

HUNGERFORD & TERRY, INC.

Manufacturers of Water Treating Equipment
226 Atlantic Avenue
Clayton, NJ 08312-0650
Phone (856) 881-3200 Fax (856) 881-6859

DOCUMENT TRANSMITTAL

URGENT ATTENTION REQUIRED!

File No.: SUB_M345-04

To: Steckbeck Engineering & Surveying, Inc.
279 N. Zinns Mill Road
Lebanon, PA 17042

Date: April 2, 2024
Page: 1 of 1
H&T Contract No.: M-345

Attention: Paul Lutzkanin, PE, CSE
Email: plutzkanin@steckbeck.net

Job: Fredericksburg Sewer & Water Auth.
Fredericksburg, PA

We are:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Submitting for approval | <input type="checkbox"/> Sending as requested |
| <input type="checkbox"/> Resubmitting for approval | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Sending for your information | |

The following enclosed under separate cover

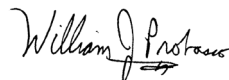
Format	Dwg. No.	Rev.	Title or Description
PDF	33552-A04	0	Piping Layout
	-A05	0	Piping Plan Views
	-A06	0	Air Blower Piping Layout
	-C04	0	Clip Location and Details
	-C05	0	Pressure Gauge Assembly
	-C06	0	Differential Pressure Switch Piping

Remarks:

- Please return to us, as soon as possible, one copy of each drawing with your approval and or comments noted.
- Fabrication is proceeding in accordance with these drawings.
- Fabrication is being held pending return of approved prints. Delay in returning drawings will extend the delivery schedule.
- Fabrication of major equipment is proceeding in accordance with these drawings.
- Minor Equipment is being held pending return of approved prints.

REPRESENTATIVE:

HUNGERFORD & TERRY, INC.



William J. Probasco
Chief Engineer

MECHANICAL DRAWINGS

**FOR: Fredericksburg Sewer & Water Authority
Fredericksburg, PA**

- REVIEWED REVISE AND RESUBMIT
 REJECTED FURNISH AS CORRECTED

Corrections or comments on shop drawings during this review do not relieve the Contractor from compliance with the drawings and/or specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The contractor is responsible for: confirming and correlating all dimensions and quantities; selecting fabrication processes and techniques of construction; coordinating his work with that or all other trades; and performing his work in a safe and satisfactory manner.

Date: April 4, 2024 By: Paul Lutzkanin, P.E.

STECKBECK ENGINEERING & SURVEYING, INC.



HUNGERFORD & TERRY, INC.

226 Atlantic Avenue
Clayton, New Jersey

Contract No.: **M-345**
Drawing Series No.: **33552**
Submitted: **April 2, 2024**

(4) 96" O.D. x 6'-0" STRAIGHT SHELL
GREENSANDPLUS FILTERS (100 PSI
WORKING PRESSURE) ASME CODE
CONSTRUCTION (SECTION VII) WITH STAMP

HARDWARE SIZING CHART (STN. STL. PIPE)

CONNECTION SIZE	CONNECTION TYPE	STUD SIZE	*MIN. LENGTH
2"	FLANGE-FLANGE	5/8"	3 1/2"
2"	FLANGE-PAD	5/8"	2 3/4"
2"	FLG-VALVE-FLG	5/8"	5 1/2"
2"	FLG-CHECK-FLG	5/8"	5 1/4"

HARDWARE SIZING CHART (PVC PIPE)

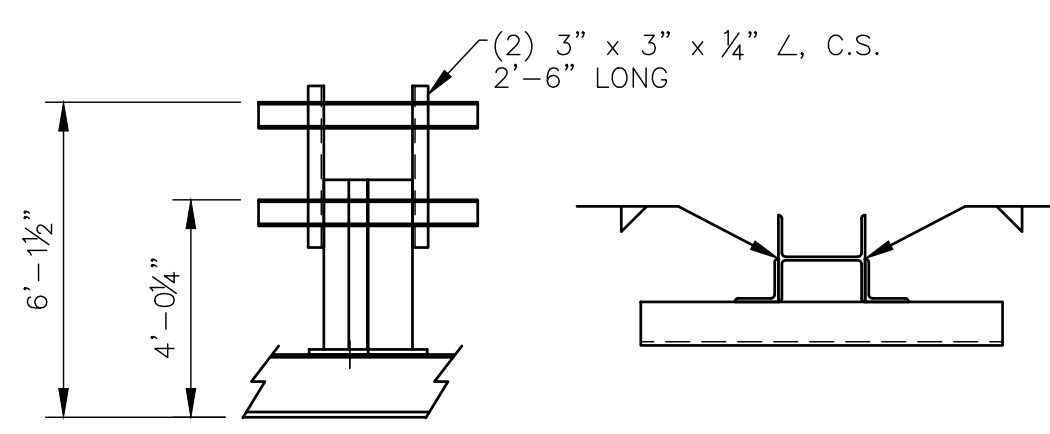
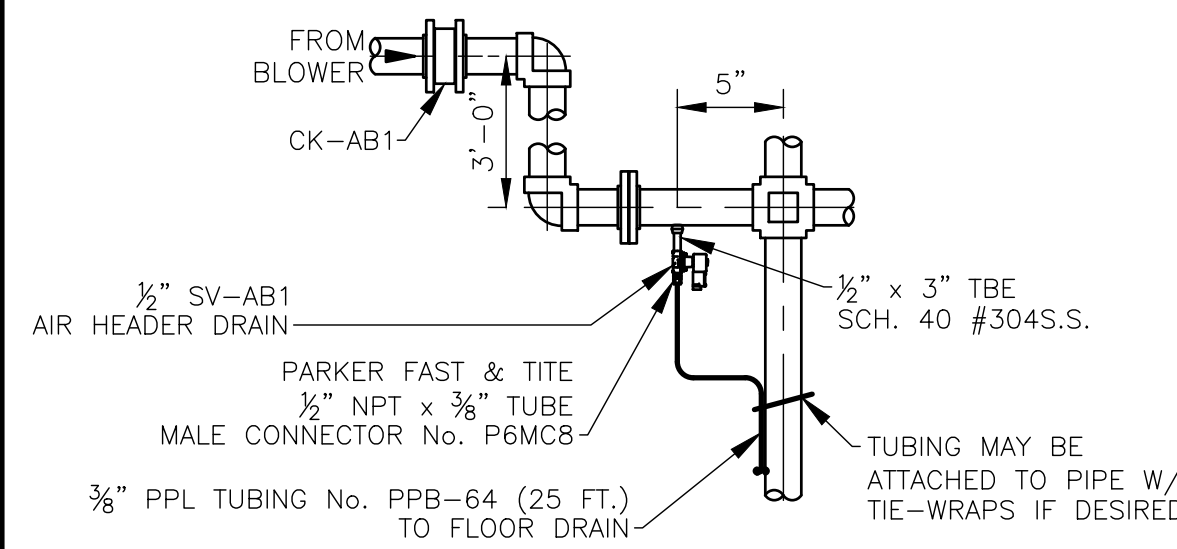
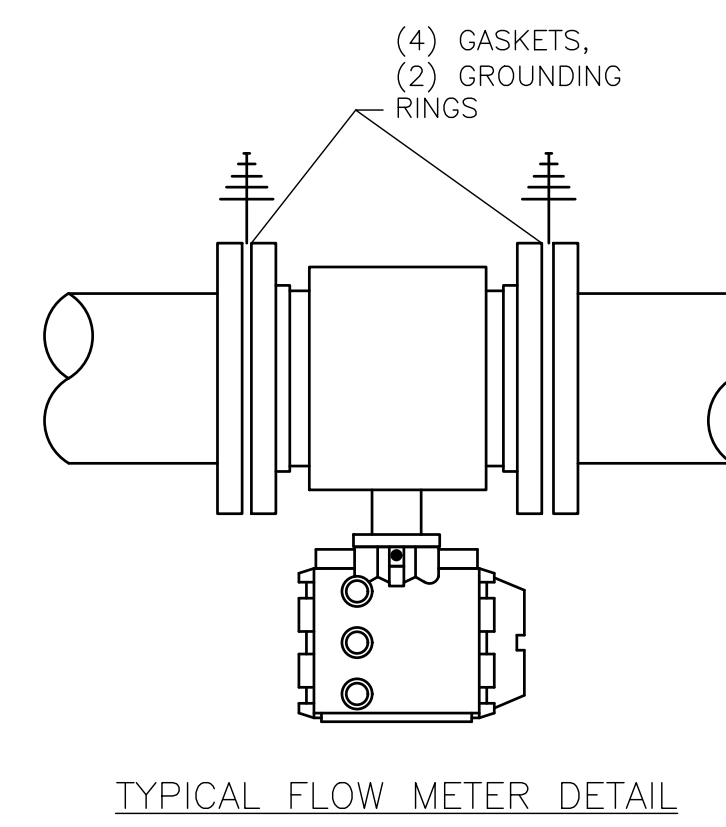
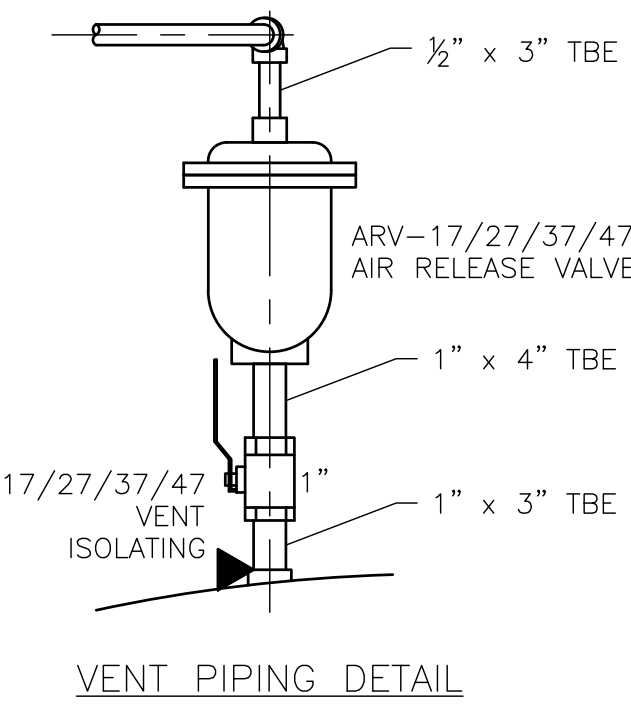
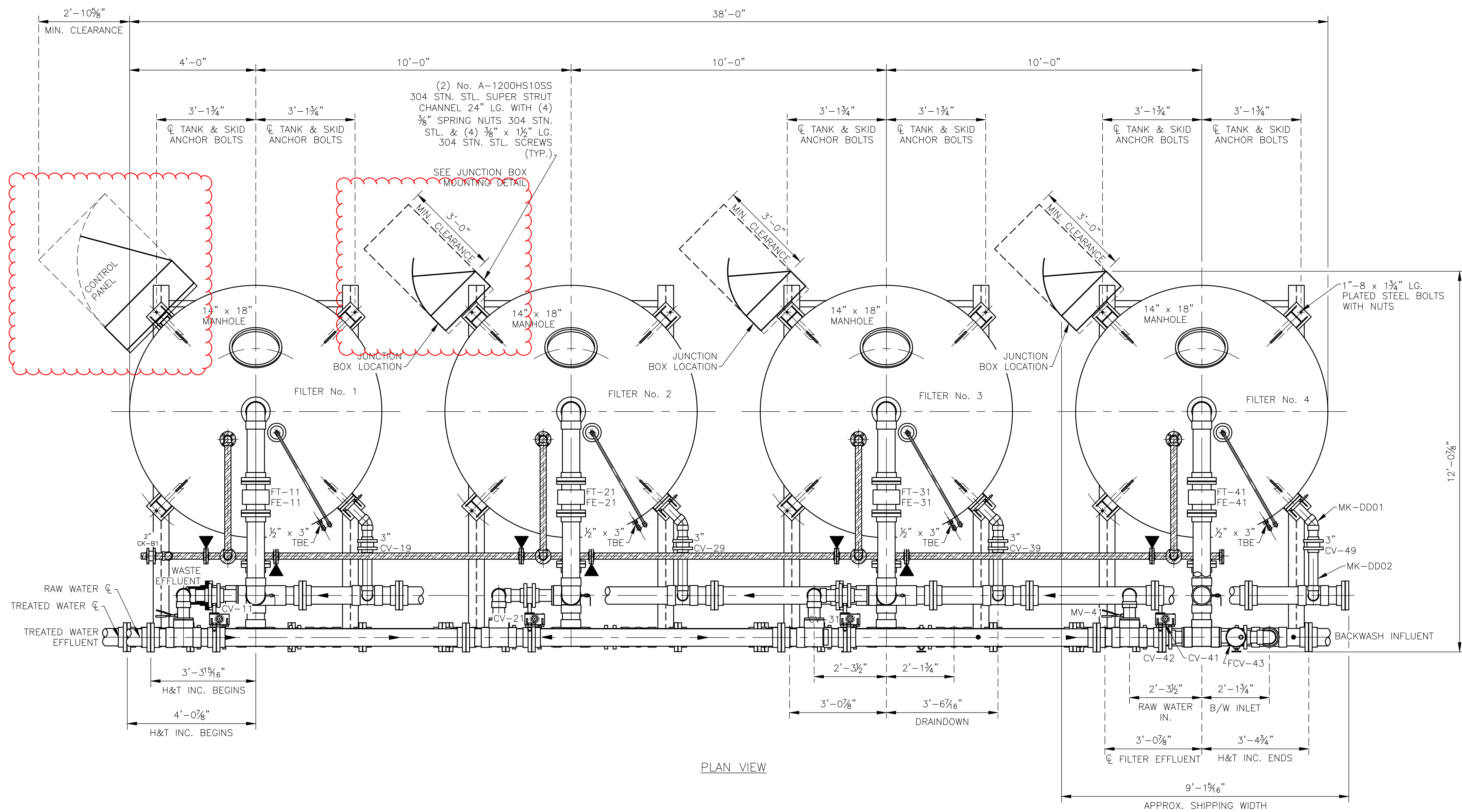
CONNECTION SIZE	CONNECTION TYPE	STUD SIZE	*MIN. LENGTH
6"	FLANGE-FLANGE	3/4"	5 1/4"
6"	FLG-VALVE-FLG	3/4"	7 1/4"
6"	FLG-METER-FLG	3/4"	5 1/4"
6"	FLANGE-PAD	3/4"	3 3/4"
4"	FLG-VALVE-FLG	5/8"	6 1/4"
3"	FLG-VALVE-FLG	5/8"	6"
3"	FLANGE-PAD	5/8"	2 3/4"
3"	FLG-FLG	5/8"	4 1/4"
2 1/2"	FLG-VALVE-FLG	5/8"	6"
2"	FLANGE-FLANGE	5/8"	4 1/4"

* NOTE: FOR STUDS WITH INSTRUMENT SUPPORTS, ADD 1/4" TO LENGTH.

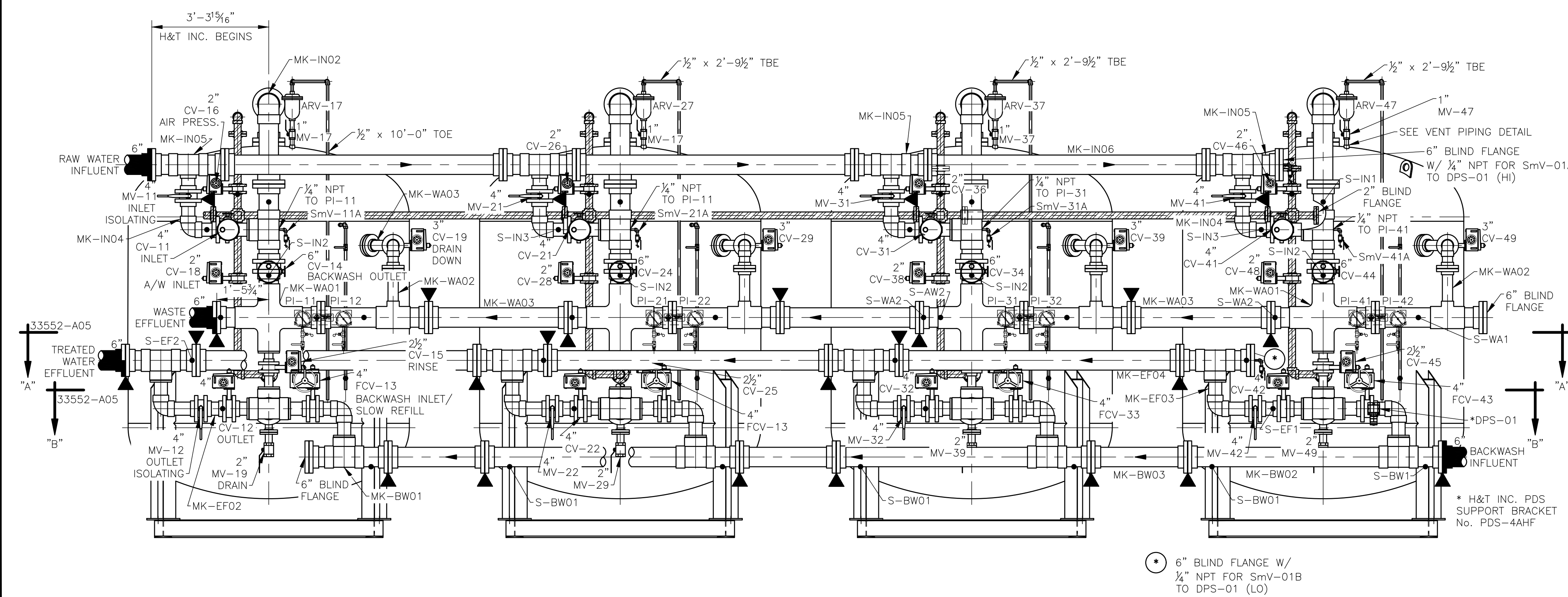
NOTES:

- PROCESS WATER PIPING IS PVC SCH. 80 WITH SCH. 80 SOCKET WELD FITTINGS & 150 LB. SOCKET WELD FLANGES FOR ALL FACE PIPING.
 - PROCESS AIR PIPING IS SCH. 40 #304L S.S. WITH SCH. 40 #304L S.S. SOCKET WELD RAISED FACE FLANGES AND SOCKET WELD FITTINGS EXCEPT AS NOTED.
 - VENT & SAMPLE PIPE IS SCH. 40 304L STAINLESS STEEL WITH 150 LB. THREADED FITTINGS.
 - ALL PROCESS WATER PIPING TO BE FURNISHED WITH REQ'D: BOLTS: ASTM A307 GRADE B PLATED CARBON STEEL. STUDS: ASTM F593 GRADE 8M 316 STAINLESS STEEL. NUTS: ASTM A563 OR A194 2H PLATED STEEL HEAVY DUTY HEX. WASHERS: PLATED STEEL FLAT (SAE). GASKETS: 1/2" THICK FULL RING EPDM OR EQUAL.
- ALL STAINLESS STEEL PIPING TO BE FURNISHED WITH REQ'D: BOLTS: ASTM F593 GRADE 8M 316 STAINLESS STEEL HEX HEAD. STUDS: ASTM F593 GRADE 8M 316 STAINLESS STEEL. NUTS: ASTM F593 GRADE 8M 316 STAINLESS STEEL. WASHERS: ASTM A193 STAINLESS STEEL FLAT WASHERS (SAE). GASKETS: 1/2" THICK FULL RING EPDM OR EQUAL.
- BUTTERFLY VALVES DO NOT REQUIRE GASKETS.
 - INTERCONNECTING PIPE SUPPORTS FURNISHED BY OTHERS.
 - SEE DWG. 33552-C01 FOR VALVE & EQUIPMENT LISTING.
 - SEE DWG. SK-33552-C07 FOR PRESSURE GAUGE TUBING DETAILS.
 - SEE DWG. SK-33552-C06 FOR "DPS-01" TUBING DETAILS.
 - SEE DWG. 33552-A05 FOR PROCESS WATER MK- DETAILS.
 - SEE DWG. 33552-B04 FOR PROCESS AIR MK- DETAILS.
 - SEE DWG. 33552-A06 FOR AIR BLOWER PIPING LAYOUT.

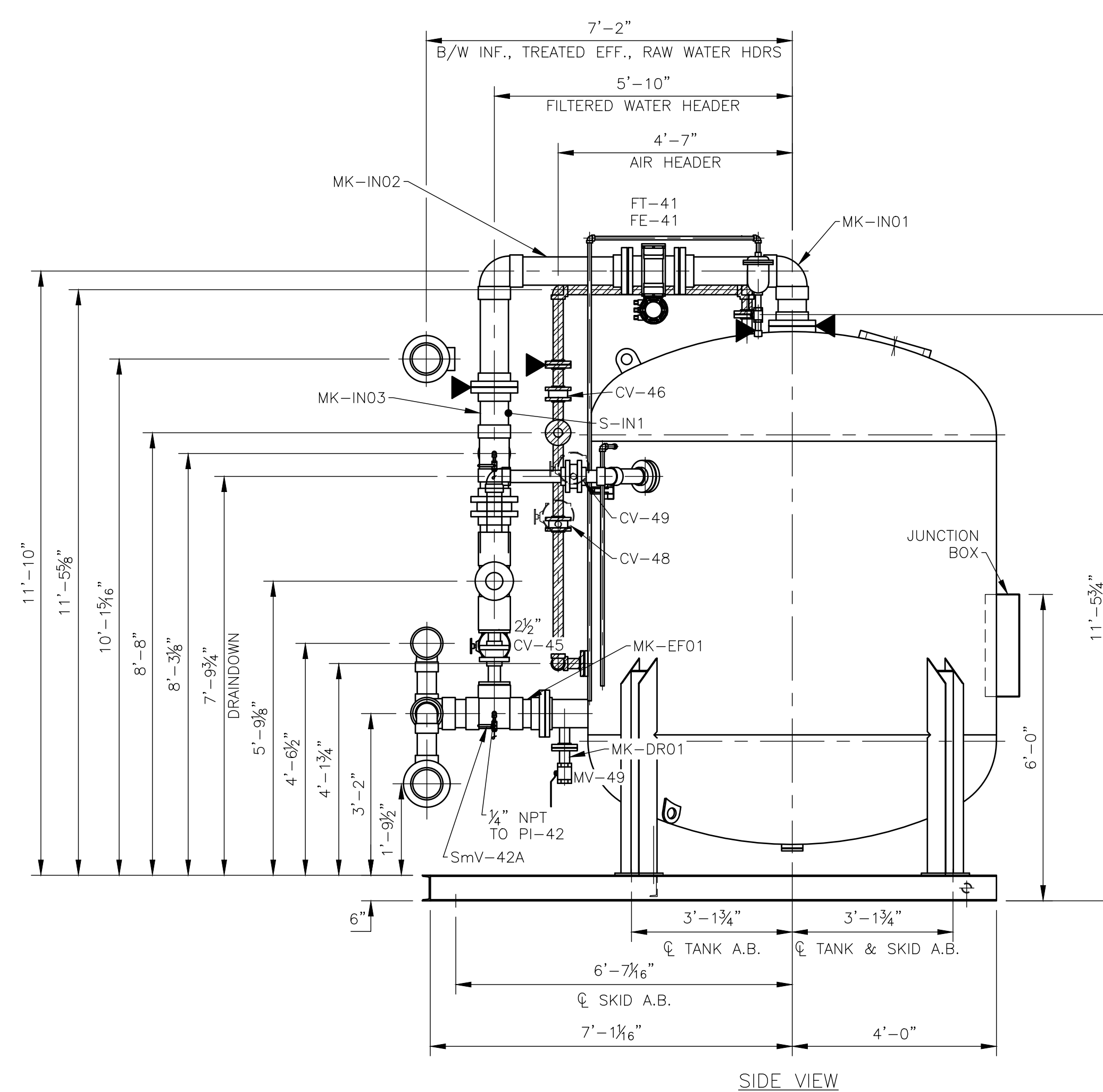
- SEE NOTE No. 1
SEE NOTE No. 2
PIPING BY OTHERS
INDICATES BREAK POINT FOR SHIPPING.
INDICATES PIPE SUPPORT LOCATION.
SKID SHIPPING WEIGHT:
SKID OPERATING WEIGHT:



JUNCTION BOX MOUNTING DETAILS



ELEVATION VIEW



SIDE VIEW

NO.	REVISIONS	DATE	CK'D

HUNGERFORD & TERRY, Inc.
 MANUFACTURERS OF WATER TREATING EQUIPMENT
 CLAYTON, NEW JERSEY
THIS DRAWING AND INFORMATION CONTAINED THEREON IS THE PROPERTY OF HUNGERFORD & TERRY, INC., AND MUST NOT BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY. THIS DRAWING MUST BE RETURNED AT THE REQUEST OF HUNGERFORD & TERRY, INC.

FREDERICKSBURG SEWER & WATER AUTHORITY
 FREDERICKSBURG, PA
96" O.D. GREENSANDPLUS FILTERS
 PIPING LAYOUT

DATE	12/28/23	GRV	SCALE	1/2" = 1'-0"
STARTED	3/28/24	GRV	FORM NO.	M-345
FINISHED	3/28/24	GRV	CONT. NO.	
CHECKED	3/28/24	BUP	DRAWING NO.	33552-A04
APPROVED			REV.	0

HUNGERFORD & TERRY, Inc.

CLAYTON, NEW JERSEY

MADE BY GRV
 DATE 3/29/24
 SCALE NONE
 CHECKED WJP
 APPROVED _____

TITLE CHANNEL & CLIP LOCATION SYSTEM

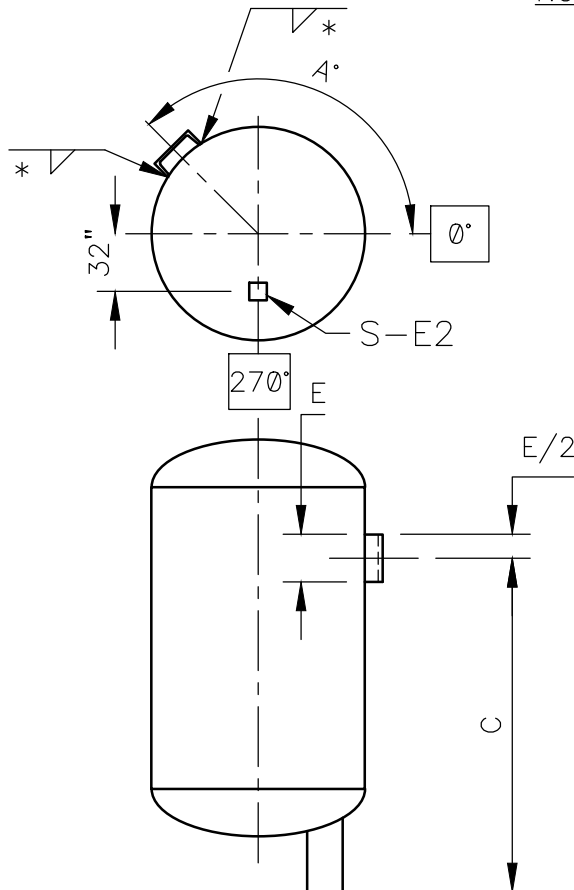
FORM No. TK-C38A

A	B	C	D	E	F	A	B	C	D	E	F
270°	226 $\frac{3}{16}$	106	C4	8	S-IN1						
270°	226 $\frac{3}{16}$	85 $\frac{1}{2}$	C4	4	S-IN2						
245°	205 $\frac{1}{4}$	99	C4	4	S-IN3						
252 $\frac{1}{2}$ °	211 $\frac{1}{2}$	38	C4	4	S-EF1						
239°	200 $\frac{1}{4}$	54 $\frac{1}{2}$	C4	4	S-EF2						
295°	247 $\frac{7}{8}$	69 $\frac{7}{8}$	C4	4	S-WA1						
250°	209 $\frac{7}{16}$	69 $\frac{7}{8}$	C6	6	S-WA2						
302°	253	90	C4	4	S-VT1						
302°	253	50	C4	4	S-VT2						
258°	216	111	C4	4	S-AW1						
239°	200 $\frac{1}{4}$	99	C4	4	S-E1						
270°	226 $\frac{3}{16}$	-	C4	4	S-E2						

TANK	DWG. NUMBER
No. 1 TO 4	33552-A02

TANK	DWG. NUMBER

NOTE: MASK CLIP/CHANNEL FACES BEFORE PAINTING



* CLIPS 7" AND LONGER SHALL BE 1-3 SKIP WELDED, ALL OTHERS SHALL BE CONTINUOUS WELDED. SIZE & LENGTH OF CHANNEL ARE GIVEN IN "D" & "E" BLOCKS AS EXPLAINED BELOW.

EXAMPLE: 48" DIA. TANK

A	B	C	D	E	F
120°	50.26"	96"	C4x5.4	4"	PS-1

- A - DEGREE COUNTER-CLOCKWISE FROM 0° FRONT CENTERLINE
- B - ARC LENGTH IN INCHES
- C - HEIGHT IN INCHES ABOVE BOTTOM OF TANK SUPPORT
- D - CHANNEL OR CLIP SIZE (C4 = C4x5.4, C6 = C6x8.2)
- E - LENGTH OF CHANNEL IN INCHES
- F - PIPE SUPPORT No. "S-"

						SK 33552-C04
NO.	REVISIONS	DATE	CK'D	CONT. No. <u>M-345</u>		

FORM No. TK-C38A

HUNGERFORD & TERRY, Inc.

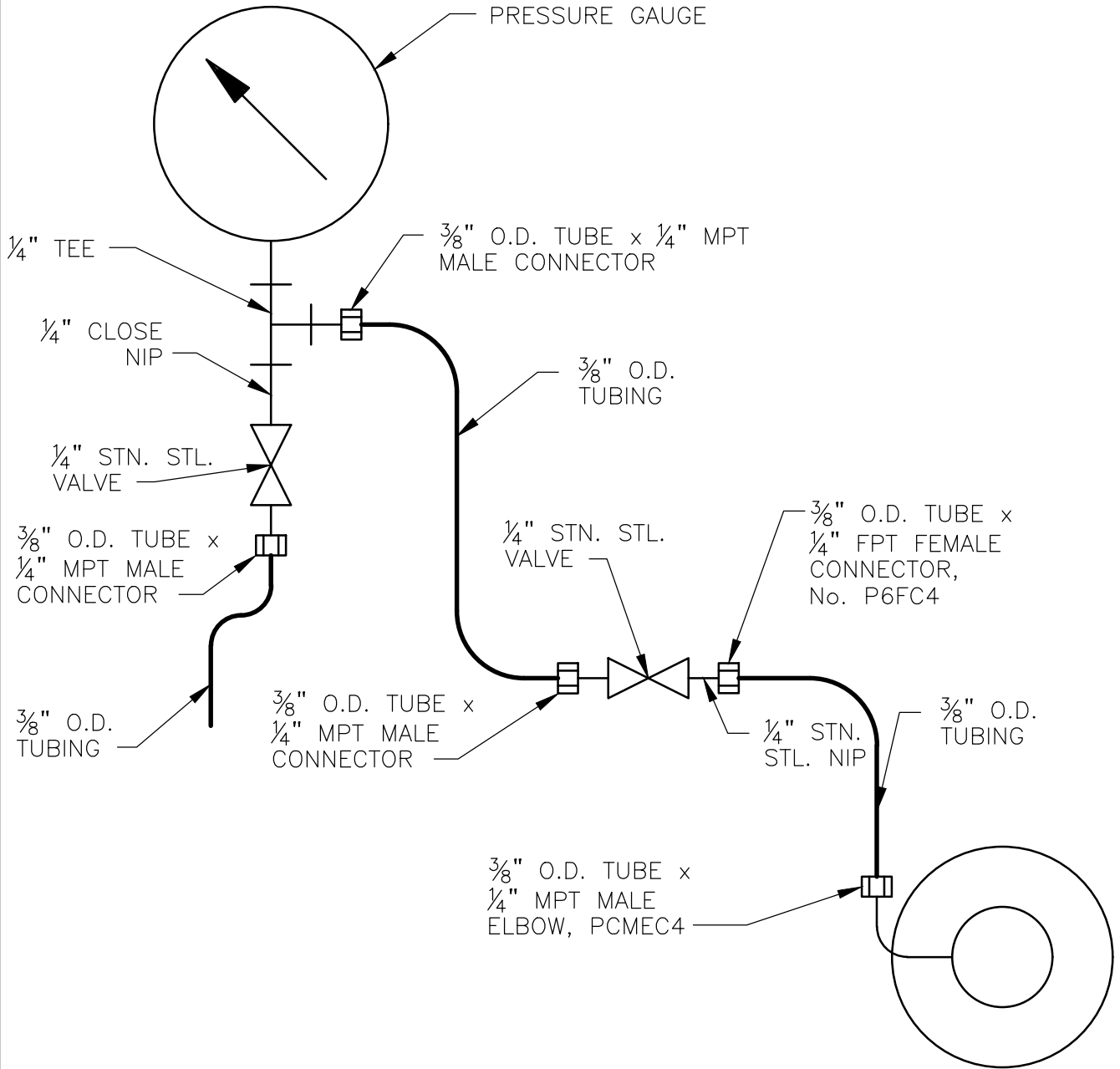
CLAYTON, NEW JERSEY

MADE BY GRV
 DATE 3/29/24
 SCALE NONE
 CHECKED WJP
 APPROVED 3/28/24

TITLE PRESSURE GAUGE ASSEMBLY

FORM No. PG-3PPL

PI-11 & PI-12
 PI-21 & PI-22
 PI-31 & PI-32
 PI-41 & PI-42



PIPE: SCH. 40 STN. STL. UNLESS NOTED OTHERWISE

FITTINGS: 150 LB. THREADED STN. STL.

TUBING: $\frac{3}{8}$ " O.D. BLACK POLYPROPYLENE, No. PPB-64 OR EQUAL

TUBING FITTINGS: PARKER FAST & TITE BLACK POLYPROPYLENE OR EQUAL

VALVES: SEE DWG. SK-33552-C01, SmV

FORM No. PG-3PPL

			SK 33552-C05
NO.	REVISIONS	DATE	CK'D
			CONT. No. M-345

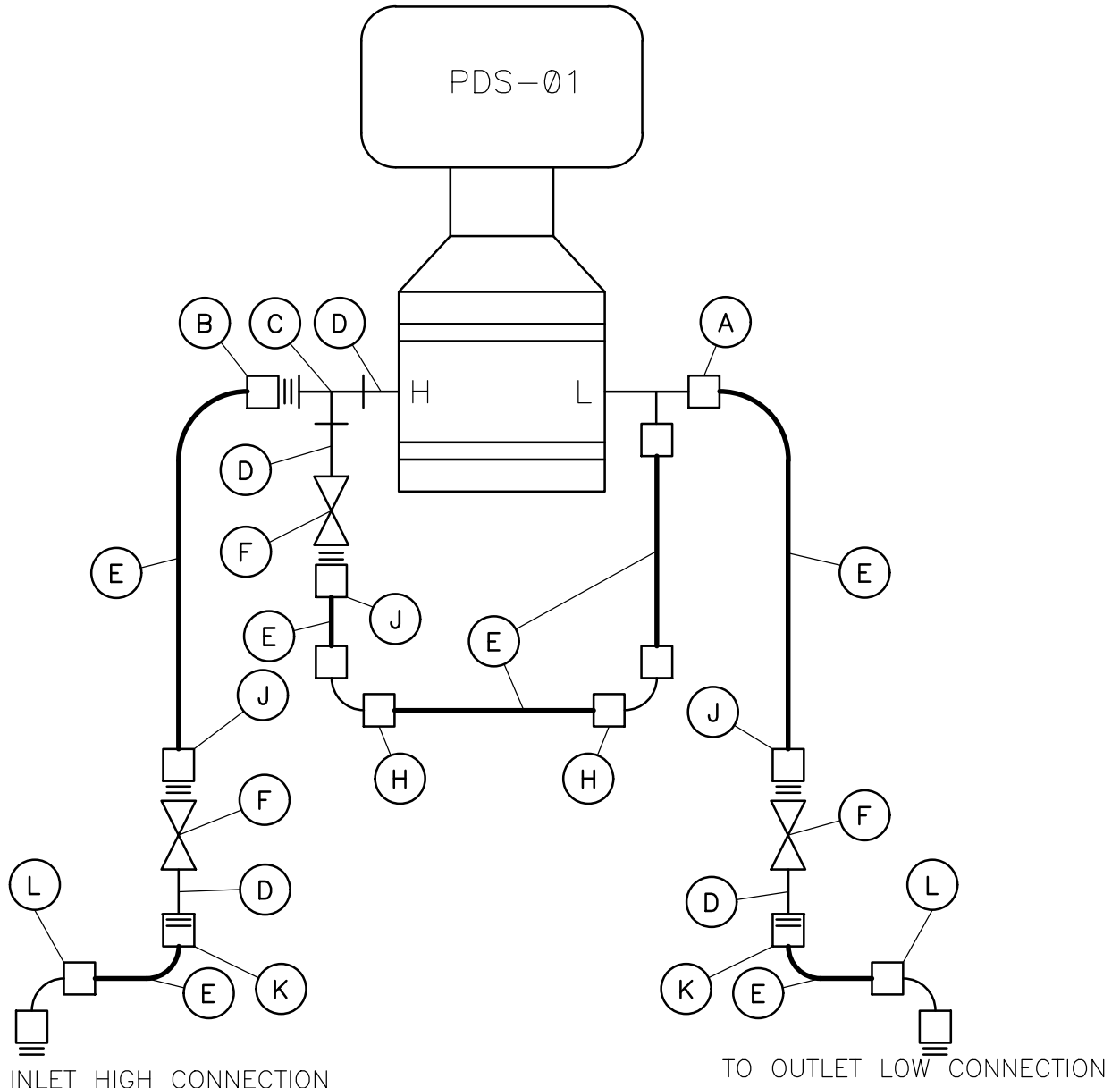
HUNGERFORD & TERRY, Inc.

CLAYTON, NEW JERSEY

MADE BY	GRV
DATE	3/28/24
SCALE	NONE
CHECKED	WJP
APPROVED	3/29/24

TITLE DIFFERENTIAL PRESSURE SWITCH PIPING

FORM No. PG-19



- | | |
|--|---|
| (A) MALE RUN TEE No. P6MR4 OR EQUAL | (G) 1/4" THREADED STN. STL. ELL |
| (B) MALE CONNECTOR No. P6MC4 OR EQ. | (H) ELBOW UNION No. P6EU6 OR EQUAL |
| (C) 1/4" THREADED STN. STL. TEE | (J) MALE CONNECTOR No. P6MC4 OR EQUAL |
| (D) 1/4" x 2" TBE SCH. 40 STN. STL. | (K) FEMALE CONNECTOR No. P6FC4 OR EQUAL |
| (E) 3/8" O.D. POLYPROPYLENE TUBING No. PPB-64 OR EQUAL | (L) MALE ELBOW No. P6ME4 OR EQUAL |
| (F) VALVES: SEE DWG. SK-33552-C01, SmV- | |
- NOTE:** UTILIZE PARKER FAST & TITE FITTINGS ON TUBING RUNS.

			SK 33552-C06
NO.	REVISIONS	DATE	CK'D
			CONT. No. M-345

FORM No. PG-19