM/SF)		10
<b>31</b>	Mixed Media Filter Surface Loading Rate (GPM/SF)		5
<b>32</b>	Maximum Backwash Rate (GPM)		150
<b>33</b>	Air Scour Rate (SCFM)		45
<b>34</b>	Backwash Water Production (%)		4.3



<b>35</b>	Average Backwash Water Production (Gallons/Week)	13,000
<b>36</b>	Maximum Backwash Water Production (Gallons/Week)	23,000
<b>37</b>	Backwash Recycle Percent of Average Day Demand (%)	4%
<b>38</b>	Volume of Backwash/Sludge Tank (Converted Tank 2) (Gallons)	100,000
<b>39</b>	Maximum Backwash Recycle Rate (GPM)	5
<b>40</b>	Pounds of Dried Sludge Produced (Lbs/Year)	5,100
<b>41</b>	Volume of Concentrated Sludge to Dewater (Gallons/Month)	1,200
<b>42</b>	Depth of Settled Sludge in Dewatering Beds (Ft/Month)	0.4
<b>43</b>	Granular Activated Carbon Filters	2
<b>44</b>	Granular Activated Carbon Filter Diameter (Ft)	5
<b>45</b>	Granular Activated Carbon Filter (Lbs)	2,000
<b>46</b>	Granular Activated Carbon Filter Empty Bed Contact Time (Min)	20
<b>47</b>	Raw Water Pumps	2
<b>48</b>	Raw Water Pump Capacity/Head (GPM/FT)	50/25
<b>49</b>	Filtered Water Pumps	2
<b>50</b>	Filtered Water Pump Capacity/Head (GPM/FT)	50/45
<b>51</b>	High Pressure Zone Peak Hour Flow Pumps	2
<b>52</b>	High Pressure Zone Low Flow Pump Capacity/Head (GPM/Ft)	50/100
<b>53</b>	High Pressure Zone High Flow Capacity Pumps	<u>1</u> <del>2</del>
<b>54</b>	High Pressure Zone High Flow Pump Capacity/Head (GPM/Ft)	500/130

<b>EDWG Exhibit B - Funding Amounts</b>	<b>Submitted</b>	<b>EDWG Agreement</b>
<b>Construction</b>	<b>\$9,049,091</b>	<b>\$9,049,091</b>
<b>Pre-Purchased Material / Equipment (Vac Truck)</b>	<b>\$600,000</b>	<b>\$0</b>
<b>Purchase of Land / Easements</b>	<b>\$30,000</b>	<b>\$30,000</b>
<b>Change Order Contingency (<math>\leq 20\%</math> of total)</b>	<b>\$964,909</b>	<b>\$964,909</b>
<b>Force Account</b>		
<b>Allowances (Soft Costs)</b>		<b>\$2,556,000</b>
<b>Planning</b>	<b>\$50,000</b>	
<b>Design</b>	<b>\$711,400</b>	
<b>Construction Management</b>	<b>\$1,681,894</b>	
<b>Administration</b>	<b>\$112,706</b>	
<b>Conditional Costs (<math>\leq 30\%</math> of total)</b>	<b>\$0</b>	<b>\$2,400,000</b>
	<b>\$13,200,000</b>	<b>\$15,000,000</b>

# EXPEDITED DRINKING WATER GRANT PROGRAM

## B.4 BUDGET COSTS.

Estimated budget costs are contained in the Summary Project Cost Table below.

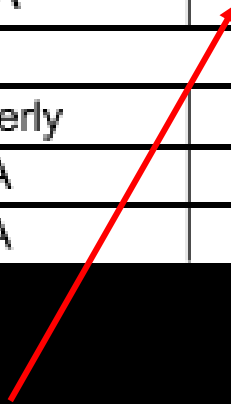
ITEM	DESCRIPTION	TOTAL ESTIMATED COST	PROJECT FUNDING AMOUNT
A	Construction	\$9,049,091	\$6,459,451
B	Pre-Purchased Material / Equipment	\$0	\$0
C	Purchase of Land / Easements	\$30,000	\$0
D	Change Order Contingency ( $\leq 20\%$ of total)	\$964,909	\$645,945
E	Force Account		\$0
F	Allowances (Soft Costs)	\$2,556,000	\$1,410,603
G	Conditional Costs ( $\leq 30\%$ of total)	\$2,400,000 ← <del>\$2,400,000</del>	\$ 2,554,801
	TOTAL	\$15,000,000	\$11,070,800

Note: Deductive Alternative(s) could include Tank 2 roof replacement



ITEM	DESCRIPTION OF SUBMITTAL	CRITICAL DUE DATE	ESTIMATED DUE DATE
5.3	EDWG Request for Final Budget Approval Form	N/A	December 2, 2024
6	Construction and Implementation		
6.1	Notice(s) to Proceed	N/A	January 1, 2025
6.2	Project Completion	December 31, 2025	N/A
6.3	Notification of Project Changes	N/A	As Needed
6.4	Necessary TMF Elements	N/A	Completed
6.5	Permit Amendment Application Documents	N/A	November 28, 2025
6.6	Completion of Construction	N/A	December 31, 2025
REPORTS			
A.5	Progress Reports	Quarterly	N/A
A.6	Project Completion Report	N/A	February 1, 2026
A.7	Final Inspection and Certification	N/A	March 1, 2026

Project construction will go through 2026



**From:** Uppal, Parmdeep@Waterboards <[Parmdeep.Uppal@Waterboards.ca.gov](mailto:Parmdeep.Uppal@Waterboards.ca.gov)>

**Sent:** Tuesday, August 15, 2023 1:41 PM

**To:** Tom Warnock <[twarnock@paceengineering.us](mailto:twarnock@paceengineering.us)>; Vasquez, Maria@Waterboards <[Maria.Vasquez@Waterboards.ca.gov](mailto:Maria.Vasquez@Waterboards.ca.gov)>

**Cc:** Paul Radman <[radman8400@gmail.com](mailto:radman8400@gmail.com)>; [prosenblatt.wcsd@suddenlinkmail.com](mailto:prosenblatt.wcsd@suddenlinkmail.com)

**Subject:** Re: Westhaven CSD EDWG

Hi Tom,

The final reimbursement request date is pushed as far back as the funding source allows, as it's set to the funding appropriation end date. If the District feels that the project cannot be completed and paid out by the March 2026 date, we can potentially add a different funding source at the time of the final budget approval (FBA) amendment that has a later appropriation end date, depending on the availability of funds. For example, we can potentially add Prop 68 for the additional project costs, and this funding source has an end appropriation date of March 2027. As a result, we can potentially push the project dates to March 2027.

Also, we are working on expediting the FBA process as well, so we're hopeful that it should be a much quicker turnaround than the SRF program.

## Engineering Scope of Services & Budget

<b>Final Design</b>	\$761,400
<b>Services During Bidding</b>	\$47,861
<b>Construction Management</b>	\$697,340
<b>Construction Observation</b>	\$704,809
<b>Construction Observer Per Diem</b>	\$47,792
<b>Construction Surveying</b>	\$14,000
<b>O&amp;M Manual</b>	\$40,000
<b>Record Drawings</b>	\$22,842
<b>Prevailing Wage Monitoring</b>	\$27,250
<b>Project Performance Report</b>	\$40,000
<b>Permitting &amp; Environmental Compliance During Construction</b>	\$40,000
<b>Startup/Operator Training</b>	\$50,000
<b>Total</b>	<b>\$2,493,294</b>



**Table 36 – Project Schedule**

<b>Task</b>	<b>Date</b>
<b>Technical Package Completed</b>	12/2022
<b>Environmental &amp; Financial Packages Completed</b>	12/2022
<b>DWSRF Issues Construction Funding Agreement</b>	9/2023
<b>Bid Construction Contract</b>	6/2024
<b>Start Construction</b>	9/2024
<b>Startup</b>	9/2026

**Table 33 – Annual O&M Cost Increase**

Item	Unit Cost	Units	Amount/Year	Units/Year	Cost Year 2021	Cost Year 2025
Trimite O&M	\$0.21	\$/1000 Gallons	8,935,200	Gallons	\$1,876	\$2,112
Inlet/Outlet Pumps Power	\$0.27	\$/kWHr	2004	kWHr	\$538	\$606
Coagulant	\$2.44	\$/Lb	745	Lbs	\$1,816	\$2,044
Sludge Disposal	\$0.23	\$/Gallon	8310	Gallons	\$1,911	\$2,151
GAC Media Replacement	\$2.50	Lb	400	Lbs	\$1,000	\$1,126
Sand Media Replacement	\$124	\$/Ton	6.2	Tons	\$766	\$862
			Additional O&M			\$8,901
			Short-Lived Asset Replacement			\$12,154
			Additional Half-time Operator			\$25,064
			Total Additional Annual Cost			\$46,119

**Table 35 – Average Monthly Increase Cost Per Connection**

Year	2020	2021	2022	2023	2024	2025
Average Monthly Cost of Water Per Customer	\$91.66	\$96.89	\$102.42	\$108.27	\$114.46	\$120.99
Increase in Monthly Cost	-	\$5.23	\$5.53	\$5.85	\$6.18	\$6.54

2021-22 avg monthly bill \$99.84

2022-23 avg monthly bill \$108.12

2023-24 avg monthly bill \$111.17



# ACKNOWLEDGEMENTS

## Westhaven Community Services District Board

### Members

Bill Verick, President

Barbara Cline, Vice President

David Hankin, Finance Officer

Richard Swisher, Safety Officer

Antonio Llanos, Member

## Westhaven Community Services District Staff

### Members

Paul M. Rosenblatt, General Manager/Chief Plant,  
Operator T2-34384/D2-42549

Katrina Martin, Lead Operator,  
T2-44809/D1-55736

Madison Hewitt, Operator, T2-46094

Roxanne Levang, Secretary/Bookkeeper

## EDWG Project Team

Maria Vasquez, Water Resources Control Engineer, DFA

Eric Uppal, Sr. Water Resources Control Engineer, DFA

Barry Sutter, Sr. Water Resources Control Engr, DDW

Scott Gilbreath, Water Resources Control Engr, DDW

Tom Warnock, Principal Engr, PACE Engineering

Steve Wilson, Structural Engr, PACE Engineering

Tony Bowser, Electrical Engr, PACE Engineering

Andy King, Principal Engr, MTI/KC Engineering Co.

Dave Cymanski, Principal Engr, MTI/KC Engineering Co.

Don Burk, Environmental Services Manager, ENPLAN

Carla Thompson, Senior Planner, ENPLAN

Kiara Cuerpo-Hadsall, Planner, ENPLAN

Mark Andre, Forester, BBW & Associates

Giovanni Vadurro, CEG, SHN



Questions?