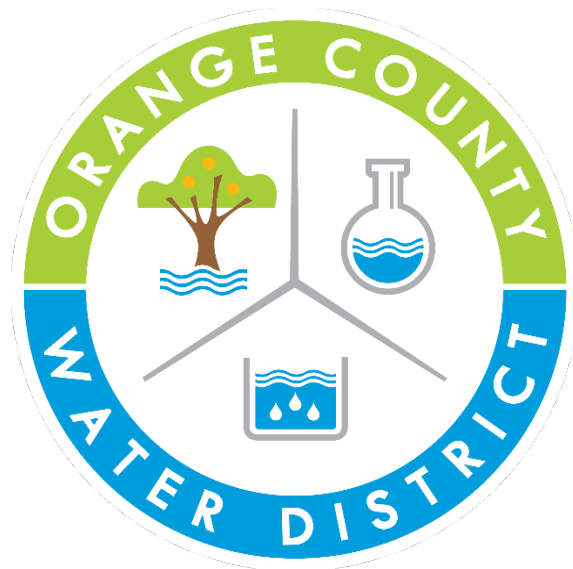


**ORANGE COUNTY WATER DISTRICT**

**REQUEST FOR PROPOSALS  
RFP-25-003**

**FOR  
GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT,  
DELIVERY AND INSTALLATION AT THE FULLERTON MAIN  
PLANT**

**ISSUED: August 21, 2025**



**PROPOSALS DUE:**

**Tuesday, September 23, 2025, at 10:00 AM PT**

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## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

The Orange County Water District (“OCWD” or District) is seeking proposals from qualified and experienced firms to provide 480,000 pounds (lbs) of granular activated carbon (GAC) to the City of Fullerton Main Plant PFAS treatment system. OCWD intends to evaluate the proposals received and enter into a Three-Year General Services Agreement (“Agreement”) with the qualified firm. The work is expected to commence on November 1, 2025. This Agreement will be for a minimum term of three (3) years for the period from November 1, 2025, to October 31, 2027. The Agreement will be monitored closely for acceptable services rendered throughout the Agreement term. OCWD will have the option to terminate the contract in whole or in part during the Agreement term, for any reason or no reason, without penalty, upon notice. The proposer will not be entitled to lost profits or any other compensation not earned prior to the time of termination.

This Request for Proposal (“RFP”) describes the required scope of services, the information that must be included in the proposal, and the proposal selection process. Proposers are encouraged to carefully review this RFP in its entirety prior to submitting their proposals. Failure to submit information in accordance with these requirements and procedures may be cause for disqualification.

### 1. INTRODUCTION

The OCWD is an internationally recognized leader in the water industry that was formed in 1933 by the California State Legislature which entrusted OCWD to guard and protect the region’s groundwater basin and limited water supply. OCWD’s mission is to provide a reliable supply of high-quality water that is sourced in an environmentally responsible manner to the more than 2.5 million residents and businesses within the 270 square mile service area of Orange County, California that OCWD serves. OCWD manages three of Southern California’s greatest water supplies, this includes protecting rights to the Santa Ana River, managing and replenishing the Orange County Groundwater Basin, and operating and maintaining the Groundwater Replenishment System (GWRS), the world’s largest advanced water purification system for potable water reuse. More information regarding the OCWD can be found at [www.ocwd.com](http://www.ocwd.com).

### 2. SOLICITATION SCHEDULE

The solicitation schedule is summarized in the table below. OCWD reserves the right to modify the schedule below at its discretion. Proper notification changes will be made to interested proposers.

RFP Issued	August 21, 2025
Optional Pre-Proposal Meeting	N/A
Questions Due Date	Tuesday, September 2, 2025, at 12:00 PM PT
Proposals Due	Tuesday, September 23, 2025, at 10:00 AM PT
Agreement Award Date:	October 2025



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

### 2.1. OPTIONAL PRE-PROPOSAL MEETING

There will be no mandatory pre-proposal meeting.

### 2.2. QUESTIONS CONCERNING REQUEST FOR PROPOSALS

All questions regarding the RFP must be submitted in writing before the deadline due date of **Tuesday, September 2, 2025, at 12:00 PM PT**. All questions must be titled "**Question – RFP-25-003 GAC Media for Fullerton Main Plant**". Responses to questions received from prospective proposers will be formally documented in a Question and Answer (Q&A) table that will be posted on the OCWD website: <https://www.ocwd.com/working-with-us/rfp-contracts/>. The Q&A table will be updated regularly as questions are received from prospective proposers. Questions received after the questions due date will not be considered.

Attention: Ashlie Valencia, Contracts Administrator  
Email: [procurement@ocwd.com](mailto:procurement@ocwd.com)

### 2.3. DEADLINE FOR PROPOSALS

Three (3) hard copies and one (1) electronic flash drive copy of the proposal must be received in a sealed envelope by OCWD no later than **Tuesday, September 23, 2025, at 10:00 AM PT** or such later time that OCWD may announce by an addendum at any time prior to the proposal deadline. The envelope shall be plainly marked on the exterior "**Proposal for RFP-25-003 GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT**" and with the name, company name, and address of the proposer.

Proposals must be mailed or delivered in person or via courier services at the District office listed below. To deliver submittal packages in person or via courier, please notify the guard at the main gate for proposal drop off. Sealed envelopes will be timestamped upon receipt at the receptionist desk.

#### **Orange County Water District**

Administration Office Building  
Attention: Ashlie Valencia, Contracts Administrator  
Address: 18700 Ward Street  
Fountain Valley, CA 92708

It is the Proposer's responsibility to ensure that proposals are received prior to the submittal deadline. Proposal packages should also include all signed Acknowledgment of Addendum forms that may be issued by OCWD as part of this RFP process, as further described below. Proposals received after the deadline will not be considered under any circumstances. **FAXED OR E-MAILED SUBMISSIONS WILL NOT BE ACCEPTED.** The OCWD will not be responsible for the proper identification and handling of any proposals submitted incorrectly. Only responses properly submitted to OCWD will be considered.



# OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

OCWD reserves the right to reject any and/or all responses received. There will be no formal opening of the proposals.

## 2.4. PRE-SUBMITTAL ACTIVITIES

The District reserves the right to revise the RFP prior to the date the Proposals are due. Addendums to the RFP shall be posted on the OCWD website: <https://www.ocwd.com/working-with-us/rfp-contracts/> for all interested Proposers. The District reserves the right to extend the date by which the Proposals are due.

## 3. PROJECT BACKGROUND AND DESCRIPTION

In 2024, the City of Fullerton began operating the Fullerton Main Plant PFAS Water Treatment Plant, constructed by OCWD. The primary purpose of the treatment plant is to remove Per- and Polyfluoroalkyl Substances, more specifically perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), from drinking water supplied via groundwater wells. The groundwater also contains trace concentrations of volatile organic compounds (i.e., trichloroethylene and tetrachloroethylene), thus unlike the other ion exchange treatment systems constructed by OCWD for other retail agencies in the Orange County groundwater basin, the City of Fullerton’s Main Plant treatment plant consists of granular activated carbon (GAC) followed by free chlorination and distribution to the City’s residents and businesses. The Main Plant is located at 628 W La Palma Ave, Anaheim, CA 92801 (shown in Figure 1).

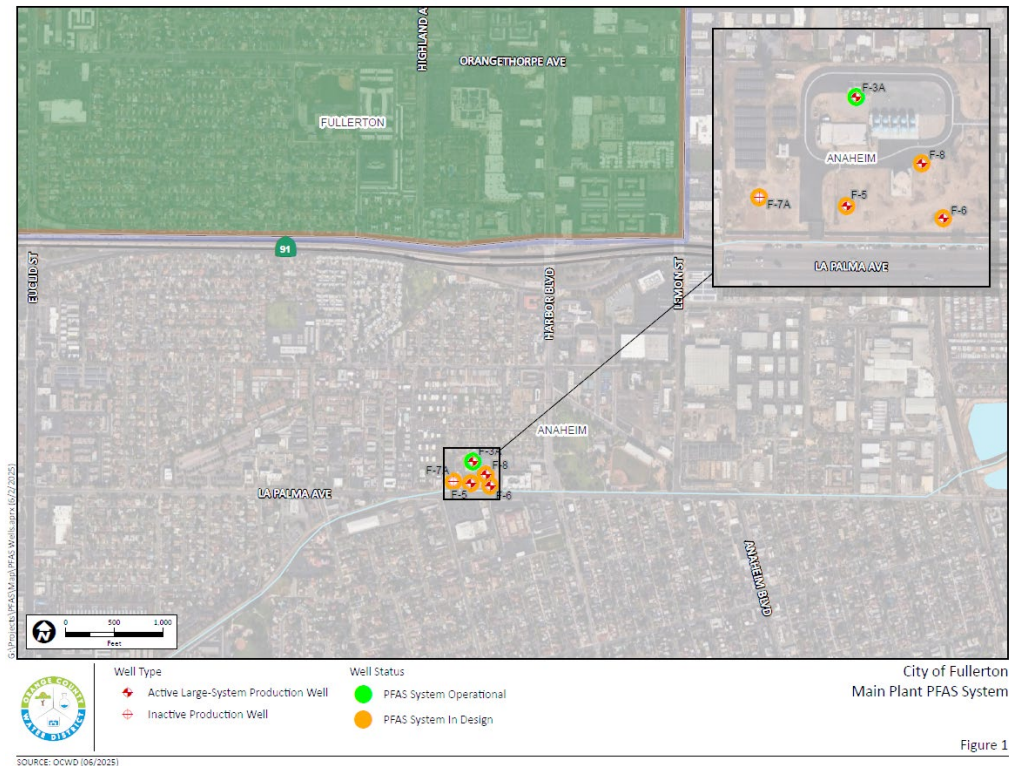


Figure 1. City of Fullerton Main Plant Location



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

Currently, raw groundwater from the City's Well 3A is treated through three GAC trains consisting of two pressure vessels operating in a lead-lag configuration, also known as the "North Plant". Each vessel contains 40,000 lbs of Calgon Filtrasorb 400 media, and each train operates at a 10-minute minimum empty bed contact time and maximum flow of 1,000 gallons per minute (gpm). Operations and maintenance manual for the GAC vessels are included in Exhibit A-2. The maximum capacity of the current treatment system is 3,000 gpm. The Calgon Filtrasorb 400 GAC media was selected through a competitive bidding process based on cost and performance data from pilot testing and rapid small scale column testing conducted by OCWD between December 2019 and January 2021.

Also constructed at the North Plant in 2024 were two idle GAC trains. These trains are in the process of being connected with associated piping, valving and instruments. Estimated completion for this project is November 2025. The City's new well, Well 7A, is also in the process of being equipped with an estimated completion of spring 2026. With the completion of both of these projects, the maximum capacity of the North Plant will increase to 5,000 gpm.

Finally, the Main Plant is planned to be expanded to treat the remaining three operational wells on site: Wells 5, 6 & 8. These three wells will be treated through four new GAC treatment trains before discharging to the existing forebay where the treated water will be disinfected with free chlorine and pumped into the City's distribution system. This new treatment system, also known as the "South Plant" will have a maximum treatment capacity of 4,000 gpm. This project is currently in the process of receiving construction bids, and the GAC vessels are expected to be ready to receive media by winter 2026. At the completion of the Wells 5, 6 & 8 PFAS Water Treatment Plant project, approximately 10,500 acre-feet per year of treated groundwater is expected to be restored, further reducing the region's reliance on imported water. A layout of the planned fully built-out Main Plant is shown in Figure 2.



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

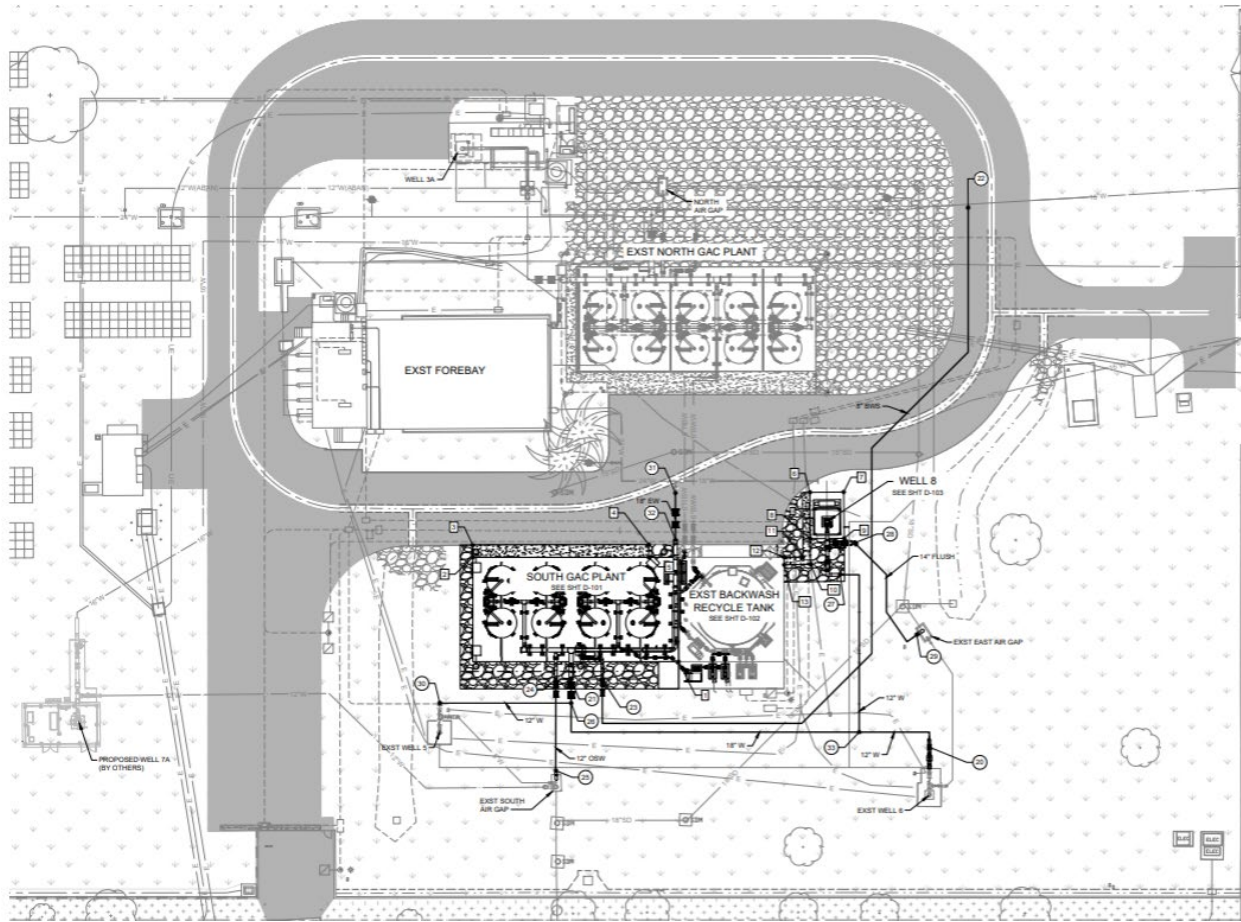


Figure 2. City of Fullerton Main Plant - Site Layout

As mentioned previously, the OCWD performed a PFAS Treatment Study between December 2019 and January 2021. The objective of the study was to test different types of adsorbent media including GAC and ion exchange resins, and alternative (novel) adsorbents to remove PFAS from affected wells operated by retail agencies within the Orange County Groundwater Basin. The study was comprised of both pilot scale testing at a single location (the OCWD “Bessie” well located in Anaheim) and bench-scale rapid-small scale column testing performed for individual wells owned and operated by the retail agencies. Of the GAC products tested, three products lasted the longest before PFAS breakthrough: Calgon Filtrasorb 400, Evoqua UltraCarb 1240LD, and Evoqua AquaCarb 1230CX. The full reports from the OCWD studies can be found on the District’s website: [Resources – Orange County Water District](#).

Between the existing North Plant trains (4 vessels) and planned new South Plant trains (8 vessels), 480,000 lbs of virgin GAC media is required to fill these vessels. The procurement, transport, delivery, filling and preparation of the media will be conducted in two phases. Phase 1 will consist of loading the North Plant trains 4 empty vessels (160,000 lbs) by December 2025, and Phase 2 will consist of loading the South Plant



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

trains 8 empty vessels (320,000 lbs) by winter 2026. Acceptable GAC media for these vessels are the three products tested by OCWD with the longest bed life before PFAS breakthrough.

### 4. SCOPE OF SERVICES

See Exhibit A, attached at the end of this RFP, for the Scope of Work and performance standards. Refer to Exhibit A-2 for relevant Operations and Maintenance Manual for the GAC media vessels currently installed and to be installed as part of the upcoming Fullerton Wells 5, 6 & 8 PFAS Water Treatment Plant project.

### 5. GENERAL INFORMATION

The District expects the selected firm to provide quality service in accordance with industry standards. The firm must demonstrate experience with the type of anticipated work and must have the ability to perform all services in a timely manner upon the request(s) from the District or the District's authorized representative. All work shall comply with the requirements of federal, state, and local laws, and District requirements. The GAC media contractor must be reputable and capable of furnishing the required materials, equipment, machinery, supplies, tools, apparatus, incidentals, labor and supervision necessary to provide GAC media procurement, transport, delivery, installation, and preparation to the City of Fullerton's Main Plant.

Acceptable performance standards include, but are not limited to, dependability, contractor safety, demonstrated experience with anticipated work with the ability to perform all anticipated services in a timely manner upon receipt of request, expertise on the procurement, transport, delivery, installation and preparation of GAC media. Acceptable GAC media products are Calgon Filtrasorb 400, Evoqua UltraCarb 1240LD, and Evoqua AquaCarb 1230CX. No other products will be accepted by the District.

#### 5.1. MINIMUM QUALIFICATIONS

The selected firm is required to have at minimum the following qualifications: at least five years of experience procuring, transporting, delivering, installing and preparing virgin GAC media for treating municipal drinking water utilizing at least one of the three pre-approved GAC media products.

#### 5.2. CONTRACTOR SAFETY

OCWD is committed to the safety of all its employees, contractors, and visitors. All contractors and subcontractors must adhere to applicable Federal, State, and Regional Environmental, Health and Safety (EHS) requirements, as well as OCWD EHS policies and procedures. As part of OCWD's Contractor Safety Program, the proposer shall review and sign the required documents provided in **Exhibit D**, which describes OCWD's Contractor Safety Program Requirements (**Exhibit D-1**) and Appendix forms (**Exhibit D-2**) that are required to be filled out by the Contractor at time of the proposal deadline and throughout the duration of the Agreement. OCWD's Risk and Safety Department will coordinate with the awarded contractor on safety training regarding OCWD's Contractor Safety Program.



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### 5.3. PREVAILING WAGE

The California Labor Code, including but not limited to Sections 1720 et seq. and 1770 et seq. thereof, and interpreting case law and regulations (the “Prevailing Wage Laws”) require the payment of prevailing wages for “public works” projects, including “[w]ork done for irrigation, utility, reclamation, and improvement districts, and other districts of this type” where the total compensation exceeds \$1000. The District has determined that some or all of the scope of work requires the payment of prevailing wages under the Prevailing Wage Laws.

Responding proposers must expressly agree to be responsible for compliance with all Prevailing Wage Laws applicable to the work performed.

The firms to whom an Agreement is awarded hereunder shall comply with all Prevailing Wage Laws, including the payment of prevailing wages to persons performing public works for OCWD. A copy of these prevailing wage rates is on file with the Department of Industrial Relations and can be found online with the State of California at <http://www.dir.ca.gov/dlsr/pwd>. A copy of such prevailing wage rates shall be posted on the jobsite by selected firms.

In accordance with Sections 1773 and 1773.2 of the California Labor Code, the District has found and determined the general prevailing rates of wages in the locality in which the public work is to be performed are those determined by the Director of Industrial Relations and available at <https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Copies of the prevailing rates of wages are maintained with the District’s principal office and are available to any interested party on request. The selected firm shall post a copy of the prevailing rate of per diem wages at each job site.

The description provided herein only summarizes the Prevailing Wage Laws applicable to the work, and proposers are independently responsible for reviewing and assuring compliance with the same.

### 5.4. DIR CONTRACTOR REGISTRATION

Firms submitting proposals to this RFP must be registered with the Department of Industrial Relations prior to submitting a proposal pursuant to the requirements of Sections 1725.5 and 1771.1 of the California Labor Code. Contractor registration information can be found at <http://www.dir.ca.gov/Public-Works/PublicWorks.html>. Contracts entered into with any firm in violation of Section 1771.1(a), shall be subject to cancellation by the District at the sole discretion of the District consistent with Section 1771.1(f). Pursuant to California Labor Code Section 1771.4, proposers are alerted that the project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

### 6. ELEMENTS OF PROPOSAL

To provide a degree of consistency in the review of the written proposals, firms are required to include the following content in their proposals. The information required below will be used to evaluate each proposal based on the evaluation criteria outlined in this RFP. Proposals may be deemed nonresponsive if they do not respond to all areas specified below.

Proposals shall be prepared simply and economically, providing a straightforward and concise description of how the proposal has satisfied all the requirements of this RFP. Emphasis shall be on completeness and clarity of content with sufficient detail to allow for accurate evaluation and comparative analysis. Excessive or irrelevant materials will not be favorably received.

The following subsections describe the contents required in the proposal. The proposal shall be of such scope and depth to sufficiently describe and demonstrate the proposer's understanding of and approach to the projects.

Please include the following in your proposal:

#### 6.1 Title Page

The proposer should identify the RFP title, name and title of the firm's contact person, address, telephone number, fax number, email address, and date of proposal submission.

#### 6.2 Cover Letter

A principal of the firm authorized to commit the firm to the requirements of the RFP must sign the cover letter. The letter should identify a contact person (name, e-mail address, and phone number) for future communication during the selection process. And shall also discuss the Proposer's commitment to providing high quality services, describe the firm's understanding and approach to the services, and its ability to perform the requirements of this RFP. Include a brief background of the firm including history, types of services provided, number of employees, number of offices and locations with staff size and disciplines, and any other relevant information that may be useful in determining the firm's qualifications to provide the services described in this RFP.

#### 6.3 Table of Contents

The table of contents should include a clear and complete identification by section and page number of the submitted materials.

#### 6.4 Experience and record of past performance.

Provide a minimum of three (3) references from other municipal, city, or county governmental agencies for which the company has recently or is currently providing procurement, transportation, delivery, installation, and preparation of virgin GAC media that is equivalent or greater in scope as being required in this RFP. Indicate the scope of



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

work, date, contract amount, and the name, email address, and telephone number of the client contact. Also provide a complete list of other public agencies in California utilizing your services over the past five (5) years. Ongoing projects currently being performed by the proposer also may be submitted for consideration. The District at its discretion may contact the references for additional information. Failure to provide accurate contact information may be cause for rejection of the proposal as being nonresponsive.

### 6.5 Price Proposal

Please complete the Cost Proposal Sheet that is attached in **Exhibit A-1** for the services that are required within this RFP. It is expected that the indicated rates will remain in effect for the duration of the Agreement term unless otherwise specified and approved by OCWD.

### 6.6 Other Information

The proposal shall also include:

#### 6.6.1 Contractor Safety Program

The proposer is required to review, complete, sign and submit the following documents:

- Contractor Environmental Health and Safety Agreement form, attached at the end of **Exhibit D-1**.
- Appendix B: Contractor Required Information Form, attached in **Exhibit D-2**, must be completed in its entirety, and signed and submitted with the proposal.

#### 6.6.2 Safety Manual

Contractor must include in their proposal a copy of its safety manual that meets requirements for their injury and illness prevention program.

#### 6.6.3 Quality Control Plan

Contractor must include in its proposal a Quality Control Plan that provides the contractor an effective and efficient means of identifying and correcting problems throughout the entire scope of work.

### 6.7 Statement of Insurance Compliance

Proposer shall provide a statement that it will meet the insurance requirements that are listed in the Services Agreement, attached hereto as **Exhibit C**. OCWD will request the insurance forms and associated documentation when OCWD provides notice that the Services Agreement is awarded.



## OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT

### 6.8 OCWD Standard Agreement

Proposers shall provide a statement that the Proposer accepts OCWD's form of Services Agreement attached hereto as **Exhibit C**. Proposers responding to this RFP must be prepared to proceed with the Services Agreement in substantially the form provided, with minor non-substantive changes in OCWD's sole discretion. OCWD retains full discretion to rescind the proposed Services Agreement award to a Proposer who fails to comply with this requirement, and to exclude the Proposer from future procurement where applicable. The Services Agreement shall be executed by the Proposer within ten (10) calendar days of receipt of OCWD's Notice of Award to Proposer.

### 6.9 Billing

Proposers shall provide a statement that it will meet the minimum requirements specified here. At a minimum, the invoice for services shall include the Purchase Order Number, Agreement Number, and the itemized summary of each authorized project task along with the names of persons, their job titles, the hours worked, and hourly billing rates. OCWD will provide reporting requirements to the selected firm, and the selected firm shall prepare invoices that comply with the requirements. Failure to satisfy the reporting requirements may result in rejection, payment delay, or short pay of the invoices submitted to OCWD for payment.

### 6.10 Conflict of Interest

Provide a statement that the proposer, individuals employed by the proposer, or firms employed by or associated with the proposer, do not have a conflict of interest with the Project. The proposer shall exercise reasonable efforts to prevent any actions or conditions that could result in a conflict of interest and shall include, but is not limited to, establishing precautions to prevent its employees or agents from making, receiving, providing in, or offering gifts, entertainment, payments, loans, or other considerations which could be deemed to appear to influence individuals to act contrary to the best interest of the District. If a potential conflict of interest is identified in any form, the Proposer shall inform the District immediately. Proposers are subject to disqualification on the basis of a conflict of interest as determined by OCWD. By submitting a proposal you are stating you do not have a conflict of interest with the Project.

### 6.11 Equal Employment Opportunity And Affirmative Action Requirements

The proposers shall provide a Statement of Equal Employment Opportunity/Affirmative Action. The selected consultant/contractor and each subconsultant/subcontractor shall not discriminate in the employment of persons on the work because of race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, sexual preference or sex of such persons except as permitted by Section 12940 of the California Government Code. The selected contractor is expected to maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as set forth in the District's Administrative Policies.



**OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT**

**7. PROPOSAL SUBMISSION REQUIREMENTS**

**7.1. Proposal Format**

The proposal shall be limited to no more than 5 single-pages in 8.5” width x 11” length size recycled or recyclable white bond paper, paginated, and bound. This does not include the title page, table of contents, cover letter, appendices, dividers, or résumés. Any oversized documents, such as charts or tables, must be folded to size and secured in the envelope.

All files shall be bookmarked and in a text searchable PDF format (i.e., not scanned images) compatible with Adobe Acrobat Version 8.0 (at a minimum). The main directory of the flash drive shall contain the entire proposal. All sections of the PDF file shall be bookmarked.

**7.2. Proposal Preparation Costs**

This solicitation does not commit the District to award any work nor to pay any costs incurred from the preparation of proposals. Firms responding to this RFP will be solely responsible for all costs and expenses incurred during the selection process.

**8. SELECTION PROCESS**

Selection of the Consultant will be based on the proposal contents, prior experience of the firm, performance on similar or related projects, and overall costs that best serve the District. Other factors that may be considered during the evaluations include the firm’s reputation in the industry and any other aspects which could affect the proposer’s performance under the awarded Agreement.

All responsive proposals will be evaluated by a selection committee formed by the District. The proposal shall be of such scope and depth to sufficiently describe and demonstrate the proposer’s understanding, approach, and qualifications to successfully complete the scope of services described herein. Submittal of incomplete or vague responses to any section or subsection of this RFP may result in rejection of the proposal. Proposals will be evaluated, scored, and ranked based on the criteria specified in the table below. The evaluation criteria listed in the OCWD Proposal Evaluation Form (**Exhibit B**) will be used to evaluate each proposer.

<b>Item No.</b>	<b>Criteria for Proposal Evaluations</b>	<b>Maximum Points</b>
1	Proposers Qualifications and Performance on Similar or Related Projects	30
2	Price	70
<b>TOTAL POINTS:</b>		<b>100</b>



## **OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND INSTALLATION AT THE FULLERTON MAIN PLANT**

The District reserves the right to award the contract to the firm who presents the proposal, which in the judgment of the District, best accomplishes the desired results based upon this information, OCWD staff will recommend a firm to OCWD's Board of Directors for award of the contract. The selected firm must be able to begin work immediately upon award of the contract and must be able to maintain the required level of effort to meet the proposed schedule.

### **9. SPECIAL CONDITIONS**

#### **9.1. RESERVATIONS**

This RFP does not commit the District to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP or to procure or contract for work.

#### **9.2. PUBLIC RECORDS**

All Proposals submitted in response to this RFP become the property of the District and are public records and as such may be subject to public review.

#### **9.3. RIGHT TO CANCEL**

The District reserves the right to cancel, for any or no reason, in part or in its entirety, this RFP including but not limited to: selection schedule, submittal date, and submittal requirements. If the District cancels or revises the RFP, the District will notify all the proposers in writing via email.

#### **9.4. ADDITIONAL INFORMATION**

The District reserves the right to request additional information and/or clarifications from any or all Proposers.

#### **9.5. PUBLIC INFORMATION**

Release of Public Information selection announcements, contract awards, and all data provided by the District shall be protected from public disclosure. Proposers desiring to release information to the public must receive prior written approval from the District.



**OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT**

# **EXHIBITS**



**OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT**

# **EXHIBIT A**

## **SCOPE OF WORK**

## EXHIBIT A

### STATEMENT OF WORK

The OCWD (“District”) is soliciting Proposals from Contractors that OCWD has determine as potentially qualified to provide virgin Granular Activated Carbon (GAC) media and installation at the Fullerton Main Plant PFAS Water Treatment Plant located in the City of Anaheim. The selected Contractor will be responsible for the procurement, transport, delivery, filling of GAC pressure vessels, and preparation of the media (e.g., flushing) for treating raw groundwater.

The primary purpose of this treatment plant is to remove PFAS (Per- and Polyfluoroalkyl Substances), more specifically perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), from drinking water supplied via groundwater wells. OCWD has performed pilot testing of select GAC products for PFOA and PFOS removal and is accepting Proposals for the three products that lasted the longest before breakthrough. The decision of which GAC to be purchased by OCWD will be based upon price and demonstrated PFOA and PFOS removal performance of the GAC in the OCWD pilot study.

Between the existing North Plant empty trains (4 vessels) and planned new South Plant trains (8 vessels), 480,000 pounds (lbs) of virgin GAC media is required to fill these vessels. The procurement, transport, delivery, filling and preparation of the media will be conducted in two phases. Phase 1 will consist of loading the North Plant trains 4 empty vessels (160,000 lbs) by December 2025, and Phase 2 will consist of loading the South Plant trains 8 empty vessels (320,000 lbs) by winter 2026.

### GAC Media Specifications

- The GAC media shall be one of the following. There are no other equals.
  - Calgon Filtrasorb 400;
  - Evoqua UltraCarb 1240LD; or,
  - Evoqua AquaCarb 1230CX.
- The GAC media shall be 12x40 particle mesh bituminous coal.
- The GAC media shall be virgin GAC. Regenerated GAC media is prohibited without written approval by OCWD.
- The GAC media shall be free of dirt and other foreign material.
- The GAC media shall be ANSI/NSF 61 certified for potable water use and rinsed prior to deliver in accordance with the certification requirements. ANSI/NSF 61 certification shall be provided by the Contractor within their Proposal.
- The GAC media shall comply with AWWA B604-18.
- All GAC media supplied under this contract shall be manufactured at the same plant.
- The GAC media shall be durable and capable of withstanding the abrasion associated with sluicing.

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- Contractor shall provide a product specification sheet as part of their Proposal containing, at a minimum, the following information for the GAC to be provided at the locations specified in this RFP:
  - Product and company information
  - Type of GAC media
  - GAC media physical properties:
    - Iodine number
    - Moisture by weight
    - Effective size
    - Uniformity coefficient
    - Abrasion number
    - Gradation
    - Specific gravity
  - Bed expansion curve
  - Pressure drop characteristics of the GAC at the project's fill quantity and vessel size
  - Material Safety and Data Sheets
- Detailed specifications, material quality, testing results, and a representative sample of the GAC media shall be submitted to OCWD for review and approval at least two weeks prior to delivery. Testing shall be in accordance with the current ASTM testing methods on a representative lot of the GAC to be supplied.

Manufacturer's test reports shall include the following information:

- Manufacturer's name
- Product name
- Material source and manufacturer plant location
- Date of sampling
- Lot or stockpile number identification
- Pressure drop characteristics of the GAC at the project's fill quantity and vessel size
- Physical properties:
  - Iodine number
  - Moisture by weight
  - Effective size
  - Uniformity coefficient
  - Abrasion number
  - Gradation
  - Specific gravity

### **GAC Media Procurement, Transport, Delivery, Installation and Preparation**

- The Contractor shall procure, transport, deliver, install, and prepare the GAC media for treating raw groundwater into the constructed pressure vessels.
- The Contractor shall deliver the GAC media in two phases. The first phase includes 160,000 lbs of GAC media to be loaded into four vessels, 40,000 lbs each, by December 2025. The second phase includes 320,000 lbs of GAC media to be

## OCWD RFP-25-003 – SCOPE OF WORK

loaded into eight vessels, 40,000 lbs each, by winter 2026. The Contractor shall hold the price for both delivery phases included in their Proposal.

- The Contractor shall provide at least one week notice and 24-hour confirmation of its intent to deliver the GAC and shall schedule its work in coordination with the City of Fullerton's schedule.
- The Contractor shall install the media within three weeks of request by OCWD.
- The GAC media shall be transported and delivered in trailers used solely for the transport of GAC for treating water for drinking water purposes. Trailers shall be thoroughly cleaned and sanitized prior to filling with GAC and shall be lined or constructed with materials suitable for transporting GAC that will be in contact with potable water.
- The Contractor shall comply with applicable regulatory requirements including, but not limited to, OSHA, Cal-OSHA, US Department of Transportation, local air pollution control requirements, and all applicable requirements of the State Water Resources Control Board and Regional Water Quality Control Boards. Contractor to provide evidence of compliance with applicable permits and regulatory requirements.
- The GAC media shall be transferred as water slurry only using air pressure provided by the Contractor as the motive force. Use of a pump or eductor to transfer the GAC from the trailer into the exchange vessel will not be allowed. Bag loading or dry loading of the GAC media into the exchange vessel is prohibited.
- No discharges of slurry water used in the transfer process will be permitted without OCWD's permission and permission of any applicable regulatory agencies. All discharges shall meet the minimum requirements of the local City NPDES permit.
- The Contractor shall be responsible for cleanup and proper disposal of all GAC and slurry spills that may occur during the transfer operation.
- Following installation of the GAC in the vessels, the Contractor shall assist the City of Fullerton's operating personnel in placing the system in initial operation in the filter-to-waste modes, in accordance with the GAC manufacturer recommendations, for removal of fines from the newly installed GAC. Contractor shall submit GAC preparation plan as part of their Proposal. Operations and Maintenance Manual for the existing and planned GAC vessels is available for reference in Exhibit A-2.
- OCWD may elect to collect samples and perform independent testing. The treatment system must continuously provide water below 2 ng/L of both PFOA and PFOS concentrations.
- The Contractor shall guarantee in writing that effluent from the GAC media placed in the lead and lag vessel shall not exceed 2 ng/L of PFOA or PFOS within the first 100 calendar days of use, and shall remove and replace, at no cost to OCWD, the City of Fullerton, OCWD's construction contractor, or the City of Fullerton's construction contractor, the GAC media in the vessel(s) that has effluent exceeding 2 ng/L within the first 100 calendar days.
- The Contractor shall guarantee in writing that all installed GAC meets the required specifications of this RFP. If the GAC is found to not meet the specifications, the Contractor shall remove and replace the GAC from the vessels at no cost to

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OCWD, the City of Fullerton, OCWD's construction contractor, or the City of Fullerton's construction contractor.



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INSTALLATION AT THE FULLERTON MAIN PLANT

# EXHIBIT A-1

# COST PROPOSAL SHEET

**ORANGE COUNTY WATER DISTRICT  
 GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
 INSTALLATION AT THE FULLERTON MAIN PLANT - RFP-25-003**

**COST QUOTATION**

ITEM	DESCRIPTION	UNITS	QUANTITY	TOTAL (\$)
1	<u>Product Name:</u> _____ <u>GAC Media Amount:</u> 160,000 lbs <u>Location:</u> Fullerton Main Plant – North GAC Trains 4 & 5 (4 vessels, 40,000 lbs each)	Lump	1	
1A	Sales Tax (7.75%) for Item 1	-	-	
Item 1 Subtotal				
2	<u>Product Name:</u> _____ <u>GAC Media Amount:</u> 320,000 lbs <u>Location:</u> Fullerton Main Plant – South GAC Trains 1 - 4 (8 vessels, 40,000 lbs each)	Lump	1	
2A	Sales Tax (7.75%) for Item 2	-	-	
Item 2 Subtotal				
<b>TOTAL QUOTATION</b>				

**Company Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

## **EXHIBIT A-2**

# **GAC MEDIA VESSEL O&M MANUAL**

## **GRANULAR ACTIVATED CARBON (GAC) SYSTEM OPERATION AND MAINTENANCE MANUAL**

**Project Name:** OCWD — Water Treatment System  
**Project location:** Orange County, CA  
**Equipment Name:** HP1240 System

**October 2021**

Prepared by: Evoqua Water Technologies LLC  
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Ludington, MI 49431  
Phone: 855-338-7812

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## 1.0 INTRODUCTION

This manual generally describes the equipment and operating procedures for a granular activated carbon (GAC) System. The GAC System is designed to provide many years of trouble-free service. To achieve this, the GAC System equipment must be properly handled and installed to obtain the desired results. Failure to do so can cause premature equipment malfunctions and/or undesirable System performance.

Evoqua Water Technologies LLC shall deliver the GAC System and shall ensure that quality workmanship practices and construction procedures are followed throughout. Unknown situations or conditions not covered in this manual are the responsibility of the Purchaser.

## 1.1 GLOSSARY

**1.1.1 Adsorber** - A vessel designed to hold granular activated carbon.

**1.1.2 Backflush** - Performed during normal operations to remove entrapped air from the GAC bed.

**1.1.3 Backwash** - Running treated water upwards through the media bed. Performed before placing the System on-line to remove fines and entrapped air, and to stratify the GAC bed depth. Also used during normal operations to remove particulate build up.

**1.1.4 Breakthrough** - When effluent contaminant levels are too high. It means the treatment effectiveness is unacceptable.

**1.1.5 Bulk Transport Trailer** - Hopper type trailer used to transport GAC, slurry in fresh GAC, and remove spent GAC from Exchangers. Also called slurry trailer.

**1.1.6 Carbon Rinse** - Plant water used to rinse an Adsorber's interior surface during GAC change-out.

**1.1.7 Differential Pressure** - The difference between the inlet pressure and the outlet pressure of a component. Also called "Pressure Drop" and "delta-P."

**1.1.8 Effluent** - Treated water leaving the System or leaving some System component (as context indicates).

**1.1.9 GAC** - Granular activated carbon.

**1.1.10 Heel** - Any spent GAC not removed from an Adsorber before adding fresh GAC.

**1.1.11 Influent** - The untreated water entering the System or entering some System component (as context indicates).

**1.1.12 Lead Adsorber** - The first bed of GAC through which a process or a waste stream is passed. Also called Primary Adsorber.

**1.1.13 Media** – GAC

**1.1.14 Polishing Adsorber** - The second or last bed of GAC through which a process or a waste stream is passed. (Also called Secondary or Lag Adsorber)

**1.1.15 Pneumatic Port/Pressure Port** – The air and water connection for service and wash-down of Adsorber.

**1.1.16 Pressure Safety Valve (PRV)** – A device with a limit switch to prevent Adsorber over-pressurization. Upon valve relief, it sends a signal to the SCADA.

**1.1.17 Spent Media** - GAC that has adsorbed the maximum organic material.

**1.1.18 Underdrain** - Device designed to permit an evenly distributed flow of water but retain GAC in Adsorber.

**1.1.19 Utility Port** – An air and water connection for Adsorber service and wash-down.

**1.1.20 Vent** - A line from each Adsorber with automatic vacuum/air release valve.

**1.1.21 Water Cushion** - The water added to an Adsorber before charging it with GAC to protect underdrain and lining.

**1.2 IMPORTANT MESSAGES AND WARNINGS**

This Operation and Maintenance Manual (OMM) should be in the possession of the personnel who operate and maintain the GAC System. The purpose of this OMM is to instruct and advise operators and maintenance personnel. This manual will remain a valuable resource for the safe, economical, efficient operation and maintenance of the GAC System.

Failure to properly follow instructions, failure to take notice of warnings, and failure to take proper precautions and preventive measures may be dangerous and could cause serious injury, equipment damage, and environmental problems.

Mechanical modifications or substitutions of parts on equipment that may affect structural or operational safety shall not be made without prior manufacturer's approval or engineer's advice. Modifications other than those approved may defeat protective features originally designed into the equipment and its controls; and therefore, shall not be made.

Unauthorized personnel should be always kept away from this equipment. Only qualified personnel who have been properly instructed in this equipment's proper operation and maintenance requirements and in its potential hazards shall be allowed to operate and maintain it.

**IMPORTANT**

**EVOQUA WATER TECHNOLOGIES LLC MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THE MATERIAL CONTAINED IN THIS OMM, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OR FITNESS FOR A PARTICULAR PURPOSE. EVOQUA WATER TECHNOLOGIES LLC SHALL NOT BE LIABLE FOR ERRORS CONTAINED HEREIN OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE PERFORMANCE OR USE OF THIS MATERIAL.**

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**1.3 SAFETY PRECAUTIONS**

Any piece of equipment can be dangerous if operated improperly. Safety is ultimately the responsibility of those operating and maintaining the equipment. All personnel operating and maintaining the GAC System, and its proper implementation must be familiar with all the system components, and observe all OSHA, federal, state, and local safety codes and requirements. The personnel should also be active participants in an approved plant-wide health and safety program.

**STAY ALERT**

**DO NOT PERFORM OPERATION OR MAINTENANCE ACTIVITIES WHEN TIRED OR GROGGY**

**WATCH WHAT YOU ARE DOING**

**DO NOT ATTEMPT TO SERVICE OR OPERATE MACHINERY YOU ARE NOT FULLY FAMILIAR WITH**

**NEVER ADD WATER TO ACID OR A VIOLENT REACTION WILL OCCUR - THIS CAN CAUSE SEVERE CHEMICAL BURNS**

**DO NOT TAKE CHANCES**

**ASK FOR ASSISTANCE IF IN DOUBT**

**DO NOT TRY TO DO IT ALONE**

**USE COMMON SENSE**

**THINK BEFORE YOU ACT AND BE CAREFUL**

### 1.3.1 Safety Definitions

- 1.3.1.1 **WARNING** means a potentially hazardous situation which if not avoided, could result in death or serious injury.
- 1.3.1.2 **CAUTION** means a potential situation which if not avoided, could result in equipment or property damage.
- 1.3.1.3 **NOTE** means a remark which will help make System operation easier.

### 1.3.2 Hazards

- 1.3.2.1 **WARNING:** Wear personal protective equipment (PPE) suited to the work activity and conditions. Consult the table below:

**Table 1: PPE Guidelines**

Item	Required When	Notes
Sleeved shirt	Always	Do not wear loose clothing (or jewelry) which could be caught in machinery
Long heavy trousers	Always	Coveralls may be used instead of sleeved shirt and trousers
Safety-toed work boots	Always	Non-skid footwear is recommended
High-visibility vest, shirt, or jacket	Always	If a high-visibility jacket is used, be sure it is suited to the weather and do not take it off if it warms up, unless a high-visibility vest or shirt will be used.
Safety glasses	Always	Should have side shield
Protective gloves	Always	Ensure gloves are suited to the activity. Use leather gloves to avoid pinches and cuts, and impervious gloves when handling chemicals, etc.

1.3.2.2 **WARNING:** Avoid contacting potentially contaminated water and media when sampling and servicing the System. Wear appropriate PPE such as chemical-impervious gloves, safety glasses, face shields, aprons, or respirators to avoid exposure to contaminants. Be especially cautious of splashes when disconnecting piping, valves, and fittings.

1.3.2.3 **WARNING:** This system runs at high pressure. Take precautions when adjusting valves or fittings or opening pressurized vessels.

1.3.2.4 **WARNING:** Failing to relieve all pressure could result in death or serious injury! Use LOTO procedures. Relieve pressures by opening the appropriate valve before servicing. Ensure gauges show 0 psi before opening equipment.

1.3.2.5 **WARNING:** Clear the area of slip, trip, fall, and fire hazards. Put tools back in their designated storage areas. Store excess supplies neatly. Dispose of trash appropriately.

1.3.2.6 **WARNING:** Media particles and dust may irritate the respiratory tract, skin, and eyes, and may pose a slip hazard. Avoid breathing dust. Avoid contact with eyes and skin. Wear proper PPE. Clean up spills immediately.

1.3.2.7 **WARNING:** Hoses and other objects used while operating this System may be heavy. Be careful when pulling, lifting, pushing, holding, carrying, or throwing. Use proper lifting techniques or assistance to avoid back strain or other injury.

1.3.2.8 **WARNING:** Workers may fall on slick or uneven walking surfaces or trip on obstacles. Reactive injuries may be caused by slipping or tripping without falling. Use proper footwear and caution to help prevent injury. Maintain neat and orderly work areas. Properly store and secure all unused tools and supplies.

1.3.2.9 **WARNING:** Spills and releases of treatment chemicals, filter media, or contaminated water are possible. Follow applicable spill response plans and protocols. To avoid slipping, clean up spills immediately. Wear proper PPE. Avoid breathing dust. Avoid eye or skin contact.

1.3.2.10 **WARNING:** Depending on the nature of the job, media used, site characteristics, and additional equipment used, there may be hazards not described here.

1.3.2.11 **WARNING:** Mechanical modifications and/or parts substitutions on equipment that will affect structural, operational, or environmental safety should not be made. Modifications may defeat protective features originally designed into the equipment and control; and therefore, should not be made.

1.3.2.12 **WARNING:** Keep all equipment guards in place. If removed to service the equipment, make sure the guards are replaced properly before operating.

1.3.2.13 **WARNING:** Failure to properly follow instructions and failure to take proper safety precautions is dangerous and can cause serious personal injury, needless equipment damage, and unnecessary environmental harm.

1.3.2.14 **WARNING:** Remove adjusting screws or wrenches. Form a habit of checking to see that all tools are removed from equipment.

1.3.2.15 **WARNING:** Make sure all personnel are familiar with OSHA approved Safety Data Sheets for all hazardous materials they may contact.

## 2.0 EQUIPMENT DESCRIPTION

### 2.1 GENERAL DESCRIPTION

The HP1240 (GAC) System is designed to reduce the influent PFAS concentration. The GAC System consists of (2) two GAC Adsorber vessels, face piping, and piping module with support skid.

The carbon steel Adsorbers are vertical cylindrical pressure vessels with elliptical tops and bottoms manufactured for a maximum operating pressure of 125 psig. The Adsorbers are designed for down flow operation with a specially designed underdrain collection system to maximize GAC effectiveness and allow efficient and rapid spent GAC removal.

The HP1240 System is designed to be used with GAC. A single point distributor is installed at the top of each Adsorber. The HP1240 System has an 8" 4-tier piping manifold provided for lead/lag or parallel operation with separate connections for influent, effluent, backwash in and backwash discharge. The piping manifold also has sample ports and pressure gauges. The Adsorbers are protected from over pressure by pressure relief valves mounted on the piping manifold.

The process and utility piping to for System operation are mounted on the Adsorbers and piping module. The piping has valving to operate the Adsorbers in parallel or series (lead/lag) flow configuration. Each Adsorber has its own GAC fill, GAC discharge and vent lines. The process piping is equipped with pressure gauges and sample ports at each Adsorber's inlet and outlet. Compressed air connections facilitate GAC transfer.

## **2.2 PROCESS DESCRIPTION**

The HP1240 System is designed to remove dissolved ionic compounds (PFAS) from contaminated feed water using granular activated carbon (GAC).

2.2.1 The client will pump the feed water to be treated at a controlled rate through the Adsorbers in the series configuration.

2.2.2 Feed water enters each Adsorber from the top and flows down through the GAC bed.

2.2.3 Each Adsorber shall contain 1400 ft<sup>3</sup> of GAC which will provide sufficient contact time at the design and peak flowrates to remove the PFAS in the feed water. PFAS ions in the source water are adsorbed onto the GAC as the water passes through the bed.

2.2.4 The treated water is collected in the underdrain system.

2.2.5 When piped in the series configuration, and the lead Adsorber becomes saturated (spent) it's taken off-line for GAC replacement. The feed water is directed to the second Adsorber, allowing the system to remain in service. The lead Adsorber is then pressurized up to 20-40 psig with air. When utility water is added, the spent GAC is pneumatically displaced as slurry to a bulk transport trailer. The dewatered spent GAC is reactivated, landfilled, or incinerated.

2.2.6 To refill the Adsorber with fresh GAC, the GAC in the trailer is slurried, using clean water, pressurized up to 15 psig and then transferred to the empty Adsorber.

2.2.7 With fresh GAC in the Adsorber, this Adsorber becomes the lag Adsorber.

### 2.3 OPERATING CONDITIONS

The design operating conditions and characteristics for this system are shown in the following table.

Table 2: Operating Parameters

Design flowrate	1047 gpm in series (max.)
Design pressure	125 psig
Design temperature	150°F
GAC content	1400 ft <sup>3</sup> per Adsorber
GAC type	To Be Determined

**NOTE:** Optimum System effectiveness is obtained if changes to the system occur slowly. Rapid changes in flow will cause upsets to the Adsorbers, which could adversely affect the operation. Always turn valves slowly to prevent hydraulic shock.

### 3.0 PROCEDURES

#### 3.1 RECEIVING

Immediately upon receipt and before removal from the truck trailer or shipping container, inspect the GAC System equipment for damage. Claims for any damage that may have occurred in transit should be filed promptly with the delivering carrier. Delay unloading until the carrier's representative finishes inspecting the damaged equipment, or a damage claim may not be honored. The inspection should include as a minimum:

- 3.1.1 External surface damage.
- 3.1.2 Damage such as broken nozzles, valves, pipes, underdrain, etc.
- 3.1.3 Equipment damage at contact points.
- 3.1.4 Unpacking and inspecting all packaged equipment and accessories.
- 3.1.5 Internal lining.

#### 3.2 UNLOADING AND HANDLING

When unloading and handling the GAC System equipment, take extreme care to avoid damaging it. Regardless of the type of equipment being handled, certain precautionary measures must be implemented such as:

- 3.2.1 Ensure the lifting equipment can hold the total intended load.
- 3.2.2 Always use lifting eyes and brackets.
- 3.2.3 Never position lifting equipment where it could damage the equipment load.

3.2.4 When using a forklift, make sure the forks are long enough to extend past the intended load. This prevents accidentally puncturing the underside of the equipment crates, boxes, and skids that may damage the equipment itself.

3.2.5 Use spreader bars.

3.2.6 Do not slide, drag, or push equipment across surfaces. Always lift it into position.

3.2.7 Do not roll, drop, or throw equipment or accessories.

3.2.8 Never attach lifting cables and/or straps to, or permit them to contact nozzles, flanges, gussets, pipes, shafts, painted surfaces, or any other accessory that may be damaged by contact.

3.2.9 When equipment is being lifted, use proper rigging practices, and attach a guideline to prevent impact damage caused by swinging it into another object.

3.2.10 Never set on or roll over an equipment fitting and never use a fitting as a lifting point.

3.2.11 Prevent tools, hooks, etc. from striking the GAC System equipment.

### **3.3 ASSEMBLING SYSTEM**

The GAC System will be shipped pre-assembled to the greatest extent possible. The drawings in Appendix B show the System after assembly. The piping module skid and vessel legs have pre-drilled holes for placing and mounting. The internal septa will be shipped installed. Assemble the GAC System in the following order:

3.3.1 Check to see if any bolts may have loosened during shipment. If so, tighten them.

3.3.2 Be sure the site foundation is level, but most importantly, flat.

**CAUTION:** Always use proper flange tightening procedures when assembling the piping.

3.3.3 Mark the foundation with guidelines to help place the Adsorbers in a straight line.

3.3.4 Place the Adsorbers spaced as shown on drawing.

3.3.5 Place the piping module appropriately between the face piping connections.

3.3.6 If alignment is off, make sure the Adsorbers and piping module are level and in the correct positions. Shim the Adsorbers and piping module if needed.

3.3.7 Loosely bolt Adsorber A to the piping module.

3.3.8 Loosely bolt Adsorber B to the piping module.

3.3.9 Re-check alignment. If alignment is acceptable, tighten all the bolts.

3.3.10 Secure the Adsorbers and piping module to the foundation.

3.3.11 Assembly is complete.

**NOTE:** After the equipment is assembled and before filling the Adsorbers with GAC, the System must be disinfected per AWWA C653-13 Standard for Disinfection of Water Treatment Plants.

### 3.4 START-UP

**WARNING:** All confined spaces, including those containing GAC, are presumed to be hazardous. Always take appropriate safety measures before entering, and while inside a confined space. Follow all OSHA regulations, including those pertaining to respiratory protection in oxygen-deficient atmospheres.

**NOTE:** See Figure 1: Flow Diagram and Table 3: 4-Tier Manifold Valve Sequence Chart and Figure 2: GAC Vessel Slurry Inlet/Outlet Connections for the steps below.

#### 3.4.1 Filling the Adsorbers

See the slurry transfer instructions in Section 3.8.4.

#### 3.4.2 Initial preparation

The GAC arrives in the slurry trailer in the dry form. Clean water is added to the slurry trailer so the GAC can be transferred to the Adsorbers in slurry form. After the GAC is installed in the Adsorbers, allow it to soak for approximately 24 hr. After soaking and before being placed into service, backwash the Adsorbers to remove carbon fines, entrapped air and to fully stratify the GAC.

#### 3.4.3 Placing the system in operation - series operation

The procedure below is for flow from Adsorber A (lead) to Adsorber B (lag).

3.4.3.1 Ensure that all System valves are closed.

**NOTE:** Evoqua strongly recommends using a motor soft-start or VFD to minimize water hammer.

3.4.3.2 The user's feed pump provides the feed to the GAC System. Start the pump and bring it up to operating conditions before placing the System in operation.

3.4.3.3 Slowly open the pump discharge valve.

3.4.3.4 On Adsorber A, open valves A1 and A4, and the 2" vent valve on the 2" utility air/water line.

3.4.3.5 Water will enter the lead Adsorber.

3.4.3.6 Manually vent air within Adsorber A through the 2" vent valve on the Adsorber A utility air/water line.

3.4.3.7 Once no air is observed discharging through the vent valve (all water), close the Adsorber A 2" vent valve.

**WARNING:** Never let process water (contaminated water or untreated water) hit the ground.

3.4.3.8 Open valve B3 about halfway and open and the 2" vent valve on the Adsorber B utility air/water line.

3.4.3.9 Manually vent air within Adsorber B through the 2" vent valve on the Adsorber B utility air/water line.

3.4.3.10 Once no air is observed discharging through the vent valve (all water), close the 2" vent valve.

3.4.3.11 Open valve B3 all the way and open valve B5.

**NOTE:** Before placing the GAC system on-line, the valves to the system must be set to allow flow through the system as the feed water pump is brought on-line.

#### **3.4.4 Non-series Operation – Parallel Operation**

Series operation is preferred for maximum PFAS removal. However, parallel operation is also possible with the 4-tier manifold.

**NOTE:** Refer to Figure 1: Flow Diagram and Table 3: 4-Tier Manifold Valve Sequence Chart for parallel operation.

### **3.5 SYSTEM RINSING**

After backwashing, the pH of the water leaving the System may be too high. If this is the case, additional backwash may be needed, or rinsing may be performed to drop the pH to within an acceptable range.

**NOTE:** Refer to Figure 1: Flow Diagram and Table 3: 4-Tier Manifold Valve Sequence Chart.

**NOTE:** Rinsing is performed with the source water.

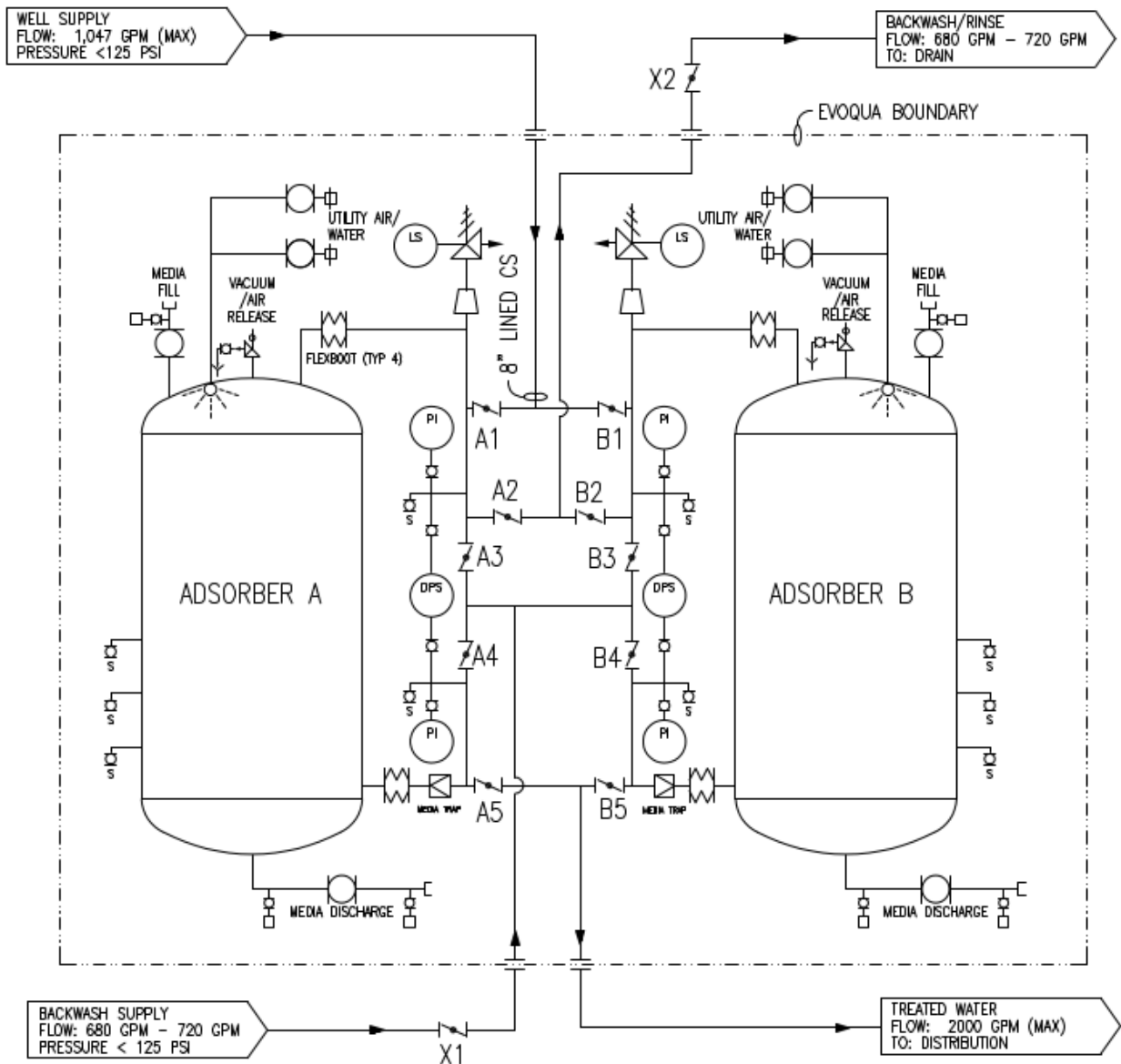
3.5.1 Refer to Section 3.4.3 to place the System into operation discharging to waste.

3.5.2 Continue to discharge to waste until the pH is within acceptable range.

**Table 3: 4-Tier Manifold Valve Sequence Chart**

OPERATION		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5
ADSORBER "A" ONLY		O	C	C	C	O	C	C	C	C	C
ADSORBER "B" ONLY		C	C	C	C	C	O	C	C	C	O
SERIES FLOW "A" THEN "B"		O	C	C	O	C	C	C	O	C	O
SERIES FLOW "B" THEN "A"		C	C	O	C	O	O	C	C	O	C
PARALLEL "A" AND "B"		O	C	C	C	O	O	C	C	C	O
BACKWASH "A"		C	O	C	O	C	C	C	C	C	C
BACKWASH "B"		C	C	C	C	C	C	O	C	O	C
Open	O	Closed		C							

Note: During Backwash "A" and Backwash "B", Customer Valves X1 and X2 should remain open. Refer to Figure 1: Flow Diagram.



**Figure 1: Flow Diagram**

### 3.6 BACKWASHING

Before starting up a system the GAC Adsorbers must be backwashed to remove carbon fines and entrapped air, and to fully stratify the GAC.

Also, if the pressure drop across an adsorber becomes too high (double the clean bed pressure drop), backwashing may be needed. Generally, high pressure drop is caused by solids deposited in the GAC bed. This can not only lead to high pressure drop, but it can cause channeling in the GAC bed and lead to premature breakthrough of organic contaminants.

It is the Purchaser's responsibility to backwash an adsorber and to provide ample **clean** water (free of solids and organics) for backwashing. The flow rate should be high enough to achieve approximately 25% bed expansion. Refer to GAC supplier's data sheet for backwash curve to determine the proper backwash flow rate.

Backwashing with water containing solids is highly discouraged. Solids will be introduced into the carbon bed via the underdrain septa screens. If the size of these solids is greater than the slot opening size of the septa, then it is likely that these solids may become trapped in the septa slots. Plugging the septa slots will decrease the open area for flow resulting in a high pressure drop. These solids may become so tightly wedged in the septa openings that the only remedy for their removal is to remove the septa screens and either clean or replace them.

Backwashing with water containing organics is also highly discouraged. Normal operation for organic removal is down flow. In down flow operation, the mass transfer zone (volume of carbon in the bed where organics are being removed) moves down through the bed. The volume of carbon above the mass transfer zone is spent and the volume of carbon below the mass transfer zone is available for adsorption. If the bed is backwashed with water containing organics, then organics are adsorbed below the mass transfer zone. When the bed is placed in normal down flow operating mode, those organics will desorb, and premature breakthrough may occur.

**NOTE:** Each Adsorber should be backwashed separately.

**NOTE:** Make provisions to properly dispose of the backwash water.

3.6.1 Ensure all valves are closed. Engage backwash water supply and open Customer supplied Valve X1 and Valve X2.

3.6.2 Slowly open Valve A4 to allow backwash water into the bottom of Adsorber A.

3.6.3 Slowly open Valve A2 to allow backwash water to exit out the top of Adsorber A.

3.6.4 Backwash Adsorber A until the water leaving the Adsorber is clear, usually 10-20 min. Refer to GAC supplier's data sheet for backwash curve to determine the proper backwash flow rate.

**NOTE:** Make sure backwash valves are open for the entire cycle.

3.6.5 Slowly close Valve A4, then close Valve A2.

3.6.6 Adsorber A has now been successfully backwashed.

3.6.7 Repeat Steps 3.6.2 through 3.6.4 for Adsorber B with valves B4 and B2.

3.6.8 Adsorber B has now been successfully backwashed.

3.6.9 Disengage backwash water supply. Close Customer supplied Valves X1 and X2.

**NOTE:** If pressure drop after backwashing is unacceptable, repeat or call GAC supplier for technical service.

### **3.7 REMOVING SPENT GAC**

When the lead Adsorber's GAC becomes saturated (spent), follow these steps:

3.7.1 The slurry trailer will be positioned as close to the Adsorber as possible.

3.7.2 Take the lead Adsorber off-line for GAC replacement.

3.7.3 Direct the feed water to the lag Adsorber, allowing the system to remain in service.

3.7.4 Pressurize the lead Adsorber up to 20-40 psig with air.

3.7.5 Slowly open the slurry outlet valve to pneumatically displace the spent GAC as slurry to the bulk transport trailer.

**NOTE:** To remove the 1400 ft<sup>3</sup> of GAC, approximately 18,000 gal. of water is needed to keep the spent GAC in slurry to facilitate removal. This will prevent a line clogging. There should already be enough water in the Adsorber to facilitate the transfer.

### **3.8 TRANSFERRING GAC BETWEEN SLURRY TRAILER AND ADSORBER**

This section describes the operations involved in the GAC transfer to and from the Adsorber and an Evoqua slurry trailer using Evoqua's GAC.

Evoqua will supply the services and equipment for the GAC transfers on site.

**NOTE:** This procedure may need to be modified if using a slurry trailer other than provided by Evoqua. The procedure can be modified as needed.

**NOTE:** This procedure is based on the transfer of 1400 ft<sup>3</sup> of GAC per Adsorber.

#### **3.8.1 Initiating GAC Exchange or Initial Fill**

3.8.1.1 GAC transfer is triggered by the customer. Before the initial fill, the Adsorbers will have already been disinfected.

3.8.1.2 Once the GAC exchange or initial fill is scheduled, the slurry trailer and transfer hoses are food grade washed at a facility and documentation is provided before any GAC being loaded into the trailer.

3.8.1.3. Clean GAC is loaded into the slurry trailer before arriving onsite.

**NOTE:** The Evoqua trailer's front and rear compartments can each hold 350 ft<sup>3</sup> of GAC (700 ft<sup>3</sup>) and the center compartment can hold 700 ft<sup>3</sup>. Therefore, a single slurry trailer can be used for the initial fill of (1) Adsorber (1400 ft<sup>3</sup>). Spent GAC weighs about twice that of virgin GAC (due to water in the pores); therefore, (2) slurry trailers are required for changeout of one Adsorber.

### 3.8.2 Pre-Transfer Procedures

3.8.2.1 The driver and technician will check in with the customer staff to confirm which Adsorber(s) will need the initial fill or GAC exchange. This confirmation will be noted on the service order.

3.8.2.2 The customer will isolate the Adsorber to be serviced from the well system.

3.8.2.3 The fresh GAC compartment(s) in the slurry trailer are filled with clean water. A 4" camlock connection is used for the water supply. This requires approximately 12,000 gal. for each 1400 ft<sup>3</sup> of GAC (12,000 gal. for initial fill of (1) Adsorber). Make sure there is enough water in the trailer to completely cover the GAC with about 6" of water above the GAC.

**NOTE:** Refer to Figure 2: GAC Vessel Slurry Inlet/Outlet Connections and Figure 3: Trailer Connections.

### 3.8.3 Transferring Spent GAC to Trailer

The GAC Adsorber that is to be changed out must be full of water before the (2) slurry trailers arrive at the customer site. Each slurry trailer will be positioned as close to the GAC Adsorber as possible.

3.8.3.1 Driver back up trailer to the staging area using a spotter to safely guide slurry trailer to the Adsorber vessel.

3.8.3.2 Remove 4" slurry hoses from the slurry trailer's side hose containers.

3.8.3.3 Connect one end of the 4" slurry hose to the slurry trailer's GAC inlet.

3.8.3.4 Connect 4" sight glass to the Adsorber vessel GAC outlet line.

3.8.3.5 Connect the other end of the 4" slurry hose to the 4" sight glass.

3.8.3.6 Connect the fire hose to the slurry trailer's water rail line and run the fire hose to location indicated by customer for discharge of water from the slurry trailer.

3.8.3.7 Connect air hose to compressor and to the Adsorber vessel's Chicago fitting.

3.8.3.8 Driver proceeds to top of slurry trailer and verifies that the two outside compartment valves are closed, and the center compartment valve is open to receive spent GAC.

3.8.3.9 Turn on the 185-cfm air compressor, open air compressor's valve, and open valve to the Adsorber vessel. Air up the Adsorber to 20-40 psig.

3.8.3.10 Open the GAC outlet valve on the Adsorber vessel and open the GAC inlet valve on the slurry trailer to begin the slurry transfer.

3.8.3.11 When half of the spent GAC is transferred, as determined by the slurry driver technician, close the Adsorber vessel discharge valve. Close the GAC inlet valve and disconnect the 4" slurry hose from the 1<sup>st</sup> trailer.

3.8.3.12 Connect the 4" slurry hose to the 2<sup>nd</sup> trailer. Open the GAC inlet valve. Continue transferring the remaining spent GAC to the 2<sup>nd</sup> trailer. When all spent GAC is removed, the site glass will be clear.

3.8.3.13 Close the Adsorber vessel discharge valve. Close the GAC inlet valve and disconnect the 4" slurry hose from the 2<sup>nd</sup> trailer.

3.8.3.14 Open the water rail to de-water the spent carbon slurry compartment from both trailers. Water must be drained from the trailers containing the spent GAC before they can leave the site.

3.8.3.15 Spent GAC must be properly profiled according to all applicable regulations before reactivation/destruction.

### **3.8.4 Transferring Fresh GAC To Adsorber Vessel(s)**

For the initial fill, the trailer will arrive with 1400 ft<sup>3</sup> of fresh GAC which is enough to fill (1) Adsorber.

3.8.4.1 If not already in position, driver backs up trailer to staging area using a spotter to safely guide slurry trailer to the Adsorber vessel.

3.8.4.2 If not already removed, remove 4" slurry hoses from the slurry trailer side hose containers.

3.8.4.3 Driver proceeds to top of slurry trailer and closes the center compartment valve and opens the front compartment valve where the new GAC is located.

3.8.4.4 The fresh GAC in the trailer should already be filled with clean water to about 6" above the top of the GAC. The empty Adsorber should be filled with approximately 500-1000 gallons of clean water to act as a cushion to protect the internal septa and Adsorber lining.

3.8.4.5 Connect the 4" sight glass to the slurry trailer GAC outlet line.

3.8.4.6 Connect one end of the 4" slurry hose to the sight glass and connect the other end to the Adsorber vessel GAC inlet line. Make sure the slurry trailer water rail drain line is closed.

3.8.4.7 Connect the air hose to the Chicago fitting on the slurry trailer discharge GAC line and turn on the air compressor.

3.8.4.8 Open the valve on the Chicago fitting and pressure up the slurry trailer to 10-12 psig.

**CAUTION:** The maximum pressure on the slurry trailer is 15 psig.

3.8.4.9 Open the slurry trailer GAC outlet valve and open the Adsorber vessel GAC inlet valve. Open the 2" vent valve on the Adsorber vessel.

3.8.4.10 When all the fresh GAC is transferred, the sight glass will be clear.

3.8.4.11 Close the slurry trailer GAC outlet valve.

3.8.4.12 Close the air supply valve.

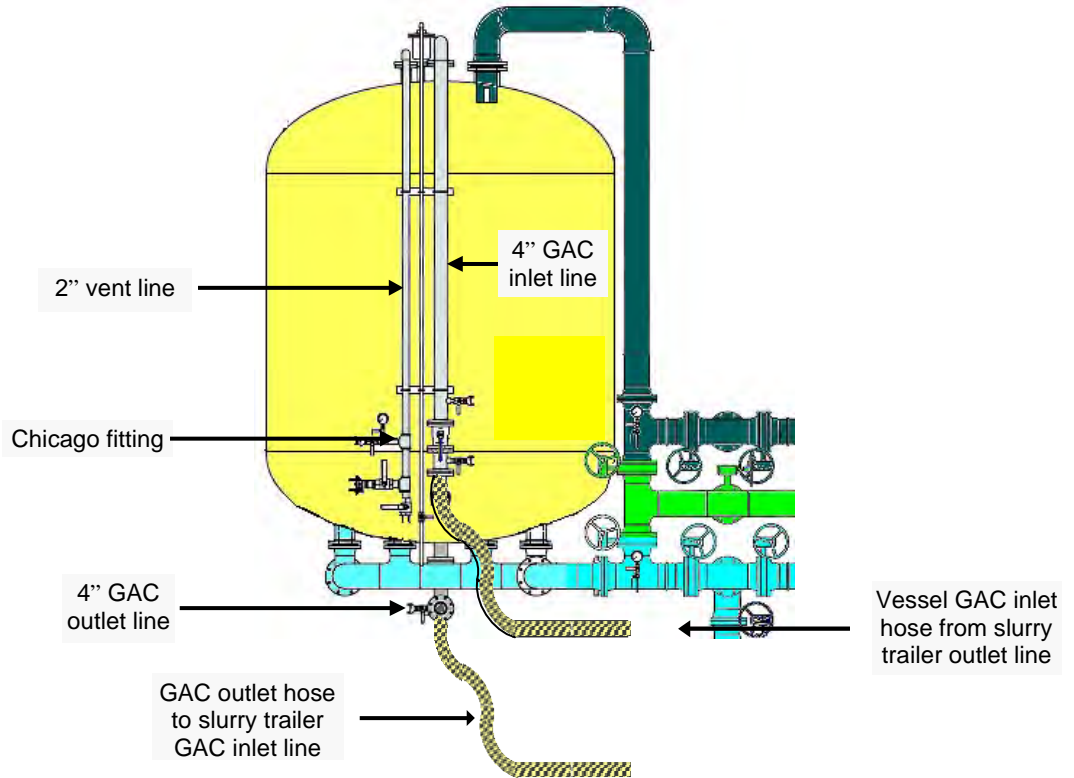
3.8.4.13 Open the rinse line valve and flush until the sight glass is clear. Close the rinse line valve, open the air supply valve, and run air to clear the slurry trailer GAC outlet valve.

3.8.4.14 Close the air supply valve, turn off the air compressor, and open the vent valve (blowdown valve) to relieve pressure on the trailer.

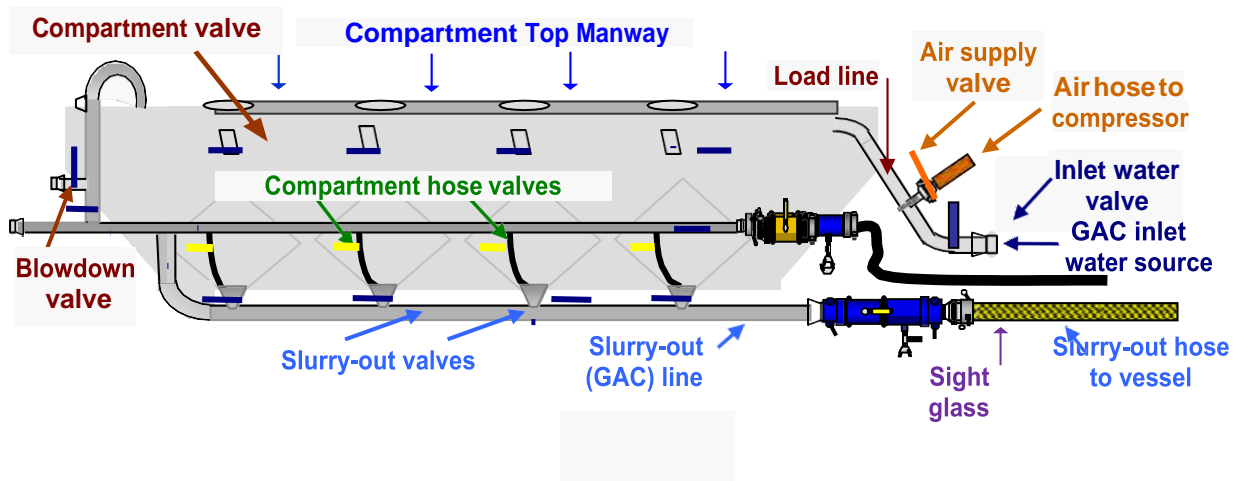
3.8.4.15 Close the 4" valve on the Adsorber vessel GAC inlet line. Close the Adsorber vessel 2" vent valve.

3.8.4.16 Disconnect all hoses and gather all equipment.

**Figure 2 : GAC Vessel Slurry Inlet/Outlet Connections**



**Figure 3 : Trailer Connections**



### 3.9 SYSTEM MONITORING

3.9.1 The user is responsible for monitoring the System during operation. The following list of items are suggested for an operating log. This list is meant as a suggestion only and is by no means complete. Record each day the following items for each individual Adsorber:

#### 3.9.1.1 Log information

3.9.1.1.1 Person monitoring the System

3.9.1.1.2 Date each item was logged

3.9.1.1.3 Time each item was logged

#### 3.9.1.2 Equipment maintenance

3.9.1.2.1 Calibrations

3.9.1.2.2 System cleaning

3.9.1.2.3 Repairing

3.9.1.2.4 Parts replacement

#### 3.9.1.3 Unusual occurrences

3.9.1.3.1 Shutdowns

3.9.1.3.2 Breakdowns

#### 3.9.1.4 Pressure drops (high levels may indicate an obstruction, etc.)

3.9.1.4.1 Record pressure drop across the system daily

3.9.1.4.2 Record pressure drop across each Adsorber daily

### 3.10 MAINTENANCE

#### 3.10.1 Minor Maintenance

Minor maintenance is that maintenance to be performed by the plant to ensure continuous and effective operation. This maintenance includes visual check of pressure gauges, adjustments to valves and regulators, and tightening flanges and connections to eliminate leakage, etc.

#### 3.10.2 Major Maintenance

Major maintenance is that effort needed to repair or replace equipment to continue system operation. The need for major maintenance would result from a major malfunction causing the system to be inoperative. Major maintenance also refers to system design changes and/or maintenance requiring downtime. EVOQUA WATER TECHNOLOGIES LLC can be contacted for any major maintenance.

### 3.11 SHUTDOWNS

The System may require shutdown for repairs, maintenance, or general servicing.

#### 3.11.1 Temporary Shutdowns

A shutdown is considered short-term if it occurs for more than 24 hr. but less than 10 days or less than 5 days if the ambient temperature is >80°F. For a short-term shutdown, follow these steps:

- 3.11.1.1 Keep System completely full of water.
- 3.11.1.2 Seal the inlet and outlet with a valve or a cap.
- 3.11.1.3 Rinse the System each day with two to three bed volumes of water.
- 3.11.1.4 Before restarting, rinse the System with two to three bed volumes of water. Follow the rinsing instructions in Section 3.5.

**CAUTION:** Failing to rinse may result in a temporary presence of contaminated water at the Adsorber outlet.

### **3.11.2 Extended Shutdowns**

A shutdown is considered extended if it lasts for over 10 days or over 5 days if the ambient temperature is >80°F. For an extended shutdown, follow these steps to reduce potential bed life degradation:

- 3.11.2.1 Drain the GAC System of all water.
- 3.11.2.2 Ensure there is no free-standing water left in the Adsorber.
- 3.11.2.3 Tightly seal all valves, manways, and vents for the entire shutdown to eliminate any oxygen that would promote biological growth.
- 3.11.2.4 Before re-commissioning the units, follow the start-up instructions included in Section 3.4.

## **3.12 EMERGENCY PROCEDURES**

### **3.12.1 Emergency Involving Only One Adsorber**

If something happens to cause an Adsorber to be shut down, take these steps:

- 3.12.1.1 Switch the operation over to the other Adsorber.

**NOTE:** Refer to Figure 1: Flow Diagram and Table 3: 4-Tier Manifold Valve Sequence Chart.

- 3.12.1.2 Take steps immediately to remedy the situation.

### **3.13.2 Emergency Involving Both Adsorbers**

If a major leak or failure occurs which would cause the GAC System to be inoperative, follow these steps:

- 3.12.2.1 Immediately shut down feed to the system.
- 3.12.2.2 Take steps immediately to remedy the situation.
- 3.12.2.3 If repairs are beyond the scope of the plant operators, contact the EVOQUA WATER TECHNOLOGIES LLC customer service department immediately.

#### 4.0 TROUBLESHOOTING

The following tables list malfunctions, probable causes, and in most cases, possible corrective action to take for the problem at hand. By no means is this list complete. It is intended only as a guide to help maintenance personnel properly identify and isolate equipment malfunctions. If in doubt as to the actual cause of a malfunction, consult the factory or nearest equipment representative for assistance.

**Table 4 : Troubleshooting the System**

Malfunction	Problem Cause	Correction Action
High pressure drop across Exchanger	Bed not flooded	Check to see that the air release valve is operating. Make sure there is a constant flow before valve closes
	Bed air bound	
	Feed pump pressure too high	Throttle feed pump
	Improper valving	Check valve sequence. Check for obstructions in transfer lines
	Particulate build-up on GAC bed	Contact <b>EVOQUA WATER TECHNOLOGIES LLC at 866-613-5620</b> for evaluation
Leaking flange	Loose bolts	Tighten bolts
Leaking pressure relief valve	Leaking or broken relief valve	Check to see if GAC has collected on the valve seat
		Replace relief valve
GAC in the effluent	Internal mechanical failure	To confirm, open effluent sample valve. Collect 1 qt. Effluent sample to check for GAC. If the test confirms internal failure, call <b>EVOQUA WATER TECHNOLOGIES LLC at 866-613-5620</b>
Premature breakthrough	Change of influent concentrations	Confirm by checking influent and effluent samples before changing GAC
	Siphoning air in	Check air release/vacuum relief valve for correct operation
	Background PFAS	Change GAC
Sudden high contamination level in effluent	Check heel due to improper GAC change-out	Call <b>EVOQUA WATER TECHNOLOGIES LLC at 866-613-5620</b>
Frozen lines, broken gauges and valves	Cold weather	Insulate piping and or heat trace process. Call <b>EVOQUA WATER TECHNOLOGIES LLC at 866-613-5620</b>

#### 5.0 CONTACTING EVOQUA WATER TECHNOLOGIES

Normal contact concerning the day-to-day System operation should be with the Customer Service Department. The telephone number is 866-613-5620.

**APPENDIX A - SPECIFICATION SHEET**

**HP®1240 SYS**  
**GAC ADSORPTION SYSTEM SPECIFICATION SUMMARY**

**HP®1240 SYS** Liquid Phase Adsorption Systems are designed to treat a wide range of contaminated process streams. Piping and valves are configured for series, parallel, or vessel isolation flows. System includes GAC inlet and outlet piping, and backwash capabilities. The system consists of two adsorbers, with all piping, valves, and gauges assembled for ease of operation. The adsorbers are equipped with underdrains for maximum series flow rate of 1047 GPM.

**EACH ADSORBER:**

Vessel Diameter .....	12'
Side Shell Height.....	14'
Overall Height (Approx.) .....	24' - 3 1/4"
Maximum Working Pressure.....	125 psi @ 140 °F
Manway:	
Flanged at side shell .....	20"
Elliptical type at head.....	14" x 18"
Vessel Volume .....	7,520 gal.
Carbon Volume .....	1400 Ft <sup>3</sup>
Maximum Flow Rate (GAC).....	1047 GPM
Empty Bed Contact Time (GAC).....	10 min/vessel @ 1047 GPM
ASME Code Stamping .....	YES
Material .....	Carbon Steel
Supports.....	Wide Flange Legs
Lifting.....	Lifting Lugs
Seismic .....	Current IBC
Interior Surface Prep .....	SSPC-SP5
Interior Surface Coating .....	Plasite 4110 35 mil dft min
Exterior Surface Primer.....	Carboline 888 Epoxy 4-6 mil dft
Exterior Surface Coating.....	Carboguard 133 Urethane 3-4 mil dft
Standard Color.....	Open Sky #5141

**CONNECTIONS:**

Inlet / Outlet .....	8" 150# ANSI Flanged
Media Fill / Media Discharge.....	4" Kamlock
Backwash .....	8" Flanged
Utility Water .....	2" Kamlock

**UNDERDRAINS:**

External Ring Header .....	8" Sch. 40 Epoxy Lined Carbon Steel
Screens .....	8 ea 316L Stainless Steel V-Wire X-Box Screens 4 1/2" dia. x 10"

**VALVE ASSEMBLY AND PIPING:**

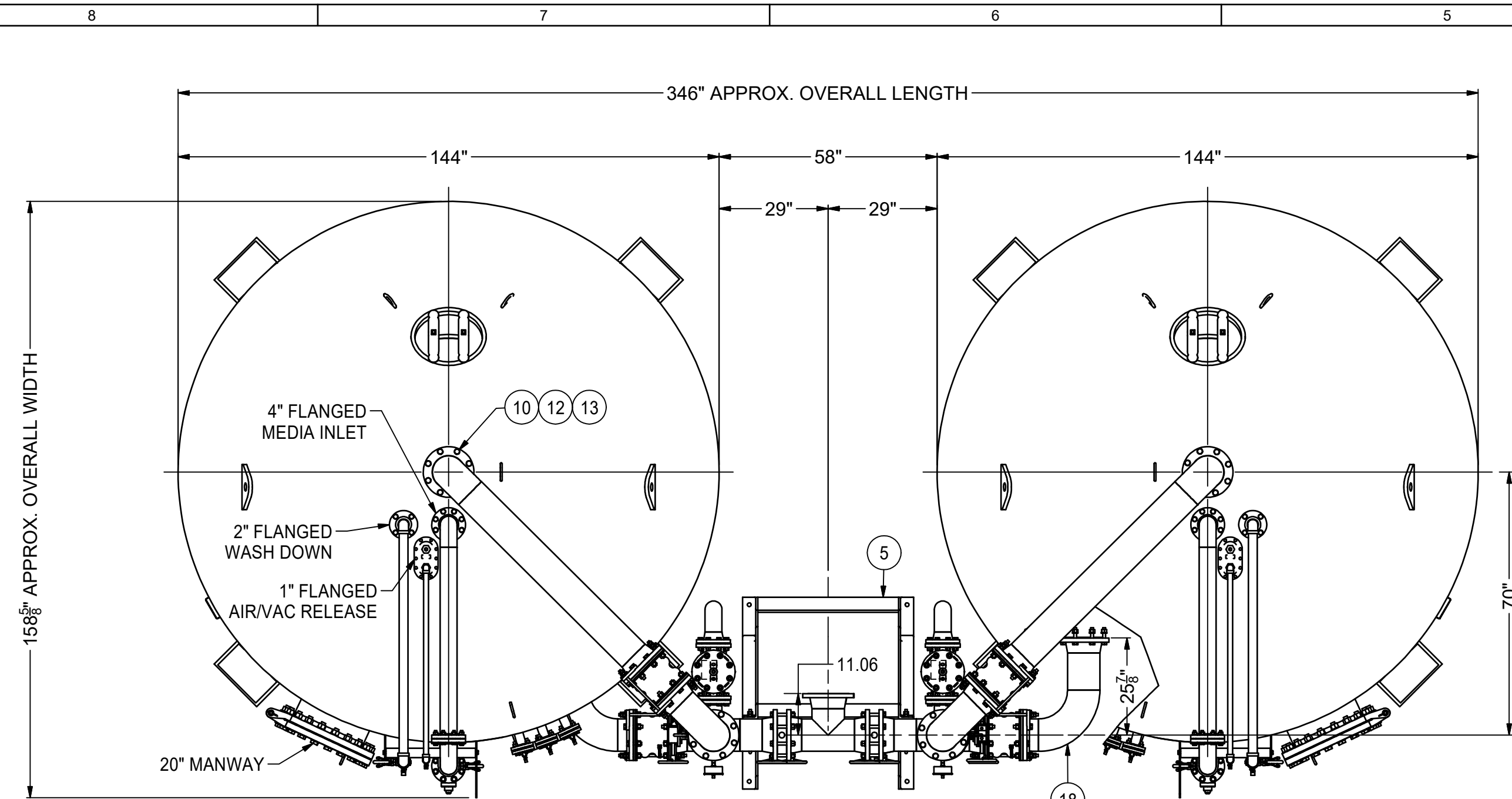
Piping:	
Process Piping .....	8" Schedule 40 Carbon Steel, Epoxy Lined
GAC Transfer Piping.....	4" Sch 40 Carbon Steel, Epoxy Lined
Valves:	
Process.....	8" Butterfly, Cast Iron Body w/SS Disk, Gear Operator
GAC Transfer .....	4" Flanged 316 Stainless Steel Ball Valve
Drain/Wash.....	2" Bronze Ball Valve
Sample Ports (3) 1/2" Bronze Ball Valve	

**SYSTEM WEIGHT:**

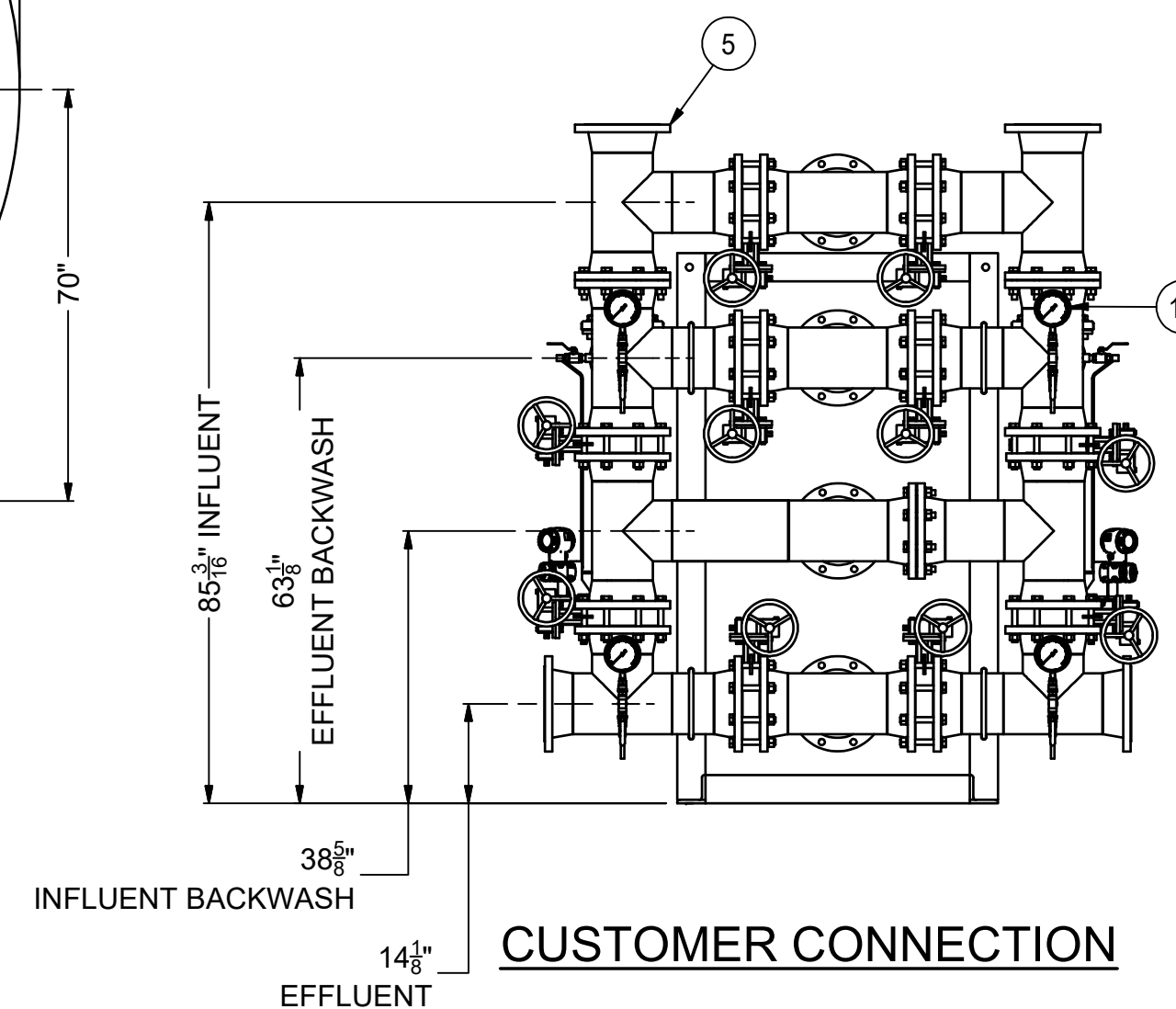
System Shipping weight (Two Adsorbers Piping & Manifold).....	55,000 lb.
Operating Weight (with UC1240LD GAC)(approx.).....	351,000 lb.

**APPENDIX B – DRAWINGS**

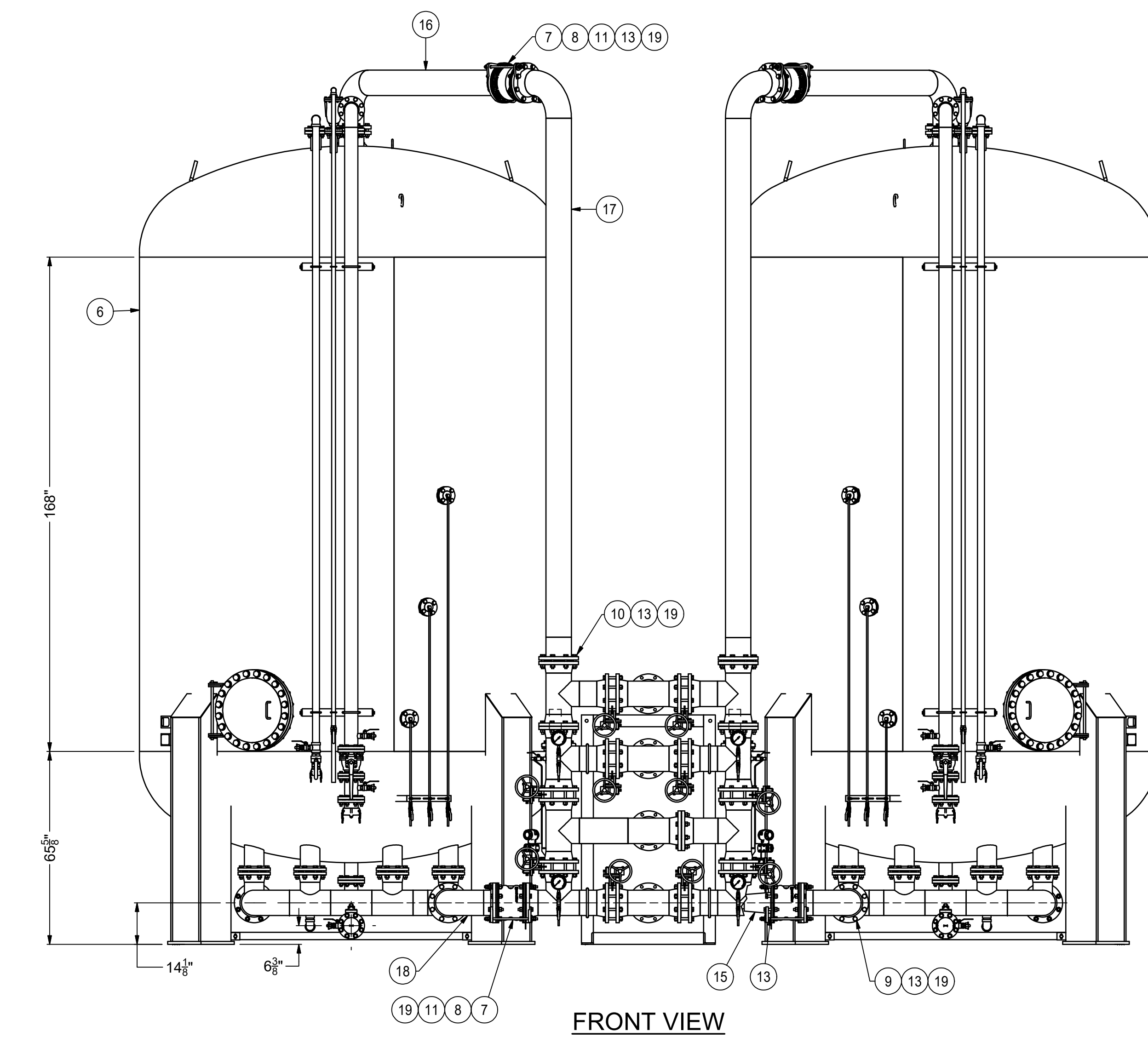
Description	Page
HP1240 SYSTEM, 125 PSI ASME WITH MACK IRON STRAINERS	B-2
TANK,SINGLE HP1240 125 PSI LEFT VESSEL SHOWN (RIGHT VESSEL MIRRORED)	B-3
HP1240 BARE TANK 125PSI (LEFT VESSEL) RIGHT VESSEL MIRRORED	B-4
RINGHEADER ASSY 8IN CS S40 S/O PM I WITH EPDM NSF-61 GASKETS	B-5
RINGHEADER 8IN CS S40 SIDE OUT I WELDAMENT	B-6
MANIFOLD 8IN CS S40 4 TIER ASSY PM S WITH EPDM NSF-61 GASKETS	B-7
STAND, MANIFOLD 8" CS S	B-8



PLAN VIEW



CUSTOMER CONNECTION



FRONT VIEW

BILL OF MATERIAL					
ITEM	QTY	PART NO	DESCRIPTION	MATERIAL	LENGTH (IN)
1	1	W2T815494	COAT PRMR CARBOGUARD 890 PART B	Generic	
2	1	W2T815493	COAT PRMR CARBOGUARD 890 GREY PT A	Generic	
3	1	W2T903777	COATING EXT CARBOTHANE 133 VOC OPEN SKY	Generic	
4	1	W3T532659	HP1240SYS SHIP LOOSE		
5	1	W3T532465	MANIFOLD 8IN CS S40 4 TIER ASSY PM S		
6	2	W3T532386	TANK, SINGLE HP1240 125 PSI	STL, MILD	

APPROX. WEIGHT: 56,000 LB

SHIP LOOSE ITEM (ITEM 6)					
ITEM	QTY	PART NO	DESCRIPTION	MATERIAL	LENGTH (IN)
7	32	W2T303916	BOLT 3/4INX4-1/2IN HDG GR A325	STL, GALV, A325	
8	32	W2T303914	BOLT, HEX .750"x3.50" HDG GR A325	STL, GALV, A325	
9	16	W2T303917	BOLT, HEX .750"x4" HDG GR A325	STL, GALV, A325	
10	32	W2T551977	BOLT, HH 0.75x4.25" UNC A325 CS HDG RH	STL, GALV, A325	
11	4	W2T903808	COUP, FLEX 8IN X 10IN NSF-61 ANCH SEAL	Generic	
12	2	W2T188869	DIFFUSER, 8" SS304L STD TOP HAT	STN STL, 304	
13	10	W2T890231	GASKET, 8" 150# 0.125 THK EPDM NSF-61	EPDM NSF-61	
14	4	W2T890521	GAUGE WIKA 232.53 1/4IN LX4IN D 160	Stainless Steel	
15	2	W2T408630	MACK IRON STRAINER, 8" X 10" LG 316SS	STN STL, 316	
16	2	W3T533379	PIPING, 8 HP1240SYS INLET HORZ		
17	2	W3T533380	PIPING, 8 HP1240SYS INLET VERT		
18	2	W3T533391	PIPING, 8" HP1240SYS MANIFOLD TO RINGHDR		
19	224	W2T371769	WASHER, FLAT STRUCTURAL, 0.75 IN GALVANIZED	STL, GALV	



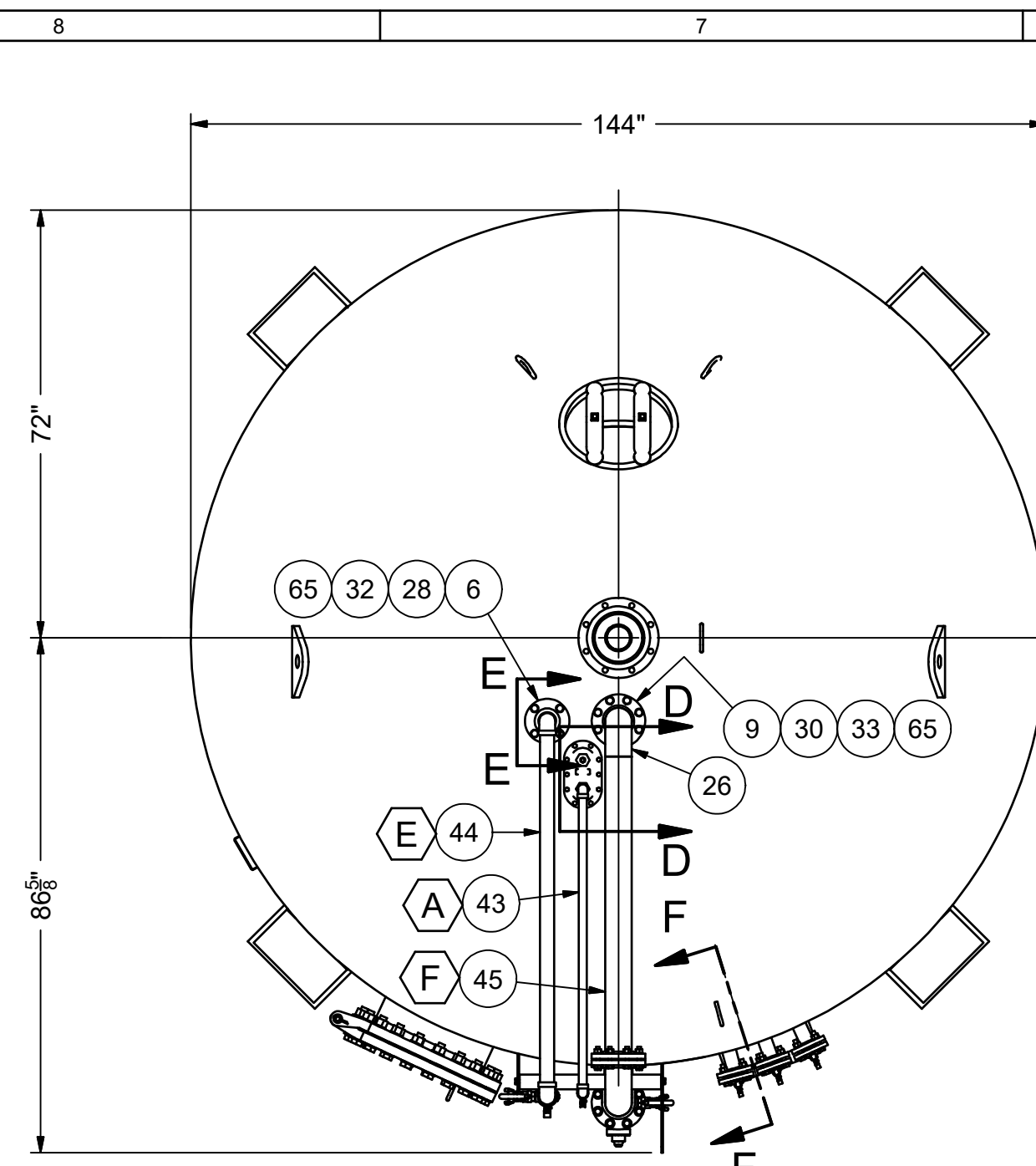
NOTES:

- THIS DRAWING IS TO SHOW PIPING AND EQUIPMENT FOR CUSTOMER APPROVAL.
- ALL BUTTERFLY VALVES ARE DUCTILE IRON WITH STAINLESS TRIM, STAINLESS STEEL DISK.
- PROVIDE 316 STAINLESS STEEL SEPTA UNDER DRAIN SCREENS.
- VESSELS SHALL BE 125 PSI, ASME CODE.
- FINISH INTERIOR WITH PLASITE 4110, PREPARE AND APPLY STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO MEET NSF STD 61 REQUIREMENTS.
- PIPING MATERIALS SHALL MEET: CS PIPE ASTM A-53 GRADE B (ERW); CS FITTINGS SA-234, ASME B16.9; SS THREADED FITTINGS ASTM A-351; SS PIPE ASTM A-312; SS BW FITTINGS ASTM A-403; MI THREADED FITTINGS ASME B-16.3.
- FINISH EXTERIOR WITH CARBOGAURD 133 URTHANE COLOR TO BE OPEN SKY 5141 OVER CARBOLINE 880 RUST PREVENTATIVE EPOXY PRIMER APPLIED PER MFG. RECOMMENDATIONS.
- GROUTING BY OTHERS IF REQUIRED.
- ± 1" TOLERANCE ON CONNECTION DIMENSIONS.
- NSF LINED CS PROCESS PIPING.
- CARBON IN/OUT LINES NSF LINED CS PROCESS PIPING.
- SYSTEM ESTIMATED OPERATION WEIGHT: 351,000 LBS.

REV	DESCRIPTION	DATE	DWN	CKD	APPD	ECN
1	CHANGED SAMPLE PORTS ORIENTATION, UPDATED WEIGHT AND COLOR	8/5/2021	MR		NRD	

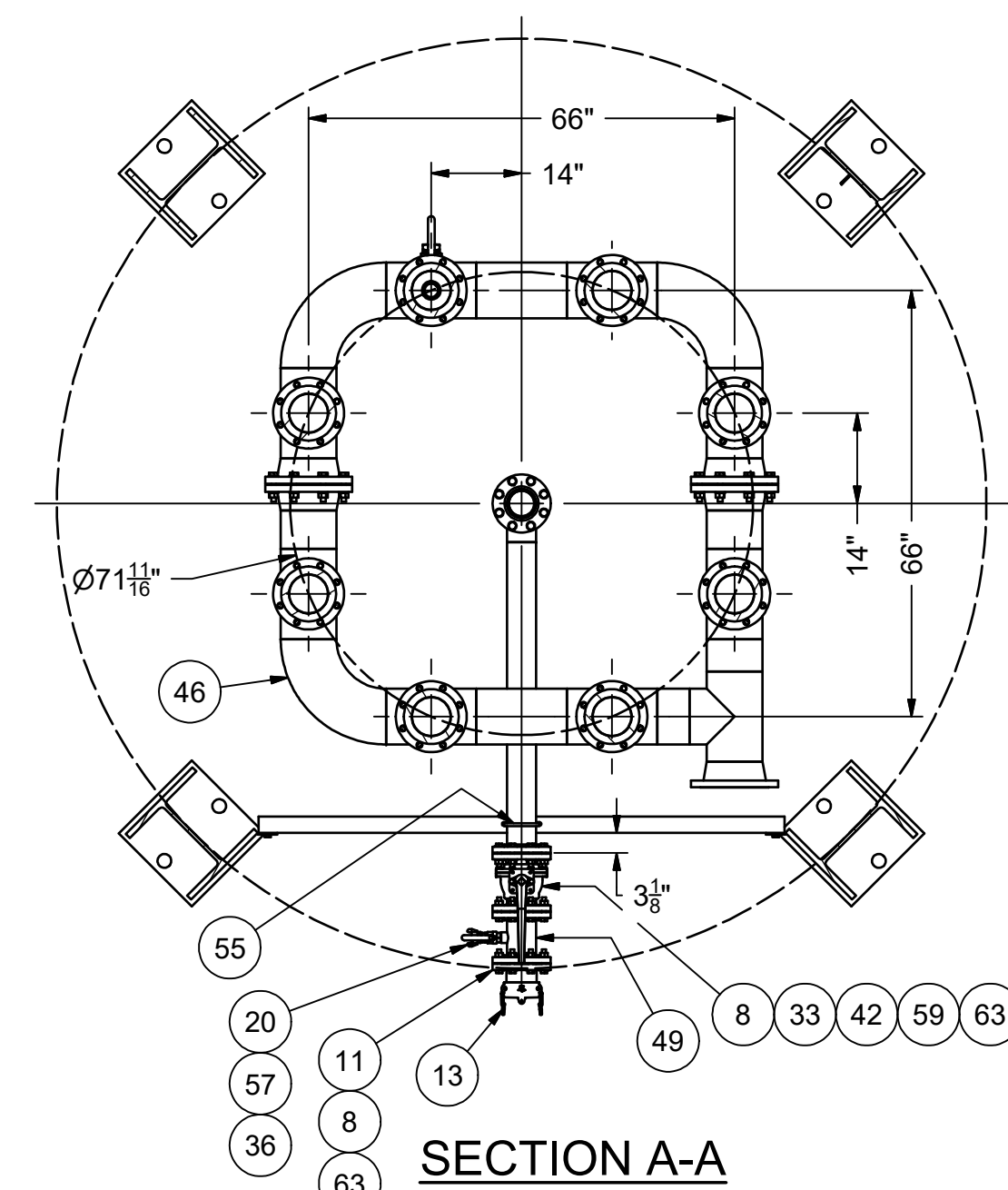
  

COMPANY CONFIDENTIAL INFORMATION THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN, INCLUDING THE DESIGN CONCEPTS AND THOSE ARISING THEREFROM ARE THE PROPERTY OF EVOQUA AND/OR ITS AFFILIATES AND ARE SUBMITTED IN CONFIDENCE. THEY MAY BE USED ONLY FOR THE EXPRESS PURPOSE FOR WHICH THEY ARE PROVIDED AND MUST NOT BE DISCLOSED, REPRODUCED OR COPIED IN ANY FORM, INCLUDING IN ELECTRONIC FORMAT, LOANED OR USED IN ANY OTHER MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF EVOQUA. ALL PATENT RIGHTS ARE RESERVED. THIS DOCUMENT AND DERIVATIVE WORKS THEREOF ARE PROTECTED UNDER APPLICABLE COPYRIGHT LAWS. UPON DEMAND OF EVOQUA, THIS DOCUMENT, ALONG WITH ALL COPIES AND EXTRACTS, AND ALL RELATED NOTES AND ANALYSES MUST BE RETURNED TO EVOQUA OR DESTROYED, AS INSTRUCTED BY EVOQUA. ACCEPTANCE OF THE DELIVERY OF THIS DOCUMENT CONSTITUTES AGREEMENT TO THESE TERMS.		DWN BY: RKC	DATE: 6/9/2021	TITLE: HP1240 SYSTEM, 125 PSI ASME WITH MACK IRON STRAINERS			
		CKD BY: NRD	DATE: 6/9/2021	CLIENT: ORANGE COUNTY WATER DISTRICT			
		APPD BY: NRD	DATE: 6/9/2021	<b>evoqua</b> WATER TECHNOLOGIES EVOQUA WATER TECHNOLOGIES RED BLUFF, CA USA (530) 527-2664			
		MGD BY: NTS	SCALE: NTS				
PART NUMBER	W3T532656	PROJ/PROD NUMBER	HP1240SYS FLEX	CODE	FILE/DRAWING NUMBER	SHEET	REV
						1 OF 1	1

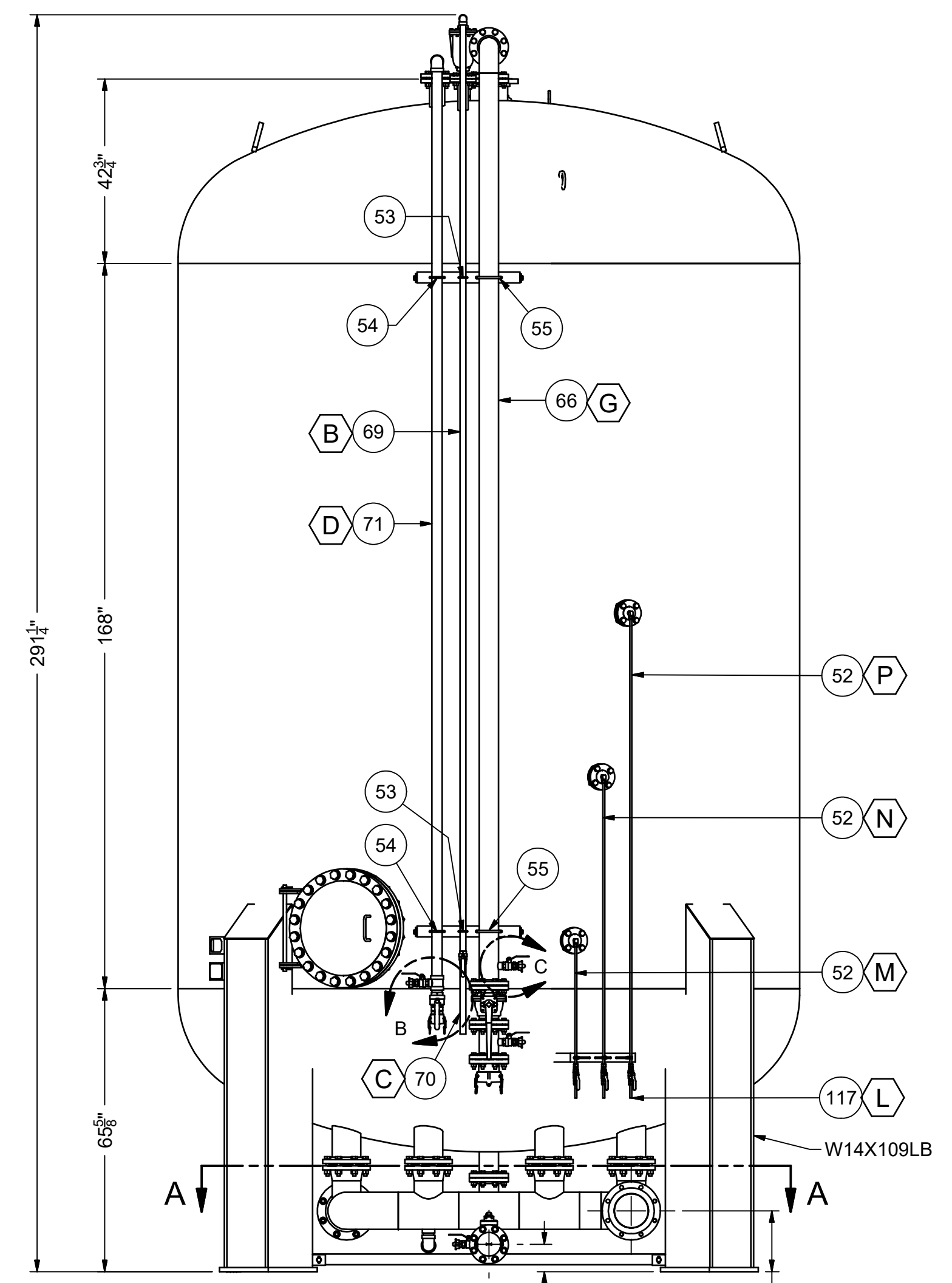


PLAN VIEW

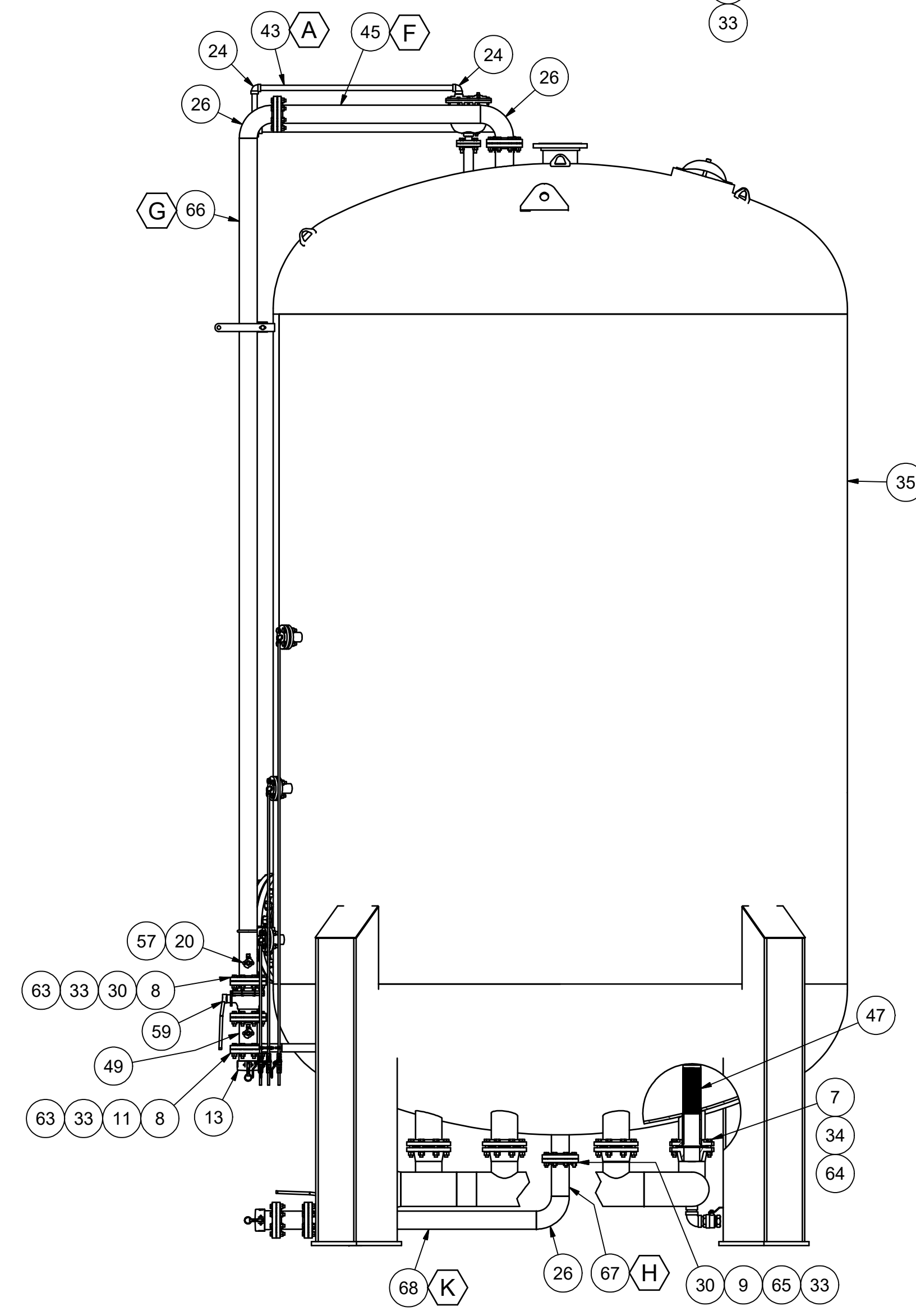
ITEM	DESCRIPTION	CUT LENGTH (IN)	QTY
A	PIPE, 1" SCH 40 CS	49 9/16"	1
B	PIPE, 1" SCH 40 CS	215 15/16"	1
C	PIPE, 1" SCH 40 CS	17"	1
D	PIPE, 2" SCH 40 CS	211"	1
E	PIPE, 2" SCH 40 CS	59 15/16"	1
F	PIPE, 4" SCH 40 CS	50 7/16"	1
G	PIPE, 4" SCH 40 CS	211 3/16"	1
H	PIPE, 4" SCH 40 CS	8 15/16"	1
K	PIPE, 4" SCH 40 CS	47 5/8"	1
L	TUBE, 0.5" 316SS	4"	3
M	TUBE, 0.5" 316SS	28 7/8"	1
N	TUBE, 0.5" 316SS	66 13/16"	1
P	TUBE, 0.5" 316SS	104 3/4"	1



SECTION A-A



FRONT VIEW



RIGHT SIDE

ITEM	QTY	PART NO	DESCRIPTION	MATERIAL	LENGTH (INCHES)
1	3	W2T462973	ADAPTER 90 BRS 1/2IN CMPX1/2IN MPT	Brass, Soft Yellow	
2	3	W3T184992	ADAPTER SAMPLE PORT WELDMENT 304SS		
3	1	W3T183841	ADAPTER SPRAY NOZZLE 304 SS		
4	6	W2T462972	ADAPTER STR BRS .5IN CMPX.5IN MPT	BRASS	
5	3	W2T295040	BOLT, HEX 0.25"D 1"L UNC-20 SS18-8;	STN STL, 18-8	
6	4	W2T304659	BOLT,HEX .625"x3.50" COARSE HDG GR A325	STL, GALV, A325	
7	64	W2T303917	BOLT,HEX .750"x4" HDG GR A325	STL, GALV, A325	
8	48	W2T83936	BOLT,HEX,0.625IN DIA,3.25IN LG,304SS	STN STL, 18-8	
9	40	W2T547725	BOLT,HH 0.625x3.25" UNC A325 CS HDG RH	STL, GALV, A325	
10	1	W2T188349	CAMLOCK 2IN ALUM MALE X MPT	AL, 6061	
11	2	W2T188418	CAMLOCK 4IN ALUM MALE X FLANGE	AL, 6061	
12	1	W2T188419	CAP 2IN ALUM CAMLOCK DUST	AL, 6061	
13	2	W2T188420	CAP 4IN ALUM CAMLOCK DUST	AL, 6061	
14	3	W2T188213	CLAMP 1/2IN SS TUBING W/RL 1/4IN BN	STN STL, 18-8	
15	1	W2T815494	COAT PRIMER CARBOGUARD 890 PART B	Generic	
16	1	W2T815493	COAT PRMR CARBOGUARD 890 GREY PT A	Generic	
17	1	W2T512800	COATING CS PIPE SK 206N EPOXY	Generic	
18	1	W2T903777	COATING EXT CARBOTHANE 133 VOC OPEN SKY	Generic	
19	1	W2T188207	COATING PLASITE 4110 CL 890 12 NSFF	Generic	
20	4	W2T188421	COUPLING CHICAGO 1IN MPT MI AM12	STL, GALV	
21	1	W2T394078	COUPLING, 1" 304SS 3000LB HLF NPT	STN STL, 304	
22	1	W2T85026	COUPLING,PIPE FULL 2" 150# FPT 304L SS	STN STL, 304	
23	3	W2T85375	CPLNG,PIPE;FULL;0.75 IN;150#;FPT	STN STL, 304	
24	2	W2T188336	ELBOW, 1" SCH40 GALV 90DEG THD;	STL, GALV	
25	2	W2T188339	ELBOW, 2" SCH40 GALV THD ASTM B16.3 I	STL, GALV	
26	3	W2T299163	ELBW,PIPE,STD WELD,4.90,STL SA234-WPB,LR	STL, MILD	
27	3	W2T408244	FLANGE 2INX1/2IN CS 150LB NPT B16.3	STL, A36	
28	1	W2T380486	FLANGE 3INX2IN CS 150 NPT ASTM A105	STL, A36	
29	1	W3T185103	FLANGE AIRPORT 2IN W/ 1IN COUPLING CS		
30	6	W2T83820	FLG,SLIPON;4 IN;150#;RF;STL SA105	STL, A36	
31	7	W2T890227	GASKET, 2" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
32	2	W2T890228	GASKET, 3" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
33	9	W2T890229	GASKET, 4" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
34	16	W2T890230	GASKET, 6" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
35	1	W2T901649	HP1240 BARE TANK 125PSI ASME		
36	5	W2T188804	NIPPLE 1IN X CLOSE 316SS SCH40	STN STL, 316	
37	1	W2T188984	NIPPLE 1IN X CLOSE 316SS SCH80	STN STL, 316	
38	2	W2T188982	NIPPLE 2IN X CLOSE 316SS SCH40 ASTM	STN STL, 316	
39	1	W2T188871	NOZZLE 1IN POLYPROPYLENE X MNPT N8	POLYPROPENE	
40	3	W2T188866	NOZZLE 3/4IN MNPT PP ORTHOS N5	POLYPROPENE	
41	3	W2T820440	NUT, HVY HEX 0.25"DIA UNC-20 SS18-8;	STN STL, 18-8	
42	48	W2T403127	NUT;HEX HEAVY 0.625-11 18-8SS;UNC;18-8	STN STL, 18-8	
43	1	W2T84289	PIPE;1;SCH 40;CS;A53-A;252 LG;GALV	STL, GALV	283.0
44	1	W2T84291	PIPE;2;SCH 40;252 LG;GALV	STL, GALV	271.0
45	1	W2T83807	PIPE;4 IN;SCH 40;CS SA53A	STL, MILD	319.0
46	1	W3T532370	RINGHEADER ASSY 8IN CS S40 S/O PM I		
47	8	W2T188557	SEPTA 4 1/2IN OD 316SS .015 SLOT	STN STL, 316	
48	1	W2T804720	SIGN, ID NP 5.5X3.5 EVOQUA 530-527-2664;	STN STL, 304	
49	2	W3T184715	SPOOL ASSEMBLY MEDIA IN & OUT CS		
50	1	W2T188554	SPRAY NOZZLE W2T188554	PVC	
51	1	W2T188337	TEE 2INX2INX1IN G S40 THD ASME B16.	STL, GALV	
52	6	W2T85852	TUBE;RND;SS;316/316L;.05 IN;.035 IN;RND	STN STL, 316L	213.0
53	2	W2T371759	UBOLT 1IN 304 STAINLESS STEEL W/ 4	STN STL, 304	
54	2	W2T189004	UBOLT 2IN HOT DIP GALV W/ 4 NUTS	STL, MILD	
55	3	W2T189005	UBOLT 4IN HOT DIP GALV W/ 4 NUTS	STL, MILD	
56	3	W2T188642	VALVE 1/2IN BRASS BALL LEAD FREE NS	Brass, Soft Yellow	
57	5	W2T188200	VALVE 1IN BRASS BALL LEAD FREE NSF	Brass, Soft Yellow	
58	1	W2T188201	VALVE 2IN BRASS BALL LEAD FREE NSF	Brass, Soft Yellow	
59	2	W2T188196	VALVE 4IN 316SS FULL PORT BALL VALVE	STN STL, 316	
60	1	W2T902026	VALVE, CMBO AIR/VAC 1" NPT CI STD SEAT;	STL, CI	
61	3	W2T248765	WASHER, FLT 0.25" SS18-8 SM OD	STN STL, 18-8	
62	3	W2T84530	WASHER, LOCK 0.25" SS18-8 MED;	STN STL, 18-8	
63	96	W2T188781	WASHER,FLAT 0.625" 304SS SAE	STN STL, 304	
64	128	W2T371769	WASHER;FLAT STRUCTURAL;0.75 IN GALVANIZED	STL, GALV	
65	88	W2T85099	WASHER;FLAT;0.625 IN;CS;GALV	STL, GALV	

NOTES:

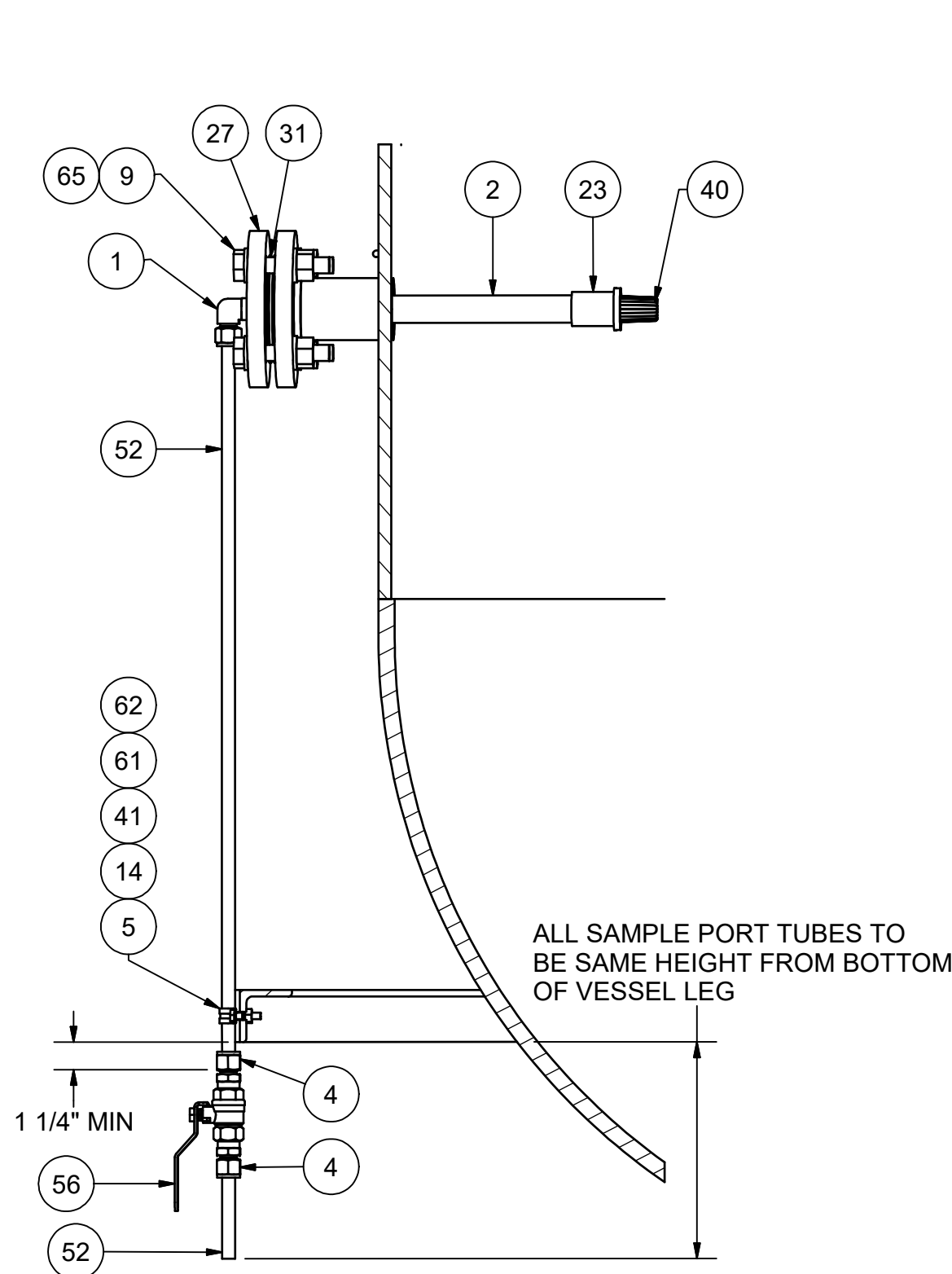
- 1.) PROVIDE STAINLESS STEEL SCREENS AT SEPTA UNDER DRAIN.
- 2.) VESSELS SHALL BE 125 PSI, ASME CODE.
- 3.) FINISH INTERIOR WITH PLASITE 4110, PREPARE AND APPLY STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND NSF STANDARD 61. LINING TO BE CONTINUOUS TO OD OF ALL NOZZLE FLANGES.
- 4.) PIPING MATERIALS SHALL MEET: CS PIPE ASTM A-53 GRADE B (ERW); CS FITTINGS SA-234, ASME B16.9; SS THREADED FITTINGS ASTM A-351; SS PIPE ASTM A-312; SS BW FITTINGS ASTM A-403; MI THREADED FITTINGS ASME B-16.3.
- 5.) FINISH EXTERIOR WITH CARBOGUARD 133VOC URETHANE (3 MIL DFT MIN) COLOR TO BE OPEN SKY 5141 OVER CARBOLINE 890 RUST PREVENTATIVE EPOXY PRIMER (3 MIL DFT MIN) APPLIED PER MANUFACTURERS RECOMMENDATIONS.
- 6.) MEDIA SLURRY LINES TO BE INTERNALLY COATED WITH SCOTCHKOTE 206N.
- 7.) GROUTING BY OTHERS IF REQUIRED.
- 8.) NSF LINED CS PROCESS PIPING.
- 9.) ESTIMATED OPERATING WEIGHT: 170,000 LBS.

APPROX. WEIGHT: 25,000 LB

REV	DESCRIPTION	DATE	DWN	CKD	APPD	ECN
1	CHANGED SAMPLE PRORS ORIENTATION, UPDATED WEIGHT AND COLOR	8/5/2021	MR		NRD	

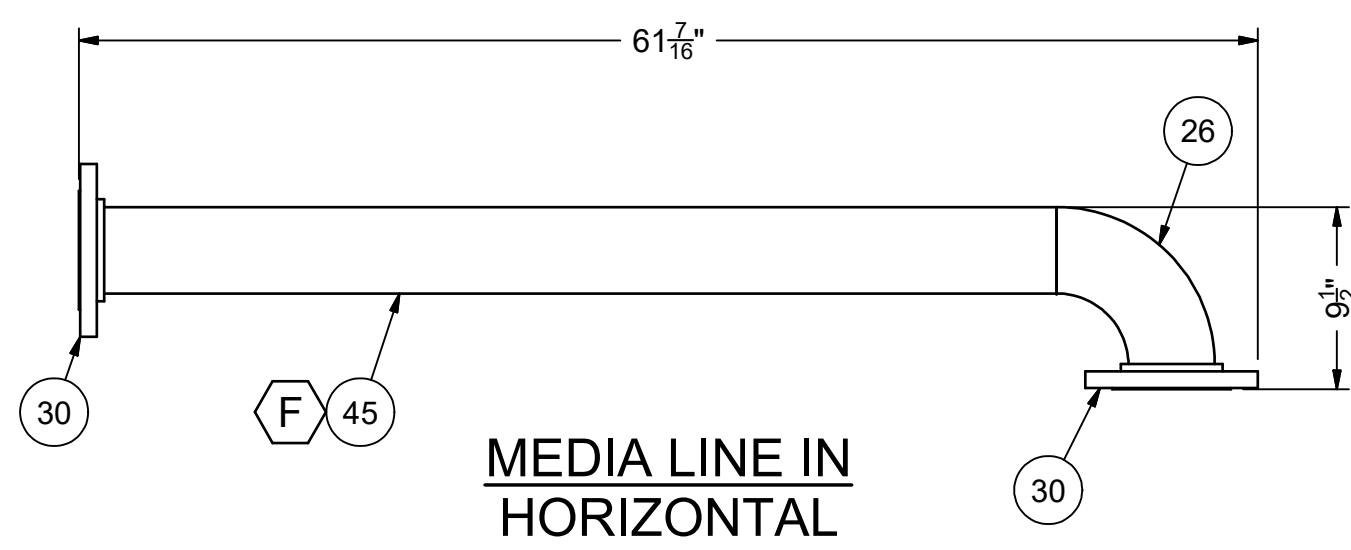
  

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PART NUMBER: W3T532386	PROJ/PROD NUMBER: 1200-001025	CODE: HP1240ST	SHEET: 1 OF 2	REV: 1

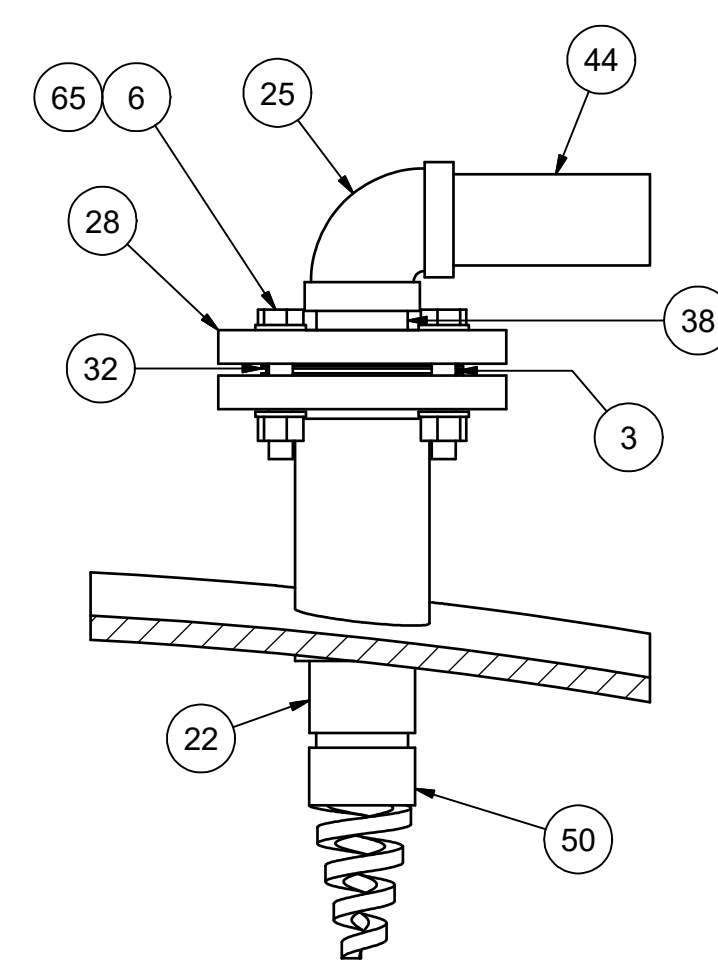


SECTION F-F  
VESSEL SAMPLE PORT (3 REQ.)

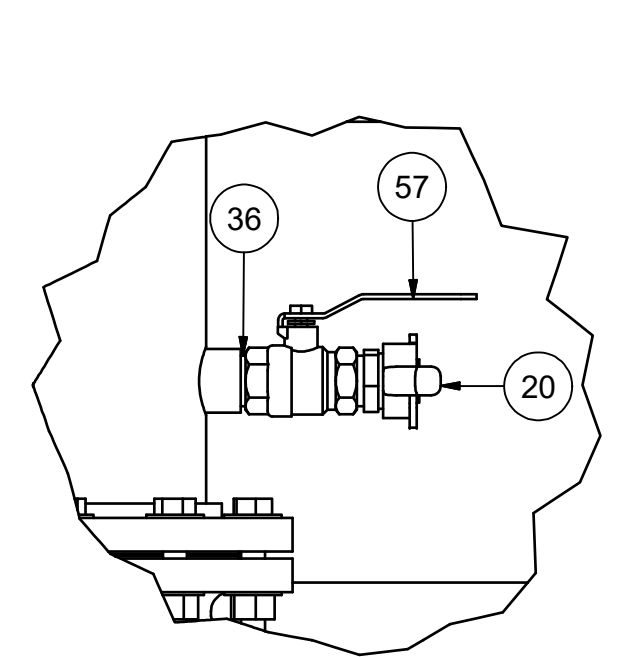
ITEM	DESCRIPTION	CUT LENGTH (IN)	QTY
F	PIPE, 4" SCH 40 CS	50 7/16"	1
G	PIPE, 4" SCH 40 CS	211 3/16"	1
H	PIPE, 4" SCH 40 CS	8 15/16"	1
K	PIPE, 4" SCH 40 CS	47 5/8"	1



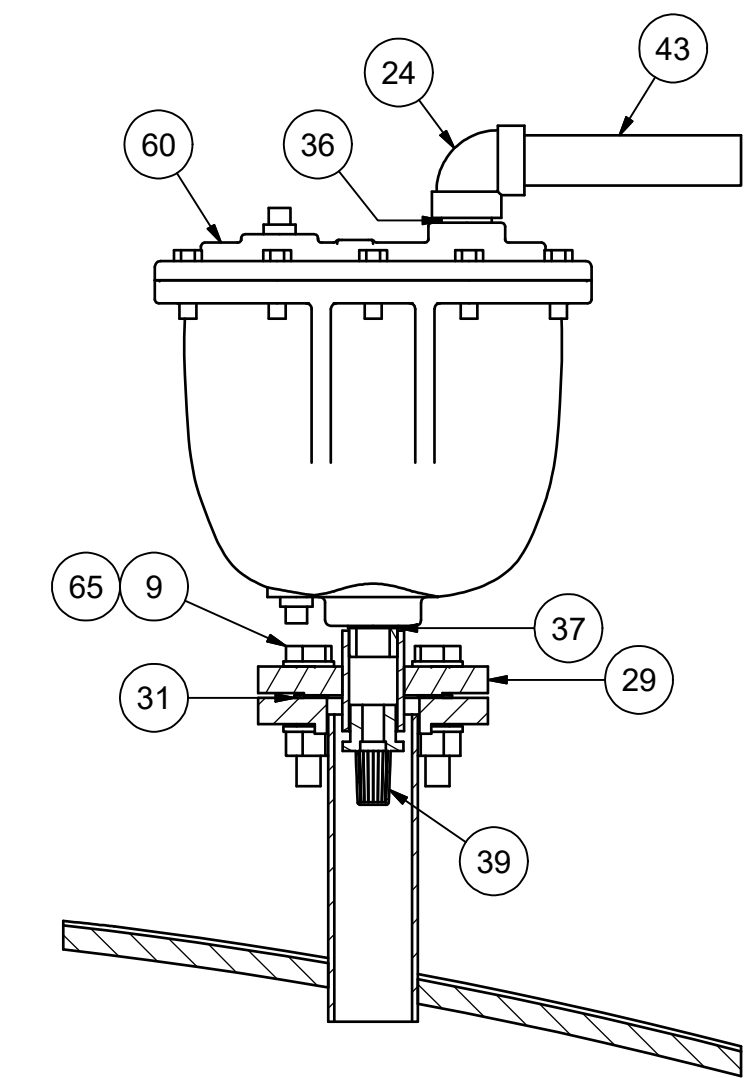
MEDIA LINE IN  
HORIZONTAL



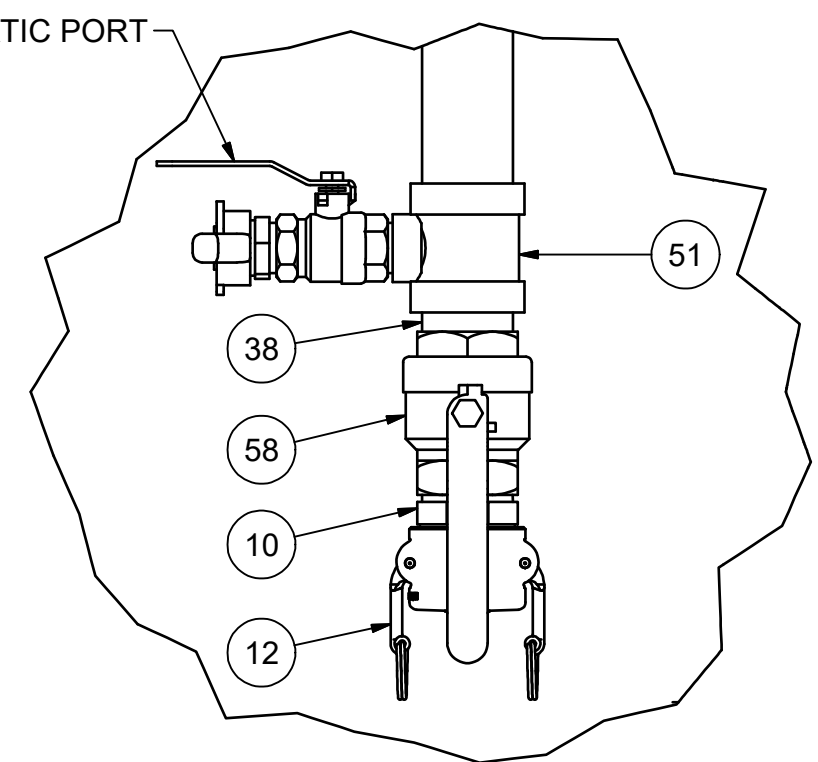
SECTION E-E  
2" WASH DOWN (1 REQ.)



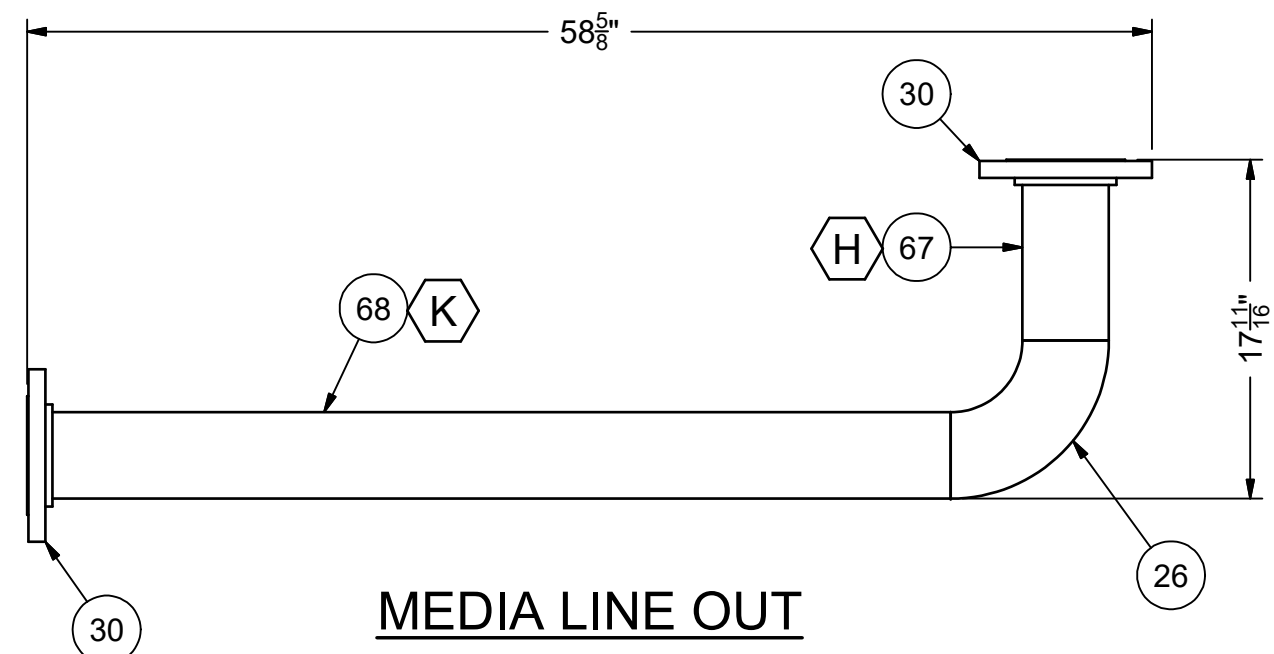
DETAIL C  
1" PNEUMATIC PORT (4 REQ.)



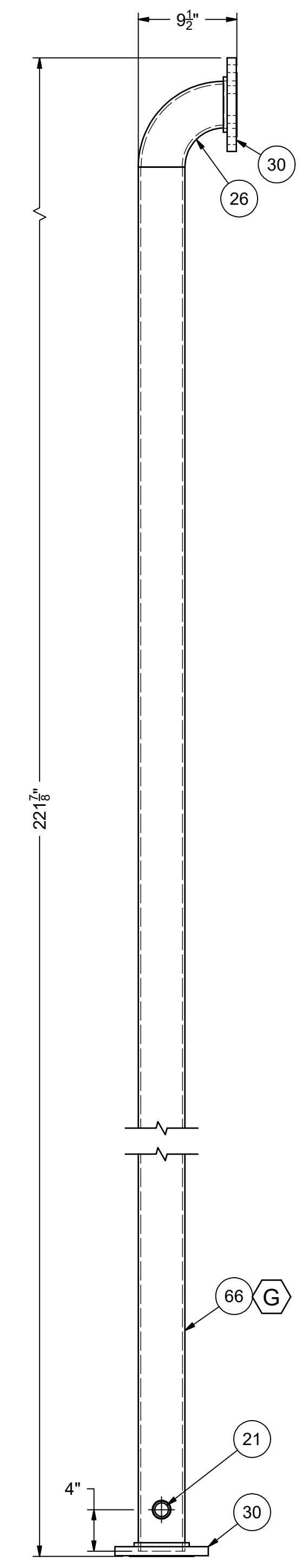
SECTION D-D  
AIR RELEASE (1 REQ.)



DETAIL B  
2" UTILITY PORT (1 REQ.)



MEDIA LINE OUT



MEDIA LINE IN  
VERTICAL

ITEM	QTY	PART NO	DESCRIPTION	MATERIAL	LENGTH (INCHES)
1	3	W2T462973	ADAPTER 90 BRS 1/2IN CMPX1/2IN MPT	Brass, Soft Yellow	
2	3	W3T184992	ADAPTER SAMPLE PORT WELDMENT 304SS		
3	1	W3T183841	ADAPTER SPRAY NOZZLE 304 SS		
4	6	W2T462972	ADAPTER STR BRS .5IN CMPX.5IN MPT	BRASS	
5	3	W2T295040	BOLT, HEX 0.25"D 1"L UNC-20 SS18-8;	STN STL, 18-8	
6	4	W2T304659	BOLT, HEX .625"x3.50" COARSE HDG GR A325	STL, GALV, A325	
7	64	W2T303917	BOLT, HEX .750"x4" HDG GR A325	STL, GALV, A325	
8	48	W2T83936	BOLT, HEX, 0.625IN DIA, 3.25IN LG, 304SS	STN STL, 18-8	
9	40	W2T547725	BOLT, HH 0.625x3.25" UNC A325 CS HDG RH	STL, GALV, A325	
10	1	W2T188349	CAMLOCK 2IN ALUM MALE X MPT	AL, 6061	
11	2	W2T188418	CAMLOCK 4IN ALUM MALE X FLANGE	AL, 6061	
12	1	W2T188419	CAP 2IN ALUM CAMLOCK DUST	AL, 6061	
13	2	W2T188420	CAP 4IN ALUM CAMLOCK DUST	AL, 6061	
14	3	W2T188213	CLAMP 1/2IN SS TUBING W/RL 1/4IN BN	STN STL, 18-8	
15	1	W2T815494	COAT PRIMER CARBOGUARD 890 PART B	Generic	
16	1	W2T815493	COAT PRMR CARBOGUARD 890 GREY PT A	Generic	
17	1	W2T512800	COATING CS PIPE SK 206N EPOXY	Generic	
18	1	W2T903777	COATING EXT CARBOTHANE 133 VOC OPEN SKY	Generic	
19	1	W2T188207	COATING PLASITE 4110 CL 890 12 NSFF	Generic	
20	4	W2T188421	COUPLING CHICAGO 1IN MPT MI AM12	STL, GALV	
21	1	W2T394078	COUPLING, 1" 304SS 3000LB HLF NPT	STN STL, 304	
22	1	W2T85026	COUPLING, PIPE FULL 2" 150# FPT 304L SS	STN STL, 304	
23	3	W2T85375	CPLNG, PIPE, FULL, 0.75 IN, 150#, FPT	STN STL, 304	
24	2	W2T188336	ELBOW, 1" SCH40 GALV 90DEG THD;	STL, GALV	
25	2	W2T188339	ELBOW, 2" SCH40 GALV THD ASTM B16.3 I	STL, GALV	
26	3	W2T299163	ELBW, PIPE, STD WELD, 4.90, STL SA234-WPB, LR	STL, MILD	
27	3	W2T408244	FLANGE 2INX1/2IN CS 150LB NPT B16.3	STL, A36	
28	1	W2T380486	FLANGE 3INX2IN CS 150 NPT ASTM A105	STL, A36	
29	1	W3T185103	FLANGE AIRPORT 2IN W/ 1IN COUPLING CS		
30	6	W2T83820	FLG, SLIPON, 4 IN, 150#, RF, STL SA105	STL, A36	
31	7	W2T890227	GASKET, 2" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
32	2	W2T890228	GASKET, 3" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
33	9	W2T890229	GASKET, 4" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
34	16	W2T890230	GASKET, 6" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
35	1	W2T901649	HP1240 BARE TANK 125PSI ASME		
36	5	W2T188804	NIPPLE 1IN X CLOSE 316SS SCH40	STN STL, 316	
37	1	W2T188984	NIPPLE 1IN X CLOSE 316SS SCH80	STN STL, 316	
38	2	W2T188982	NIPPLE 2IN X CLOSE 316SS SCH40 ASTM	STN STL, 316	
39	1	W2T188871	NOZZLE 1IN POLYPROPYLENE X MNPT N8	POLYPROPENE	
40	3	W2T188866	NOZZLE 3/4IN MNPT PP ORTHOS N5	POLYPROPENE	
41	3	W2T820440	NUT, HVY HEX 0.25"DIA UNC-20 SS18-8;	STN STL, 18-8	
42	48	W2T403127	NUT, HEX HEAVY 0.625-11 18-8SS, UNC; 18-8	STN STL, 18-8	
43	1	W2T84289	PIPE, 1; SCH 40; CS; A53-A; 252 LG; GALV	STL, GALV	283.0
44	1	W2T84291	PIPE, 2; SCH 40; 252 LG; GALV	STL, GALV	271.0
45	1	W2T83807	PIPE, 4 IN; SCH 40; CS SA53A	STL, MILD	319.0
46	1	W3T532370	RINGHEADER ASSY 8IN CS S40 S/O PM I		
47	8	W2T188557	SEPTA 4 1/2IN OD 316SS .015 SLOT	STN STL, 316	
48	1	W2T804720	SIGN, ID NP 5.5X3.5 EVOQUA 530-527-2664;	STN STL, 304	
49	2	W3T184715	SPOOL ASSEMBLY MEDIA IN & OUT CS		
50	1	W2T188554	SPRAY NOZZLE W2T188554	PVC	
51	1	W2T188337	TEE 2INX2INX1IN G S40 THD ASME B16.	STL, GALV	
52	6	W2T85852	TUBE, RND; SS; 316/316L; 0.5 IN; 0.035 IN; RND	STN STL, 316L	213.0
53	2	W2T371759	UBOLT 1IN 304 STAINLESS STEEL W/ 4	STN STL, 304	
54	2	W2T189004	UBOLT 2IN HOT DIP GALV W/ 4 NUTS	STL, MILD	
55	3	W2T189005	UBOLT 4IN HOT DIP GALV W/ 4 NUTS	STL, MILD	
56	3	W2T188642	VALVE 1/2IN BRASS BALL LEAD FREE NS	Brass, Soft Yellow	
57	5	W2T188200	VALVE 1IN BRASS BALL LEAD FREE NSF	Brass, Soft Yellow	
58	1	W2T188201	VALVE 2IN BRASS BALL LEAD FREE NSF	Brass, Soft Yellow	
59	2	W2T188196	VALVE 4IN 316SS FULL PORT BALL VALVE	STN STL, 316	
60	1	W2T902026	VALVE, CMBO AIR/VAC 1" NPT CI STD SEAT;	STL, CI	
61	3	W2T248765	WASHER, FLT 0.25" SS18-8 SM OD	STN STL, 18-8	
62	3	W2T84530	WASHER, LOCK 0.25" SS18-8 MED;	STN STL, 18-8	
63	96	W2T188781	WASHER, FLAT 0.625" 304SS SAE	STN STL, 304	
64	128	W2T371769	WASHER, FLAT STRUCTURAL; 0.75 IN GALVANIZED	STL, GALV	
65	88	W2T85099	WASHER, FLAT; 0.625 IN; CS; GALV	STL, GALV	

REV	DESCRIPTION	DATE	DWN	CKD	APPD	ECN
1	CHANGED SAMPLE PRORS ORIENTATION, UPDATED WEIGHT AND COLOR	8/5/2021	MR		NRD	

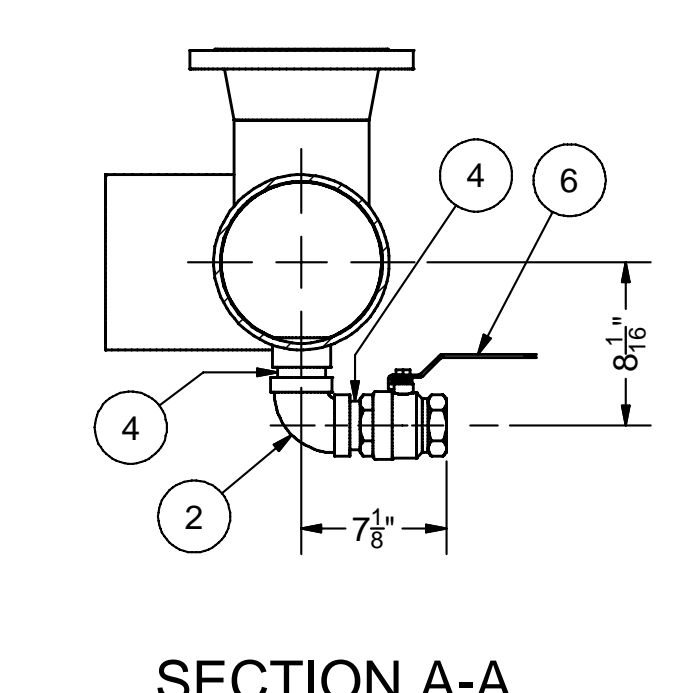
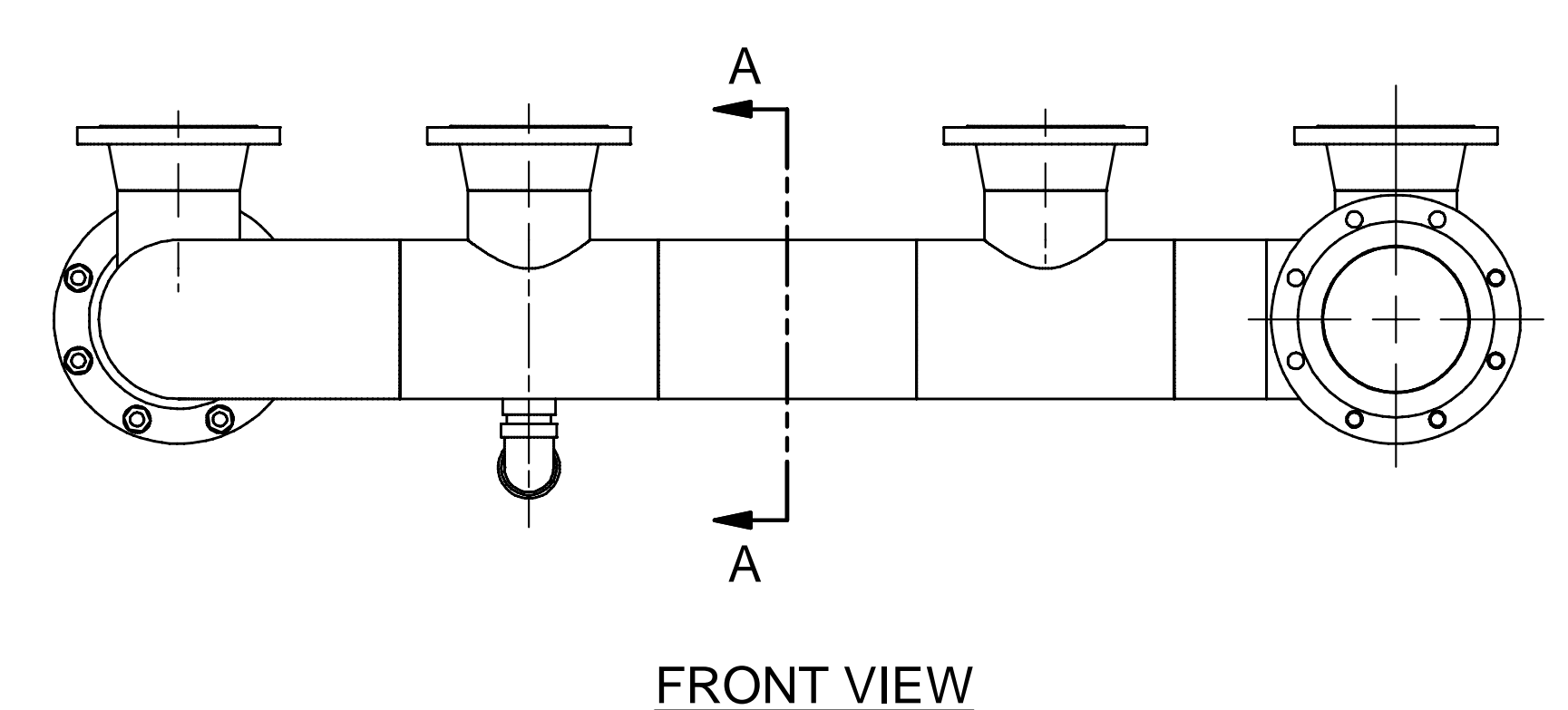
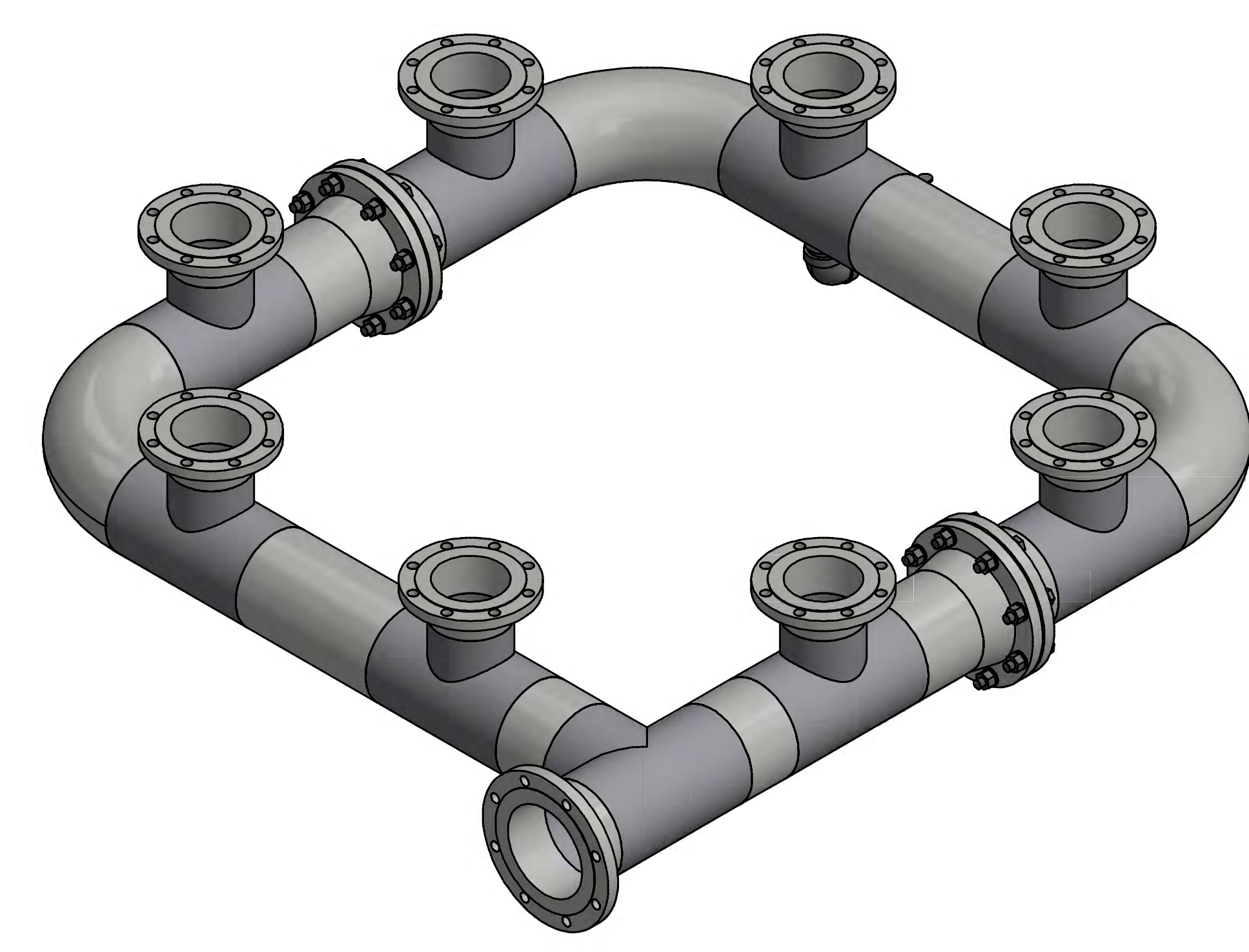
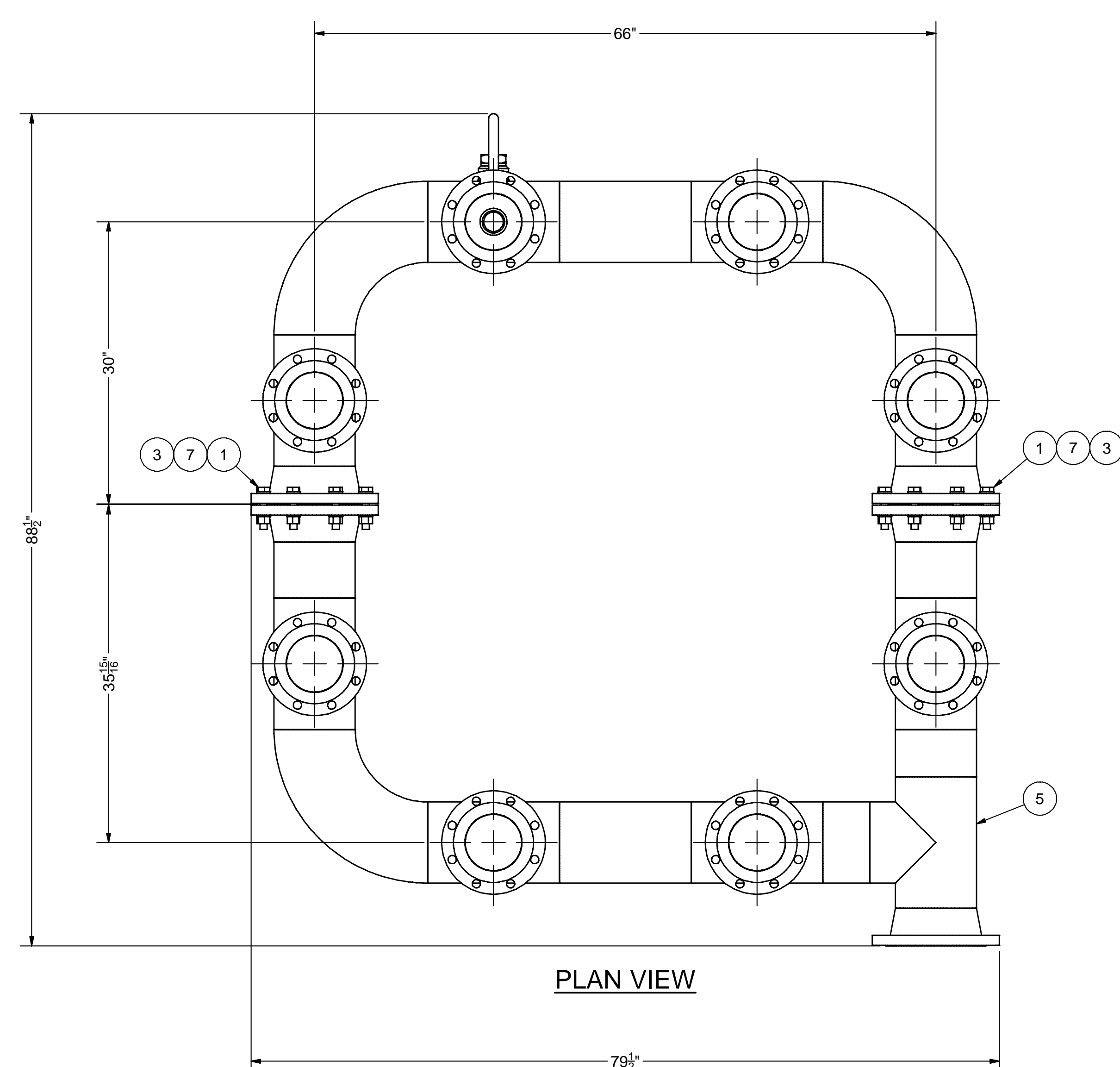
  

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 EVOQUA WATER TECHNOLOGIES RED BLUFF CA USA (530) 527-2664		PART NUMBER: W3T532386	PROJ/PROD NUMBER: 1200-001025	CODE: HP1240ST	SHEET: 2 OF 2	REV: 1

STD:22x34\_D\_V2.1  
 BAR = 1" AT PLOT SCALE  
 Doc Group: Doc Type:



ITEM	QTY	PART NO	DESCRIPTION	MATERIAL
1	16	W2T303917	BOLT,HEX .750"x4" HDG GR A325	STL, GALV, A325
2	1	W2T188339	ELBOW, 2" SCH40 GALV THD ASTM B16.3 I	STL, GALV
3	2	W2T890231	GASKET, 8" 150# 0.125 THK EPDM NSF-61 CRT	Rubber
4	2	W2T188982	NIPPLE 2IN X CLOSE 316SS SCH40 ASTM	STN STL, 316
5	1	W3T185346	RINGHEADER 8IN CS S40 SIDE OUT I	
6	1	W2T188201	VALVE 2IN BRASS BALL LEAD FREE NSF	Brass, Soft Yellow
7	32	W2T371769	WASHER;FLAT STRUCTRUAL;0.75 IN GALVANIZED	STL, GALV



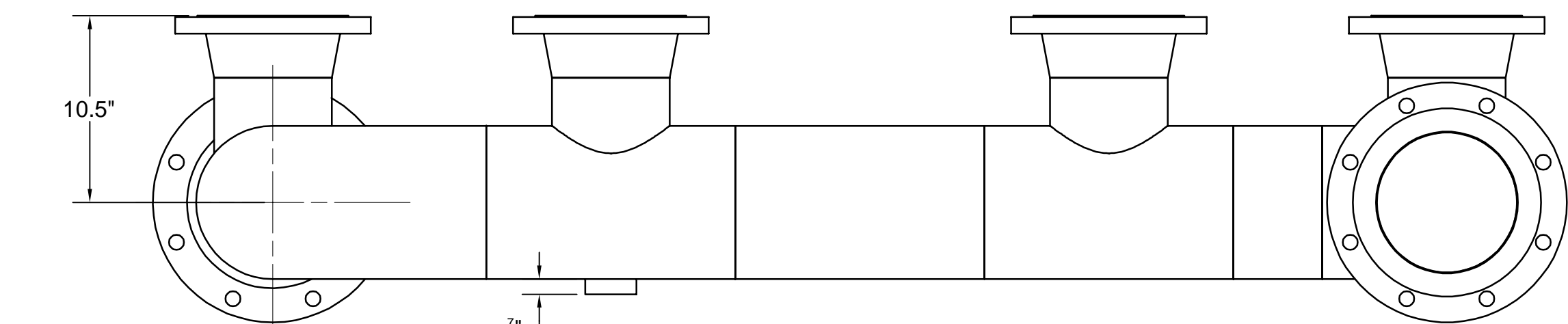
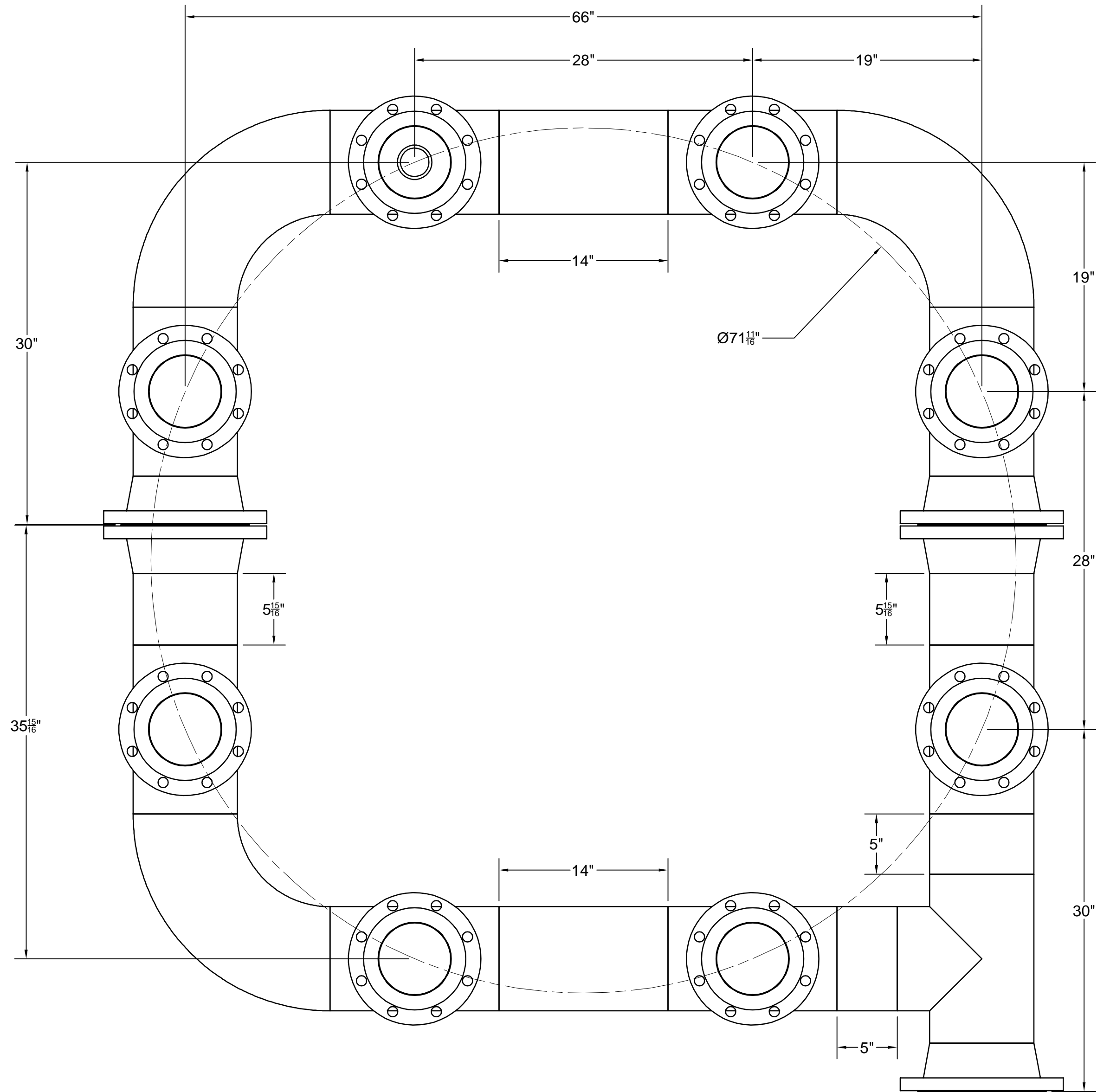
- NOTES:**
- INTERIOR TO BE COATED WITH NSF LINING.
  - INLET, OUTLET CONNECTIONS TO BE RAISED FACE FLANGE.
  - FINISH EXTERIOR WITH CARBOGUARD 133VOC URETHANE COLOR TO BE OPEN SKY 5141 (3 MIL DFT MIN) OVER CARBOLINE 890 RUST PREVENTATIVE EPOXY PRIMER (4 MIL DFT MIN) APPLIED PER MFG. RECOMMENDATIONS.

REV	DESCRIPTION	DATE	DWN	CKD	APPD	ECN
1	CHANGED COLOR	8/3/2021	MR	NRD		

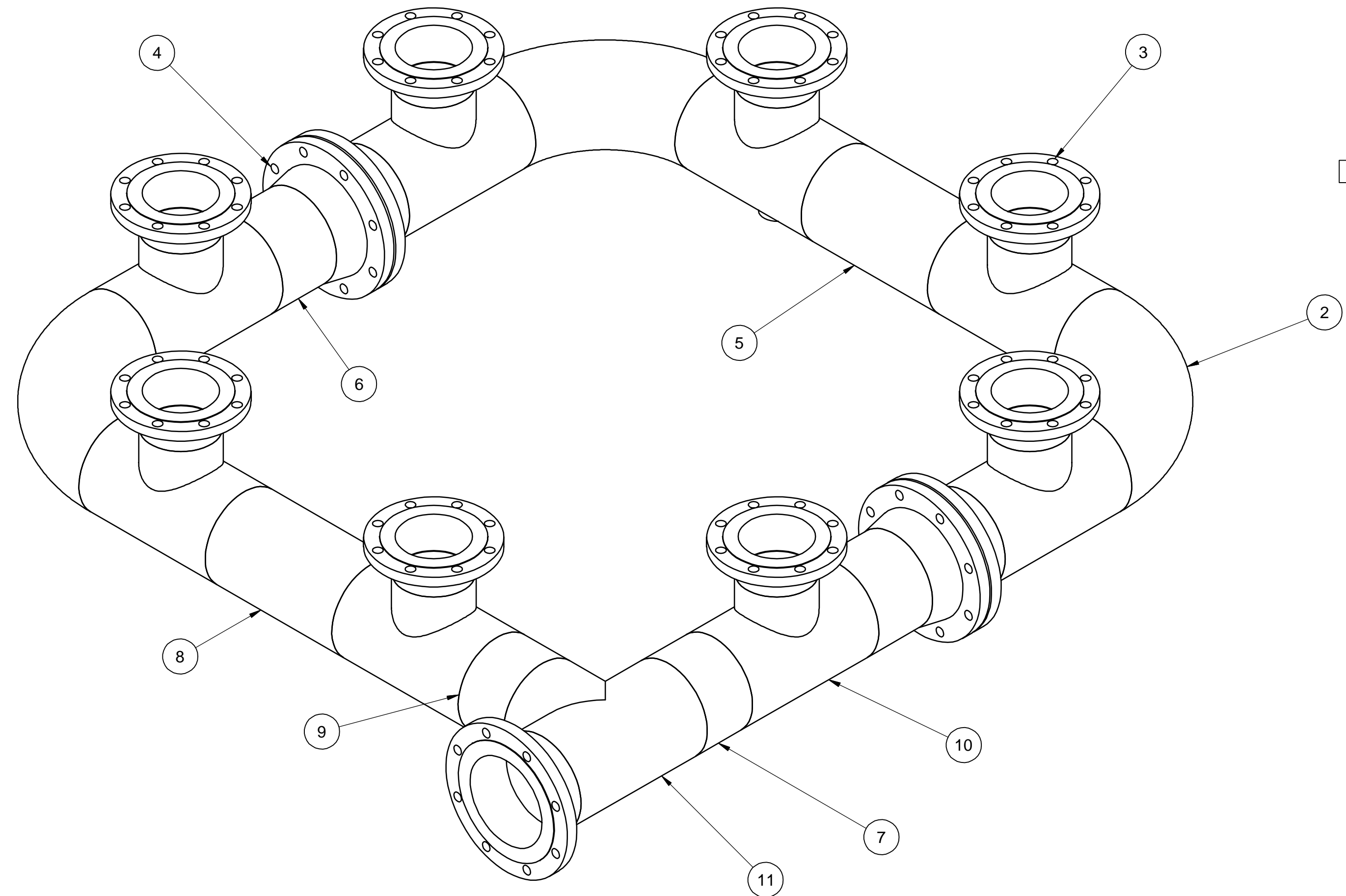
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PART NUMBER	PROJ/PROD NUMBER	CODE	FILE/DRAWING NUMBER	SHEET	REV
W3T532370	1200-001025		RINGHEADER ASSY	1 OF 1	1

STD:22x34\_D\_v2.1 BAR = 1" AT PLOT SCALE Doc Group: Doc Type:

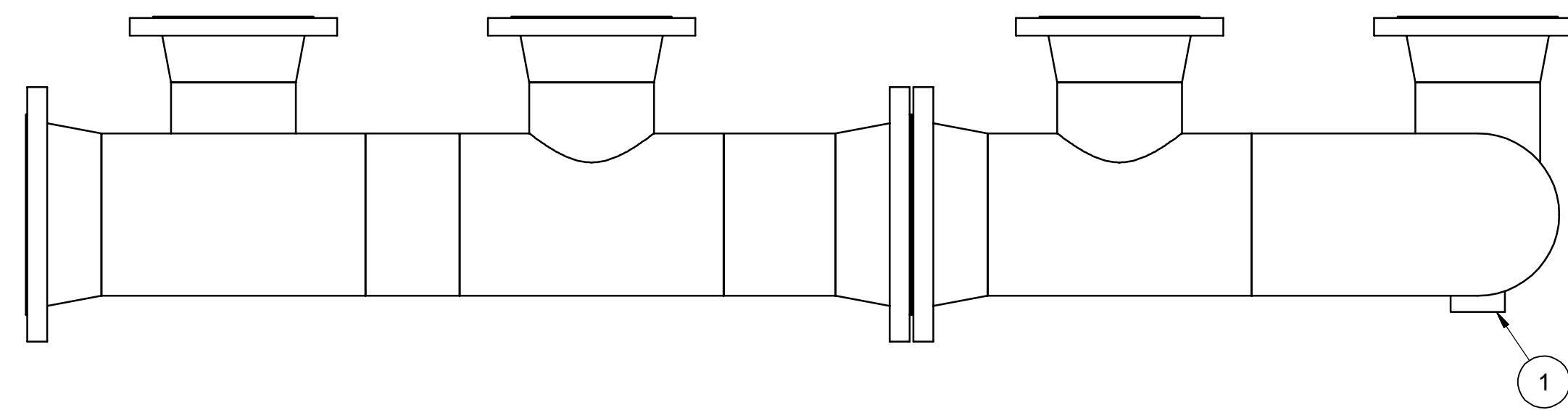


REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1		1/6/2017	

BILL OF MATERIAL										
POS	UNIT	QTY	ITEM CODE	DESCRIPTION	MATERIAL	LENGTH, IN	WIDTH, IN	WEIGHT, LB		
1	1		W2T380139	COUPLING, 2" 316SS 3K HLF NPT ASTM A403;	STN STL, 316					0.86
2	3		W2T84925	ELBW, PIPE, 90DEG, 8IN, BW, LONG RAD	STL, MILD					50.60
3	8		W2T87418	FLG, WELDNK; 6 IN; 150#; RF; SCH 40; CS SA105	STL, A36					24.33
4	5		W2T87444	FLG, WELDNK; 8 IN; 150#; RF; SCH 40; SA105	STL, A36					40.26
5	1		W2T84277	PIPE; 8; SCH 40; CS A53-A; RAN LG	STL, MILD	14.0000				33.39
6	2		W2T84277	PIPE; 8; SCH 40; CS A53-A; RAN LG	STL, MILD	5.9370				14.16
7	1		W2T84277	PIPE; 8; SCH 40; CS A53-A; RAN LG	STL, MILD	5.0000				11.93
8	1		W2T84277	PIPE; 8; SCH 40; CS A53-A; RAN LG	STL, MILD	14.0000				33.39
9	1		W2T84277	PIPE; 8; SCH 40; CS A53-A; RAN LG	STL, MILD	5.0000				11.93
10	8		W2T380529	TEE, 8INX8INX6IN CS RD ASTM A234 I	STL, MILD					*Varies*
11	1		W2T84380	TEE, PIPE; STD; 8 IN; BW; STD WT; CS SA234-WPB	STL, MILD					37.47



TOTAL WEIGHT: 1000.0 LB



ADDITIONAL NOTES:

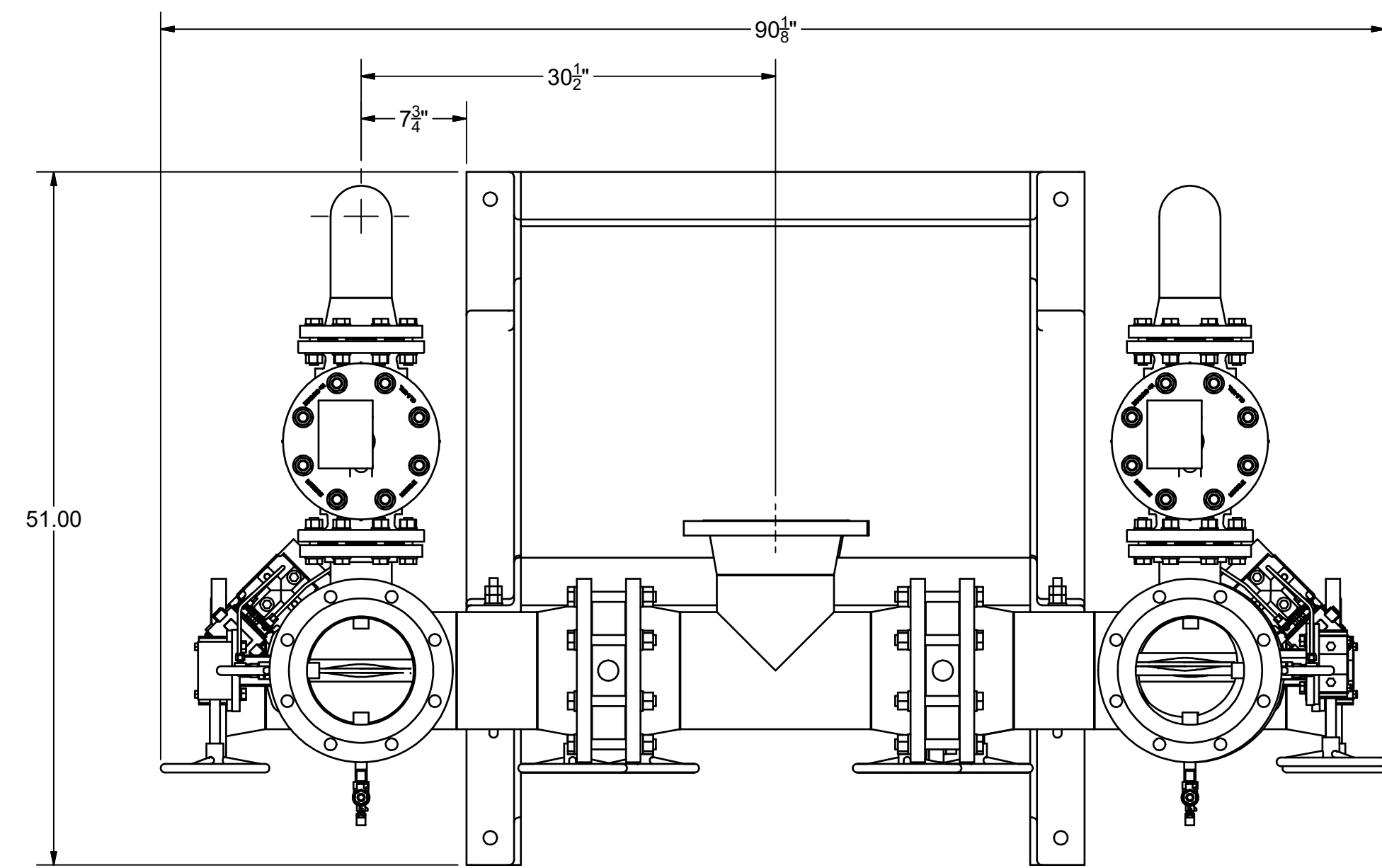
1.)

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C:\RDP\Valu\Standards\Subassemblies\RINGHEADER ASSY 8IN CS S40 SO PM I W3T185363\RINGHEADER 8IN CS S40 SIDE OUT I W3T185346\RINGHEADER 8IN

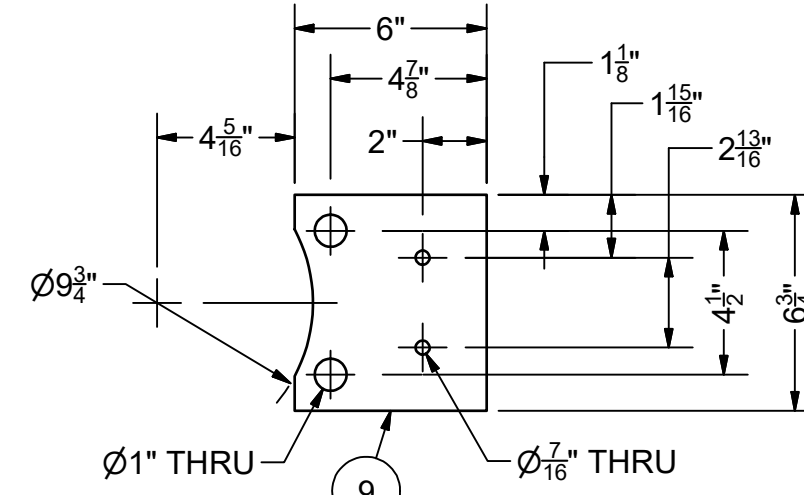
DESIGNER	DATE
AJA	1/6/2017
CHECKER	DATE
ENGINEER	DATE
MANAGER	DATE
FILE:	
SCALE:	

TITLE		RINGHEADER 8IN CS S40 SIDE OUT I WELDAMENT W3T185346	
CLIENT			
PROJECT		DRAWING	
CODE		SHEET	
W3T185346		1 OF 1	
1		1	
Water Technologies		Red Bluff, Ca	
530-527-2664			

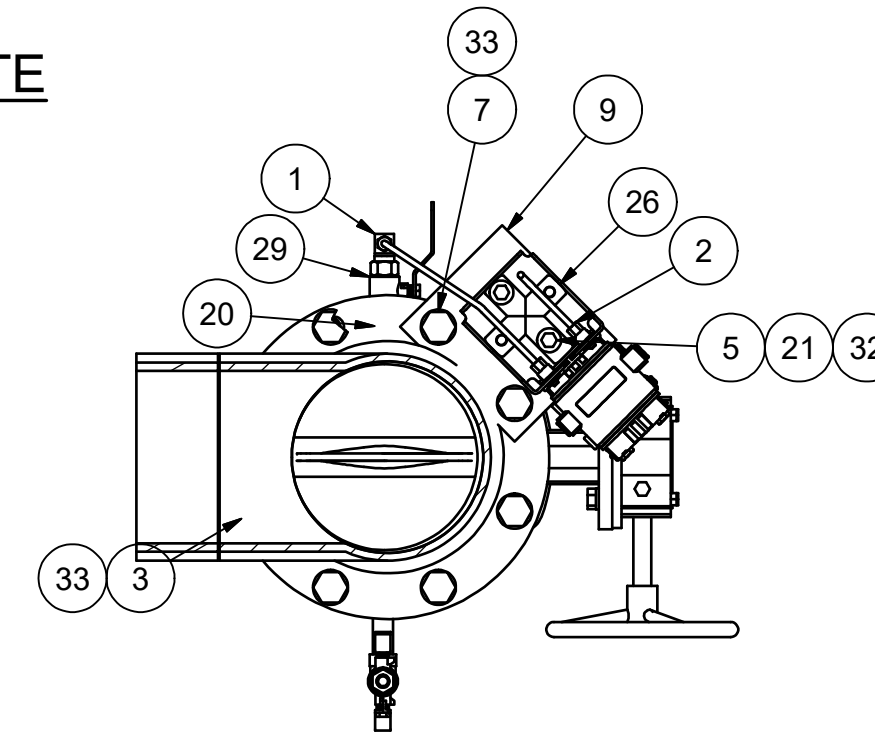
REV	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN
1	MOVED 2 INCH COUPLING TO TEE	9/24/2018	RKC			



PLAN VIEW

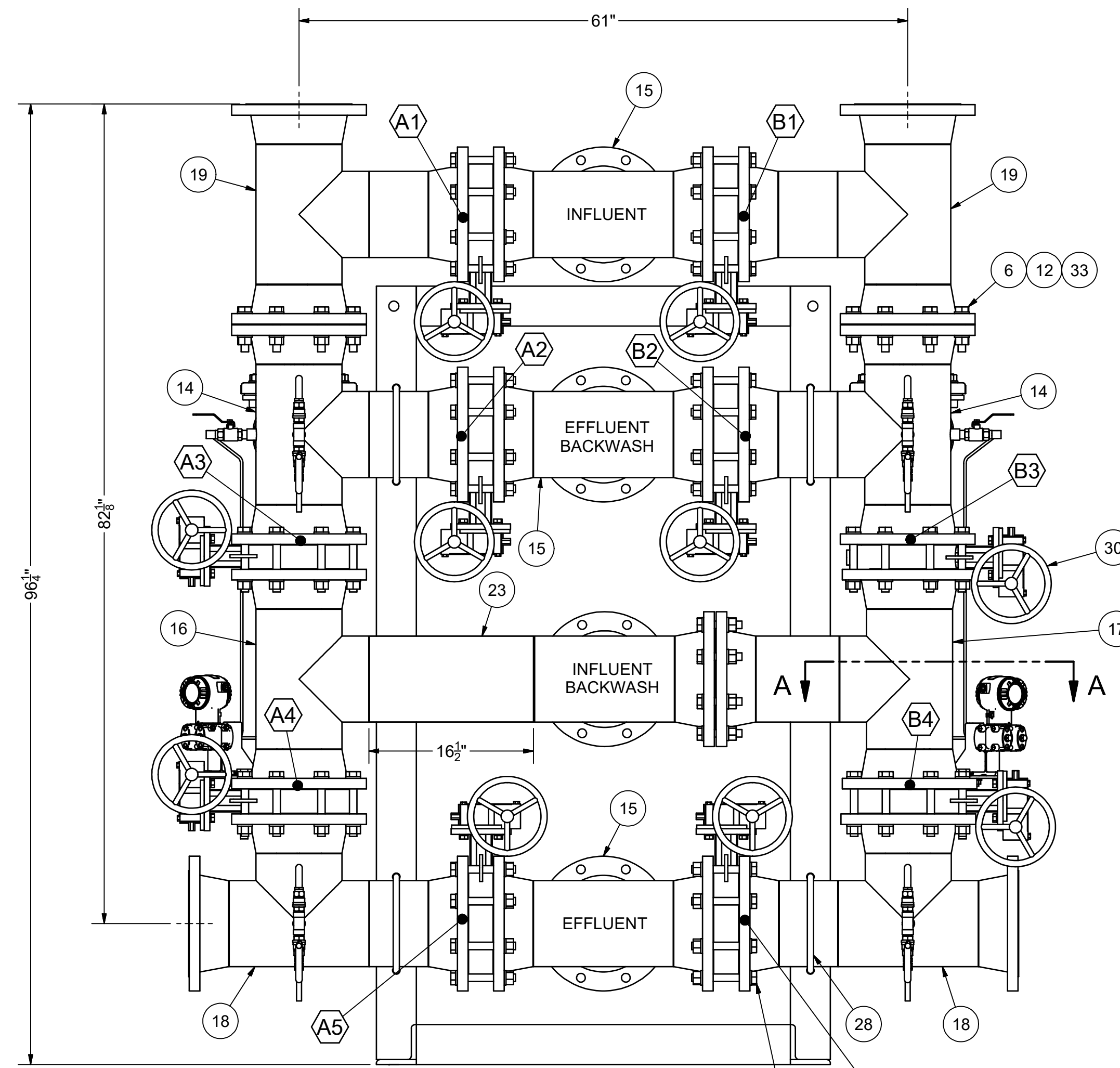


DPT MOUT PLATE

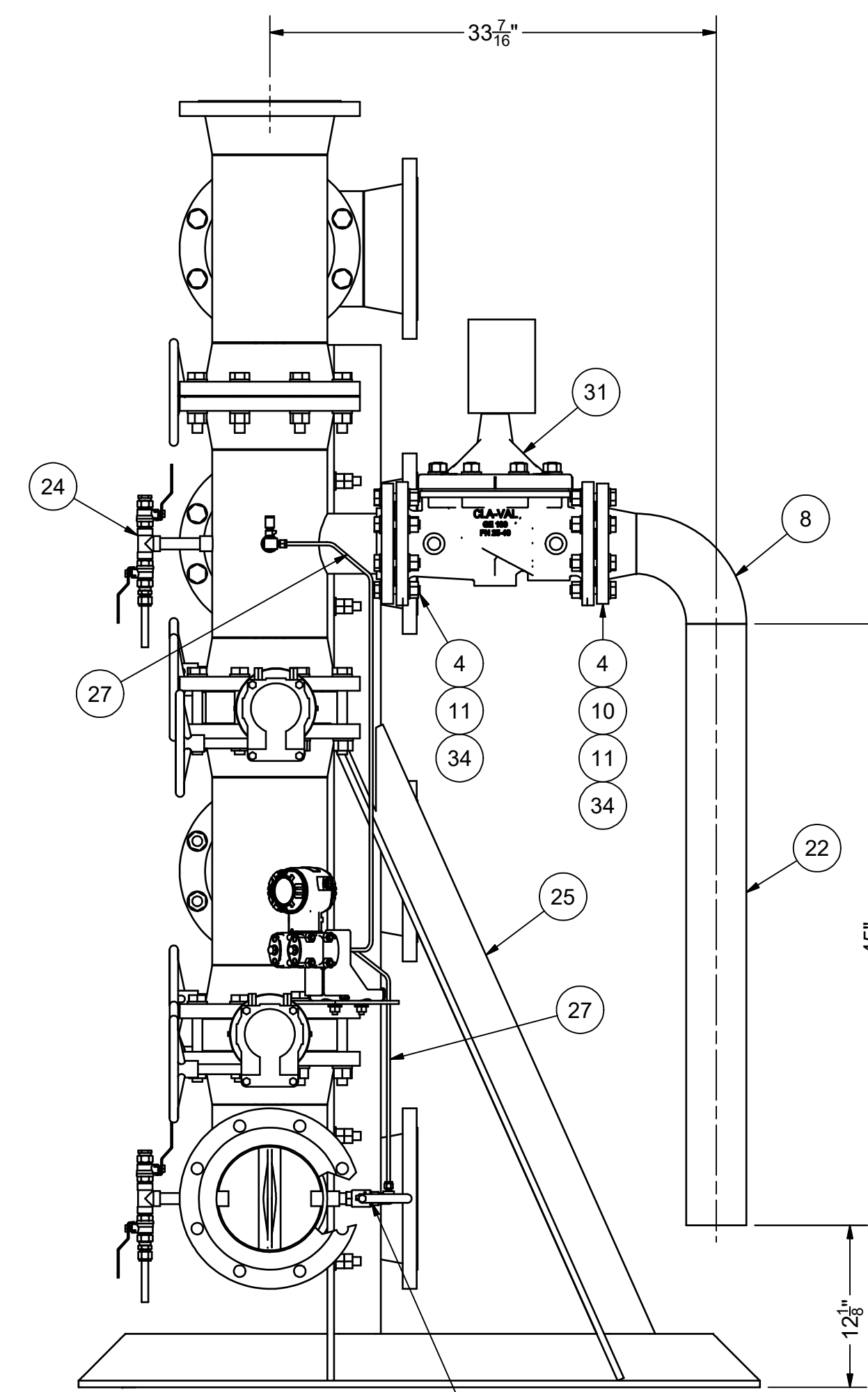


SECTION A-A  
DPT MOUNTING

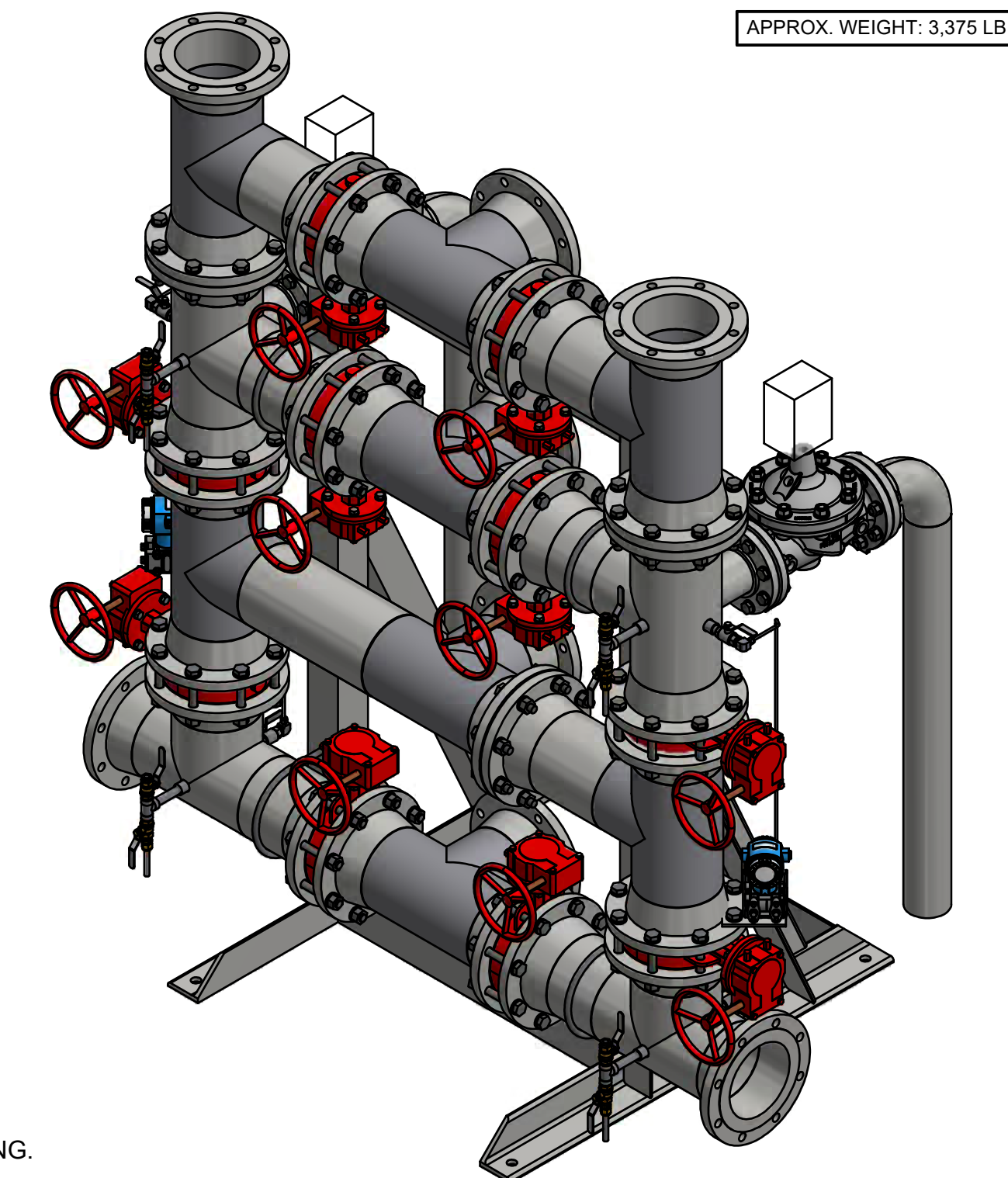
ITEM	QTY	PART NO	DESCRIPTION	MATERIAL	LENGTH (INCHES)
1	4	W2T882725	ADAPTER ELL .50" NPT X .25" CONN 90 DEG. 316SS	STN STL, 316	
2	4	W2T462957	ADAPTER, STR SS 0.25"CMPx0.25"MPT	STN STL, 316L	
3	76	W2T513149	BOLT 3/4INX6IN HDG GR A325	STL, GALV, A325	
4	32	W2T303887	BOLT 5/8INX3IN HDG GR A325	STL, GALV, A325	
5	4	W2T823856	BOLT, HEX 0.375"D 1.5"L UNC-10 SS18-8;	STN STL, 18-8	
6	24	W2T303917	BOLT,HEX .750"x4" HDG GR A325	STL, GALV, A325	
7	4	W2T408529	BOLT,HEX .750"x6.50" UNC HDG GR A325	STL, GALV, A325	
8	2	W2T299163	ELBW,PIPE,STD WELD,4.90,STL SA234-WPB,LR	STL, MILD	
9	2	W2T188861	FLAT BAR 1/4" THK X 6" A36 CS	STL, A36	
10	2	W2T84802	FLG,WELDNK,4 IN;150#;RF;SCH 40;CS SA105	STL, A36	
11	4	W2T890229	GASKET, 4" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
12	3	W2T890231	GASKET, 8" 150# 0.125 THK EPDM NSF-61 CRT	Rubber	
13	1	W2T800905	KIT, LBL 4 TIER MANF FOR BIG SYS;	Generic	
14	2	W3T532528	MANIFOLD 8IN CS SCH40 TEE ASSY 1 S		
15	3	W3T348989	MANIFOLD 8IN CS SCH40 TEE ASSY 2 S		
16	1	W3T348990	MANIFOLD 8IN CS SCH40 TEE ASSY 3 S		
17	1	W3T349001	MANIFOLD 8IN CS SCH40 TEE ASSY 4 S		
18	2	W3T532527	MANIFOLD 8IN CS SCH40 TEE ASSY 5 S		
19	3	W3T349004	MANIFOLD 8IN CS SCH40 TEE ASSY 7 S		
20	4	W2T817220	NIPPLE 0.5" X 1.5" 316SS SCH80 SHORT	STN STL, 316	
21	4	W2T88318	NUT, HVY HEX 0.375" DIA UNC-16 SS18-8	STN STL, 18-8	
22	2	W2T83807	PIPE,4 IN;SCH 40;CS SA53A	STL, MILD	94.000
23	1	W2T84277	PIPE,8;SCH 40;CS A53-A;RAN LG	STL, MILD	
24	4	W3T185112	SAMPLE PORT ASSEMBLY: 1/2IN STRAIGHT		
25	1	W3T405293	STAND, MANIFOLD 8" CS S		
26	2	W2T890934	TRANSMITTER, DIFF. PRESS. HAUSER PMD55	Generic	
27	1	W2T196267	TUBING, .250 .035 THK WALL WELDED 304SS	STN STL, 316	138.000
28	4	W2T189007	UBOLT 8IN HOT DIP GALV W/ 4 NUTS	STL, MILD	
29	4	W2T832883	VALVE, BALL FULL PT 0.5" 316SS BDY NPT;	STN STL, 316L	
30	10	W2T833142	VALVE, BFLY WFR HW 8" CI BDY BRAY S30;		
31	2	W2T895043	VALVE, PRESS REL 4" 125 PSI FLGD W/LIM SW;	Generic	
32	8	W2T373297	WASHER, 0.375" X 1" 18-8 SS	STN STL, 18-8	
33	208	W2T371769	WASHER;FLAT STRUCTURAL;0.75 IN GALVANIZED	STL, GALV	
34	72	W2T85099	WASHER;FLAT;0.625 IN;CS;GALV	STL, GALV	



FRONT



RIGHT SIDE



NOTES:

- INTERIOR TO BE COATED WITH NSF LINING.
- INLET, OUTLET AND BW CONNECTION TO BE RAISED FACE FLANGE.
- FINISH EXTERIOR WITH CARBOGUARD 133VOC URETHANE COLOR TO BE OPEN SKY 5141 (3 MIL DFT MIN) OVER CARBOLINE 890 RUST PREVENTATIVE EPOXY PRIMER (4 MIL DFT MIN) APPLIED PER MFG. RECOMMENDATIONS.
- A1** VALVE TAGS.

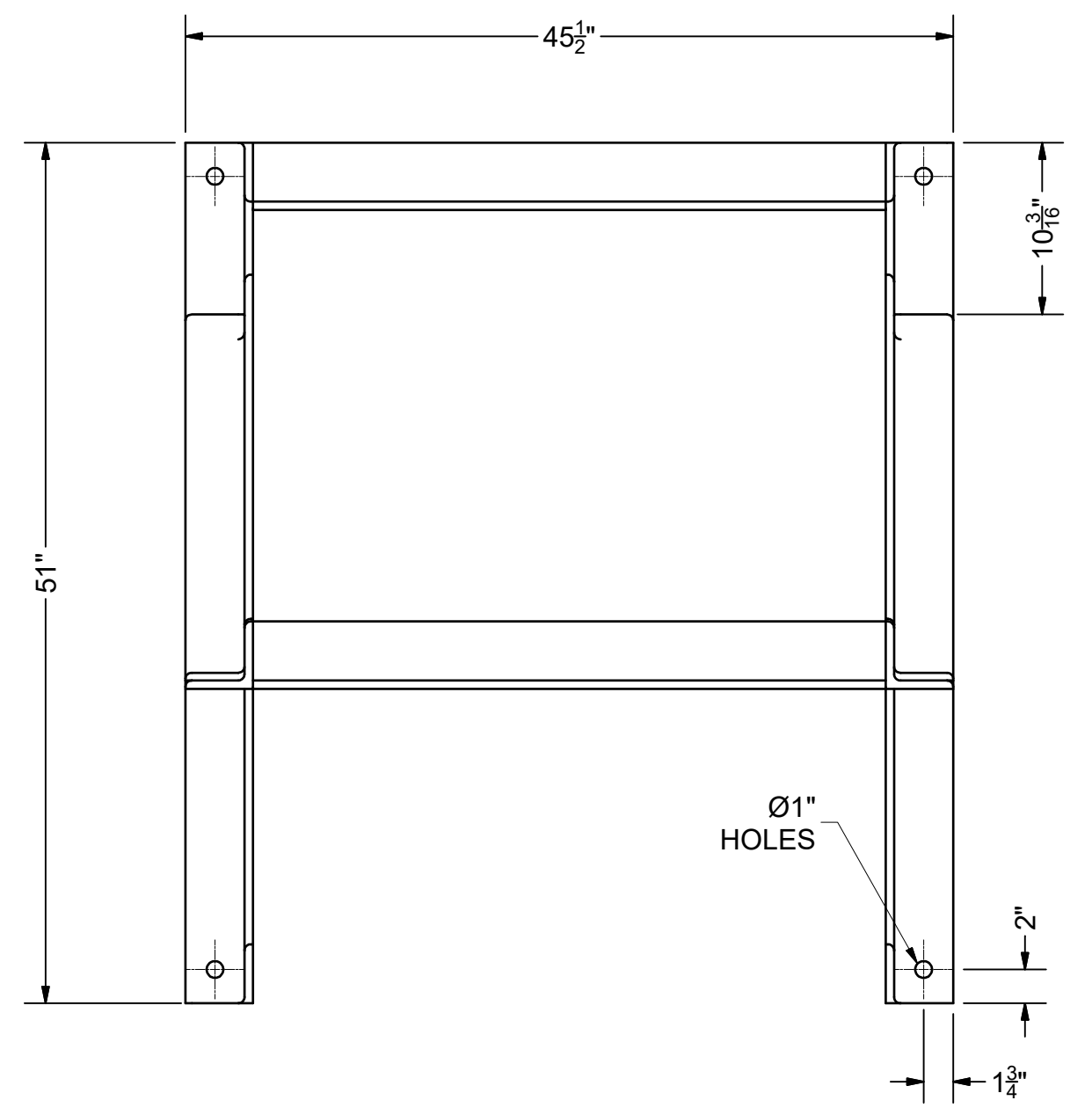
REV	DESCRIPTION	DATE	DWN	CKD	APPD	ECN
1	CHANGED COLOR, CHANGED LENGTH IN ITEM #23	8/3/2021	MR			

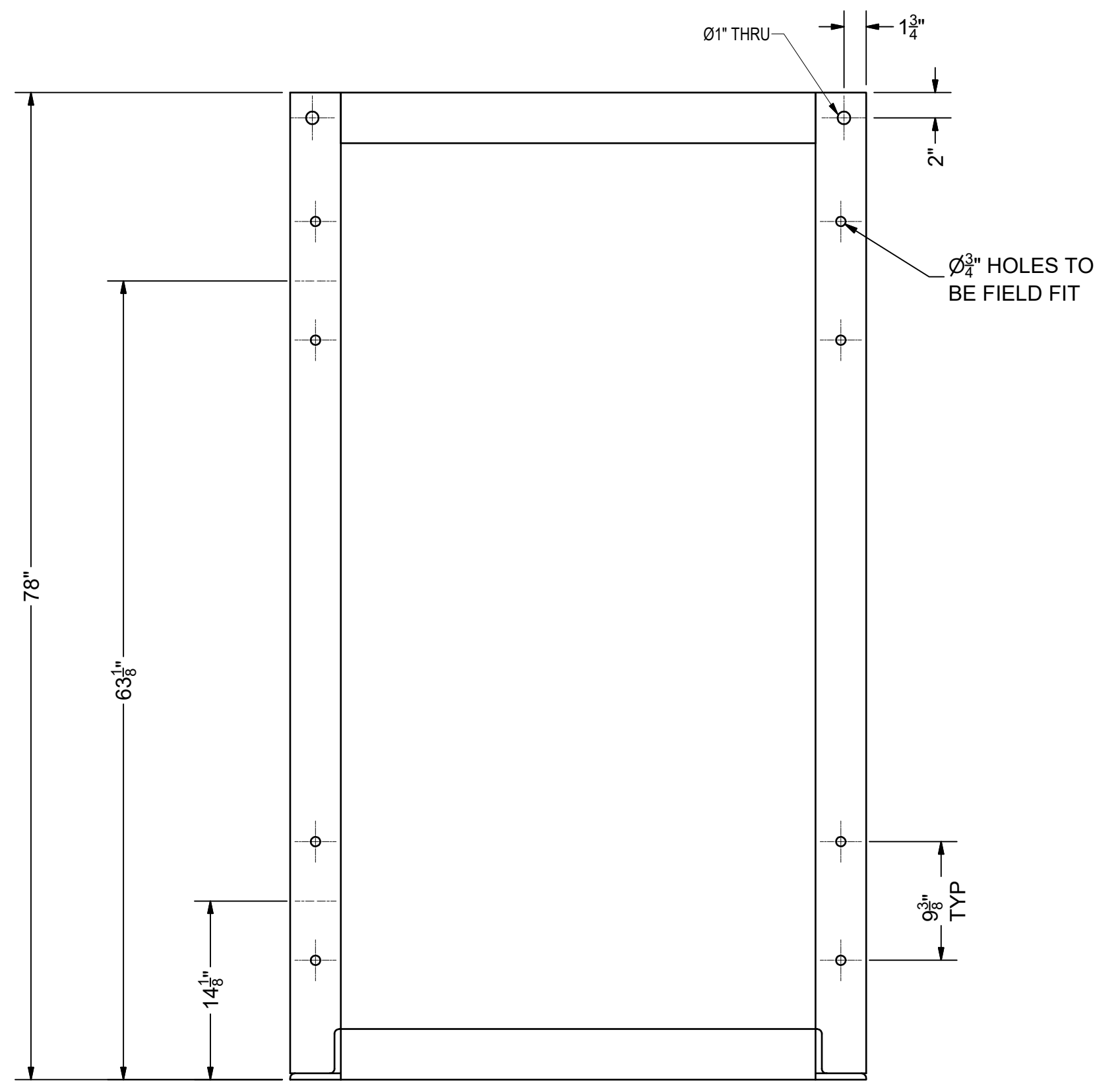
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	CKD BY:	DATE	CLIENT ORANGE COUNTY WATER DISTRICT
	APPD BY:	DATE	 EVOQUA WATER TECHNOLOGIES RED BLUFF CA USA (530) 527-2664
	MGD BY:	SCALE NTS	
	PART NUMBER W3T532465	PROJ/PROD NUMBER 1200-001025	CODE MANIFOLD 8IN CS
		FILE/DRAWING NUMBER	SHEET 1 OF 1
			REV 1

BILL OF MATERIAL					
POS	UNIT QTY	ITEM CODE	DESCRIPTION	MATERIAL	LENGTH, IN
1	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	52.00
2	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	52.00
3	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	37.50
4	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	37.50
5	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	77.50
6	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	77.50
7	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	51.00
8	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	37.50
9	1	W2T84861	ANGLE SA36 4"x4"x0.5"	STL A36	51.00

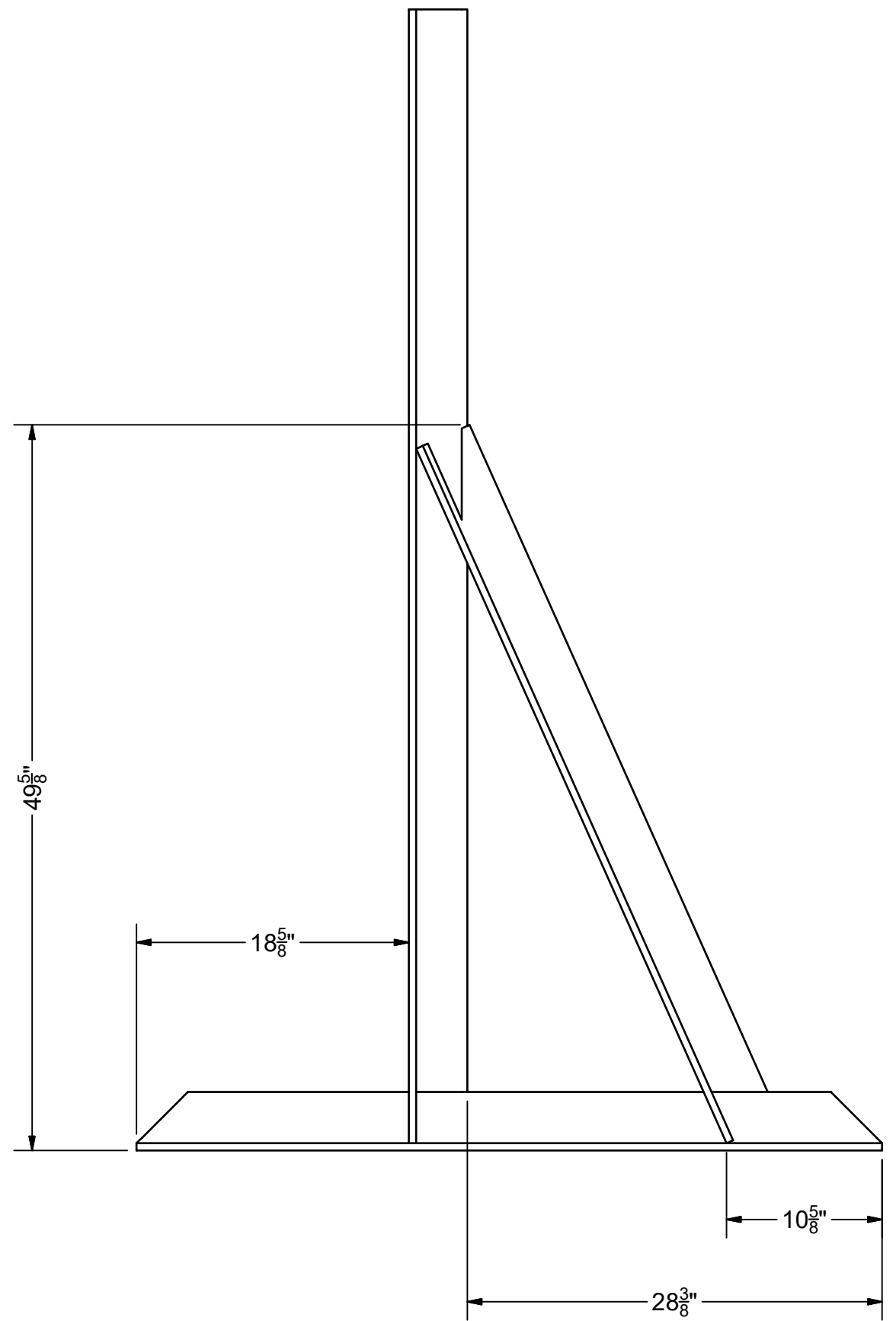
APPROX. WEIGHT: 480 LB



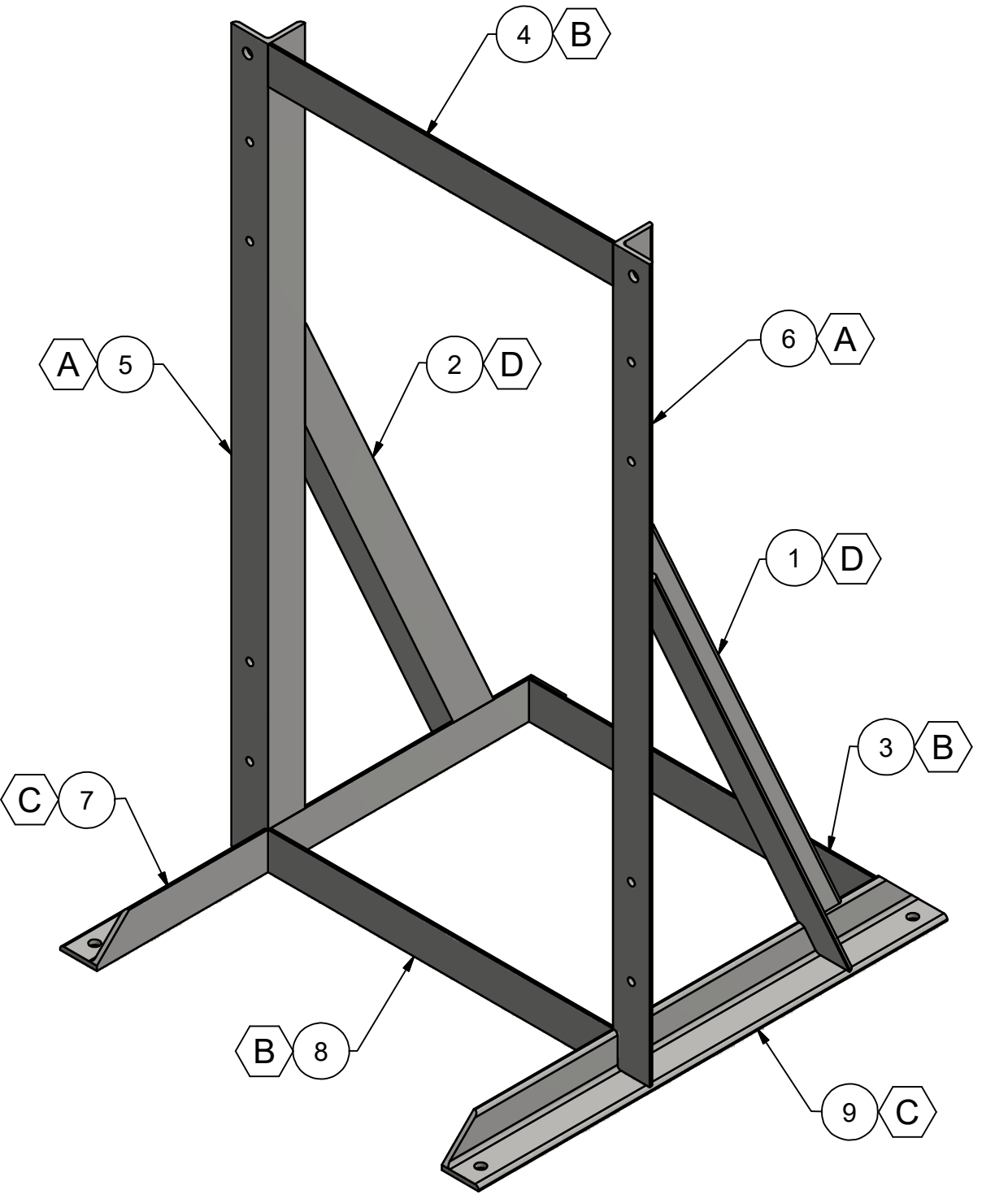
TOP VIEW



ELEVATION VIEW



SIDE VIEW



ISOMETRIC VIEW

CUT LENGTH			
TAG	DESCRIPTION	CUT LENGTH (INCHES)	QTY
A	ANGLE, A36 4INX4INX1/2IN	77 1/2	2
B	ANGLE, A36 4INX4INX1/2IN	37 1/2	3
C	ANGLE, A36 4INX4INX1/2IN	51	2
D	ANGLE, A36 4INX4INX1/2IN	52	2

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<p>CKD BY: [blank] DATE: [blank]</p>		<p>APPD BY: NRD DATE: 10/15/2019</p>	<p>CLIENT: [blank]</p>
<p>MGD BY: [blank]</p>		<p>SCALE: NOT TO SCALE</p>	<p><b>evoqua</b> WATER TECHNOLOGIES EVOQUA WATER TECHNOLOGIES RED BLUFF CA USA (530) 527-2664</p>
PROJECT	PART NUMBER	DMS REFERENCE	SHEET
W3T405293			1 OF 1
			REV 0

## APPENDIX C – PREVENTIVE MAINTENANCE

Establish a regular inspection and measurement program based on the site and process conditions. Consider operation frequency and duration, process contaminants, quantity of particulate matter, and elements of nature when setting the inspection and measurement frequency.

If problems are discovered during inspection and/or measurement, address them in a timely fashion, to get the best performance and life possible from the system. If unsafe conditions are observed, shut down the system if running. Remedy the unsafe conditions before starting or re-starting the system.

Preventative maintenance is important, but minimal. If problems occur, troubleshoot should commence immediately, and problem resolution should be speedy to get the best performance and life possible from the system. These lists are provided as a starting point. They are not exhaustive. Maintenance needs may change over time as conditions change.

Description	Page
Hourly Parameter Tracking Form	C-2
System Inspection Form	C-3
Parts	C-4

**Hourly Parameter Tracking Form**

Page \_\_\_\_ of \_\_\_\_

Record operating parameters at start-up and then hourly. Adjust the interval to meet field conditions. Copy this page for future use. Retain filled forms in a Parameter Tracking Log.

**Example Runsheet**

Date:

Time:								
Operator Initials:								
Adsorber A	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?
Inlet Pressure:								
Outlet Pressure:								
Pressure Differential:								
Notes:								
Adsorber B	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?	Lead, Lag, or Parallel?
Inlet Pressure:								
Outlet Pressure:								
Pressure Differential:								
Notes:								

**System Inspection Form**

Page \_\_\_\_ of \_\_\_\_ Pages

Record inspection notes daily. Adjust the inspection interval to meet changing field conditions.

**Example Daily Inspection & Maintenance Checklist**

Inspector Name			
Date and Time			
<b>Item</b>	<b>Adsorber A</b>	<b>Adsorber B</b>	<b>Piping Module</b>
1. No dents or holes in vessel			
2. Vessel exterior free of leaks or damage			
3. No major damage to exterior paint?			
4. Press. gauges free of leaks or damage			
5. Ball valves free of leaks or damage			
6. Butterfly valves free of leaks or damage			
7. Other valves free of leaks or damage			
8. Expan. joints free of leaks or damage			
9. Diff. press. transmitter operates properly			
10. ValMatic valve free of leaks or damage			
<b>COMPLETE ITEM 11 AT EVERY CARBON CHANGE</b>			
11. Chamber interior is clean and rust-free?			
Notes:			

<b>PARTS</b>
<b>Bolts</b>
BOLT, 0.25" x 1" HEX UNC-20 SS18-8; STN STL, 18-8 BOLT, 0.375" x 1.5" HEX UNC-10 SS18-8; STN STL, 18-8 BOLT, 0.5" x 1.5" HDG GR A325 STL, GALV, A325 BOLT, 0.5" DIA; HEX;HVY UNC;1.75 LG;A325;RH STL, GALV, A325 BOLT, 0.625" x 3" HDG GR A325 STL, GALV, A325 BOLT, 0.625" x 3.25" HEX,304SS STN STL, 18-8 BOLT, 0.625" x3.25" HH UNC A325 CS HDG RH STL, GALV, A325 BOLT, 0.625"x 3.5" HEX COARSE HDG GR A325 STL, GALV, A325 BOLT, 0.75" x 3.5" HEX HDG GR A325 STL, GALV, A325 BOLT, 0.75" x 4" HEX HDG GR A325 STL, GALV, A325 BOLT, 0.75" x 4.25" HH UNC A325 CS HDG RH STL, GALV, A325 BOLT, 0.75" x 4.5" HEX HDG GR A325 STL, GALV, A325 BOLT 0.75" x 6" HDG GR A325 STL, GALV, A325 BOLT, 0.75" x 6.50" HEX UNC HDG GR A325 STL, GALV, A325 U-BOLT, 8" HOT DIP GALV W/ 4 NUTS STL, MILD
<b>Nuts</b>
NUT, 0.25" DIA UNC-20 SS18-8; STN STL, 18-8 HVY HEX NUT, 0.375" DIA UNC-16 SS18-8 STN STL, 18-8 HVY HEX NUT, 0.625-11 18-8SS;UNC; 18-8 STN STL, 18-8 HEX HEAVY
<b>Washers</b>
WASHER, 0.25" FLT SS18-8 SM OD STN STL, 18-8 WASHER, 0.25" LOCK SS18-8 MED; STN STL, 18-8 WASHER, 0.375" x 1" 18-8 SS STN STL, 18-8 WASHER, 0.5" FLAT GRADE 5 HOT DIPP STL, GALV WASHER, 0.625" FLAT 304SS SAE STN STL, 304 WASHER, 0.625" FLAT CS;GALV STL, GALV WASHER, 0.75" FLAT STRUCTRUAL; GALVANIZED STL, GALV
<b>Gaskets</b>
GASKET, 2" 150# 0.125 THK EPDM NSF-61 CRT GASKET, 3" 150# 0.125 THK EPDM NSF-61 CRT GASKET, 4" 150# 0.125 THK EPDM NSF-61 CRT GASKET, 6" 150# 0.125 THK EPDM NSF-61 CRT GASKET, 8" 150# 0.125 THK EPDM NSF-61 CRT

## APPENDIX D – COMPONENTS

This appendix provides component descriptions and OEM cut sheets.

Description	Manufacturer Model or Part Number	Page
Spray Nozzle W2T188554 PVC	Spiraljet Spray Nozzle 2-HHSJ-PVC-170-1400	D-2
Pressure Gauge 4 in. dia, stainless steel, glycerin filled	SPAN™ Liquid Filled SCS100-2-160-G	D-4
Ball Valve 0.5 in., lead free brass	Watts Ball Valve Model LFFBV-3C NSF Certified	D-6
Ball Valve 1 in., lead free brass		
Ball Valve 2 in., lead free brass		
Ball Valve 0.5 in., full port, 316 stainless steel	Apollo 76-100 Series	D-8
Combination Air/Vacuum Valve 1 in., NPT cast iron	Val-Matic 201C.2	D-9
Pressure Relief Valve with Limit Switch 4 in., 125 psi, flanged	Cla-Val 50-01	D-11
Limit Switch	Cla-Val X105L2	D-15
Expansion Joint/Flex Coupler 8" x 10" NSF-61	General Rubber	D-19
Perforated Basket Strainer 8" x 10" LG 316 stainless steel	Mack Iron Series PBS-150# RF	D-20
Ball Valve 4 in., full port, 316 stainless steel	Matco-Norca Industrial 20 SSFL11D	D-21
Butterfly Valve 8 in., wafer, cast iron body	Bray S30	D-22
Differential Pressure Transmitter	Endress+Hauser PMD55	D-23
NSF Interior Lining for Process and 4" Service Piping	3M Scotchkote 206N Fusion Bonded Epoxy	D-24
Exterior Primer	Carboline Carboguard 890	D-26
Vessel and Piping Exterior Top-Coat Color: Open Sky	Carboline Carbothane 133 VOC	D-28
Vessel Interior Coating NSF-61	Carboline Plasite 4110	D-30
Nozzle 0.75 in., MNPT, polypropene	Orthos N5	D-32
Nozzle 1 in., MNPT, polypropene	Orthos N8	



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

# EXHIBIT B

# EVALUATION CRITERIA

## ORANGE COUNTY WATER DISTRICT PROPOSAL EVALUATION FORM

**Project:** RFP for Granular Activated Carbon Media Procurement,  
Deliver and Installation at the Fullerton Main Plant (RFP-25-003)

**Proposing Firm:** \_\_\_\_\_

**Reviewer:** \_\_\_\_\_

Criteria	Weighting (%)	Score (1-5)	Weighted Score	Comments
1 Proposers Qualifications and Performance on Similar or Related Projects	30		0.00	
2 Price Proposal	70		0.00	
Total	100		0.00	

Scoring:

- 5 = Excellent
- 4 = Above Average
- 3 = Average
- 2 = Below Average
- 1 = Poor



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

# EXHIBIT C

# SERVICES AGREEMENT

AGREEMENT NO. \*\*\*

with

\*\*\*

for

\*\*\*

This Agreement (the "Agreement") is made and entered into as of \*\*\*, by and between the ORANGE COUNTY WATER DISTRICT, a special governmental district organized and operating under the laws of the State of California (hereinafter "OCWD") and \*\*\* ("Contractor"). (The term Contractor includes professionals performing in a consulting capacity.)

PART I  
FUNDAMENTAL TERMS

- A. Location of Project: \*\*\*.
- B. Description of Services/Goods to be Provided: \*\*\* in accordance with PART IV, Scope of Services, included herein.
- C. Term: Unless terminated earlier as set forth in this Agreement, the services shall commence on \*\*\* ("Commencement Date") and the term of this Agreement shall continue through its expiration on \*\*\*.
- D. Party Representatives:
- D.1. OCWD designates the following person/officer to act on OCWD's behalf: \*\*\*
- D.2. Contractor designates the following person to act on Contractor's behalf: \*\*\*
- E. Notices: All notices and other writings required to be delivered under this Agreement to the parties shall be delivered at the addresses set forth in Part II ("General Provisions").
- F. Attachments: This Agreement incorporates by reference the following Attachments to this Agreement:
- |      |           |                    |
|------|-----------|--------------------|
| F.1. | Part I:   | Fundamental Terms  |
| F.2. | Part II:  | General Provisions |
| F.3. | Part III: | Special Provisions |
| F.4. | Part IV:  | Scope of Services  |
| F.5. | Part V:   | Budget             |

G. Integration: This Agreement represents the entire understanding of OCWD and Contractor as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with regard to those matters covered by this Agreement. This Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements or understandings, if any, between the parties, and none shall be used to interpret this Agreement.

IN WITNESS WHEREOF, the parties have executed and entered into this Agreement as of the date first set forth above.

ORANGE COUNTY WATER DISTRICT

\*\*\*

By: \_\_\_\_\_  
John C. Kennedy, General Manager

By: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_  
Denis Bilodeau, Board President

By: \_\_\_\_\_

Title: \_\_\_\_\_

Dated: \_\_\_\_\_

APPROVED AS TO FORM:

Contractor Information:

RUTAN & TUCKER, LLP

Address for Notices and Payments:

\*\*\*

By: \_\_\_\_\_  
Jeremy N. Jungreis, General Counsel

\*\*\*

Attention: \*\*\*

Telephone: \*\*\*

Facsimile No.: \*\*\*

PART II  
GENERAL PROVISIONS

SECTION ONE: SERVICES OF CONTRACTOR

1.1 Scope of Services. In compliance with all terms and conditions of this Agreement, Contractor shall provide the goods and/or services shown on Part IV hereto ("Scope of Services"), which may be referred to herein as the "services" or the "work." If this Agreement is for the provision of goods, supplies, equipment or personal property, the terms "services" and "work" shall include the provision (and, if designated in the Scope of Services, the installation) of such goods, supplies, equipment or personal property.

1.2 Changes and Additions to Scope of Services. OCWD shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to, or deducting from said work. No such work shall be undertaken unless a written order is first given by OCWD to Contractor, incorporating therein any adjustment in (i) the Budget, and/or (ii) the time to perform this Agreement, which adjustments are subject to the written approval of the Contractor. It is expressly understood by Contractor that the provisions of this Section 1.2 shall not apply to services specifically set forth in the Scope of Services or reasonably contemplated therein. Contractor hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Contractor anticipates and that Contractor shall not be entitled to additional compensation therefor.

1.3 Standard of Performance. Contractor agrees that all services shall be performed in a competent, professional, and satisfactory manner in accordance with the standards prevalent in the industry, and that all goods, materials, equipment or personal property included within the services herein shall be of good quality, fit for the purpose intended.

1.4 Performance to Satisfaction of OCWD. Contractor agrees to perform all work to the satisfaction of OCWD within the time specified. If OCWD reasonably determines that the work is not satisfactory, OCWD shall have the right to take appropriate action, including but not limited to: (i) meeting with Contractor to review the quality of the work and resolve matters of concern; (ii) requiring Contractor to repeat unsatisfactory work at no additional charge until it is satisfactory; (iii) suspending the delivery of work to Contractor for an indefinite time; (iv) withholding payment; and (v) terminating this Agreement as hereinafter set forth.

1.5 Instructions from OCWD. In the performance of this Agreement, Contractor shall report to and receive instructions from OCWD's representative identified in Part I, or his or her designee. Tasks or services other than those specifically described in the Scope of Services shall not be performed without the prior written approval of the OCWD.

1.6 Familiarity with Work. By executing this Agreement, Contractor warrants that Contractor (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties, and restrictions attending performance of the services under the Agreement. If the services involve work upon any site, Contractor warrants that Contractor has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Contractor discover any conditions, including any latent or unknown conditions, which will materially affect the performance of the services hereunder, Contractor shall immediately inform the OCWD of such fact and shall not proceed except at Contractor's risk until written instructions are received from the OCWD's Representative.

1.7 Prohibition Against Subcontracting or Assignment. Contractor shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of OCWD. In addition, neither the Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated, or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior express written approval of OCWD. In the event of any unapproved transfer, including any bankruptcy proceeding, OCWD may, in its sole and absolute discretion, void the Agreement. No approved transfer shall release any surety of Contractor of any liability hereunder without the express consent of OCWD.

1.8 Compensation. Contractor shall be compensated in accordance with the terms of Part V hereto ("Budget"). Included in the Budget are all ordinary and overhead expenses incurred by Contractor and its agents and employees, including meetings with OCWD representatives, and incidental costs incurred in performing under this Agreement. Contractor shall be compensated for actual costs incurred by subcontractors or other services, and no mark-up will be paid to contractor by OCWD. Unless otherwise specified in Part V, OCWD shall compensate Contractor on a time-and-materials basis at the rates listed in Part V. Contractor shall submit an invoice referencing this Agreement, the Work Order number, date and description of services performed, and the amount. OCWD shall pay the Contractor within 30 days of receipt of the invoice.

## SECTION TWO: INSURANCE AND INDEMNIFICATION

2.0 Insurance – See attached Exhibit A to this Agreement.

2.1 Indemnification.

The parties mutually acknowledge that OCWD has retained Contractor to perform the services set forth in this Agreement based upon the special skills, expertise and experience of Contractor. Accordingly, in performing the services under this Agreement, Contractor shall use the skill and care that a highly specialized professional,

with expertise in the field, would use under similar circumstances. Further, the parties mutually agree that, to the extent that Contractor retains subcontractors or subcontractors to perform any portion of any of the tasks or services under this Agreement, Contractor has a duty to OCWD to ensure that the tasks and services performed by such subcontractors or subcontractors meet the same professional level, skill and expertise expected of Contractor.

2.2.1 Except as set forth in subdivision 2.2.2 or 2.2.3, Contractor shall indemnify, defend (with legal counsel acceptable to OCWD) and hold harmless OCWD and the OCWD Personnel from and against any and all actions, suits, claims, demands, judgments, attorneys fees, costs, damages to persons or property, losses, penalties, obligations, expenses or liabilities (“Claims”) that may be asserted or claimed by any person or entity arising out of Contractor’s performance of any tasks or services for or on behalf of OCWD, whether or not there is concurrent negligence on the part of OCWD and/or any OCWD Personnel, but excluding any Claims arising from the active negligence or willful misconduct of OCWD or any OCWD Personnel where the active negligence or willful misconduct is determined to be the actual and proximate cause of the alleged injury.

2.2.2 The provisions of this subdivision 2.2.2 apply only in the event that Contractor is a “design professional” within the meaning of California Civil Code section 2782.8(c). If Contractor is a “design professional” within the meaning of Section 2782.8(c), then, notwithstanding subdivision 2.2.1 above, to the fullest extent permitted by law (including, without limitation, Civil Code sections 2782 and 2782.6), Contractor shall defend (with legal counsel reasonably acceptable to OCWD), indemnify and hold harmless OCWD and OCWD Personnel from and against any Claim that arises out of, pertains to, or relates to, directly or indirectly, in whole or in part, the negligence, recklessness, or willful misconduct of Contractor, any subcontractor, subcontractor or any other person directly or indirectly employed by them, or any person that any of them control, arising out of Contractor’s performance of any task or service for or on behalf of OCWD under this Agreement. Such obligations to defend, hold harmless and indemnify OCWD or any OCWD Personnel shall not apply to the extent that such Claims are caused in part by the sole active negligence or willful misconduct of OCWD or such OCWD Personnel. To the extent Contractor has a duty to indemnify OCWD or any OCWD Personnel under this subdivision 2.2.2, Contractor shall be responsible for all incidental and consequential damages resulting directly or indirectly, in whole or in part, from Contractor’s negligence, recklessness or willful misconduct.

2.2.3 The provisions of this subdivision 2.2.3 apply only in the event that this Agreement is a “construction contract” within the meaning of Civil Code Section 2782(b) and 2783. If this Agreement is a “construction contract” within the meaning of those statutes, then notwithstanding subdivision 2.2.1 above, to the fullest extent permitted by law, Contractor shall indemnify, defend (with legal counsel acceptable to OCWD) and hold harmless OCWD and the OCWD Personnel from and against any and all Claims that may be asserted or claimed by any person or entity arising out of Contractor’s performance of any tasks or services for or on behalf of OCWD, whether or not there is concurrent passive negligence on the part of OCWD and/or any OCWD

Personnel, but excluding any Claims arising from the active negligence or willful misconduct of OCWD or any OCWD Personnel.

### SECTION THREE: LEGAL RELATIONS AND RESPONSIBILITIES

3.1 Compliance with Laws. Contractor shall keep itself fully informed of all existing and future state and federal laws and all county, municipal and OCWD ordinances and regulations which in any manner affect those employed by it or in any way affect the performance of services pursuant to this Agreement. Contractor shall at all times observe and comply with all such laws, ordinances, and regulations and shall be responsible for the compliance of all work and services performed by or on behalf of Contractor. When applicable, Contractor shall not pay less than the prevailing wage, which rate is determined by the Director of Industrial Relations of the State of California. When applicable, Contractor shall submit such bids and securities which are required to be submitted pursuant to the Public Contract Code.

3.2 Licenses, Permits, Fees and Assessments. Contractor shall obtain at its sole cost and expense all licenses, permits, and approvals that may be required by law for the performance of the services required by this Agreement. Contractor shall have the sole obligation to pay any fees, assessments, and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for Contractor's performance of the services required by this Agreement, and shall indemnify, defend, and hold harmless OCWD against any such fees, assessments, taxes, penalties, or interest levied, assessed, or imposed against OCWD thereunder.

3.3 Covenant Against Discrimination. Contractor covenants for itself, its heirs, executors, assigns, and all persons claiming under or through it, that there shall be no discrimination against any person on account of race, color, creed, religion, sex, marital status, national origin, or ancestry, in the performance of this Agreement. Contractor further covenants and agrees to comply with the terms of the Americans with Disabilities Act of 1990 (42 U.S.C. §12101 et seq.) as the same may be amended from time to time.

3.4 Independent Contractor. Contractor shall perform all services required herein as an independent Contractor of OCWD and shall remain at all times as to OCWD a wholly independent Contractor. OCWD shall not in any way or for any purpose become or be deemed to be a partner of Contractor in its business or otherwise, or a joint venturer, or a member of any joint enterprise with Contractor. Contractor shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of OCWD. Neither Contractor nor any of Contractor's employees shall, at any time, or in any way, be entitled to any sick leave, vacation, retirement, or other fringe benefits from the OCWD; and neither Contractor nor any of its employees shall be paid by OCWD time and one-half for working in excess of forty (40) hours in any one week. OCWD is under no obligation to withhold State and Federal tax deductions from Contractor's compensation. Neither Contractor nor any of Contractor's employees shall be included in the competitive service, have any property right to any position, or any of the rights an employee may have in the event of termination of this Agreement.

3.5 Use of Patented Materials. Contractor shall assume all costs arising from the use of patented or copyrighted materials, including but not limited to equipment, devices, processes, and software programs, used or incorporated in the services or work performed by Contractor under this Agreement. Contractor shall indemnify, defend, and save the OCWD harmless from any and all suits, actions or proceedings of every nature for or on account of the use of any patented or copyrighted materials.

3.6 Proprietary Information. All proprietary information developed specifically for OCWD by Contractor in connection with, or resulting from, this Agreement, including but not limited to inventions, discoveries, improvements, copyrights, patents, maps, reports, textual material, or software programs, but not including Contractor's underlying materials, software, or know-how, shall be the sole and exclusive property of OCWD, and are confidential and shall not be made available to any person or entity without the prior written approval of OCWD. Contractor agrees that the compensation to be paid pursuant to this Agreement includes adequate and sufficient compensation for any proprietary information developed in connection with or resulting from the performance of Contractor's services under this Agreement. Contractor further understands and agrees that full disclosure of all proprietary information developed in connection with, or resulting from, the performance of services by Contractor under this Agreement shall be made to OCWD, and that Contractor shall do all things necessary and proper to perfect and maintain ownership of such proprietary information by OCWD.

3.7 Ownership of Data, Reports and Documents. The Contractor shall deliver to OCWD's representative identified in Part I, at the end of the project, notes and surveys made, all reports of tests made, studies, reports, plans, a copy of electronic and digital files, and other materials and documents which shall be the property of OCWD. The Contractor is not responsible to third parties of OCWD's use of data, reports and documents on other projects. OCWD may use or reuse the materials prepared by Contractor in any manner desired without additional compensation to Contractor. Any work performed by Contractor under this Agreement shall be the property of OCWD.

3.8 Retention of Funds. Contractor hereby authorizes OCWD to deduct from any amount payable to Contractor (whether arising out of this Agreement or otherwise) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate OCWD for any losses, costs, liabilities, or damages suffered by OCWD, and all amounts for which OCWD may be liable to third parties, by reason of Contractor's negligent acts, errors, or omissions, or willful misconduct, in performing or failing to perform Contractor's obligations under this Agreement. OCWD in its sole and absolute discretion, may withhold from any payment due Contractor, without liability for interest, an amount sufficient to cover such claim or any resulting lien. The failure of OCWD to exercise such right to deduct or withhold shall not act as a waiver of Contractor's obligation to pay OCWD any sums Contractor owes OCWD.

3.9 Termination By OCWD. OCWD reserves the right to terminate this Agreement at any time, with or without cause, upon fourteen (14) days prior written notice to Contractor. Upon receipt of any notice of termination from OCWD, Contractor shall immediately cease all services hereunder except such as may be specifically

approved in writing by OCWD. Contractor shall be entitled to compensation for all services rendered prior to receipt of OCWD's notice of termination and for any services authorized in writing by OCWD thereafter. If termination is due to the failure of Contractor to fulfill its obligations under this Agreement, OCWD may take over the work and prosecute the same to completion by contract or otherwise, and Contractor shall be liable for the costs OCWD incurs in completion of the services required hereunder, including, but not limited to, costs incurred by OCWD in retaining a replacement Contractor, and similar expenses and costs, and including increased staff time costs incurred by OCWD.

3.10 Right to Stop Work; Termination By Contractor. Contractor shall have the right to stop work only if OCWD fails to timely make a payment required under the terms of the Budget. Contractor may terminate this Agreement only for cause, upon thirty (30) days' prior written notice to OCWD. Contractor shall immediately cease all services hereunder as of the date Contractor's notice of termination is sent to OCWD, except such services as may be specifically approved in writing by OCWD. Contractor shall be entitled to compensation for all services rendered prior to the date notice of termination is sent to OCWD and for any services authorized in writing by OCWD thereafter. If Contractor terminates this Agreement because of an error, omission, or a fault of Contractor, or Contractor's willful misconduct, the terms of Section 3.9 relating to OCWD's right to take over and finish the work and Contractor's liability therefor shall apply.

3.11 Waiver. No delay or omission in the exercise of any right or remedy by a nondefaulting party on any default shall impair such right or remedy or be construed as a waiver. A party's consent to or approval of any act by the other party requiring the party's consent or approval shall not be deemed to waive or render unnecessary the other party's consent to or approval of any subsequent act. Any waiver by either party of any default must be in writing.

3.12 Legal Actions. Legal actions concerning any dispute, claim, or matter arising out of or in relation to this Agreement shall be instituted and maintained in the Superior Courts of the State of California in the County of Orange, or in any other appropriate court with jurisdiction in such County, and Contractor agrees to submit to the personal jurisdiction of such court.

3.13 Rights and Remedies are Cumulative. The rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

3.14 Attorneys' Fees. Each party is responsible for its own attorneys' fees.

3.15 Force Majeure. The time period specified in this Agreement for performance of services shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of OCWD or Contractor, including but not restricted to acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes,  
OCWD AGREEMENT NO. \*\*\*

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freight embargoes, wars, litigation and/or acts of any governmental agency, including OCWD, if the delaying party shall within ten (10) days of the commencement of such delay notify the other party in writing of the causes of the delay. If Contractor is the delaying party, OCWD shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of OCWD such delay is justified. OCWD's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Contractor be entitled to recover damages against OCWD for any delay in the performance of this Agreement, however caused. Contractor's sole remedy shall be extension of this Agreement pursuant to this Section 3.15.

3.16 Non-liability of OCWD Officers and Employees. No officer, official, employee, agent, representative or volunteer of OCWD shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by OCWD, or for any amount which may become due to Contractor or its successor, or for breach of any obligation of the terms of this Agreement.

3.17 Conflict of Interest. No officer, official, employee, agent, representative or volunteer of OCWD shall have any financial interest, direct or indirect, in this Agreement, or participate in any decision relating to this Agreement which affects his or her financial interest or the financial interest of any corporation, partnership, or association in which he or she is interested, in violation of any Federal, State, or OCWD statute, ordinance, or regulation. The Contractor shall not employ any such person while this Agreement is in effect.

3.18 Compliance with California Unemployment Insurance Code Section 1088.8. If Contractor is a sole proprietor, then prior to signing the Agreement, Contractor shall provide to the OCWD a completed and signed Form W-9, Request for Taxpayer Identification Number and Certification. Contractor understands that pursuant to California Unemployment Insurance Code Section 1088.8, the OCWD will report the information from Form W-9 to the State of California Unemployment Development Department, and that the information may be used for the purposes of establishing, modifying, or enforcing child support obligations, including collections, or reported to the Franchise Tax Board for tax enforcement purposes.

3.19 Prevailing Wage Laws Compliance. To the fullest extent permitted by law, Contractor shall comply with all applicable laws and regulations related to the payment of prevailing wages for the work performed hereunder, including but not limited to Sections 1720 et seq. and 1770 et seq. of the Labor Code, and interpreting case law and regulations. Contractor is independently responsible for reviewing and complying with all such laws (and every other law applicable to the Agreement).

Without limiting the foregoing, in accordance with Sections 1773 and 1773.2 of the Labor Code, the OCWD has found and determined the general prevailing rates of wages in the locality in which the public work is to be performed are those determined by the Director of Industrial Relations and available at <https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Copies of the prevailing

rates of wages are maintained with the OCWD's principal office and are available to any interested party on request. Contractor shall post a copy of the prevailing rate of per diem wages at each job site.

Pursuant to Labor Code Section 1775, it is hereby stipulated that Contractor shall, as a penalty to OCWD, forfeit not more than two-hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for the work by Contractor or any sub-consultant or subcontractor.

Contractor is aware of and will comply with the provisions of Labor Code Section 1776, including the keeping of payroll records and furnishing certified copies thereof in accordance with said Section. Pursuant to Labor Code Section 1771.4, Contractor must submit certified payroll records to the Labor Commissioner using the Department of Industrial Relations' electronic certified payroll reporting (eCPR) system.

Contractor is aware of and will comply with the provisions of Labor Code Sections 1777.5 and 1777.6 with respect to the employment of apprentices. Pursuant to Section 1777.5 it is hereby stipulated that Contractor will be responsible for obtaining compliance therewith on the part of any and all sub-consultants or subcontractors employed by Contractor in connection with this Agreement.

(Pursuant to Labor Code Section 1813, it is stipulated hereby that Contractor shall, as a penalty to OCWD, forfeit twenty-five dollars (\$25) for each worker employed in the execution of this Agreement by Contractor or by any subcontractor hereunder for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of Article 3 (commencing with Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

Pursuant to Labor Code Section 1815, work performed by employees of contractors in excess of eight (8) hours per day, and 40 hours during any one week, shall be permitted upon public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than 1 ½ times the basic rate of pay.

Pursuant to Labor Code Section 1725.5 and 1771.1, no contractor or subcontractor (or consultant or subconsultant) may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations.

In accordance with Labor Code Sections 1860, 1861, and 3700, Contractor and every subcontractor is required the secure payment of compensation to all employees. By signing this Agreement, Contractor provides the following certification: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

To the fullest extent permitted by law, Section 2, Indemnification, specifically encompasses Claims arising from or related to (i) the noncompliance by Contractor or any party performing the work of any applicable local, state, and/or federal law, including, without limitation, any applicable federal and/or state labor laws (including, without limitation, the requirement to pay state prevailing wages and hire apprentices); (ii) the implementation of Labor Code Sections 1726 and 1781, as the same may be amended from time to time, or any other similar law; and/or (iii) failure by Contractor or any party performing the work to provide any required disclosure or identification as required by Labor Code Section 1781, as the same may be amended from time to time, and/or any other similar law.

#### SECTION FOUR: MISCELLANEOUS PROVISIONS

4.1 Records and Reports. Upon request by OCWD, Contractor shall prepare and submit to OCWD any reports concerning Contractor's performance of the services rendered under this Agreement. OCWD shall have access, upon reasonable notice, to the books and records of Contractor related to Contractor's performance of this Agreement. All drawings, documents, and other materials prepared by Contractor in the performance of this Agreement (i) shall be the property of OCWD and shall be delivered at no cost to OCWD upon request of OCWD or upon the termination of this Agreement, and (ii) are confidential and shall not be made available to any individual or entity without prior written approval of OCWD. Contractor shall keep and maintain all records and reports related to this Agreement for a period of three (3) years following termination of this Agreement, and OCWD shall have access to such records upon 48 hours notice.

4.2 Notices. Unless otherwise provided herein, all notices required to be delivered under this Agreement or under applicable law shall be personally delivered, or delivered by United States mail, prepaid, certified, return receipt requested, or by reputable document delivery service that provides a receipt showing date and time of delivery. Notices personally delivered or delivered by a document delivery service shall be effective upon receipt. Notices delivered by mail shall be effective at 5:00 p.m. on the second calendar day following dispatch. Notices to the OCWD shall be delivered to the following address, to the attention of the OCWD Representative set forth in Paragraph D.1 of the Fundamental Terms of this Agreement:

To OCWD	Orange County Water District
<u>Representative:</u>	P. O. Box 8300
	Fountain Valley, CA 92728-8300

Invoices only shall be properly identified with the corresponding Agreement No. and sent to one of the following:

[apinvoices@ocwd.com](mailto:apinvoices@ocwd.com)

**OR** to the address shown below:

Orange County Water District

Attention: Accounts Payable  
P. O. Box 20845  
Fountain Valley, CA 92728-0845

Notices to Contractor shall be delivered to the address set forth below Contractor's signature on Part I of this Agreement to the attention of Contractor's Representative set forth in Paragraph D.2 of the Fundamental Terms of this Agreement. Changes in the address to be used for receipt of notices shall be effected in accordance with this Section 4.2.

4.3 Construction and Amendment. The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply. The headings of sections and paragraphs of this Agreement are for convenience or reference only and shall not be construed to limit or extend the meaning of the terms, covenants and conditions of this Agreement. This Agreement may only be amended by the mutual consent of the parties by an instrument in writing.

4.4 Severability. Each provision of this Agreement shall be severable from the whole. If any provision of this Agreement shall be found contrary to law, the remainder of this Agreement shall continue in full force.

4.5 Authority. The person(s) executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound.

4.6 Special Provisions. Any additional or supplementary provisions or modifications or alterations of these General Provisions shall be set forth in Part III of this Agreement ("Special Provisions").

4.7 Precedence. In the event of any discrepancy between Part I ("Fundamental Terms"), Part II ("General Provisions"), Part III ("Special Provisions"), Part IV ("Scope of Services"), and/or Part V ("Budget"), Part III shall take precedence and prevail over Parts I, II, IV and V; Part II shall take precedence and prevail over Parts I, IV and V; Part IV shall take precedence and prevail over Parts I and V; and Part V shall take precedence over Part I.

4.8 OCWD Contract Management Authority. The OCWD General Manager (or his or her duly authorized representative) shall have the authority to make approvals, issue interpretations, execute documents to implement or clarify this Agreement, waive provisions, and/or enter into certain amendments of this Agreement on behalf of OCWD so long as such actions do not result in any of the following: (a) an increase in the Budget set forth in Part V hereto, (b) a decrease in the scope of services without a corresponding reduction in the Budget, or (c) an increase in the risk of liability to

OCWD. Such approvals, interpretations, waivers and/or amendments may include extensions of time to perform.

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PART III  
SPECIAL PROVISIONS

A. The Contractor shall comply with the Insurance Requirements of Exhibit A, added in its entirety.

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PART IV  
SCOPE OF SERVICES

A. Services shall be performed in accordance with Exhibit B, \*\*\* dated \*\*\* and .

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PART V  
BUDGET

A. OCWD shall compensate Contractor in accordance with Exhibit C, \*\*\* dated \*\*\* for a not-to-exceed fee of \$\*\*\*.00.

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# EXHIBIT A

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## INSURANCE REQUIREMENTS

FOR

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The Contractor shall not commence work under this Contract until it has obtained the insurance required hereunder in a company or companies having an A.M. Best rating of A:VII and acceptable to the OCWD nor shall the Contractor allow any subcontractor to commence work on its subcontract until all insurance required herein of the Contractor has been obtained by such subcontractor.

The Contractor shall at the time of the execution of the Agreement present certificate(s) of insurance evidencing the coverage required by this agreement. Such evidence shall include a separate additional insured endorsement and other provisions required herein. At least thirty (30) calendar days prior to the expiration of any such policy, a signed complete certificate of insurance, with all endorsements required herein, showing that such insurance coverage has been renewed or extended will be filed with the OCWD.

At the time of contract document preparation, efforts were made to include all known insurance requirements which would take place during the contract. It is possible additional insurance requirements may be made by another agency or government entity to provide additional insurance not included here. At the direction of the agency/entity, the Contractor shall comply and satisfy the additional insurance requirements.

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

Coverage shall be at least as broad as the following:

1. General Liability – Commercial General Liability (CGL) – Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to the OCWD or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability – Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01) covering Symbol 1 (Any Auto) with limit of one million dollars

(\$1,000,000) for bodily injury and property damage each accident.

3. Workers' Compensation Insurance – The Contractor shall provide Workers' Compensation coverage as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.
4. Waiver of Subrogation (also known as Transfer of Rights of Recovery Against Others to Us) – The Contractor hereby agrees to waive rights of subrogation to obtain endorsement necessary to affect this Waiver of Subrogation in favor of the OCWD, its directors, officers, employees, and authorized volunteers, for losses paid under the terms of this coverage which arise from work performed by the Named Insured for the OCWD; this provision applies regardless of whether or not the OCWD has received a Waiver of Subrogation from the insurer.
4. Builder's Risk is not required.
5. Contractor's Pollution Liability is not required.
6. Professional Liability is not required.

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

1. Additional Insured Status – The OCWD, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of **both** CG 20 10 10 01 and CG 20 37 10 01) with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General Liability coverage can be provided in the form of an endorsement to the Contractor's insurance.
2. Primary Coverage – For any claims related to this project, the Contractor's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the OCWD, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the OCWD, its directors, officers, employees, and authorized volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Notice of Cancellation – Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the OCWD.

Acceptability of Insurers - The Contractor agrees that it will comply with such provisions before commencing work. All of the insurance shall be provided on policy forms and  
OCWD AGREEMENT NO.\*\*\*

through companies satisfactory to the OCWD. The OCWD reserves the right to obtain complete, certified copies of all required insurance policies, including the policy declarations page with endorsement number. Failure to continually satisfy the insurance requirements is a material breach of contract.

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

Verification of Coverage – Evidence of Insurance – The Contractor shall furnish the OCWD with copies of certificates and amendatory endorsements affecting coverage required by this Contract. All certificates and endorsements are to be received and approved by the OCWD before work commences. However, failure to obtain the required documents prior to the working beginning shall not waive the Contractor's obligation to provide them. The OCWD reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration pages and Endorsement pages, required by these specifications, at any time. Failure to continually satisfy the insurance requirements is a material breach of contract.

Continuation of Coverage – The Contractor shall, upon demand of the OCWD deliver evidence of coverage showing continuation of coverage for at least five years after completion of the project. Contractor further waives all rights of subrogation under this agreement. When any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the General Liability Additional Insured endorsement and evidence of Waiver of Rights of Subrogation against the OCWD (if Builder's Risk Insurance is applicable) to OCWD at least ten days prior to the expiration date.

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

Note 1: Any combination of a minimum \$1,000,000 per occurrence General Liability and Excess Liability to meet the \$2,000,000 total may be accepted

Note 2: The General Liability and/or Automobile Liability coverage shall include mobile equipment.

Note 3: All insurance terms provided by the Contractor for this contract are subject to approval and acceptance by the OCWD.

Note 4: The OCWD, its directors, officers, employees, authorized volunteers, shall be named, by separate endorsement, as additional insured on the policy.

Note 5: Contract Name and/or Contract Number shall be indicated on insurance certificate.

DRAFT



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

# EXHIBIT D

# CONTRACTOR SAFETY



*ORANGE COUNTY WATER  
DISTRICT*

Procedure No: SP- 1.15

Reviewed: 2025

**Contractor Safety**

**1 PURPOSE:**

- 1.1. OCWD is committed to the safety of all employees, contractors, and visitors. All contractors and subcontractors must adhere to applicable Federal, State and Regional Environmental, Health and Safety (EHS) requirements, as well as OCWD EHS policies and procedures.

**2 SCOPE:**

- 2.1. This program shall apply to all contractors and subcontractors providing goods or services to OCWD.

**3 RESPONSIBILITIES:**

- 3.1. The Project Manager is responsible for:

- Scheduling to meet with Risk & Safety at the ninety-five percent (95%) design review phase.
- Reviewing the Contractor Pre-Award Safety (Appendix A) with Risk & Safety.
- Ensuring that safety related specifications are included in the design phase.
- Conducting observations of contractor work and completing Appendix D (Notice to Correct) if serious/imminent hazards are observed.
- Coordinating contractor safety orientation with Risk & Safety

- 3.2. The Purchasing Department is responsible for:

- Sending out the “Contractor Required Information Packet” (Appendix B forms) and the Contractor EHS Handbook to the contractors.
- Ensuring the documents received from the contractors are complete & signed.
- Maintaining signed documents and forwarding copies to the Risk & Safety Department.

- 3.3. The Risk & Safety Department is responsible for:

- Reviewing the project at 95% design phase and Appendix A with the Project Manager.
- Reviewing Appendix B received from Purchasing.
- Conducting Contractor Safety Orientation with the awarded contractor, subcontractor, and other applicable personnel.

- 3.4. The General Manager:

- The General Manager or his designee shall approve changes to the Contractor Safety Program.

**4 DEFINITIONS:**

- 4.1. Types of Regulatory Violations (OSHA Classification of Violations & Definitions).

- **Serious:** A serious violation exists when the workplace hazard could cause an accident or illness that would most likely result in death or serious physical harm unless the employer did not know or could not have known of the violation.
- **Willful:** A willful violation is defined as a violation in which the employer either knowingly failed to comply with a legal requirement (purposeful disregard) or acted with plain indifference to employee safety.

- **Repeat:** a violation where the employer has corrected, or indicated correction of an earlier violation, for which a citation was issued, and upon a later inspection is found to have committed the same violation again within a period of three years immediately preceding the latter violation.
- 4.2. Experience Modification Rate (EMR or “X-Mod”) - A Ratio of actual losses (workers compensation) versus expected losses over a rolling three - year period average. The EMR produces a metric in which the number “1” is considered the industry average, less than one is considered good experience and more than 1 is considered poor experience. The EMR is typically used by OSHA (Cal/OSHA) and by the Casualty Insurance Industry as a measure of a Contractor or Subcontractor’s “safety” performance.
  - 4.3. Injury and Illness Prevention Program (IIPP) - Cal/OSHA requirement for employers to maintain and implement a safety program associated with the prevention of injury and illnesses. The IIPP standard is referenced within the California Code of Regulations (CCR) Title 8 Sections 1509 (Construction Safety Orders) and 3203 (General Industry Safety Orders).
  - 4.4. Public Works Contract – Contracts for tasks which are construction related, including repairs, rehabilitation, maintenance, etc.
  - 4.5. Professional Services Agreement – Agreement for consultants, services, and Public Works projects.

## 5 PROCEDURE:

### 5.1. Qualification

- Appendix B shall be used for all contractors and those providing ongoing services to OCWD, such as but not limited to landscaping services, janitorial services, etc.
- Appendix B shall be added to the bid sheets in the bid specs (both the bid invitation and the information for bidders). Appendix B includes the following sections:
  - a) Instructions for Contractors and Criteria Requirements
  - b) Contractor Required Information
  - c) Contractor’s EHS Agreement
  - d) If the contractor does not qualify based on the Contractor Criteria Requirements in Appendix B, the contractor would need to submit additional information for potential consideration, including the Request for Contractor Safety Variance (see page 13).

### 5.2. All Departments:

- At the final selection process (contracts, service agreements):
  - a) The Purchasing Department shall
    - a. Send Appendix B forms and the Contractor EHS Handbook to the contractor. The Contractor shall review, complete, sign and return requested Appendix B forms and any additional information.
    - b. Purchasing reviews completed documents and forwards copies of Appendix B to the Risk & Safety Department.
  - b) The Project Manager shall
    - a. Schedule, at the 95% design review phase, a safety review with the Risk & Safety Department and applicable managers. The meeting shall include a review of the Contractor Pre-Award Safety (Appendix A). Changes shall be incorporated into the updated design.
    - b. Once the contract has been awarded, before Notice to Proceed, the Project Manager shall schedule a Post Award Safety Orientation (Appendix C) with the Risk & Safety

Department. Risk & Safety will review Appendix C with the contractor and conduct a safety and emergency orientation.

- c. The Project Manager or designee is expected to conduct ongoing safety observations throughout the project using the Contractor Safety Observation Guidelines.
  - a. Serious or imminent hazards shall be stopped immediately until the risk is reduced. The project manager shall communicate the serious hazard(s) by completing and submitting the Notice to Correct form (Appendix D) to the Contractor Representative. A copy of the Notice to Correct form must be sent to the Risk & Safety Department.

**6 REFERENCES:**

6.1. Cal/ OSHA, Title 8, Regulations of the Director of Industrial Relations, § 336.10 § 336.11, § 1509.  
*Note - Authority cited: Sections 54 and 55, 50.7, 6317, 6400, 6401, 6402, 6403, 6404, 6405, 6406, and 6407 of the Labor Code.*

**7 APPENDICES:**

- 7.1. Appendix A: Contractor Pre-Award Safety Review
- 7.2. Appendix B: Contractor Required Information
- 7.3. Appendix C: Post Award Orientation
- 7.4. Appendix D: Notice to Correct
- 7.5. Contractor Safety Observation Guidelines
- 7.6. Request for Contractor Safety Variance

California Code of Regulations Section, §336.10. Determination of Citable Employer.

On multi-employer worksites, both construction and non-construction citations may be issued only to the following categories of employers when the Division has evidence that an employee was exposed to a hazard in violation of any requirement enforceable by the Division:

- (a) The employer whose employees were exposed to the hazard (the exposing employer);
- (b) The employer who actually created the hazard (the creating employer):
- (c) The employer who was responsible, by contract or through actual practice, for safety and health conditions on the worksite; i.e., the employer who had the authority for ensuring that the hazardous condition is corrected (the controlling employer); or
- (d) The employer who had the responsibility for actually correcting the hazard (the correcting employer).

*Note: The employers listed in subsections (b) through (d) may be cited regardless of whether their own employees were exposed to the hazard.*

**8 Revision History:**

Date	Author	Description
3/21/2024	P. Bouyounes	Included Contractor Variance information.
227/2025	P. Bouyounes	Added Variance. Removed Post Project Evaluation and Purchasing Checklist. Modified Appendix B Contractor Criteria and added Heat Illness.

Approved by the General Manager: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX A: CONTRACTOR PRE-AWARD SAFETY**

\_\_\_\_\_ Project Manager Name \_\_\_\_\_ Risk & Safety Name and Date

\_\_\_\_\_ Project Name \_\_\_\_\_ Estimate Start Date

Describe project, potential impact & accommodation (dust, odor, noise, etc.) associated with the project/work:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1	Building Access Needed? <input type="checkbox"/> Yes <input type="checkbox"/> No	#badges needed:	List specific area(s):
2	Will hazardous waste be generated? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list waste:		
3	Will chemicals be brought onsite? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list chemicals:		
4	<input type="checkbox"/> How will excess materials/wastes (hazardous or not) be removed?		
5	<input type="checkbox"/> Will Hot Work be performed?		
6	<input type="checkbox"/> Will Noise exceed 85 dB?		
7	<input type="checkbox"/> Will PPE be required for this project? (List required PPE)		
8	<input type="checkbox"/> Will work in confined space be required?		
9	<input type="checkbox"/> Will Lockout/Tagout be required?		
10	<input type="checkbox"/> Will there be any demolition activities or work that generates dust?		
11	<input type="checkbox"/> Will there be work done on the roof?		
12	<input type="checkbox"/> Will the use of cranes (e.g. Hoisting/Rigging) be required?		
13	<input type="checkbox"/> Will Trenching (over 5 feet)/Excavation be required?		
14	<input type="checkbox"/> Will there be Powered Industrial Vehicles involved (e.g. forklift, dozer)?		
15	<input type="checkbox"/> Will work on electrical systems/equipment be performed?		
16	<input type="checkbox"/> Will Traffic Control be required for work on Public Roadway?		
17	<input type="checkbox"/> Will scaffolding/ladder/Platform/Fall protection be used?		
18	<input type="checkbox"/> Will work affect fire detection/suppression equipment system/FM-200 or other fire suppressant systems in the computer room(s)?		
19	<input type="checkbox"/> Will work affect or interrupt the emergency equipment use/accessibility? (Alarms, Eyewashes, Exhaust ventilation, Phone services, Egress routes)		
20	What equipment & tools will be used for this project?		
21	Will work be done during "Red Flag Warnings"?		

## APPENDIX B

### INSTRUCTIONS FOR CONTRACTORS

All licensed contractors interested in performing work for Orange County Water District (OCWD) must complete and provide the information requested in the “Contractor Required Information packet;” meet the criteria listed below and participate in a pre-project safety orientation meeting:

The Criteria below is required in order to comply with OCWD’s Contractor Safety Program and Cal/OSHA’s Multi-Employer Worksite Standard\*

*\*California Labor Code Sections 6400, 6401, 6401.7, 6402 through 6404 and Title 8, California Code of Regulations, Sections 336.10 and 336.11*

#### **CONTRACTOR CRITERIA REQUIREMENTS:**

- EMR greater than 1.25 for any year in the last three years.
- Received a Cal/OSHA regulatory citation and penalties assessed against your firm for any “serious,” “willful” or “repeat” violation as defined by Cal/OSHA, Title 8, sections §330 and §334, in the past three years?  
Yes  No

If “yes,” attach a separate signed page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation(s) was or were issued, the amount of penalty paid, if any. If the citation was appealed and a decision has been issued, state the case number and the date of the decision.

*NOTE: If you have filed an appeal of a citation, and the Appeals Board has not yet ruled on your appeal, you need not include information about it.*

- Failure to provide all requested information.

NOTE: if the contractor is disqualified based on the information above, the awarding body will analyze the issues using the following two factors for potential consideration of the award:

1. Whether the incident was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor, AND
2. Whether the Contractor or Subcontractor has a prior history of good performance, and the incident was openly reported, and the triggering event is not related to a major scope of work, caused by negligence, or resulted in regulatory violations or civil liability against awarding bodies.

Any policy year above 1.25 submit additional documentation to show incidents that resulted in increased EMR subject to review by the awarding party.

**APPENDIX B: CONTRACTOR REQUIRED INFORMATION**

**Part 1: CONTRACTOR INFORMATION SECTION - To Be Completed By Contractor**

- Contractor's Name: \_\_\_\_\_
- Contractor's License (copy of license if applicable): \_\_\_\_\_
- California Registration Number (if applicable): \_\_\_\_\_
- Experience Modification Rate (EMR) for each of the past three premium years:  
 Current year: \_\_\_\_\_ Previous year: \_\_\_\_\_ Year prior to previous year: \_\_\_\_\_
- Copy of 3 Years of OSHA 300A Annual Summary (If greater than 10 employees)
- How many serious injuries or fatalities has your company experienced in the past three years? \_\_\_\_\_
- How many Regulatory Violations has your company had in the last 3 years? \_\_\_\_\_

**Part 2: SAFETY PROGRAM SECTION - To Be Completed By Contractor**

All Written Safety Programs & Training Documentation must be available to OCWD upon request	YES	NO
Does your company maintain a written Injury Illness Prevention Program (IIPP) in accordance with GISO, Title 8, Section §3203 and §1509 and Labor Code (LC §6401.7)?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company provide toolbox training and maintain documentation for IIPP employee training [§3203 and §1509(b)]?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company maintain and post "Code of Safe Practices" documentation [Title 8, §1509(b)] ?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company maintain disciplinary documentation for unsafe behavior of employees or subcontractors (if applicable) [Title 8, §3203 and §1509] ?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company maintain inspection records and written evidence that safety and health concerns have been reviewed and corrective actions taken [§3203, LC§6401.7(b) and (D)]?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company maintain a documented Hazard Communication Program that complies with GHS Labeling and Safety Data Sheets (SDS) [8 CCR §5194]?	<input type="checkbox"/>	<input type="checkbox"/>
Are procedures in place for communicating critical high-risk job activities, including a written safety plan or Job Safety Analysis (JSA), to ensure they are reviewed with all employees and subcontractors [LC 6401.7(a)(5)]?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company have a written accident investigation program that ensures all accidents and incidents, including those involving subcontractors, are thoroughly investigated and corrective actions are implemented [§3203(a)(5) and (b) and §1509]?	<input type="checkbox"/>	<input type="checkbox"/>
Does your company have a written Emergency Action Plan that is effectively communicated to employees and subcontractors, covering emergencies such as medical incidents, fires, and chemical spills [8 CCR §3220]?	<input type="checkbox"/>	<input type="checkbox"/>
Are the aforementioned written programs, including training documentation and records of safety meetings, properly maintained on file and available upon request [LC §6401.7, §336.10, and 8CCR §1509(e)]?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, where are the documentations maintained? _____		

**APPENDIX B: CONTINUED**

<p><b>Part 2 – PROJECT SPECIFIC SAFETY PROGRAM SECTION - To Be Completed By Contractor</b>                  (Please review each section below, check all that apply to the project, and provide the corresponding documentation details.)</p>
<p><input type="checkbox"/> Our company has a written Confined Space Program that includes pre-entry monitoring, pre-entry permit, and employee training [T8 CCR §5157]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a written Electrical Safety Program that complies with the required regulations that includes employee training [T8 CCR §2700 - §2989 and T8 CCR §2299 - §2599 and NFPA 70E]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a written Fall Prevention Program that includes Personal Fall Arrest Systems, Personal Fall Restraint Systems, Positioning Devices and employee training [T8 CCR §1670]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a written Trenching &amp; Excavation Program that includes employee training [T8 CCR §1541.1]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a written Lockout/Tagout Program that includes employee training [T8 CCR §3314(j)]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a Hot Work Program that includes employee training [T8 CCR §4848]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a Traffic Control Program that includes employee training [T8 CCR, Construction Safety Orders, Article 11, 1597 - 1599]                  Where is the documentation maintained? _____</p>
<p><input type="checkbox"/> Our company has a documented Heat Illness Prevention Program for Outdoor Worksites, which includes comprehensive employee training. All contractors are expected to protect the workers by implanting measures to prevent heat illness <b>AND</b> to adjust their work practices to mitigate fire risks. During a “Red Flag Warning,” extra precautions must be taken to prevent potential fire hazards [T8 CCR §3395]                  Where is the documentation maintained? _____</p>
<p>Other applicable programs (please list): _____</p>

*Contractors shall ensure that all employees under their supervision, including subcontractors, receive comprehensive training in the safe work practices required to perform their jobs safely. Additionally, contractors are responsible for effectively communicating the Job Safety Plan to all employees and subcontractors, ensuring full understanding and compliance with safety protocols.*

COMMENTS: \_\_\_\_\_

\_\_\_\_\_  
**Name of Contractor Representative** (please print)

\_\_\_\_\_  
**Contractor Representative’s Signature**

\_\_\_\_\_  
**Date Signed:**

*A bidder’s failure to respond affirmatively to the questions listed in the “Part 2 - Safety Program Section” of Appendix B including the sections applicable to the work shall be grounds for the District to reject the bid as non-responsive.*

**APPENDIX B: CONTINUED**

**CONTRACTOR’S ENVIRONMENTAL HEALTH & SAFETY (EHS) AGREEMENT**

I have read the information stated in the OCWD’s *Contractor Environmental Health & Safety (EHS) Handbook*. I understand that the information provided covers brief highlights of the OCWD’s safety programs. It is my responsibility to review the updated programs and communicate the safety information & requirements to my employees.

I understand that the Contractor’s Environmental Health & Safety Handbook is not intended to replace Federal, State or Local regulations regarding Contractor performance. Contractor shall keep itself fully informed of all existing and future state and federal laws and all county and city ordinances and regulations which in any manner affect the activities of Contractor and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. Contractor (including contractor employees and subcontractors) shall at all times observe and comply with all such existing and future laws, ordinances, regulations, orders, and decrees, and shall protect and indemnify OCWD, its officers, directors, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree.

Contractor Company \_\_\_\_\_

Contractor Name & Title  
(Please Print): \_\_\_\_\_

Contractor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX C: POST AWARD ORIENTATION**

<b>PART 1: Contractor Project Review</b>	
<b>OCWD Attendees:</b>	
<b>Contractor Name:</b>	Date:
<b>Contractor Name:</b>	Cell #:
<b>Duration of Project:</b>	
<b>Project Name:</b>	Start Date:
<b>Contractor Representative:</b>	<input type="checkbox"/> Cell #:
<b>Method(s) of Communication:</b> <input type="checkbox"/> Remote <input type="checkbox"/> On-Site Office	<input type="checkbox"/> Cell #:
<b>Contractor's Supervisor/Lead:</b>	<input type="checkbox"/> Cell #:
<b>OCWD Project Manager:</b>	
<b>Instructions:</b> Select "Yes" if the requirements apply and have been reviewed and discussed in detail. Select "No" if they are not relevant to the work area or scope of the project/service. Orientation must be completed before work commences.	
1	Building Access? <input type="checkbox"/> Yes <input type="checkbox"/> No # of badges & access area:
2	<input type="checkbox"/> Emergency Procedure, x3300 and Assembly areas
3	<input type="checkbox"/> Chemicals and SDS for hazardous material
4	<input type="checkbox"/> Spill/Leak reporting procedure
5	<input type="checkbox"/> Hazardous waste generated/Removed
6	<input type="checkbox"/> Live Electrical work (system/equipment)
7	<input type="checkbox"/> Welding/Cutting/Open flames? (Review Hot Work/Permit Procedure)
8	<input type="checkbox"/> Noise generated (louder than 85 dB)
9	<input type="checkbox"/> Personal protective equipment for project
10	<input type="checkbox"/> Work in confined space(s) (Program review required)
11	<input type="checkbox"/> Lockout/Tagout? (Program review required)
12	<input type="checkbox"/> Demolition Activities/Dust generated
13	<input type="checkbox"/> Powered Industrial Vehicles (forklift, heavy equipment)
14	<input type="checkbox"/> Cranes/Hoisting/Rigging
15	<input type="checkbox"/> Trenching/ Excavation (over 5 feet)
16	<input type="checkbox"/> Ladder(s)/Platform(s)/Staging/Lift(s)/Fall Protection to be used
17	<input type="checkbox"/> Roof access/work
18	<input type="checkbox"/> Equipment and Tools needed for the project:
19	<input type="checkbox"/> Public Roadway/Traffic Control
20	<input type="checkbox"/> Work effecting fire detection/suppression equipment/FM-200 (Alarms/Sprinklers/Fire Pump/IS)
21	<input type="checkbox"/> Interruption of emergency equipment use/accessibility (Eye wash/shower; exhaust ventilation; phone service; evacuation/egress routes)
22	<input type="checkbox"/> Sensitive area(s) affected (i.e., computer room)
23	<input type="checkbox"/> Heat Illness Prevention and "Red Flag Warnings"
24	<input type="checkbox"/> Other:



**APPENDIX D: NOTICE TO CORRECT**

Your attention is directed to the issue concerning the site described below, and you are responsible for adhering to procedures in compliance with all applicable Federal, State, and Local laws, ordinances, regulations, and Construction Safety Orders.

<b>Project Title:</b>	<b>Location:</b>
<b>Contractor Firm Name:</b>	<b>Observation Date:</b>
<b>Contractor Representative/Contact Person:</b>	<b>Issued by:</b> _____ <b>Date:</b> _____ <b>Time:</b> _____

***NOTE: All work presenting a serious or imminent hazard must be halted immediately and corrected before resuming the associated activity.***

**Description of Issue:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Actions Taken:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Contractor Representative Name)

\_\_\_\_\_  
(Contract Representative Signature)

\_\_\_\_\_  
(Date)

*“NOTICE TO CORRECT” form can be completed by the Project Manager, Risk & Safety, or any other applicable OCWD staff. Forward copy to the Risk & Safety Department.*

**CONTRACTOR SAFETY OBSERVATION**

Contractor Name: \_\_\_\_\_ Company: \_\_\_\_\_

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_

Worksite Safety Observation Conducted by Contractor or Project Manager	Y	N/A
<b>Eye protection</b> worn when working with power tools and when possible, contact with flying particles, hazardous substances, projections or injurious light rays.		
<b>Hard Hats</b> worn in construction areas and where there is a potential for falling objects.		
<b>Proper Attire</b> worn (e.g. long pants and safety shoes) required in construction areas.		
<b>Hearing Protection</b> worn when noise exposure reaches 85 dBA or above.		
<b>Emergency Equipment &amp; Exits</b> are not blocked and easily accessible in case of an emergency.		
<b>Aisles and Floors</b> are kept free of obstruction that can cause slip, trip, & falls (e.g. cords, tools, Tools are put away and stored properly after usage.		
<b>Safety Data Sheets</b> provided for hazardous chemicals brought onsite.		
<b>Hazardous Materials</b> are clearly labeled in compliance with Hazard Communications & GHS		
<b>Safety Signs and Barriers</b> used as required.		
<b>Protection of OCWD Property &amp; Equipment</b> during work (e.g. computers covered properly).		
<b>Proper housekeeping</b> maintained; area cleaned up at end of shift.		
<b>Required Permits</b> available (i.e. Hot Works, Confined Space).		
<b>No live Electrical Work</b> without I&E Manager approval.		
<b>Lockout/Tagout</b> specific procedure available and followed.		
<b>Confined space</b> permit and monitoring completed prior to entry into confined space.		
<b>Asbestos</b> containing materials are not brought onsite.		
Contractor employees have been briefed on the OCWD’s emergency procedures and notification protocols. Workers calling 911 must also call OCWD’s emergency number: (714) 378-3300.		
<b>Evacuation is required</b> when the fire alarm is activated. Roll call taken at the assembly area.		
Immediate Notification to OCWD project manager if FM-200 alarm is activated.		
Use of <b>Portable Gasoline-Powered Equipment</b> within and on the roofs of OCWD buildings is strictly prohibited.		
<b>Gas cylinders</b> used, transported, & stored properly (on carts & properly strapped).		
<b>Self-Closing Safety Cans</b> with flame arrestors used for 5 gallons or more of <b>Flammable liquids</b> .		
<b>Working at Heights</b> (unprotected/unguarded above 48 inches) appropriate fall protection/guarding required to protect against falls.		
Ladders inspected & used properly. <b>NO Standing or working on the top cap or the step below the top cap of a stepladder.</b>		
<b>Excavation/Trenching</b> permit for excavation 5 feet or deeper.		
<b>Powered Industrial Vehicle’s</b> pre-use inspection must be completed and available upon request.		
<b>Crane</b> operators trained/certified as required.		
<b>Traffic Control</b> work comply with Cal/OSHA and Cal Trans requirements. This includes proper work zone set up and high visibility safety apparel for workers.		
<b>Other:</b>		

### Request for Contractor Safety Variance

1. Contractor safety variance is requested for:

Contractor Name:	
Address;	
City, State, Zip	
Phone:	
Fax:	
E-mail:	
Contact Name:	

2. Why is this variance being requested? What criteria did the contractor not meet?

3. What specialized service or expertise does this contractor have?

4. Were other “qualified” contractors available?  
If yes, why were they not selected? If there were no “qualified” contractors, why?

5. What measures will the contractor implement to ensure that the District's safety expectations are met without incurring additional costs? **(Contractor commitment letter attached)**

Reviewed By:

Date

1 Project Manager/Engineer: \_\_\_\_\_

2 Risk & Safety Manager: \_\_\_\_\_

3 Reviewed & Approved By G.M.: \_\_\_\_\_

General Manager



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

## **EXHIBIT D-1**

# **CONTRACTOR ENVIRONMENTAL HEALTH & SAFETY HANDBOOK**



SINCE 1933



# Contractor Environmental Health & Safety (EHS) Handbook

Orange County Water District  
18700 Ward Street  
Fountain Valley, CA 92708

ATTENTION: Orange County Water District (OCWD) Contractors

This handbook is designed to help you understand and comply with OCWD's Contractor Safety requirements.

This handbook is not intended to replace Federal, State or Local regulations regarding Contractor performance. Contractor shall keep itself fully informed of all existing and future state and federal laws and all county and city ordinances and regulations which in any manner affect the activities of Contractor and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. Contractor shall at all times observe and comply with all such existing laws, ordinances, regulations, orders and decrees, and shall protect and indemnify OCWD, its officers, directors, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree.

Your full support and cooperation are required to comply with all the regulations including those contained in this handbook. References to **“contractor”** shall also include subcontractors, vendors, consultants and the like. OCWD reserves the right to change or waive the policies and provisions herein contained, at any time at its discretion.

Questions regarding OCWD Contractor Safety Program should be directed to your project manager.

Thank You For Your Cooperation.

OCWD Management

This handbook is not intended to replace Federal, State or Local regulations regarding Contractor performance

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XXI.	<b>CONTRACTOR’S ENVIRONMENTAL HEALTH &amp; SAFETY (EHS) AGREEMENT</b>	

## I. CONTRACTOR SAFETY REVIEW

Prior to initiating any contract work at any OCWD facility, contractors must:

- Agree to follow the requirements set forth herein and all additional applicable Federal, State and local safety and environmental rules, regulations, ordinances and the like.
- Complete a Safety Review Process (to include pre-work orientation). OCWD Project Manager and Risk & Safety will evaluate the information and forms for approval to perform work at OCWD.

## II. SECURITY

Trespassing: Contractors, sub-contractors and their employees must confine themselves to the immediate site of their work, except when traveling between site and entrance or other places where they may have proper business.

Parking / Motor Vehicles / Deliveries: Contractor employees are permitted to park only in designated areas. The on-site speed limit is 15 miles per hour. All traffic signs must be obeyed. Pedestrians have the right-of-way. Contractors must arrange with the OCWD representative for the on-site delivery of materials, equipment and tools required for work performance. Contractors must obtain permission from the OCWD representative prior to using loading docks and platforms.

Alcoholic Beverages / Illegal Drugs: Alcoholic beverages and illegal or controlled drug substances are strictly prohibited on all OCWD premises.

Firearms / Explosives: Firearms and ammunition are not permitted on OCWD property. Explosive power tools are permitted with prior written approval from OCWD Project Manager. Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a powder-actuated tool.

Emergency Alarms and Evacuation Routes: Contractors need to review the site evacuation map with the project manager and communicate the information to their staff.

Contractors Equipment: Contractors will supply all equipment, which will be maintained in good operating condition, for work required by the project. A contractor is not permitted to use forklift equipment, ladders, tools, etc. owned by OCWD.

### III. EMERGENCY PROCEDURE



Emergencies that require a 911 call must be followed by a call to our internal emergency line for notification and building/area access for emergency personnel. **OCWD's internal emergency line is extension 3300 from an OCWD internal phone or 714-378-3300 from a cell phone.**

When the fire alarm sounds leave the building by the nearest safe exit and go to the designated assembly area to report your presence so you can be accounted for. Do not re-enter the building until the "All Clear" has been given by emergency personnel.

### IV. GENERAL DRESS AND CONDUCT

Contractor personnel will wear suitable clothing consistent with facility requirements. Shorts, tank tops, sandals and open toed shoes are not permitted.

Contractor personnel will behave in a mature and professional manner. Horseplay, foul language, fighting, or harassment of any kind will not be tolerated.

### V. FOOD, BEVERAGES AND DRINKING WATER

Not all water systems at OCWD facilities are potable or suitable for drinking. Contractor personnel shall not drink from any non-potable sources. Water obtained from drinking fountains, bottled water sources and fresh water dispensing units are acceptable.

Contractor shall provide its own water to employees as required by the Heat Illness Prevention Program.

Eating is permitted in vending areas, lunchrooms and designated areas. Food and drinks are not allowed in laboratory areas at any time.

## VI. SMOKING



Smoking (including cigarettes, pipes, cigars, electronic cigarettes, vaporizers, and vape pens) is not permitted in any buildings, facilities, vehicles, or any other indoor work area, under any circumstances. Smoking shall also be prohibited within 20 feet of entryways and windows of buildings and facilities leased or owned by the District as well as within 50 feet of all confined spaces (i.e. sewers, manholes, sewer lift stations, vaults, reservoirs, etc.) *Cal/OSHA, §5148. Prohibition of Smoking in the Workplace.*

## VII. HOUSEKEEPING

Contract personnel must maintain proper housekeeping practices while onsite. At the end of each day, contractors must remove all rubbish, equipment, tools and machinery and leave the area clean. OCWD will provide a designated location to set up trailers, craft equipment and materials. These areas must be kept clean and orderly. All materials and equipment, including tools and tool boxes, are to be stored within the areas designated by OCWD representatives.

Refuse burning, and/or open fires are prohibited.

Do not mix contractor generated waste with OCWD facility waste.

Contractors are required to cover and/or use plastic barriers, e.g., Visqueen, as appropriate, to protect sensitive computer, laboratory, and other equipment, furniture, flooring, and office areas where dust, dirt, debris, etc. can be generated from work activities involving ceiling tiles, drywall, flooring, saw cutting, jack-hammering and the like.

When generating dust indoors, (e.g. jackhammering, abrasive blasting, etc.) contractors must provide air filtration system or similar ventilation system to pull dust away from workers and occupied areas (similar to asbestos negative pressure ventilation).



## VIII. UTILITIES AND SERVICES

Contractors must never dispose of paints, acids, caustics, cleaning agents, grease, or any other hazardous material down sinks, floor drains or storm drains.

All spills must be reported to the Risk & Safety Department immediately.

Contractors are not permitted to make connections to site electric, water, wastewater, steam, compressed air or other plant utilities without approval from the OCWD Project Manager.

No water may be used from any fire hydrants, fire standpipes or risers, or hose stations for any purpose other than to fight a fire.

New or modified electrical / plumbing and utility circuits must be identified and tagged. Prints are to be updated as any changes occur.

Electrical power, steam, water (hot, cold, chilled, etc.), natural gas, vacuum, etc. shall not be shut off to any equipment, machinery or other services without approval from the Project Manager.

## IX. RISK & SAFETY INSTRUCTIONS

OCWD has developed safety procedures to protect our employees, visitors, contractors, community, facilities and the environment. Upon request, Contractors can be provided with in-house safety procedures applicable to their work. For further clarification on any of these rules or if requirements are not fully understood, contractors must contact the OCWD Project Manager or Risk & Safety Department.

OCWD site will be considered multi-employer site per Cal OSHA §336.10 and all contractors and subcontractors will be held accountable for safety of their own employees as well as OCWD employees. No shortcuts will be tolerated and we expect full cooperation from our contractors when it comes to safety compliance.

Safety policies and procedures must be followed at all times without exception. Safety concerns shall be reported directly to the OCWD Project Manager who must consult the Risk & Safety Department to resolve potential hazards or outstanding safety concerns and issues.

All work related injuries, illnesses, accidents and/or incidents must be reported to the OCWD Project Manager and to the Risk & Safety Department immediately.

## X. SAFETY EQUIPMENT

Contractor's employees should use eyewash and safety showers in applicable emergency situations.

Obey all OCWD safety signs and hazard warnings including the use of safety

glasses/goggles in designated areas. Signs are posted for everyone's safety.

The use of appropriate signs (i.e., danger, wet floor, etc.) is mandatory where hazards exist to communicate and prevent accidents & injuries.

All overhead work must be roped off. Planking and scaffolds must be secured safely.

All open ditches, trenches, excavations, potholes and the like must be marked by barriers and signs.

Contractors must not remove any safety equipment (fire exit signs, fire extinguishers, safety mirrors, railings, chains, etc.) without prior approval from the Risk & Safety Department.

All ladders must meet the applicable regulatory requirements. Metal ladders are not to be use for electrical work or stored near electrical panels. It is prohibited for anyone to stand on the top two steps of any ladder.

## XI. CUTTING, WELDING AND HOT WORK



A hot work permit must be obtained and signed daily from the Maintenance Department (or Control Room supervisor for after-hour/weekend work) for burning, welding, cutting, brazing, soldering and other work involving open flame or an electric arc per OCWD Fire Prevention Plan.

The permitted Hot Work area must be prepared and checked by the contractor prior to any welding and/or burning being performed. Inspection of the area should at a minimum include removing all combustible material from the area.

Proper safety equipment must be worn in the Hot Work process.

Fire watch must be performed by the contractor after the Hot Work and inspected by OCWD Maintenance Department or OCWD Inspector. Hot Work Permits must be returned to the Maintenance Department for fire watch signoff.

Hot Work Permits must be returned to the Maintenance Manager or designee for fire watch signoff and final checkup.

A Class ABC fire extinguisher MUST be nearby when there is Hot Work being performed.

*Cal/OSHA, § 4848. Fire Prevention in Welding and Cutting*

*Cal/OSHA § 6777, Hot Work Permits*

*Cal/OSHA §1537. Welding, Cutting, and Heating of Coated Metals*

*Cal/OSHA § 1536. Ventilation Requirements for Welding, Brazing, and Cutting*

## XII. CONFINED SPACES



Contractor personnel are not permitted to enter any confined space at OCWD until approved by the OCWD Project Manager. Contractors are required to provide a copy of the following prior to entering Confined Spaces:

- Training documentation for those entering confined spaces
- Copy of completed entry permit

The OCWD Project Manager or designee will inform the contractor about known hazards of the confined space.

Contractor is required to inform the OCWD Project Manager of any hazards confronted or created in the confined space.

Confined Space Entry PERMIT and MONITORING must be completed prior to entry.

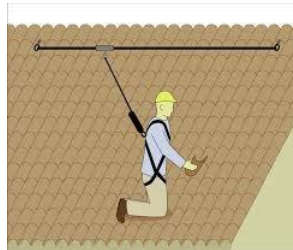
Permit-Required Confined Spaces means a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere;
- Contains a material that has the potential for engulfing an entrant;
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or contains any other recognized serious safety or health hazard.

Examples of permit required confined space include but not limited to: tanks, manholes, vaults, pipes, and secondary containment pits.

*Cal/OSHA §5157. Permit-Required Confined Space.*

### XIII. ROOF AND ELEVATED SURFACE WORK



No access to the roof is allowed without the OCWD Project Manager or the Maintenance Manager notice. No smoking is allowed on the roof. Communication such as a two way radio or cell phone is required. Contract employees are not allowed to work near unguarded skylights without fall prevention equipment.

- *Article 16. Standard Railings (Cal/OSHA Construction Safety Orders 1620 - 1621)*
- *Article 19. Floor, Roof and Wall Openings (Cal/OSHA Construction Safety Orders 1632 - 1633)*
- *Article 21. Scaffolds - General Requirements (Cal/OSHA Construction Safety Orders 1635.1 1637)*
- *Article 22. Scaffolds - Various Types (Cal/OSHA Construction Safety Orders 1640 - 1655)*
- *Article 24. Fall Protection (Cal/OSHA Construction Safety Orders 1669 - 1672)*
- *Article 2. Standard Specifications (Cal/OSHA General Industry Safety Orders, 3209 – 3239).*

### XIV. LOCKOUT / TAGOUT



Contractor personnel must comply with all requirements of the OCWD Lockout / Tagout procedure when working on any system with potential energy from any source (electric, mechanical, hydraulic, steam, etc.).

OCWD designated Operations personnel, will place their lock first and will be the last person to remove their lock during a lockout process involving contractors. All contractors and personnel working on a locked out system must have their own locks. All locks must be applied for all workers and the system not restarted until the last lock is removed. It is forbidden for anyone to remove another person's lock.

*CAL/OSHA §3314. The Control of Hazardous Energy for the Cleaning, Repairing, Servicing, Setting-Up, and Adjusting Operations of Prime Movers, Machinery and Equipment, Including Lockout/Tagout.*

## XV. COMPRESSED GASES



Contractor personnel must comply with all requirements for identifying, storing and safely using cylinders of compressed gases (air, oxygen, helium, acetylene, argon, hydrogen, nitrogen, liquid nitrogen, etc.). Free standing gas cylinders (unsecured) are not allowed on site. All gas cylinders must be used, stored and secured properly (i.e. chained, strapped)

*Cal/OSHA §4650. Storage, Handling, and Use of Cylinders and Compressed Gases.*

## XVI. ASBESTOS



Contractors are prohibited from using any materials, supplies, or other objects that contain or may potentially contain asbestos or asbestos fibers.

Contractors who identify materials that are suspected of containing asbestos must immediately stop work and notify the OCWD Project Manager.

*CAL/OSHA §1529. Asbestos.*

## XVII. FIRE PROTECTION



Self-closing safety cans with flame arrestors must be used with all flammable liquid of 5 gallons or more.

Fire protection and emergency equipment (fire extinguishers, pull alarms, exits, hydrants, etc.), must not be blocked with materials and equipment.

The use of portable gasoline-powered equipment within OCWD buildings and on the roofs of OCWD buildings is prohibited.

Approval from the OCWD Risk & Safety Department is required before temporarily obstructing roadways that could block the movement of emergency equipment, plant vehicles or agency (fire trucks, ambulances, police cars, etc.)

*CAL/OSHA §3221. Fire Prevention Plan*

## XVIII. HAZARD COMMUNICATION



Contractors must provide Safety Data Sheets (SDS) of all chemicals that will be brought onsite to the Risk & Safety Department. Contractors must inform the OCWD Project Manager of any hazardous conditions which might arise in the performance of their job.

Safe chemical handling procedures must be used by contractor personnel to ensure exposure levels remain safe for all OCWD employees.

Personal Protective Equipment (PPE) specified and recommended in the SDS should be worn properly at all times the chemical(s) is in use.

*CAL/OSHA §5194. Hazard Communication*

## XIX. PROTECTIVE CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT (PPE)



Contractor personnel will use PPE required for the job (e.g. eye protection with side shields, goggles, welding helmet, hearing protection, hard hats, and safety shoes, etc.). PPE will be worn in all posted areas or whenever hazards associated with the task being performed warrant further protection. Eye protection must always be worn when using hand or power tools and when working with chemicals.

Contractors are responsible for supplying their workers with the required PPE while performing work at OCWD.

*CAL/OSHA §3380. Personal Protective Devices*

BASIC SAFETY INSPECTION	Y	N/A
Eye protection worn when working with power tools and when possible contact with flying particles, hazardous substances, projections or injurious light rays and in designated areas (i.e. lab).		
Hard Hats worn in construction areas and where there is a potential for falling objects.		
Proper Attire worn (e.g. long pants and sturdy shoes or safety shoes) in required areas/construction sites.		
Hearing Protection worn in required areas or when noise is at or above 85 dB.		
Emergency Equipment & Exits are not blocked and easily accessible in case of an emergency.		
Aisles and Floors are kept free of obstruction that can cause slip, trip, & falls (e.g. cords, tools, equipment).		
Tools are put away and stored properly after usage.		
Safety Data Sheets provided for hazardous chemicals brought onsite.		
Hazardous Materials are clearly labeled in compliance with Hazard Communications & GHS requirements.		
Safety Signs and Barriers used as required.		
Protection of OCWD Property & Equipment during work (e.g. computers covered properly).		
Proper housekeeping maintained; area cleaned up at end of shift.		
Required Permits available (i.e. Hot Works, Confined Space).		
No live Electrical Work without I&E Manager approval.		
Lockout/Tagout specific procedure available and followed.		
Confined space permit and monitoring completed prior to entry into confined space.		
Asbestos containing materials are not brought onsite.		
Contractor employees are informed on OCWD emergency process & notification. Workers calling 911 <b>must also call OCWD's emergency number: (714) 378-3300</b> to notify.		
Evacuation is required when the fire alarm is activated. Roll call will be conducted at the assembly area.		
Immediate Notification to OCWD project manager if FM-200 alarm is activated.		
Use of Portable Gasoline-Powered Equipment within and on the roofs of OCWD buildings is strictly Prohibited.		
Gas cylinders used, transported & stored properly (on carts & properly strapped to prevent tipping).		
Self-Closing Safety Cans with flame arrestors used for 5 gallons or more of Flammable liquids.		
Working at Heights (unprotected/unguarded above 48 inches) appropriate fall protection/guarding to protect against falls.		
Ladders inspected & used properly. NO Standing or working on the top cap or the step below the top cap of a stepladder.		
Excavation/Trenching permit for excavation 5 feet or deeper.		
Powered Industrial Vehicle operator's pre-use inspection completed and available upon request.		
Crane operators trained/certified as required.		
Traffic Control work comply with Cal/OSHA and Cal Trans requirements. This includes proper work zone set up and high visibility safety apparel for workers.		
Other:		

**NOTE:** *These are NOT intended to replace Federal, State, Local laws or Ordinances and Regulations regarding Contractor Environmental Health & Safety (EHS) performance. All work in areas where there is imminent danger to employees will cease until the dangerous condition is removed.*

## CONTRACTOR'S ENVIRONMENTAL HEALTH & SAFETY AGREEMENT

I have read the information stated in the OCWD's Contractor Environmental Health & Safety Handbook. I understand that the information provided covers brief highlights of the OCWD's safety programs. It is my responsibility to review the updated programs and communicate the safety information & requirements to my employees.

I understand that the Contractor's Environmental Health & Safety Handbook is not intended to replace Federal, State or Local regulations regarding Contractor performance. Contractor shall keep itself fully informed of all existing and future state and federal laws and all county and city ordinances and regulations which in any manner affect the activities of Contractor and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. Contractor (including contractor employees and subcontractors) shall at all times observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees, and shall protect and indemnify OCWD, its officers, directors, employees and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree.

Contractor Company \_\_\_\_\_

Contractor Name & Title  
(Please Print): \_\_\_\_\_

Contractor Signature: \_\_\_\_\_

Date: \_\_\_\_\_

***FORWARD A SIGNED COPY OF THE CONTRACTOR'S AGREEMENT PAGE TO RISK & SAFETY DEPARTMENT***



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

## **EXHIBIT D-2**

# **CONTRACTOR SAFETY PROGRAM**

## APPENDIX A: OCWD PRE-AWARD SAFETY REVIEW

(Safety & Project Manager Review at 65% Design Review)

Project Name	Date of Meeting
OCWD Meeting Attendees	Estimate Start Date

Describe project, potential impact & accommodation (dust, odor, noise, etc.) associated with the project/work:

---



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1	Building Access Needed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	List specific area access:	
2	Will hazardous waste be generated?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, list waste:	
3	Will chemicals be brought onsite?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, list chemicals:	
4	How will excess materials/wastes (hazardous or otherwise) be removed?			
5	Will Hot Work be performed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
6	Will Noise exceed 85 dB?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
7	Will PPE be required for this project? (if yes, list below in line #21)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
8	Will work in confined space be required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
9	Will Lock out/tag out be required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
10	Will there be any demolition activities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
11	Will there be elevated work requiring Fall Protection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
12	Will the use of cranes (e.g. Hoisting/Rigging) be required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
13	Will Trenching (over 5 feet)/Excavation be required?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
14	Will heavy equipment (e.g. dozer) be used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
15	Will work on electrical systems/equipment be performed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
16	Will Traffic Control be required for work on Public Roadway?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
17	Will scaffolding/ladder/Platform be used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
18	Will work affect the fire detection/suppression equipment system?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
19	Will work interrupt the emergency equipment use/accessibility? (Alarms, Eyewashes, Exhaust ventilation, Phone service, Egress routes)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
20	What equipment & tools will be used for this project?			
21	List the type of PPE needed for the project?			

## APPENDIX B: CONTRACTOR REQUIRED INFORMATION FORM

### Part 1: To Be Completed By Contractor: (Complete and provide required information)

- Contractor's Name: \_\_\_\_\_
- Contractor's License (copy of license) \_\_\_\_\_
- Experience Modification Rate (EMR rating from insurance company).  
If  $\geq 1.25$  please provide reason for rating: \_\_\_\_\_
- Copy of 3 Years of OSHA 300A Annual Summary (If greater than 10 employees)
- How many serious injuries and/or fatalities has your company had in the last 3 years: \_\_\_\_\_
- How many Regulatory Violations (Cal OSHA Citations) has your company had in the last 3 years? \_\_\_\_\_

### Part 2: To Be Completed By Contractor - SAFETY PROGRAM SECTION

NOTE: Safety Programs must be available to OCWD upon request	YES	NO
Does your company maintain a written Injury Illness Prevention Program (IIPP) in accordance with GISO, Title 8, Section §3203 or §1509 and Labor Code (LC §6401.7)? If yes, where is the documentation maintained? _____		
Does your company maintain documentation on employees' IIPP training? If yes, where is the documentation maintained? _____		
Does your company maintain "Code of Safe Practices" documentation? [Title 8, §1509(b)] If yes, where is the documentation maintained? _____		
Does your company maintain disciplinary documentation for unsafe behavior of employees or subcontractors (if applicable)? [Title 8, §3203 or §1509] If yes, where is the documentation maintained? _____		
Does your company maintain a documented Hazard Communication Program that complies with GHS Labeling and Safety Data Sheets (SDS)? [8 CCR §5194] If yes, where is the documentation maintained? _____		
Does your company maintain inspection records and written evidence that safety and health concerns have been reviewed and corrective actions taken? [LC§6401.7(b) and (D)] If yes, where is the documentation maintained? _____		
Are procedures for communicating critical (hazardous) job activities (Job Safety Plan) written and reviewed with all employees and subcontractors? [LC 6401.7(a)(5)] If yes, where is the documentation maintained? _____		
Does your company have a written accident investigation program in which all accidents/incidents (including those of subcontractors, if applicable) are investigated and corrective action implemented? [8CCR §3203(a)(5) and (b) or §1509] If yes, where is the documentation maintained? _____		
Does your company have a written Emergency Action Plan that is communicated to employees and subcontractors? (i.e., medical, fire, chemical spills, etc.)? [8 CCR §3220] If yes, where is the documentation maintained? _____		

**APPENDIX B: CONTINUED**

Is documentation on file and available for review to verify that training and safety meetings have been completed (and subcontractors, if applicable)? [LC §6401.7(c) and 8CCR §1509(e)]  
 If yes, where is the documentation maintained? \_\_\_\_\_

<b>Part 2 Continued: PROJECT SPECIFIC SAFETY PROGRAMS</b>	<b>YES</b>	<b>NO</b>
---	------------	-----------

Do you have a written Confined Space Program that includes pre-entry monitoring, pre-entry permit, and employee training? [T8 CCR §5157] If yes, where is the documentation maintained? _____		
--	--	--

Do you have a written Electrical Safety Program? Can you provide documentation for employee training? [T8 CCR §2700 - §2989 and T8 CCR §2299 – §2599 and NFPA 70E] If yes, where is the documentation maintained? _____		
--	--	--

Do you have a written Fall Prevention Program that includes training and personal protective equipment? Can you provide documentation for employee training? [T8CCR §1671.1] If yes, where is the documentation maintained? _____		
--	--	--

Do you have a written Trenching/Excavation Program that includes employee training? [T8CCR §1541.1] If yes, where is the documentation maintained? _____		
---	--	--

Do you have a written Lockout/Tagout Program that includes employee training & documentation? [T8 CCR §3314(j)] If yes, where is the documentation maintained? _____		
---	--	--

Do you have a Hot Work Program that includes employee training & documentation? [T8 CCR 4848] If yes, where is the documentation maintained? _____		
---	--	--

Do you have a Traffic Control Program that includes employee training & documentation? [T8 CCR, Construction Safety Orders, Article 11, 1597 – 1599] If yes, where is the documentation maintained? _____		
--	--	--

Other applicable programs: \_\_\_\_\_

Comments:

\_\_\_\_\_  
**Contractor Representative's Name (print)**

\_\_\_\_\_  
**Contractor Representative's Signature**

\_\_\_\_\_  
**Date Signed:**

*A bidder's failure to respond affirmatively to the questions listed in the "Safety Program Section" of Appendix B that are applicable to the work shall be grounds for the District to reject the bid as non-responsive.*

**APPENDIX B: FOR OCWD INTERNAL USE ONLY**

**Part 3: To Be Completed By Purchasing Department**

Verify and complete the following:

Contractor's Name: \_\_\_\_\_

Contractor's License (Current, On File & Reviewed Quarterly) \_\_\_\_\_

Certificate of Insurance (Current, On File & Reviewed Quarterly) \_\_\_\_\_

Experience Modification Rate (EMR rating) \_\_\_\_\_

If  $\geq 1.25$  please provide reasons for rating

(<1.0 = BETTER THAN AVG; 1.0 = INDUSTRY AVG; >1.25 = less than avg. & targeted by CAL OSHA)

3 Years of OSHA 300A Annual Summary (If greater than 10 employees)

How many serious injuries and/or fatalities has your company had in the last 3 years: \_\_\_\_\_

How many Regulatory Violations (e.g. Cal OSHA Citation) has your company had in the last 3 years: \_\_\_\_\_

Verify History of Regulatory Violations (**REVIEW [WWW.OSHA.GOV](http://www.osha.gov) to ENSURE THERE ARE NO VIOLATIONS/CITATIONS FOR THE PAST 3 YEARS**) If violations are found please document specific reasons for violations/citations: \_\_\_\_\_

Forwarded completed and signed copies of Appendix B to Risk & Safety Department.

## APPENDIX C: POST AWARD EHS REVIEW PACKET

### PART 1: Contractor Orientation

CONTRACTOR SAFETY CHECKLIST & ORIENTATION			
<b>Contractor Name:</b>			
<b>Meeting Date:</b>			
<b>Duration of Project Services:</b>			
<b>Project Name &amp; Start Date:</b>			
<b>Contractor's Main Onsite Representative:</b>			
<b>Print Name:</b>		<b>Signature:</b>	
<b>Method(s) of communication:</b>	<input type="checkbox"/> On-Site Office	<input type="checkbox"/> Cell	
<b>OCWD Project Manager:</b>			
<b>Method(s) of communication:</b>	<input type="checkbox"/> Office #	<input type="checkbox"/> Cell	
<p><b>Instructions:</b> Check "yes" when requirements are applicable and arrangements/details have been discussed/ reviewed. Check "no" if not applicable to work area or scope of project/service. Orientation must be completed before work begins.</p> <p><b>Distribution:</b> Please forward this Contractor Safety Checklist form to the applicable Director and Project Manager.</p>			
<b>1</b>	Building Access?	<input type="checkbox"/> Yes <input type="checkbox"/> No	List specific area access: _____
The following discussed with contractor representative(s):			
<b>2</b>	Emergency Procedures, 3300 and Assembly areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>3</b>	Spill/Leak reporting procedures?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>4</b>	Required SDS's for all Hazardous materials?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>5</b>	Will hazardous waste be generated?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>6</b>	Removal of excess materials/wastes (hazardous or otherwise)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>7</b>	Welding/Cutting/Open flames? (Review Hot Work/Permit Procedure)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>8</b>	Noise (louder than 85 dB)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>9</b>	Personal protective equipment needed for the project?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>10</b>	Work in confined space(s) (Program review required)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>11</b>	Lock out/tag out? (Program review required)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>12</b>	Demolition Activities?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>13</b>	Work area/activities requiring Fall Protection?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>14</b>	Heavy lifting/Hoisting/Rigging?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>15</b>	Trenching (over 5 feet)/Excavation?	<input type="checkbox"/> Yes <input type="checkbox"/> No	



**APPENDIX C: CONTINUED**

**PART 2. ACKNOWLEDGEMENT OF CONTRACTOR REQUIREMENTS**

Contractor Name: \_\_\_\_\_ Company: \_\_\_\_\_

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_

<b>CONTRACTOR REQUIREMENTS</b> <i>This Form Will Also Be Used By OCWD For Inspections</i>	<b>Y</b>	<b>N</b>	<b>CORRECTIVE ACTION</b>
Safety Glasses/goggles worn in required areas (i.e. lab). Eye protection worn when working with chemicals and power tools/equipment.			
Hard Hats are worn in construction areas and where there is a potential for falling objects.			
Proper Attire worn – Long Pants and Safety Shoes in required areas (i.e. construction).			
Hearing Protection worn in required areas or when noise is at or above 85 dB			
All Emergency Equipment & Exits are accessible at all times.			
Aisles and Floors are kept free of obstruction and debris that may cause a slip, trip, and fall hazard.			
Tools are put away and stored properly after use.			
Prior to bringing Chemicals on site, Risk & Safety Manager will be provided with Safety Data Sheet(s).			
Hazardous Materials are clearly labeled in compliance with the GHS requirements.			
Safety Signs and Barriers are brought and used as required and in construction areas.			
Contractor ensures Protection of OCWD Property and Equipment.			
Contractor Brings all required Housekeeping Equipment for cleanup after completion of work.			
Contractor Obtains Permits where appropriate (i.e. Hot Works).			
Electrical Work is reviewed with the Project Manager and I&E Manager prior to start date.			
Lockout/Tagout work reviewed with Project Manager to ensure compliance with OCWD Lockout program.			
Electrical Panels are De-Energized and Locked Out prior to performing electrical work.			
Confined space permit and monitoring completed prior to entry into confined space.			
Asbestos containing materials are not brought onsite.			
Contractors are to report emergencies that occur on OCWD property immediately to the OCWD internal emergency number by calling 714-378-3300.			
Evacuation is required when the fire alarm sounds. Use the nearest safe exit, and proceed to assembly area for roll call.			
The Use of Portable Gasoline-Powered Equipment within and on the roofs of OCWD buildings is Prohibited.			
Gas cylinders must be used & stored properly (cylinders properly strapped to prevent tipping).			
Self-Closing Safety Cans with flame arrestors must be used for 5 gallons or more Flammable liquids.			
Evaluate elevated work over 6 feet for fall protection.			
Comply with Ladder Safety requirements to include pre-use inspection. NO Standing or working on the top cap or the step below the top cap of a stepladder.			

**NOTE:** *These are not intended to replace Federal, State, Local laws or Ordinances and Regulations regarding Contractor Environmental Health & Safety (EHS) performance.*

**I have read, understood, and will observe all Federal, State, Local laws, Ordinances and Regulations including those pertaining to EHS requirements while conducting contract work at OCWD.**

\_\_\_\_\_  
Contractor Signature

\_\_\_\_\_  
Date

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**APPENDIX D: NOTICE TO CORRECT**

Your attention is directed to the issue pertaining to the following described site and your responsibility to utilize procedures in accordance with the applicable Federal, State, Local laws, Ordinances and Regulations including Construction Safety Orders.

<b>Project Title:</b>	<b>Location:</b>
<b>Contractor Firm Name:</b>	<b>Observation Date:</b>
<b>Contractor Representative/Contact Person:</b>	<b>Issued by:</b> _____ <b>Date:</b> _____ <b>Time:</b> _____

*Note: All work posing imminent hazards must be stopped immediately and corrected prior to resumption of the associated activity.*

**Description of Issue:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Actions Taken:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Contractor Representative Name)

\_\_\_\_\_  
(Contract Representative Signature)

\_\_\_\_\_  
(Date)

*“NOTICE TO CORRECT” form can be completed by OCWD Inspector, Project Manager, Risk & Safety and other applicable staff*

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## **APPENDIX E: POST PROJECT EVALUATION**

Risk & Safety and the Project Manager will review and complete a Contractor Post Project Evaluation:

1. Where there any significant safety issue/risk?

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2. What was done to mitigate the safety issue/risk?

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3. Why did the safety issue/risk occur?

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4. What corrective action(s) will be implemented to prevent this issue/risk from occurring again?

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### **CONTRACTOR RATING:**

Poor

Below Average

Average

Outstanding

\_\_\_\_\_  
OCWD Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
OCWD Risk & Safety

\_\_\_\_\_  
Date



OCWD RFP-25-003 - GRANULAR ACTIVATED CARBON MEDIA PROCUREMENT, DELIVERY AND  
INSTALLATION AT THE FULLERTON MAIN PLANT

# ATTACHMENT NO.1

## RFP SUBMITTAL CHECKLIST

# **ATTACHMENT NO.1**

## **Request for Proposals (RFP) Submittal Checklist**

The following submittals shall be completed and submitted with each Proposal package (see table below for the “Required Submittal Checklist.”). This table has been provided as a convenience for proposers to use as a reference only. Ultimately, it is the Proposer’s sole responsibility to ensure that their proposal complies with all requirements of the RFP and all the required submittals are included in the Proposal package before it is formally submitted to OCWD. Proposals may be deemed nonresponsive if they do not respond to all areas specified in the RFP.

<b>Item No.</b>	<b>Required Submittal Checklist</b>	<b>Check (✓)</b>
1	Signed Proposal package including:	
2	Title Page	
3	Cover Letter	
4	Table of Contents	
5	Experience and Record of Past Performance	
6	Price Proposal	
7	Contractor Safety Program	
8	Safety Manual	
9	Quality Control Plan	
10	Statement of Insurance Compliance A statement accepting the requirements stated in Section 6.7 of the RFP.	
11	OCWD Standard Contract: A statement accepting the requirements stated in Section 6.8 of the RFP.	
12	Billing	
13	Conflict of Interest	
14	Equal Employment Opportunity and Affirmative Action Requirements	
15	Addenda Acknowledgement Forms (if applicable)	