Appendix C

Equipment Vendor Information

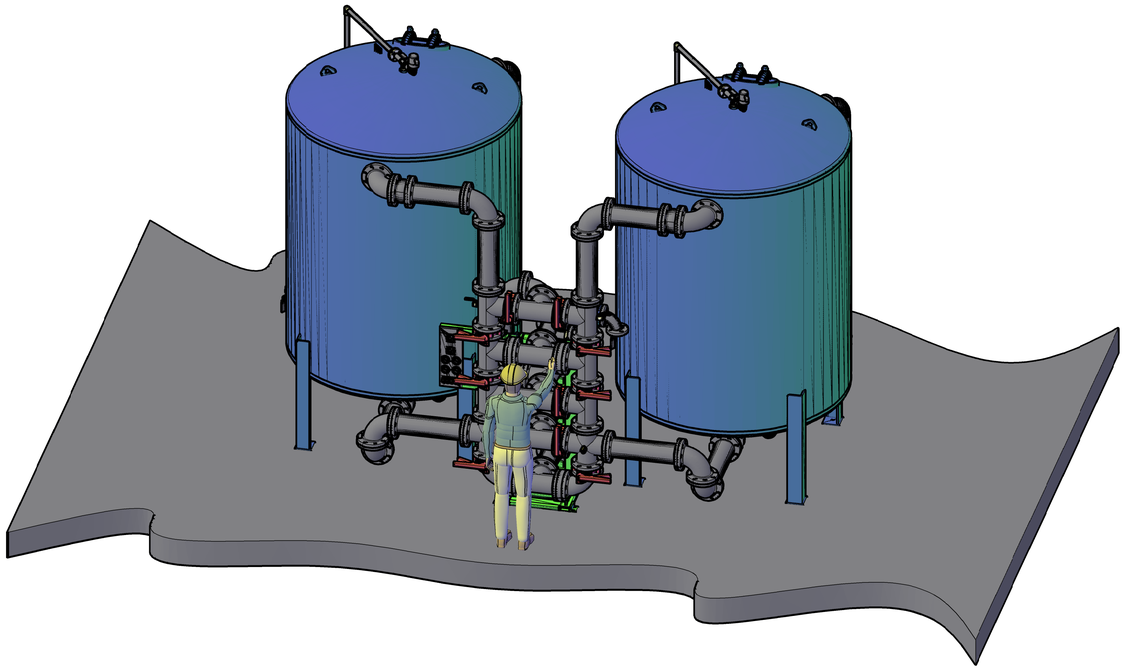
Appendix C – Part 1

AdEdge GAC

	MANCHESTER, MD PFAS	
Well Site	**Carroll County**	**Notes**
Well Flow Rate	137	
CombinedPFAS Level	11.98	
FS200 or IX Vessel Diameter, 3 minute ECBCT, per vessel	60	
Number of Trains	1	
AdEdge Model	MODPfX-6060CS-2-LL-MVT	
Media Volume, ft3	**60**	
Fluorosorb Media	FS200	Chlorine tolerant, TOC tolerant, can be backwashed.
Start Up BW Waste Volume, gallons	10603	
FS200 BW Rate	180 gpm	
FS200 Sytem Budgetary Price	$ 175,000.00	
IX Media	**694EBF**	**No chlorine or BW, TOC can impact**
IX Rinse Rate at service flow	**137**	
Start Up Waste 20 BV Rinse, gallons	17952	Based upon buffered resin. Other resins may require a 70-80 BV rinse to meet CSMR
IX System Budgetary Price	$ 200,000.00	
Bed Volumes to 3 ppt from lead vessel	274,000.00	PFHxA will be the first to break through at 86,000 BV. The PFOA will be the controlling compound
Volume treated, gallons	123,000,000	
IX Media Replacment Cost, Lead Vessel	$ 24,000.00	
FS200 Media Replacment Cost, Lead Vessel	$ 12,000.00	
IX Media Cost to Treat per 1000 gal	$ 0.20	
FS200 Media Cost to Treat per 1000 gal	$ 0.10	
GAC Vessel Diameter, 10 minute EBCT per vessel	84	38.5
Number of Trains	1	
AdEdge GAC Model	MODGAC-8496CS-2-LL-MVT	
GAC Media	Calgon F400 or equal	
Media Volume per vessel, ft3	185	
Start Up BW Waste Volume, gallons	41562	
Backwash Rate	350 gpm	
Additional Rinse	200-300 Bed Volumes, 400,000 gallons per vessel	Additional rinse will be necessary to meet the effluent pH requirements and Arsenic rinse. This can equate to 12-24 hours of rinse time for each change out.
GAC System Budgetary Price	$ 335,000.00	
Bed Volumes to PFOA @ 3 ppt	46000	
Volume Treated, gallons	63654800	
GAC Replacement Media Cost. Lead vessel	$ 26,000.00	
GAC Media Cost To Treat per 1000 gal	$ 0.41	

MODGAC-PFX-8496CS-2-MVT-LL

ADEDGE TREATMENT SYSTEM



AdEdge water technologies tm

2055 Boggs Road
Duluth, GA 30096
P. 678-835-0052 F. 678-835-0057
www. adedgetechnologies.com

CONTRACTOR: ---

SHEET INDEX

DRAWING NO.	TITLE	SHEET NO.

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:

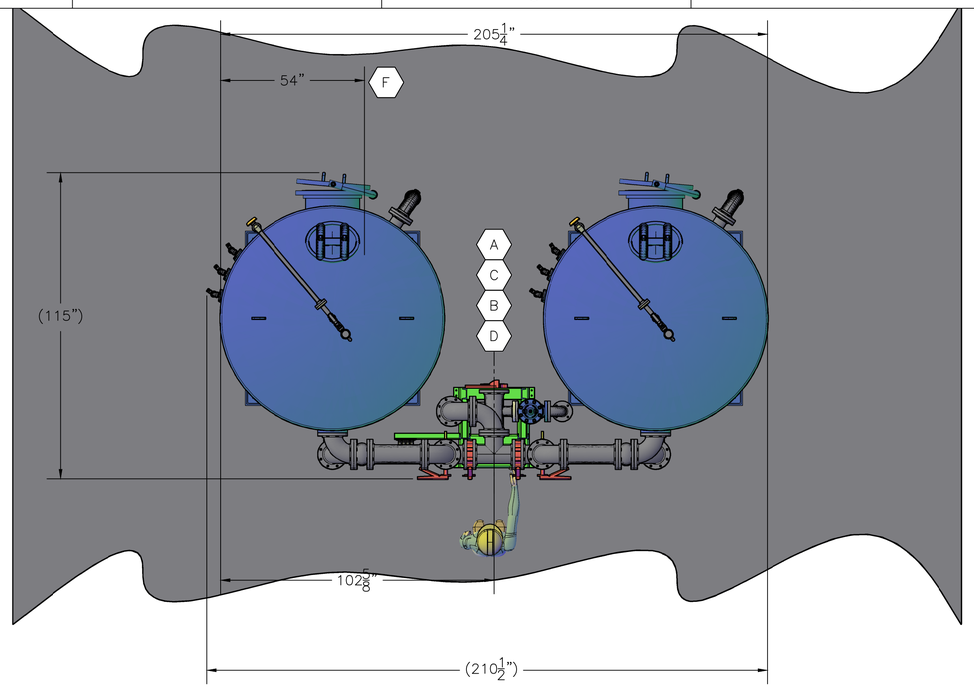
DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODGAC-PFX-8496CS-2-MVT-LL

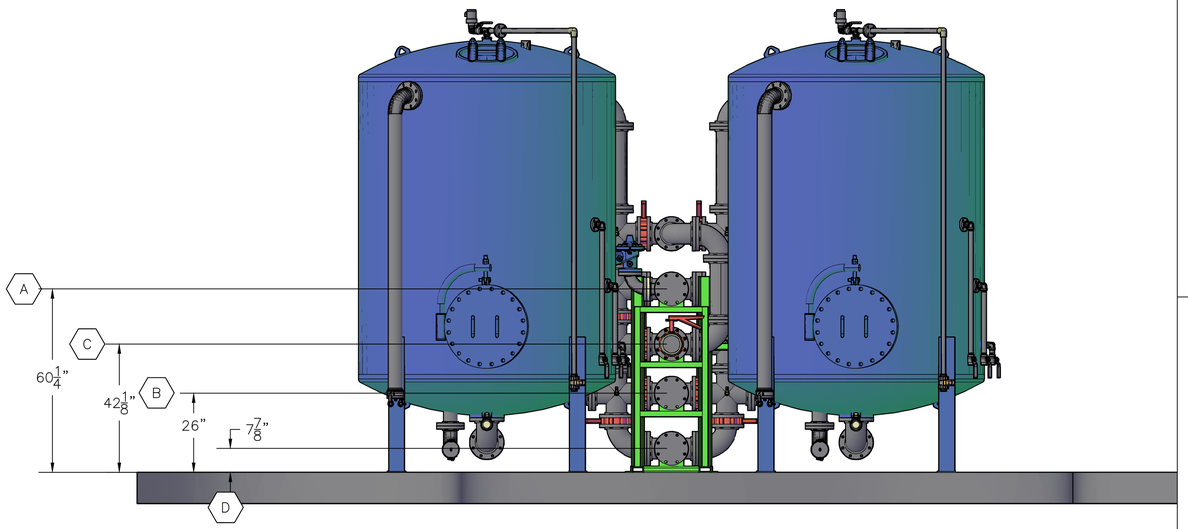
COSTUMER:
TBD

TITLE:
COVER

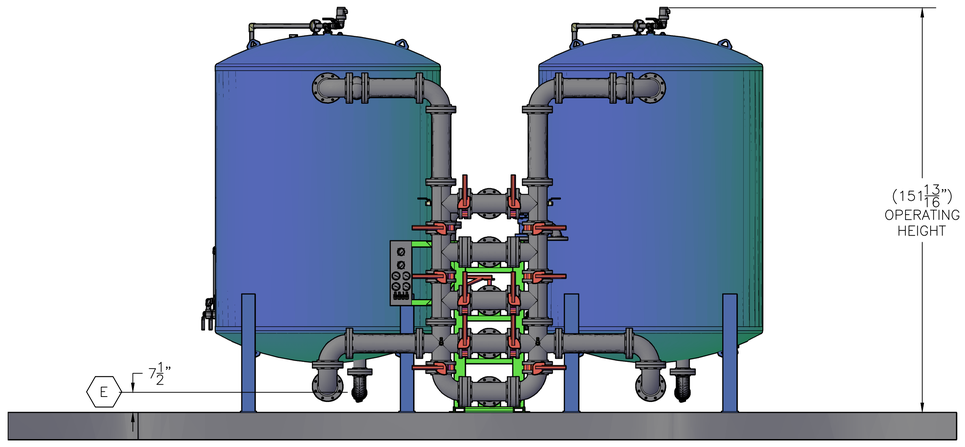
SALES DRAWING



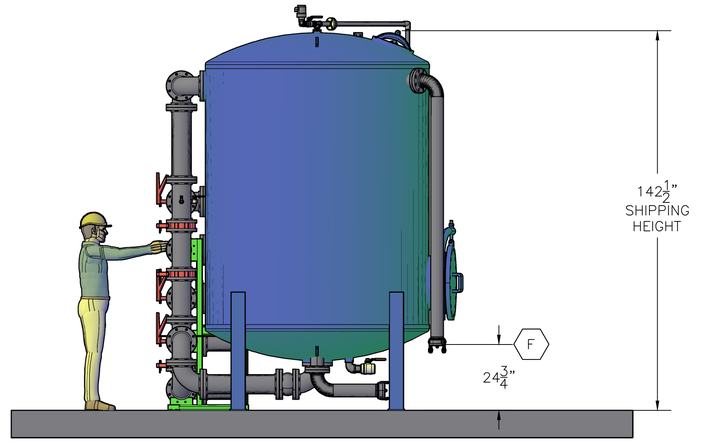
PLAN VIEW



BACK VIEW



FRONT VIEW



RIGHT SIDE VIEW

SALES DRAWING

AdEdge water technologies
2055 Boggs Road
Duluth, GA 30096
P. 678-835-0052 F. 678-835-0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:
A	SYSTEM RAW WATER INLET	6" 150# DI FLANGE
B	SYSTEM TREATED OUTLET	6" 150# DI FLANGE
C	SYSTEM BACKWASH OUTLET	6" BUTTERFLY VALVE
D	AUX. BACKWASH INLET	6" 150# DI FLANGE
E	SLUICING NOZZLE (DISCHARGE)	4" 316SS PLUG
F	SLUICING NOZZLE (FILL)	4" 316SS PLUG

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:
–	–	–	–	–

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODGAC-PFx-8496CS-2-MVT-LL

COSTUMER:
TBD

TITLE:
SALES GENERAL ARRANGEMENT

DRAWING NUMBER: M-001

SHEET: 3 OF 4

DIMENSIONAL NOTES:

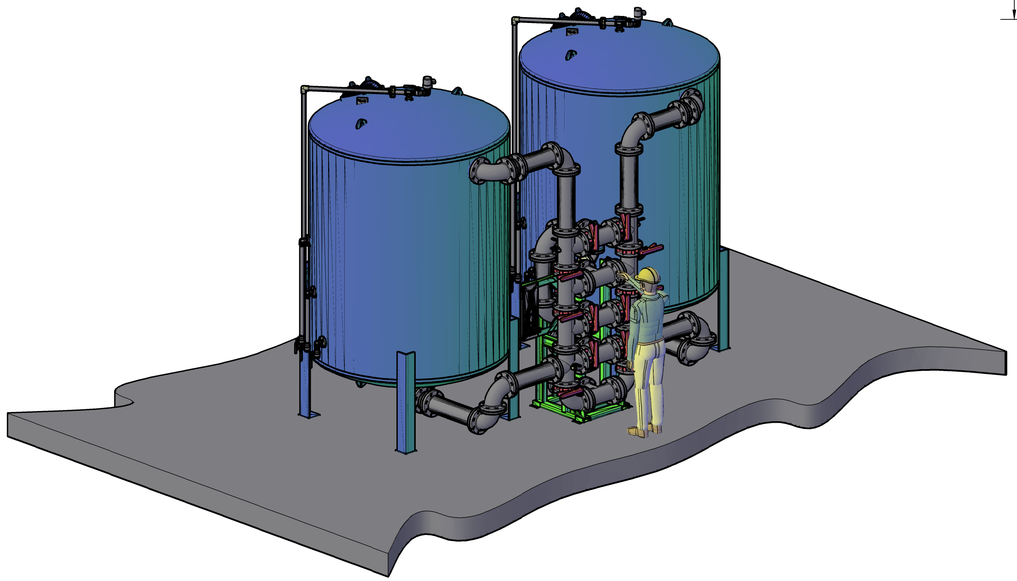
1. ALL DIMENSIONS ARE +/– 2".
2. DO NOT SCALE DRAWING. REFER TO ADEDGE ENGINEERING DEPT FOR ALL DIMENSIONS
3. (##): REFERENCE DIMENSION

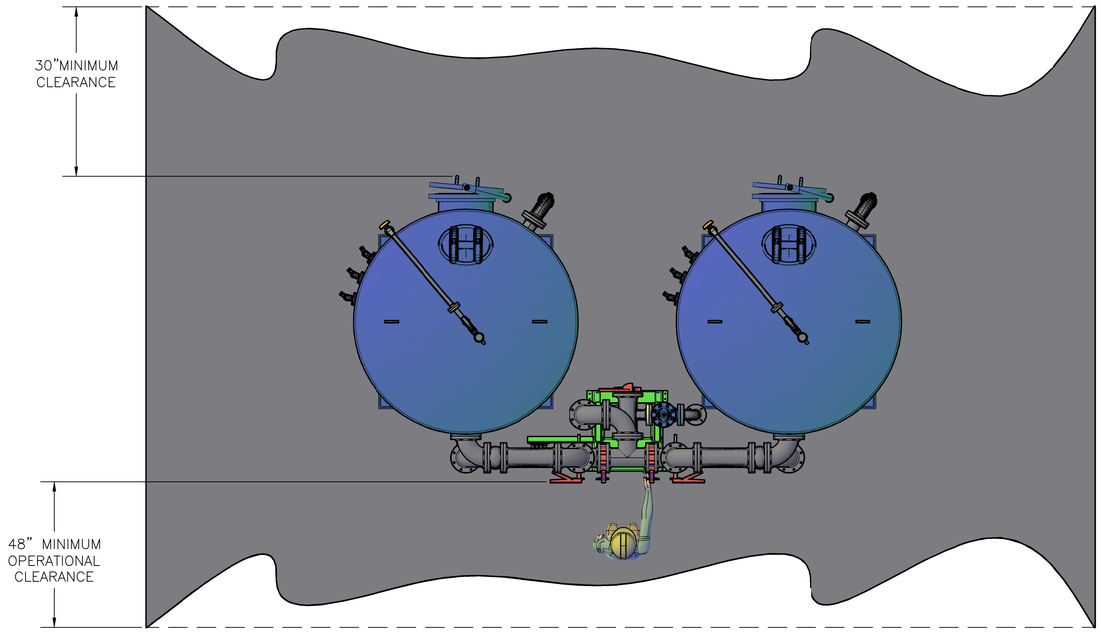
GENERAL SYSTEM SPECIFICATIONS:

1. DUCTILE IRON INLET/OUTLET WITH FLANGED TIE POINTS
2. DUCTILE IRON VALVE TREE PIPING
3. LUG–STYLE BUTTERFLY VALVES WITH MANUEL OPERATOR ON VALVE TREE
4. LUG–STYLE BUTTERFLY VALVE WITH MANUAL OPERATOR FOR BACKWASH OUTLET
5. 304SS HYDRAULIC PANEL WITH DP GAUGE FOR EACH VESSEL.
6. PRESSURE GAUGES AND SAMPLE VALVES ON EACH VESSEL'S INLET AND OUTLET

SYSTEM WEIGHT:

1. APPROXIMATE SHIPPING WEIGHT:





(OPERATOR LOCATION)

PLAN VIEW
FRONT AND BACK CLEARANCE

SALES DRAWING

AdEdge water technologies
2055 Boggs Road
Duluth, GA 30096
P. 678–835–0052 F. 678–835–0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:
–	–	–	–	–

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD–0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODGAC–PFx–8496CS–2–MVT–LL

COSTUMER:
TBD

TITLE:
SALES GENERAL ARRANGEMENT

DRAWING NUMBER:
M–002

SHEET:
4 OF 4

Appendix C – Part 2

Newterra GAC

Date: 30-Nov-23

Customer: GMB
Contact: Bradley Hogan
Phone: 410.329.5005
Email: BHogan@gmbnet.com
Location: Sparks, MD
Project Title: Town of Manchester

Budget Estimate - GAC Option

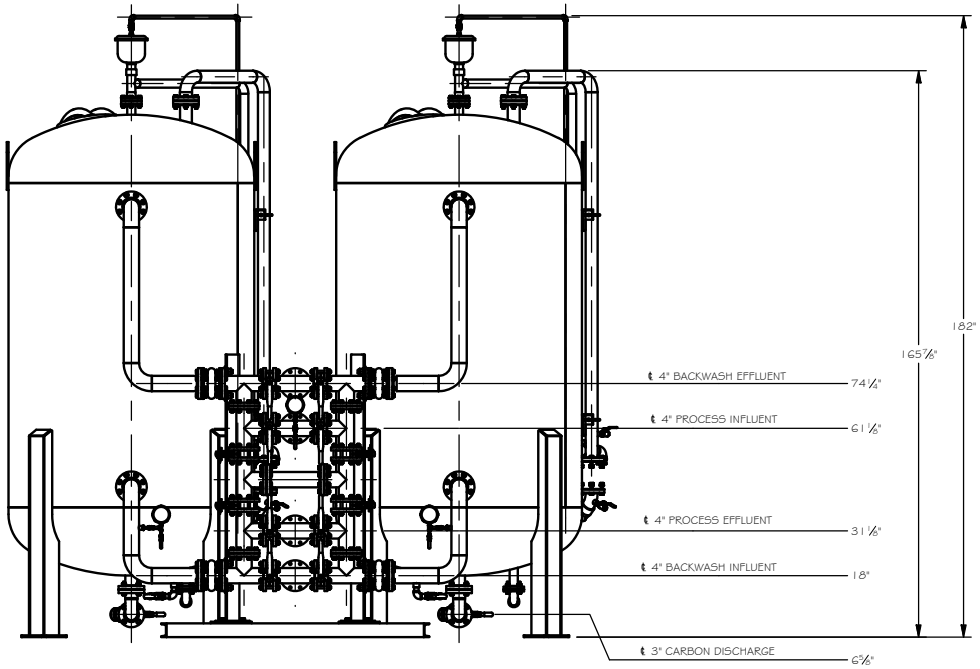
Item	Description	Total Price
A	One (1) CP5K-6 GAC System including: * Two 125 psi ASME Code Vessels; * 4" valve rack with interconnecting piping to make a complete system capable of operation in series lead-lag fashion, ability to isolate one vessel while other in operation, and independent backwash; * Each vessel supplied with 5,500 lbs. 5D 1240 NSF GAC, 11,000 lbs. per system	$230,000
B	Delivery	Included
C	Startup and Training	Included
	Total, USD Delivered	$230,000

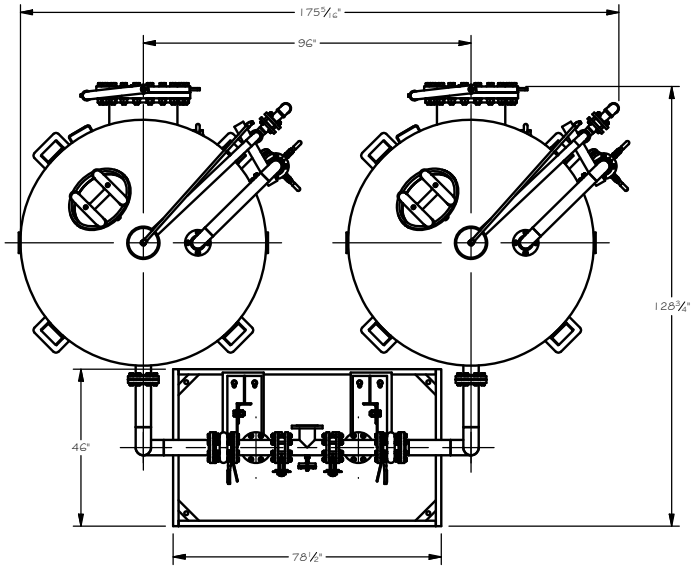
Payment Terms: Milestones with invoices due net 30 days
Validity: Budget Estimate
Availability: TBD
Terms & Conditions: See Attached

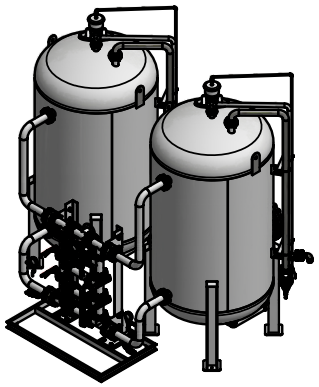
Rep Contact: Sherwood-Logan
Newterra Ref: RSM

Prepared by: John Sherbondy

1555 Coraopolis Heights Road, Suite 4100
Coraopolis, PA 15108
(724) 703-3020 Phone
(724) 703-3026 Facsimile







SYSTEM SPECIFICATIONS:

- MAXIMUM SERIES FLOW: 250 GPM
- MAXIMUM PRESSURE: 125 PSIG
- MAXIMUM TEMPERATURE: 150°F
- EMPTY VESSEL WEIGHT: 5,000 LBS
- VESSEL OPERATING WEIGHT: 22,500 LBS
- PIPE RACK OPERATING WEIGHT: 2,000 LBS
- SYSTEM OPERATING WEIGHT: 47,000 LBS

FOR VESSEL INFORMATION SEE DRAWING # CP-5K-G-GA-001
FOR P&ID SEE DRAWING # CP-5K-G-PL-001

RELEASED FOR FABRICATION

REVISION HISTORY			
REV	DESCRIPTION	BY	DATE

PROJECT
CP-5K-6
(SYSTEM)

PROJ. NO.
PO. NO.

DRAWN BY	JB
DESIGN BY	JB
CHECKED BY	BB
DATE	4/8/2019
SCALE	NTS

newterra TIGG
1555 Coraopolis Heights Road, Suite 4100 Coraopolis, PA, USA 15108 (724-703-3020) www.newterra.com

SYSTEM GENERAL ARRANGEMENT

CP-5K-6-GA-002

Appendix C – Part 3

AdEdge IX

	MANCHESTER, MD PFAS	
Well Site	**Carroll County**	**Notes**
Well Flow Rate	137	
CombinedPFAS Level	11.98	
FS200 or IX Vessel Diameter, 3 minute ECBCT, per vessel	60	
Number of Trains	1	
AdEdge Model	MODPfX-6060CS-2-LL-MVT	
Media Volume, ft3	**60**	
Fluorosorb Media	FS200	Chlorine tolerant, TOC tolerant, can be backwashed.
Start Up BW Waste Volume, gallons	10603	
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FS200 Sytem Budgetary Price	$ 175,000.00	
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AdEdge GAC Model	MODGAC-8496CS-2-LL-MVT	
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Media Volume per vessel, ft3	185	
Start Up BW Waste Volume, gallons	41562	
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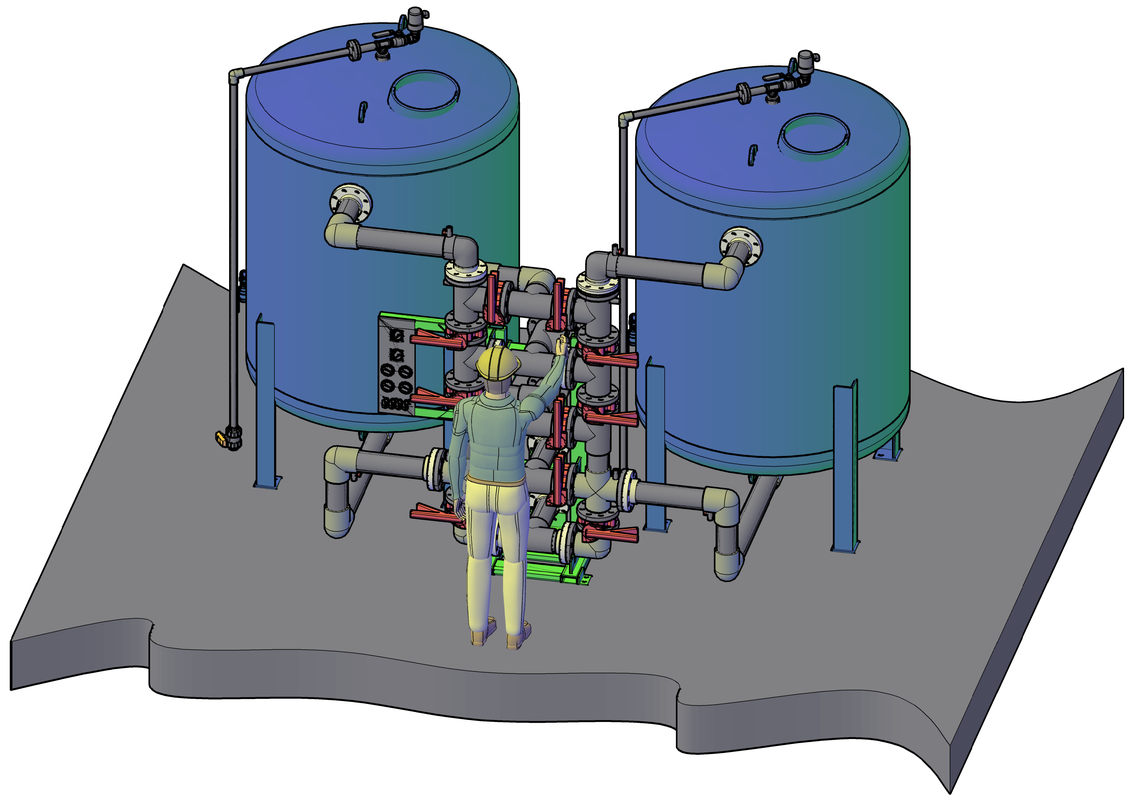
MODPFx-6060CS-2-MVT-LL

ADEDGE TREATMENT SYSTEM



AdEdge water technologies tm

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CONTRACTOR: ---

SHEET INDEX

DRAWING NO.	TITLE	SHEET NO.

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

MODEL: ADEDGE MODULAR PFAS TREATMENT SYSTEM MODPFx-6060CS-2-MVT-LL

COSTUMER: TBD

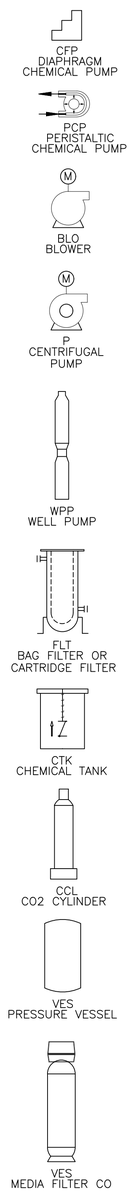
TITLE: COVER

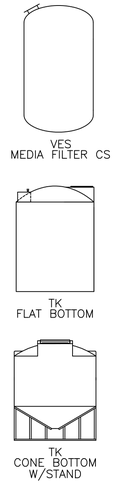
SALES DRAWING

- MAIN PROCESS LINE
- SECONDARY PROCESS LINE
- PIPING BY OTHER
- HYDRAULIC SIGNAL
- DISCRETE CONTROL SIGNAL
- PNEUMATIC SIGNAL
- POWER SUPPLY SIGNAL
- INSTRUMENT SUPPLY/CONNECTION TO PROCESS

TYPICAL SYMBOLS

- AIR RELEASE VALVE
- BALL VALVE (MANUAL / NORMALLY OPEN)
- BALL VALVE (MANUAL / NORMALLY CLOSED)
- BALL VALVE (ELECTRIC ACTUATED)
- BUTTERFLY VALVE (MANUAL)
- BUTTERFLY VALVE (ELECTRIC ACTIVATED)
- BUTTERFLY VALVE (PNEUMATIC ACTIVATED)
- CHECK VALVE
- CIRCUIT BALANCING VALVE (MANUAL)
- CROSSOVER VALVE
- DIAPHRAGM VALVE (MANUAL)
- GATE VALVE
- GLOBE VALVE
- NEEDLE OR TOGGLE VALVE (NORMALLY CLOSED)
- PILOT OPERATED DIAPHRAGM VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- SOLENOID CONTROL VALVE
- THREE-WAY VALVE (MANUAL)
- VACUUM RELIEF VALVE
- V-PORT BALL VALVE
- FLOAT LEVEL INDICATOR
- MAGNETIC FLOW METER
- TURBINE/IMPELLER FLOW METER
- VARIABLE AREA FLOW INDICATOR
- CORPORATION STOP
- STATIC MIXER
- PIPE REDUCER
- UNION
- DRAIN
- FLEXIBLE TUBING/HOSE
- ORIFICE PLATE
- CAMLOCK
- EXPANSION JOINT





TYPICAL NOMENCLATURE	
TAG	DESCRIPTION
ARV	AIR RELEASE VALVE
AS	AIR STRIPPER
AE	ANALYTICAL SENSOR
AIT	ANALYTICAL TRANSMITTER
BFV	BUTTERFLY VALVE
BHF	BULKHEAD FITTING
BLO	BLOWER
BLV	BALL VALVE
CBV	CIRCUIT BALANCING VALVE
TK	CONE BOTTOM TANK
CCL	CO/2 CYLINDER
CFP	CHEMICAL FEED PUMP
CKV	CHECK VALVE
CT	CONTACTOR
CST	CORPORATION STOP
TK	CHEMICAL STORAGE TANK
DBL	DEBUBBLER
DMV	DIAPHRAGM VALVE
TK	CHEMICAL DAY TANK
EDC	EDUCATOR/EJECTOR (CHEMICAL DRAW)
TK	FLAT BOTTOM TANK
FCP	FILTER CONTROL PANEL
FCV	FLOW CONTROL VALVE
FG	SIGHT GLASS (PVC/STAINLESS)
FKV	FLECK VALVE
FE	FLOW ELEMENT
FI	FLOW INSTRUMENT
FIT	FLOW TRANSMITTER
FLT	BAG OR CARTRIDGE FILTER HOUSING
FM	FLOW METER
FQT	FLOW TOTALIZING TRANSMITTER
GAV	GATE VALVE
GLV	GLOBE VALVE
HET	HEATING ELEMENT
INJ	INJECTION ASSEMBLY
JP	JUNCTION PANEL
LCP	LOCAL CONTROL PANEL
LG	LEVEL VIEWING GAUGE
LIT	LEVEL INDICATION TRANSMITTER
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW LOL
LT	LEVEL TRANSMITTER
MCP	MASTER CONTROL PANEL
MEL	MEMBRANE ELEMENT
VES	MEDIA FILTER COMPOSITE VESSEL
VES	MEDIA FILTER CARBON STEEL VESSEL
MIX	STATIC MIXER
OF	ORIFICE PLATE
CP	PERISTALTIC CHEMICAL PUMP
PDIS	PRESSURE DIFFERENTIAL INDICATING SWITCH
PI	PRESSURE INDICATION (LOCAL READING)
PIT	PRESSURE INDICATING SENSOR
P	PUMP
PDV	PRESSURE REDUCING VALVE
PRV	PRESSURE RELIEF VALVE
PSV	PRESSURE SUSTAINING VALVE
PT	**PRESSURE TRANSDUCER**
PVL	**PRESSURE VESSEL**
PSL	**PRESSURE SWITCH LOW**
RP	**RELAY PANEL**
SLV	**SOLENOID VALVE**
SPV	**SAMPLE VALVE**

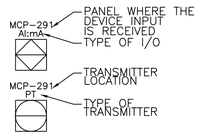
LOCATION / ACCESSIBILITY	DISCRETE SYMBOL	SHARED DISPLAY & CONTROL (DCS)	PROGRAM-ABLE LOGIC CONTROLLER	DISCRETE HARDWARE INTERLOCK
FIELD MOUNTED 1)FIELD OR LOCALLY MOUNTED 2)ACCESSIBLE TO AN OPERATOR AT THE DEVICE	○	▢	◇	◇
PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR 1)CENTRAL OR MAIN CONTROL ROOM 2)FRONT OF MAIN PANEL OR CONSOLE MOUNTED 3)VISIBLE ON VIDEO DISPLAY 4)ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE	⊖	⊖	◇	
PRIMARY LOCATION NORMALLY INACCESSIBLE TO OPERATOR 1)CENTRAL OR MAIN CONTROL ROOM 2)REAR OF PANEL OR CABINET MOUNTED 3)NOT VISIBLE ON VIDEO DISPLAY 4)INACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE	⊖	⊖	◇	
AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR 1)SECONDARY OR LOCAL CONTROL ROOM 2)FIELD OR LOCAL CONTROL PANEL 3)FRONT OF SECONDARY OR LOCAL PANEL MOUNTED 4)VISIBLE ON VIDEO DISPLAY 5)ACCESSIBLE TO OPERATOR AT DEVICE OR CONSOLE	⊖	⊖	◇	
AUXILIARY LOCATION NORMALLY INACCESSIBLE TO OPERATOR 1)SECONDARY OR LOCAL CONTROL ROOM 2)FIELD OR LOCAL CONTROL PANEL 3)REAR OF SECONDARY/LOCAL OR CABINET PANEL MOUNTED 4)NOT VISIBLE ON VIDEO DISPLAY 5)NOT ACCESSIBLE TO OPERATOR AT DEVICE OR CONSOLE	⊖	⊖	◇	

TYPICAL TRANSMITTER NOMENCLATURE AND TRANSMITTER LOCATION ARE AS FOLLOWS:

IF THE TRANSMITTER IS CONTROL PANEL MOUNTED THE PANEL TAG NUMBER WILL BE PROVIDED (E.G. MCP-291); IF THE TRANSMITTER IS LOCALLY MOUNTED ON THE SENSOR, THE DESIGNATION "LOCAL" WILL BE PROVIDED. IF THE TRANSMITTER IS MOUNTED ON A LOW FLOW PANEL THEN THE TAG WILL BE PROVIDED (E.G. LFP-375).

TYPICAL PANEL I/O NOMENCLATURE

AI ANALOG INPUT (E.G. mA OR mV)
AO ANALOG OUTPUT (E.G. mA OR mV)
DI DIGITAL INPUT (E.G. NS OR HSI)
NS NORMAL SPEED; SINGLE CONTACT CLOSURE
HSI HIGH SPEED INPUT; MULTIPLE CONTACT CLOSURES
DO DIGITAL OUTPUT
1) RELAY FOR VALVE OR PUMP ON/OFF CONTROL
2) PULSE FOR DOSING PUMP AND FLOW CONTROL
SI DATA OR SCADA INPUT (E.G. MODBUS OR EIP)
SO DATA OR SCADA OUTPUT (E.G. MODBUS OR EIP)



SALES DRAWING

AdEdge water technologies
2055 Boggs Road
Duluth, GA 30096
P. 678-835-0052 F. 678-835-0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:
A	–	–
B	–	–
C	–	–
D	–	–
E	–	–
F	–	–
G	–	–

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODPFx-6060CS-2-MVT-LL

COSTUMER:
TBD

TITLE:
GENERAL NOTES

DRAWING NUMBER:
G-001

SHEET:
1 OF 4

DESCRIPTION:

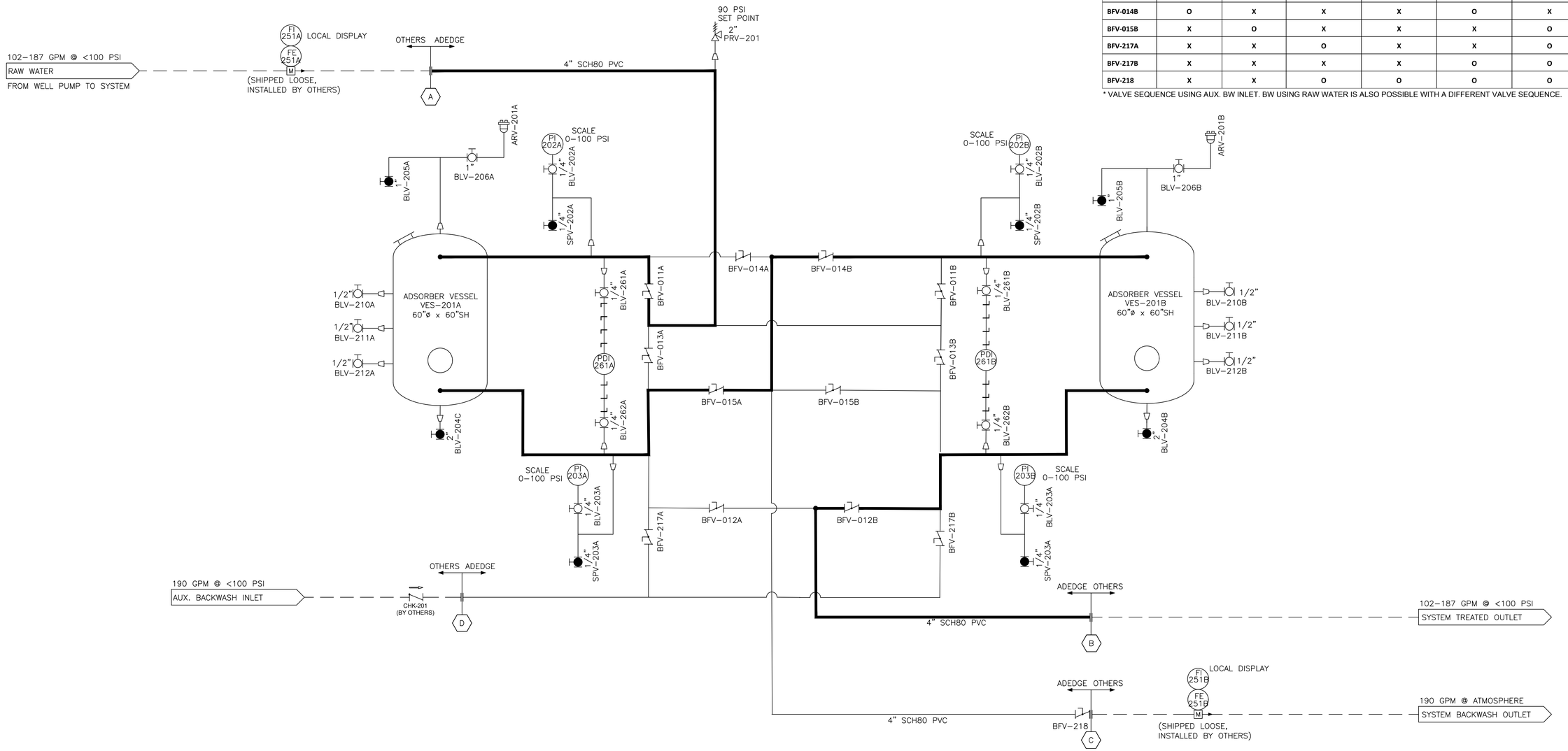
1. SYSTEM MODEL: MODPFX-6060CS-2-MVT-LL
2. MEDIA: FS200
3. CONTROL VALVES: 4" BRAY LUG STYLE MANUAL BUTTERFLY VALVES
4. VESSELS: TWO (2) 60" DIAMETER X 60" SIDESHELL
5. MAXIMUM ALLOWABLE WORKING PRESSURE: 100 PSI MAX

OPERATING CONDITIONS:

1. FLOW CONFIGURATION: SERIES/LEAD-LAG
2. SERVICE FLOW RATE: 102-187 GPM
3. TYPICAL OPERATING PRESSURE: <100 PSI

	Vessel A Lead, Vessel B Lag	Vessel B Lead, Vessel A Lag	Vessel A in BW*, Vessel B in service	Vessel A in Rinse, Vessel B in service	Vessel B in BW*, Vessel A in service	Vessel B in Rinse, Vessel A in service
BFV-011A	O	X	X	O	O	O
BFV-012A	X	O	X	X	O	O
BFV-013A	X	X	X	X	X	X
BFV-014A	X	O	O	X	X	X
BFV-015A	O	X	X	O	X	X
BFV-011B	X	O	O	O	X	O
BFV-012B	O	X	O	O	X	X
BFV-013B	X	X	X	X	X	X
BFV-014B	O	X	X	X	O	X
BFV-015B	X	O	X	X	X	O
BFV-217A	X	X	O	X	X	O
BFV-217B	X	X	X	X	O	O
BFV-218	X	X	O	O	O	O

* VALVE SEQUENCE USING AUX. BW INLET. BW USING RAW WATER IS ALSO POSSIBLE WITH A DIFFERENT VALVE SEQUENCE.



SALES DRAWING

AdEdge water technologies
2055 Boggs Road
Duluth, GA 30096
P. 678-835-0052 F. 678-835-0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:
A	SYSTEM RAW WATER INLET	4" 150# SCH80 FLANGE
B	SYSTEM TREATED OUTLET	4" 150# SCH80 FLANGE
C	SYSTEM BACKWASH OUTLET	4" BUTTERFLY VALVE
D	AUX. BACKWASH INLET	4" 150# SCH80 FLANGE

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

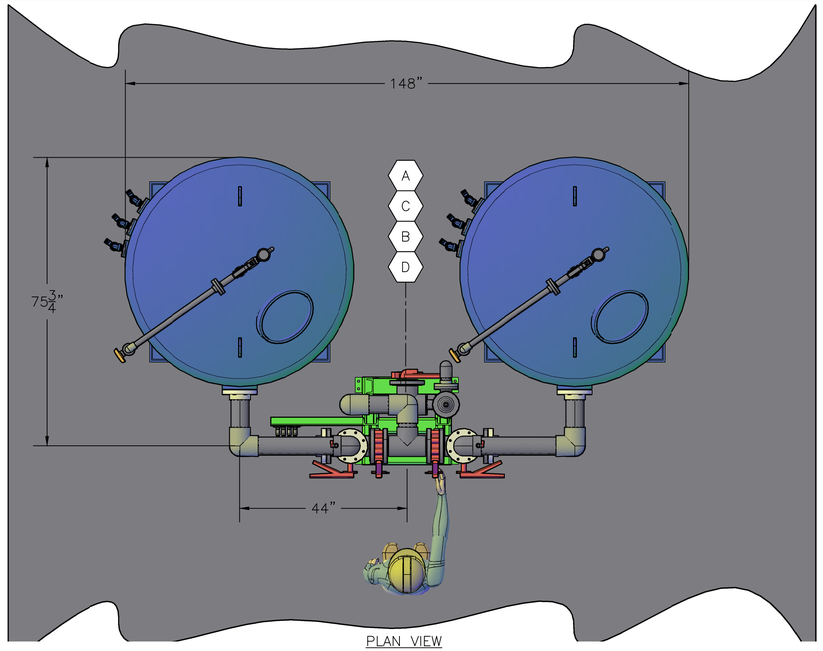
MODEL: ADEDGE MODULAR PFAS TREATMENT SYSTEM MODPFx-6060CS-2-MVT-LL

COSTUMER: TBD

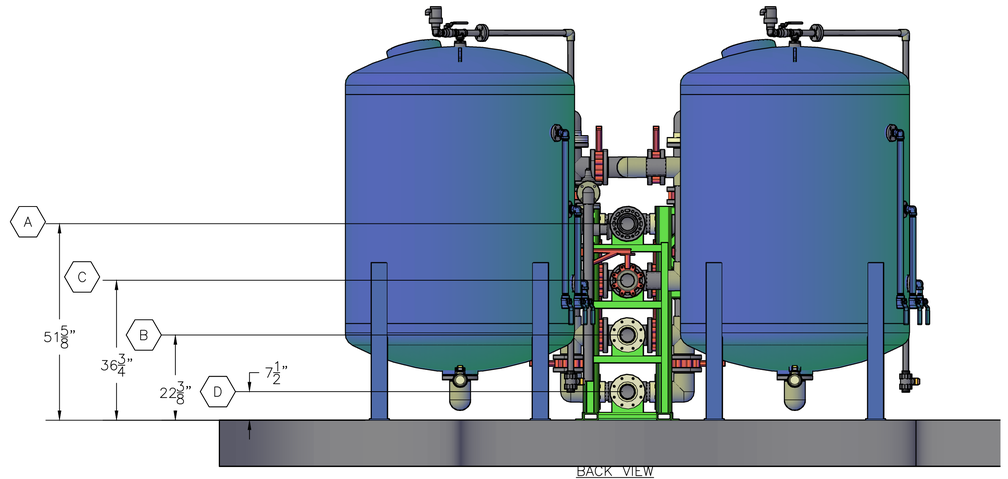
TITLE: TREATMENT SYSTEM

DRAWING NUMBER: P-001

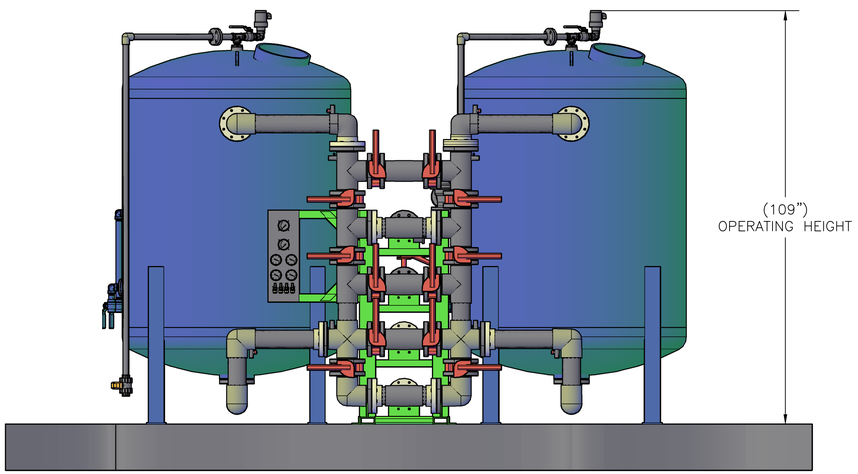
SHEET: 2 OF 4



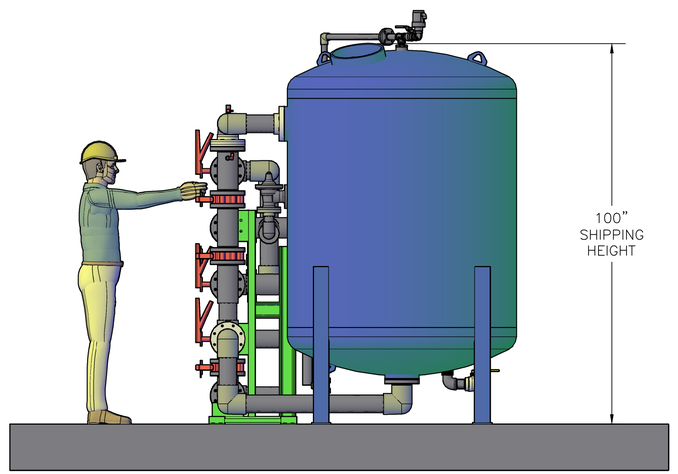
PLAN VIEW



BACK VIEW



FRONT VIEW



RIGHT SIDE VIEW

SALES DRAWING

AdEdge water technologies
2055 Boggs Road
Duluth, GA 30096
P. 678-835-0052 F. 678-835-0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:
A	SYSTEM RAW WATER INLET	4” 150# SCH80 PVC FLANGE
B	SYSTEM TREATED OUTLET	4” 150# SCH80 PVC FLANGE
C	SYSTEM BACKWASH OUTLET	4” BUTTERFLY VALVE FLANGE
D	AUX. BACKWASH INLET	4” 150# SCH80 PVC FLANGE

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:
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DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD-0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODPFx-6060CS-2-MVT-LL

COSTUMER:
TBD

TITLE:
SALES GENERAL ARRANGEMENT

DRAWING NUMBER:
M-001

SHEET:
3 OF 4

DIMENSIONAL NOTES:

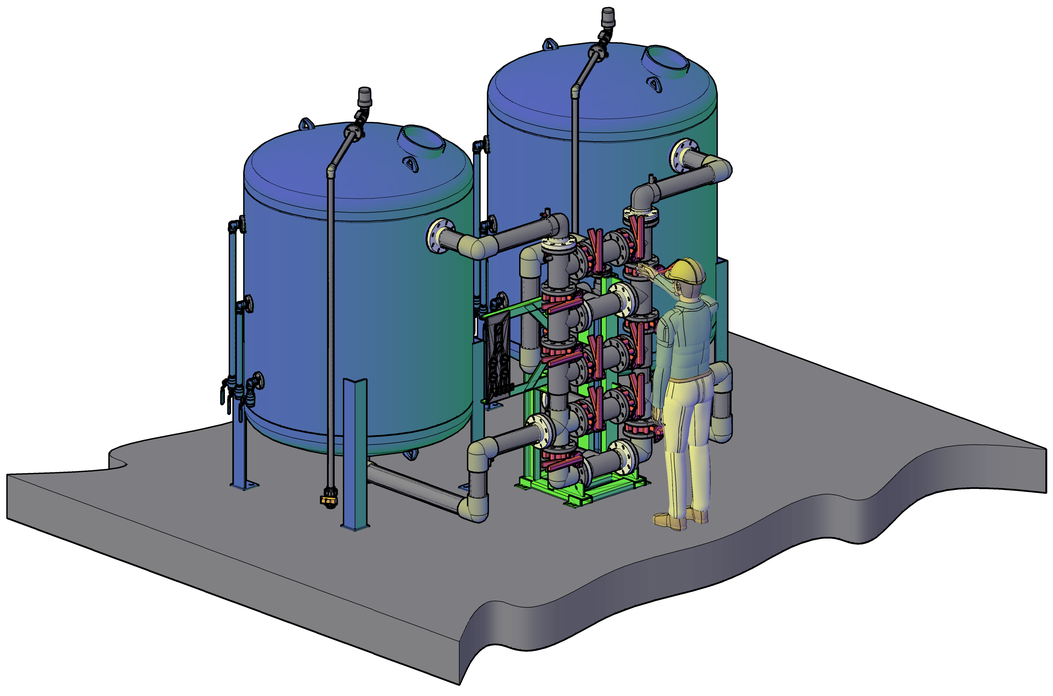
1. ALL DIMENSIONS ARE +/− 2".
2. DO NOT SCALE DRAWING. REFER TO ADEDGE ENGINEERING DEPT FOR ALL DIMENSIONS
3. (##): REFERENCE DIMENSION

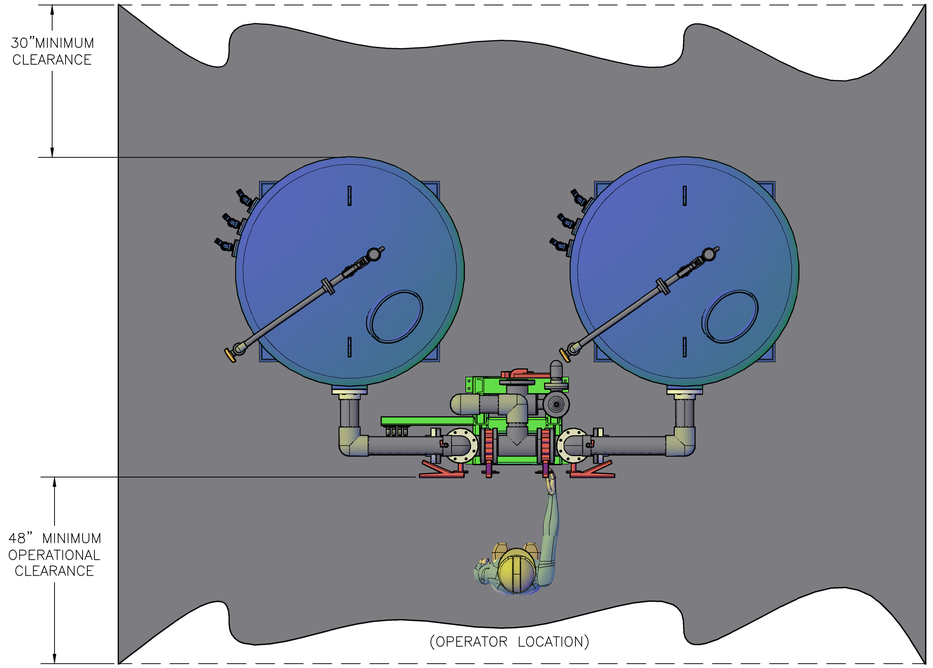
GENERAL SYSTEM SPECIFICATIONS:

1. SCH80 PVC INLET/OUTLET WITH FLANGED TIE POINTS
2. SCH80 PVC VALVE TREE PIPING
3. LUG−STYLE BUTTERFLY VALVES WITH MANUEL OPERATOR ON VALVE TREE
4. LUG−STYLE BUTTERFLY VALVE WITH MANUAL OPERATOR FOR BACKWASH OUTLET
5. 304SS HYDRAULIC PANEL WITH DP GAUGE FOR EACH VESSEL.
6. PRESSURE GAUGES AND SAMPLE VALVES ON EACH VESSEL'S INLET AND OUTLET

SYSTEM WEIGHT:

1. APPROXIMATE SHIPPING WEIGHT:





PLAN VIEW
FRONT AND BACK CLEARANCE

SALES DRAWING

AdEdge water technologies tm
2055 Boggs Road
Duluth, GA 30096
P. 678−835−0052 F. 678−835−0057
www. adedgetechnologies.com

TP.	SERVICE CONNECTIONS:	TYPE/MATERIAL:

REV. #	DATE:	BY:	APPROVED BY:	REVISION DESCRIPTION:
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DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT #:	DATE:	SCALE:
MC	CN	GG	TBD−0000	12/15/21	NTS

MODEL:
ADEDGE MODULAR
PFAS TREATMENT SYSTEM
MODPFx−6060CS−2−MVT−LL

COSTUMER:
TBD

TITLE:
SALES GENERAL ARRANGEMENT

DRAWING NUMBER: M−002

SHEET: 4 OF 4

Appendix C – Part 4

Newterra IX

Date: 30-Nov-23

Customer: GMB
Contact: Bradley Hogan
Phone: 410.329.5005
Email: BHogan@gmbnet.com
Location: Sparks, MD
Project Title: Town of Manchester

Budget Estimate - IXR Option

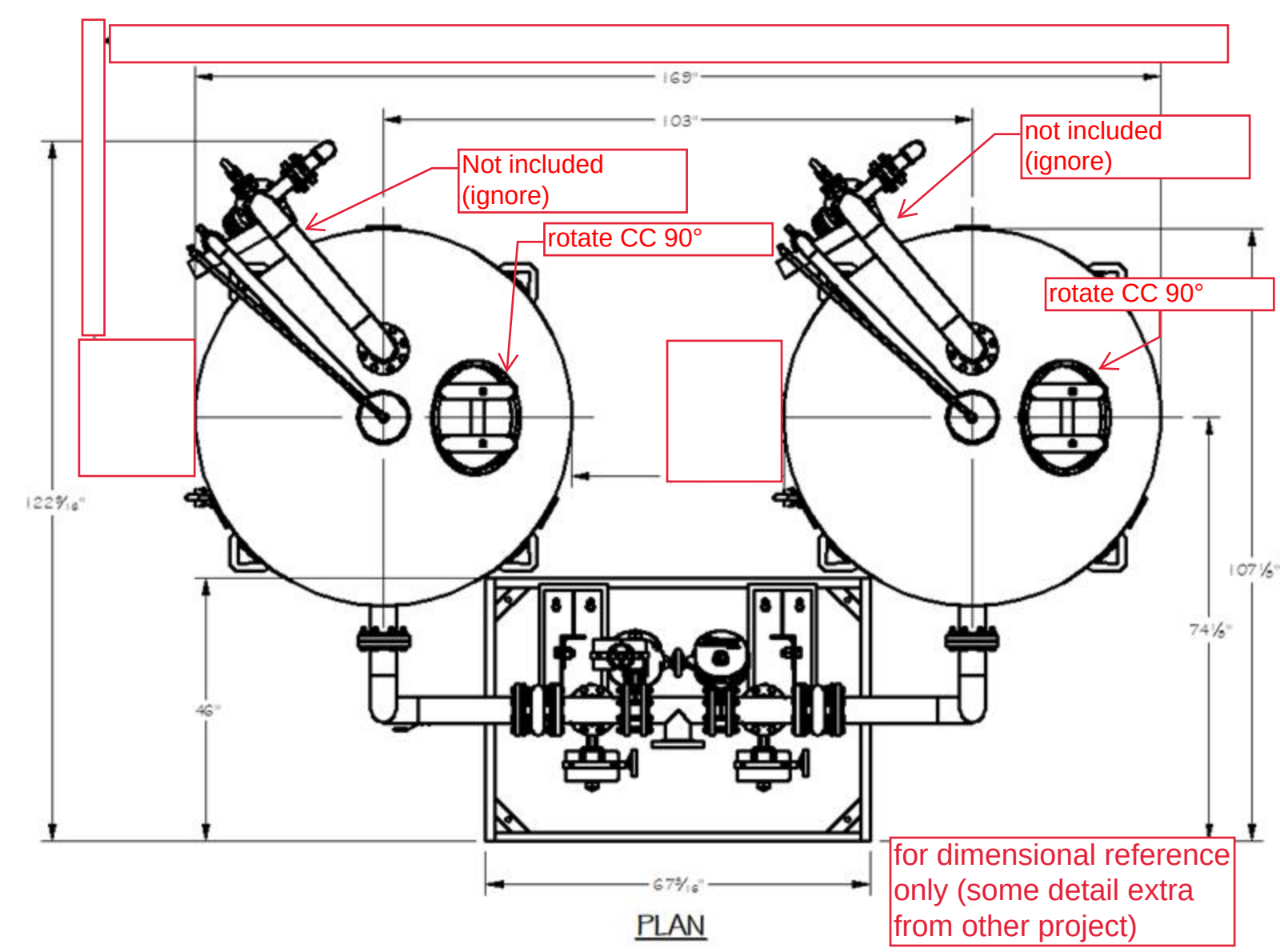
Item	Description	Total Price
A	One (1) CP-3000 Custom IXR System including: * Two 125 psi ASME Code Vessels; * 4" valve rack with interconnecting piping to make a complete system capable of operation in series lead-lag fashion, ability to isolate one vessel while other in operation, and independent backwash; * Each vessel supplied with 60 CF R110 PFAS specific resin, 120 CF per system	$195,900
B	Delivery	Included
C	Startup and Training	Included
	Total, USD Delivered	$195,900

Payment Terms: Milestones with invoices due net 30 days
Validity: Budget Estimate
Availability: TBD
Terms & Conditions: See Attached

Rep Contact: Sherwood-Logan
Newterra Ref: RSM

Prepared by: John Sherbondy

1555 Coraopolis Heights Road, Suite 4100
Coraopolis, PA 15108
(724) 703-3020 Phone
(724) 703-3026 Facsimile


169"
103"
Not included (ignore)
not included (ignore)
rotate CC 90°
rotate CC 90°
122 9/16"
46"
107 1/8"
74 1/8"
67 5/16"
PLAN
for dimensional reference only (some detail extra from other project)

Appendix C – Part 5

Fe/Mn Treatment

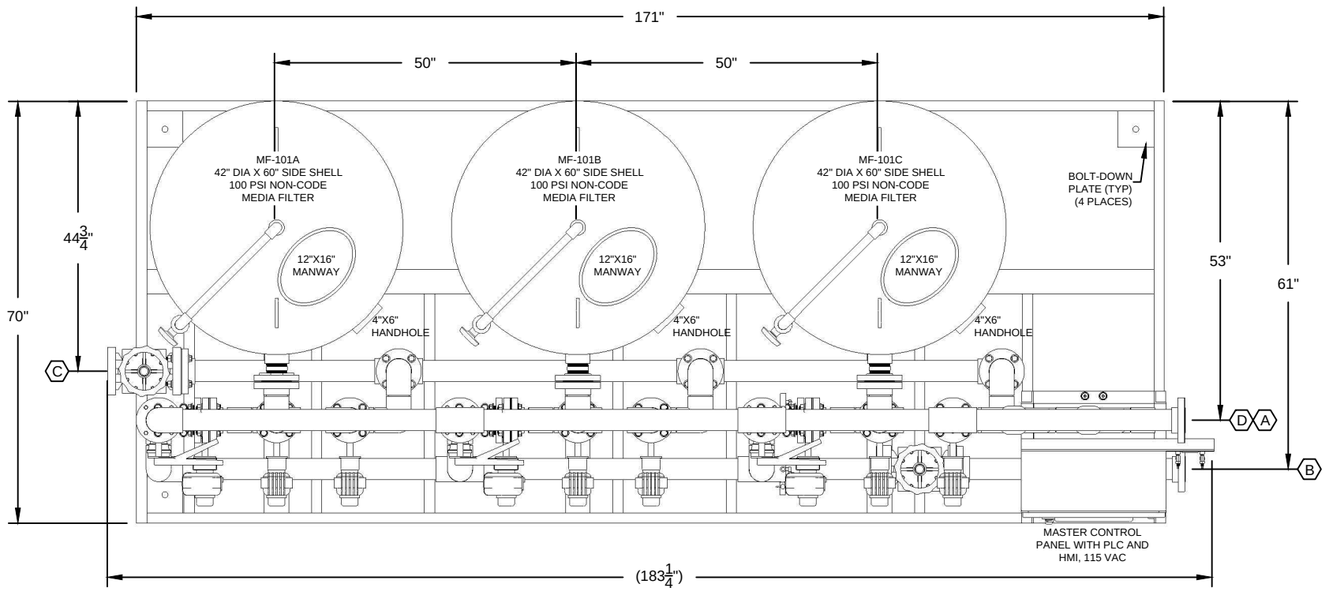
5/17/2024

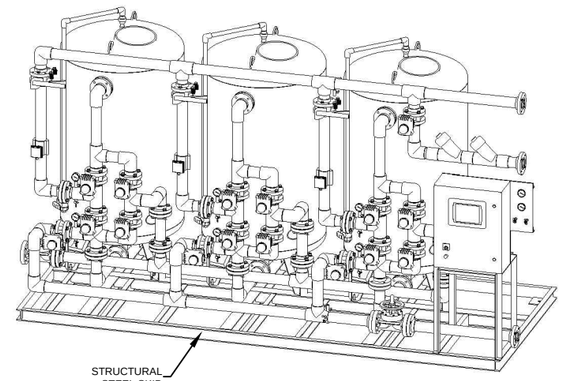
Preliminary System Sizing Calculations

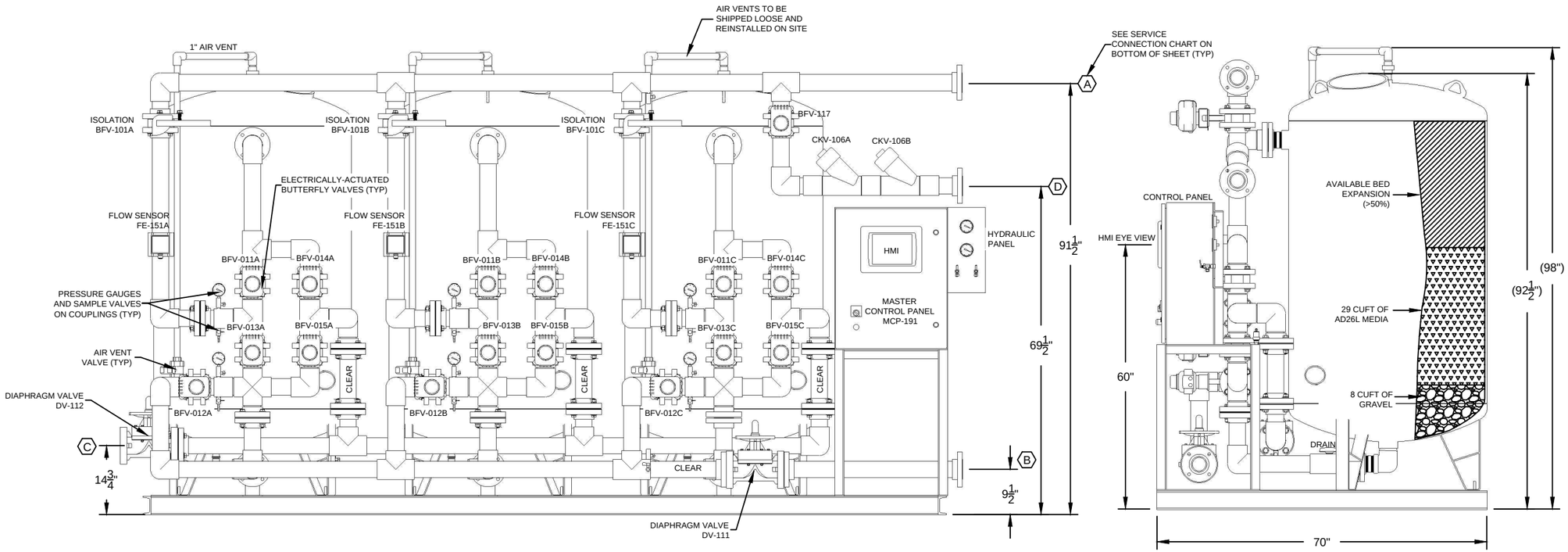
Manchester, MD

Scenario 1	Scenario 2	
APU26	APU26	System Type
AVH	AVH	Valve Harness Type
AD26L	**AD26L**	Media
64	**137**	Design Flow (gpm)
67,000	**67,000**	System Demand (gal/day)
73%	34%	Well Utilization
30	**42**	Vessel Diameter (in)
60	60	Vessel Side Shell Height (in)
CS	CS	Vessel Material
3	3	Number of Vessels - Total
4.35	**4.75**	Filtration Rate - All Vessels in Service (gpm/sqft)
6.5	7.1	Filtration Rate - One Vessel Offline (gpm/sqft)
17	17	Backwash Design Rate for Media (gpm/sqft)
85	**165**	Backwash Flow Rate (gpm)
8	8	total minutes of upflow BW (default 8)
2	2	total minutes of rinse (default 2)
10	**10**	Total Time of Backwash + Fast Rinse (min)
850	1,650	Backwash Waste per Vessel (gal)
2,550	**4,950**	Total Backwash Waste of System (gal)
2.1	2.1	Raw Iron Concentration (mg/L)
0	0	Added Iron Concentration for Coagulation (mg/L, if used)
0	0	Raw H2S Concentration (mg/L)
0.25	0.25	Raw Manganese Concentration (mg/L)
87,124	**170,762**	Estimated Throughput until Backwash (gal)
1.3	2.5	Estimated Time (24hr Days) until Backwash based on Utilization

FOR REFERENCE ONLY







REV #	DATE	REVISIONS
1	-	-

AdEdge water technologies
5152 Belle Wood Court
Buford, GA 30519
P. 678-835-0052 F. 678-835-0057
www.adedgetechnologies.com

TP	SERVICE CONNECTIONS	TYPE / MATERIAL
A	SYSTEM RAW WATER INLET	3" FLANGE, SCH80 PVC
B	SYSTEM TREATED OUTLET	3" FLANGE, SCH80 PVC
C	SYSTEM BACKWASH OUTLET	3" FLANGE, SCH80 PVC
D	AUXILIARY BACKWASH INLET	3" FLANGE, SCH80 PVC

Title: GENERAL ARRANGEMENT

IRON AND MANGANESE TREATMENT SYSTEM
MODEL: APU26-4260CS-3-AVH

Designed by	Checked by	Approved by	Project	Date	Scale
					NTS

Customer GENERAL ARRANGEMENT

Dwg. File	Rev. Date	Rev.No	Sheet
	-	-	1 OF 1