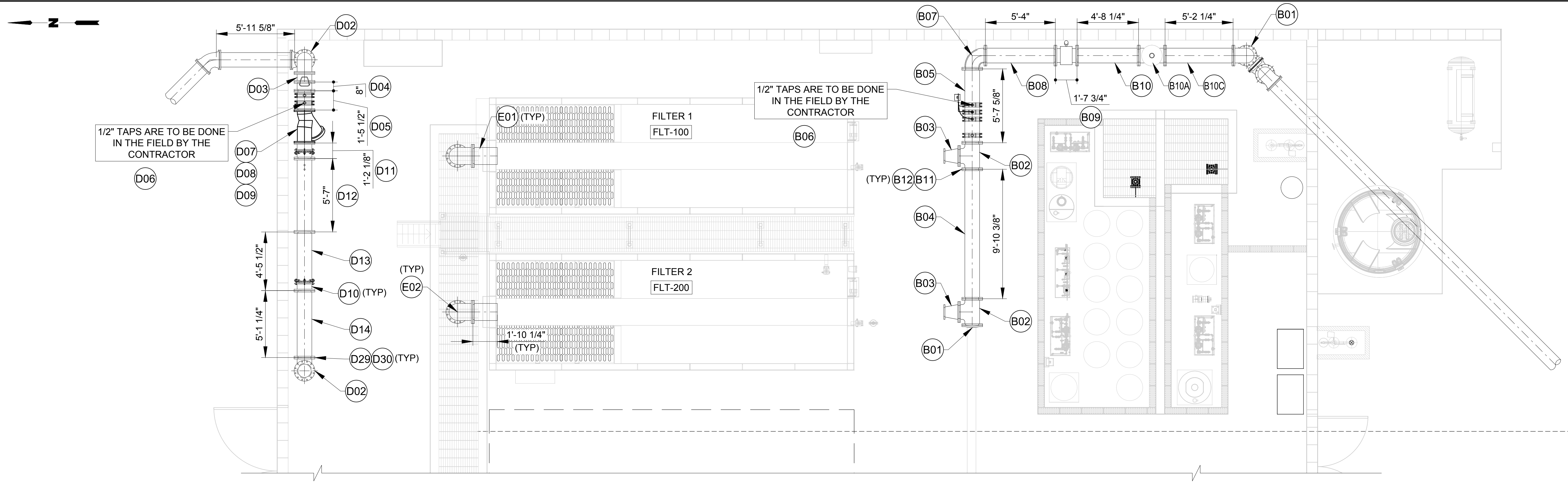


PROPOSED MECHANICAL PLAN

OWNER:-	ENGINEER:-	<p>DISCLAIMER RJ Barnes and Associates has prepared these layout drawings and material lists in accordance with our interpretation of the project drawings and specifications that were provided. Approval of these drawings and material lists constitute acceptance of our interpretation of material requirements for the subject job. Please check the drawings and material lists carefully to insure they are correct for your project.</p> <p>If corrections need to be made, please mark one set of the drawings in a contrasting color and return them to this office with your comments. No material shown in these drawings should be released for manufacture without written approval from the end customer.</p>	<table border="1"> <tr> <td>REV</td> <td>DRAWING REVISED AS PER COMMENTS</td> <td>ST</td> <td>RJB</td> <td>11/15/2024</td> </tr> <tr> <td></td> <td>PARTICULARS</td> <td>BY</td> <td>APP'D</td> <td>DATE</td> </tr> </table>	REV	DRAWING REVISED AS PER COMMENTS	ST	RJB	11/15/2024		PARTICULARS	BY	APP'D	DATE	<p>R. J. Barnes & Associates, 1442 S 500 E - STE 300, American Fork, UT 84003</p>
REV	DRAWING REVISED AS PER COMMENTS	ST	RJB	11/15/2024										
	PARTICULARS	BY	APP'D	DATE										



BILL OF MATERIALS

8" & 12" DIP FW LINE FROM FILTER 1 & 2 OUTLET CONNECT TO 1.5 MG RESERVOIR INLET (DWG # M1 & M4)

TAG #	QTY	SIZE	DESCRIPTION	ACTUAL LENGTH	NOTES
B01	1	12"	BLIND FLANGE AWWA - C110 / TN # 90-97 PRIMER		BID LINE # 296
B02	2	12" X 12"	FLG TEE AWWA - C110 / TN # 90-97 PRIMER		BID LINE # 294
B03	2	12" X 8"	FLG CONCENTRIC REDUCER AWWA - C110, CL / TN # 90-97 PRIMER		BID LINE # 297
B04	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	9'- 10 3/8"	BID LINE # 295
B05	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	5'- 7 5/8"	BID LINE # 292
B06	-	-	1/2" TAPS ARE TO BE DONE IN THE FIELD BY THE CONTRACTOR		BID LINE # 293
B07	2	12"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 288
B08	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	5'- 4"	BID LINE # 291
B09	1	12"	FLG MAG METER (FE-616)	LL = 19.69"	BID LINE # 290
B10	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	4'- 8 1/4"	BID LINE # 289
B10A	1	12" X 12"	FLG TEE AWWA - C110 / TN # 90-97 PRIMER		
B10B	1	12"	BLIND FLANGE W/ 3" TAP FOR AVV AWWA - C110 / TN # 90-97 PRIMER		
B10C	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	5'- 2 1/4"	

B11	12	12"	SET 10" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER		BID LINE # 298
B12	12	12"	1/8" FF GARLOCK 3760-U FLG GASKET		BID LINE # 299
B13	1	12"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	7'- 4 3/4"	
8" DIP FTW LINE (DWG # M1, M4 & M5)					
C01	4	8"	WAFER STYLE BUTTERFLY VALVE (VLV-161, 261, 163 & 263)	LL = 2.50"	BID LINE # 302
C02	3	8" X 8"	FLG TEE AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 301
C03	1	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	4'- 1 3/4"	BID LINE # 303
C04	1	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	4'- 3 1/8"	BID LINE # 303
C05	1	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	17'- 6"	BID LINE # 304
C06	1	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	17'- 0 5/8"	BID LINE # 304
C07	1	8"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 305
C08	1	8"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	1'- 4 3/4"	BID LINE # 306
C09	8	8"	SET 8" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER.		BID LINE # 307
C10	4	8"	SET 8" A307B BOLT, A563A HVY HEX NUT, 2 WASHERS (FOR BFV).		BID LINE # 308
C11	12	8"	1/8" FF GARLOCK 3760-U FLG GASKET		BID LINE # 309

SPECIAL NOTES:

1. (DXX) - REFER BOM ON DWG.# M5.
2. (EXX) - REFER BOM ON DWG.# M5.

STD ABBREVIATIONS & NOTES LEGEND

01. COATING AND LINING.

LINING	COATING
CEMENT MORTAR LINING (CL)	TNEME-ZINC (TN # 90-97 PRIMER)

02. FLG = FLANGE JOINT
03. PE = PLAIN END
04. CL53 = THICKNESS CLASS 53
05. LL = LAYING LENGTH

OWNER:-

ENGINEER:-

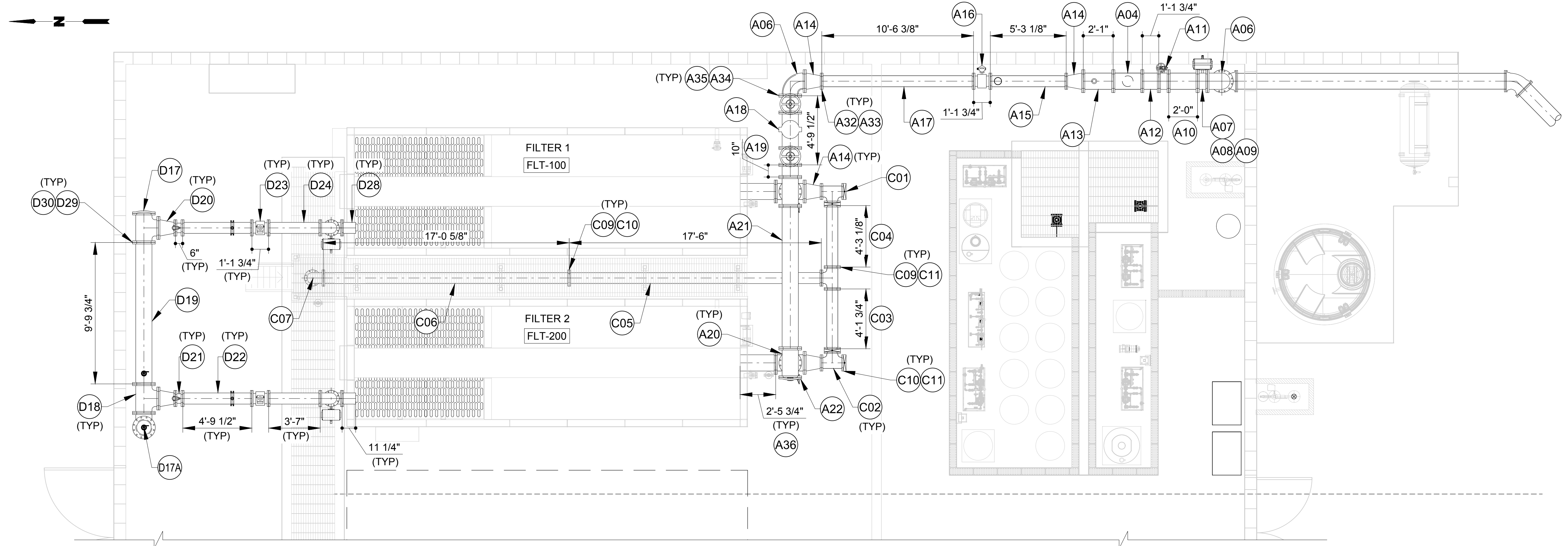
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REV	PARTICULARS	BY	APP'D	DATE

R. J. Barnes & Associates, 1442 S 500 E - STE 300, American Fork, UT 84003



SPECIAL NOTES:

1. (CXX) - REFER BOM ON DWG.# M1-A.
2. (DXX) - REFER BOM ON DWG.# M5.

BILL OF MATERIALS

8" & 12" DIP BWS LINE FROM BACKWASH SUPPLY PUMP 1 & 2 OUTLET TO FILTER 1 & 2 INLET (DWG # M1 & M4)					
TAG #	QTY	SIZE	DESCRIPTION	ACTUAL LENGTH	NOTES
A01	1	12"	12" MJ 90 ELBOW DI, AAWA C153, CL, LESS ACCESSORIES		
A02	1	12"	FLG X PE PIPE CL53 / TN # 90-97 PRIMER	6'- 1 3/8"	
A03	1	12"	AWWA C504 FLG BUTTERFLY VALVE W/ GEAR OPERATOR & HANDWHEEL, FBE (VLV-615)	LL = 8.00"	BID LINE # 251
A04	2	12" X 4"	FLG TEE , CL / TN # 90-97 PRIMER		BID LINE # 252
A05	1	12"	FLG X FLG CL53 / TN # 90-97 PRIMER	1'- 2 3/4"	BID LINE # 253
A06	2	12"	FLG 90 DEGREE BEND AWWA - C110 CL / TN # 90-97 PRIMER		BID LINE # 254 & 266
A07	1	12"	AWWA C504 FLG BUTTERFLY VALVE W/ MOTOR OPERATOR (VLV-612)	LL = 8.00"	BID LINE # 255
A08	1	-	STARTUP FOR MOTORIZED BUTTERFLY VALVE		BID LINE # 256
A09	1	-	TRAINING FOR MOTORIZED BUTTERFLY VALVES		BID LINE # 257
A10	1	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	2'-0"	BID LINE # 258
A11	1	12"	AWWA C504 FLG BUTTERFLY VALVE W/ GEAR OPERATOR & HANDWHEEL, FBE (VLV-613)	LL = 8.00"	BID LINE # 259
A12	1	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	1'-1 3/4"	BID LINE # 260
A13	1	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER W/ 1" IPT TAP. PRIMER	2'-1"	BID LINE # 261

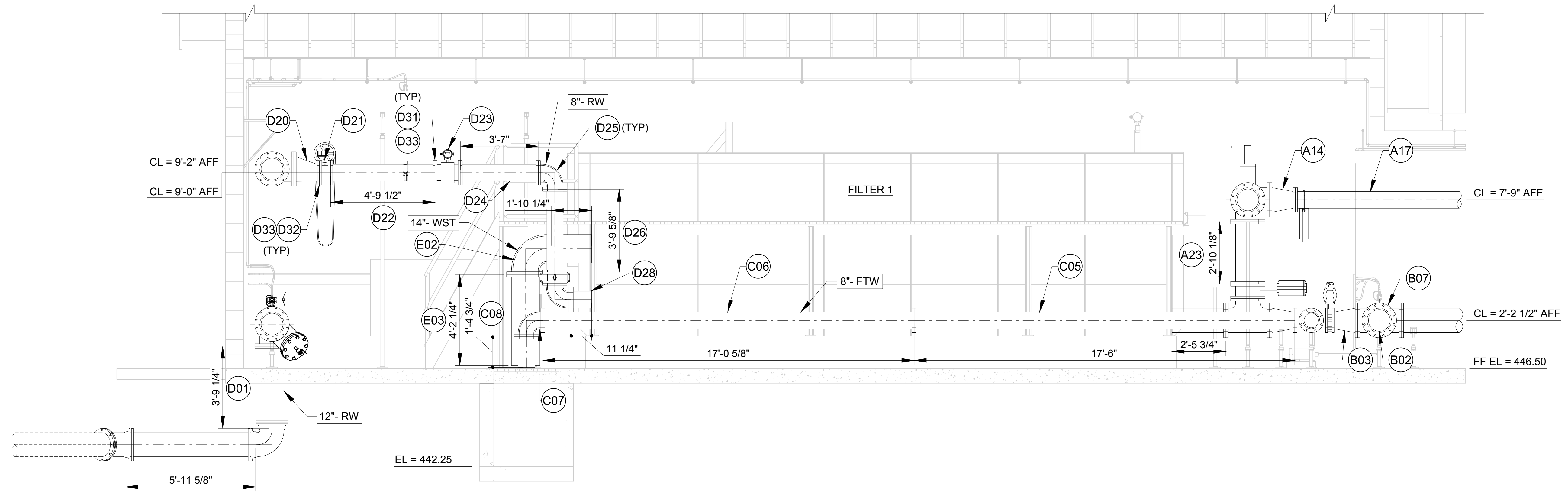
A14	4	12" X 8"	FLG CONCENTRIC REDUCER AWWA - C110, CL53 CL / TN # 90-97 PRIMER		BID LINE # 262 & 273
A15	1	8"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	5'- 3 1/8"	BID LINE # 263
A16	1	8"	FLG MAG METER (FE-616)	LL = 13.78"	BID LINE # 264
A17	1	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	10'- 6 3/8"	BID LINE # 265
A18	1	12"	BACKFLOW PREVENTER, SST BODY , WATTS 774, NON-RISING STEM GATE VALVES, (DVCS-617)	LL = 57.50"	BID LINE # 267
A19	1	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	0'-10"	
A20	4	12" X 12"	FLG TEE AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 269
A21	1	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	9'- 10 3/8"	BID LINE # 270
A22	1	12"	BLIND FLANGE AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 271
A23	2	12"	FLG X FLG CL53 CL / TN # 90-97 PRIMER	2'- 10 1/8"	BID LINE # 272
A24	2	12"	AWWA C504 FLG BUTTERFLY VALVE W/ MOTOR OPERATOR (VLV-162 & 262)	LL = 8.00"	BID LINE # 274
A25	2	4	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	2'- 3 1/4"	BID LINE # 276
A26	1	4"	AWWA C504 FLG BUTTERFLY VALVE W/ HANDWHEEL (VLV-611)	LL = 5.00"	BID LINE # 275
A27	1	4"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 277
A28	1	4"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	1'- 8 1/4"	BID LINE # 278
A29	2	4"	SET 4" BLK A307 B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER. (FOR FLG BFV)		BID LINE # 279

A30	4	4"	SET 4" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER.		BID LINE # 280
A31	6	4"	1/8" FF GARLOCK 98206 FLG GASKET		BID LINE # 281
A32	4	8"	SET 8" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER		BID LINE # 282
A33	4	8"	1/8" FF GARLOCK 98206 FLG GASKET		BID LINE # 283
A34	28	12"	SET 12" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHERS.		BID LINE # 284
A35	28	12"	1/8" FF GARLOCK 3760-U FLG GASKET		BID LINE # 285
A36	2	12"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	2'- 5 3/4"	

STD ABBREVIATIONS & NOTES LEGEND

01. COATING AND LINING.
- | LINING | COATING |
|---------------------------|--------------------------------|
| CEMENT MORTAR LINING (CL) | TNEME-ZINC (TN # 90-97 PRIMER) |
02. FLG = FLANGE JOINT
 03. PE = PLAIN END
 04. CL53 = THICKNESS CLASS 53
 05. LL = LAYING LENGTH

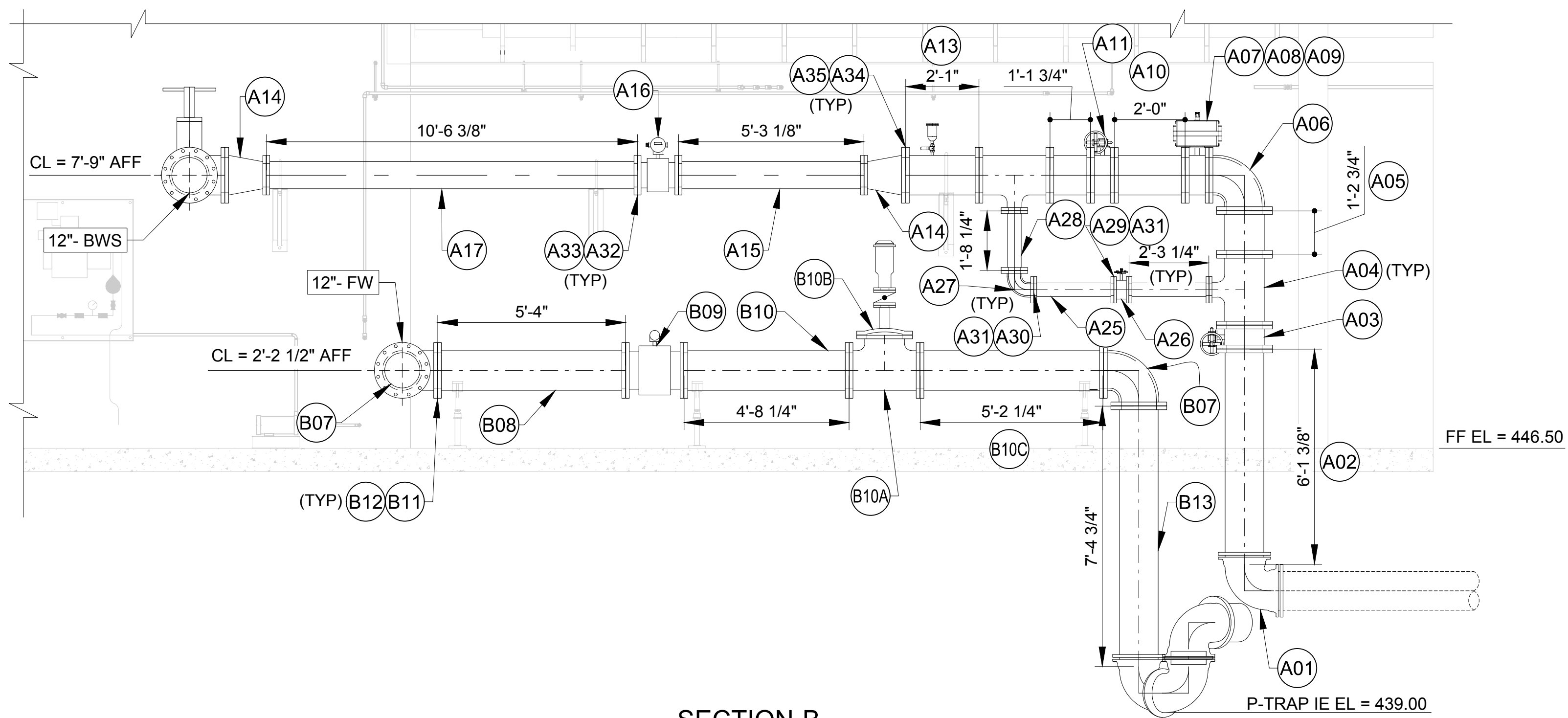
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		<p>△ DRAWING REVISED AS PER COMMENTS</p>	ST	RJB	11/15/2024	
		REV	PARTICULARS	BY	APP'D DATE	



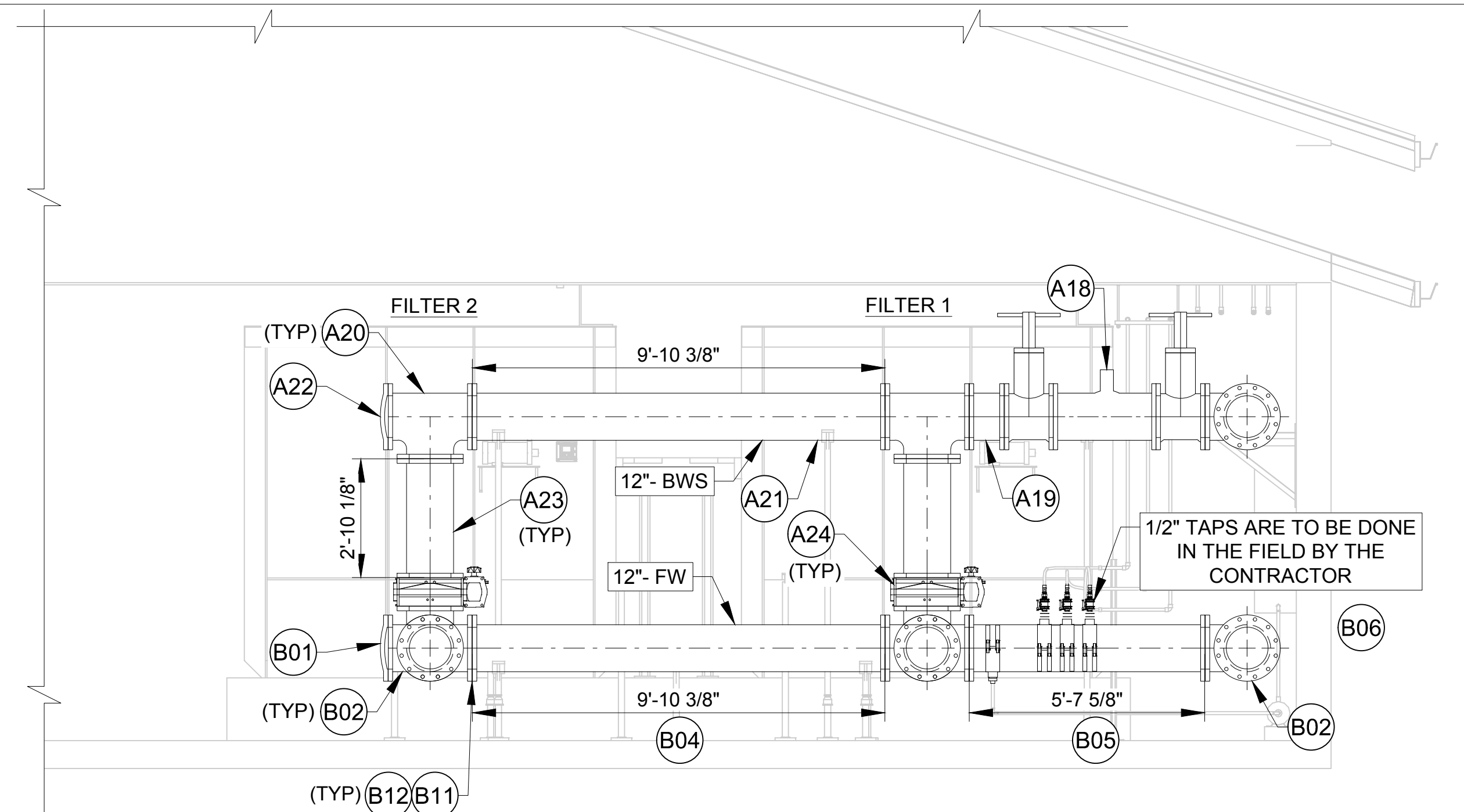
SECTION-A

SPECIAL NOTES:

1. (AXX) - REFER BOM ON DWG.# M1-B.
2. (BXX) - REFER BOM ON DWG.# M1-A.
3. (CXX) - REFER BOM ON DWG.# M1-A.
4. (DXX) - REFER BOM ON DWG.# M5.



SECTION-B



SECTION-C

OWNER:-

ENGINEER:-

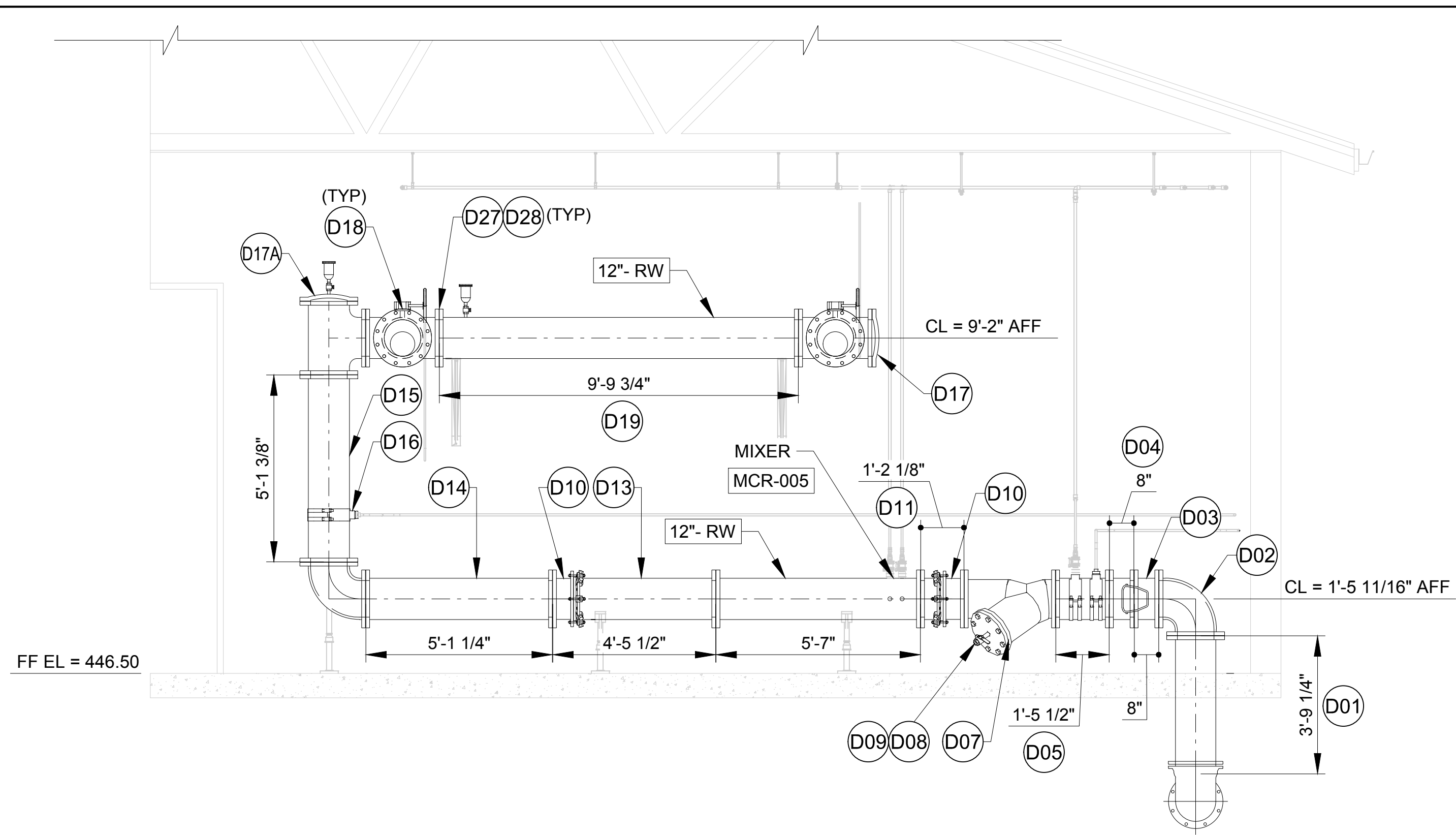
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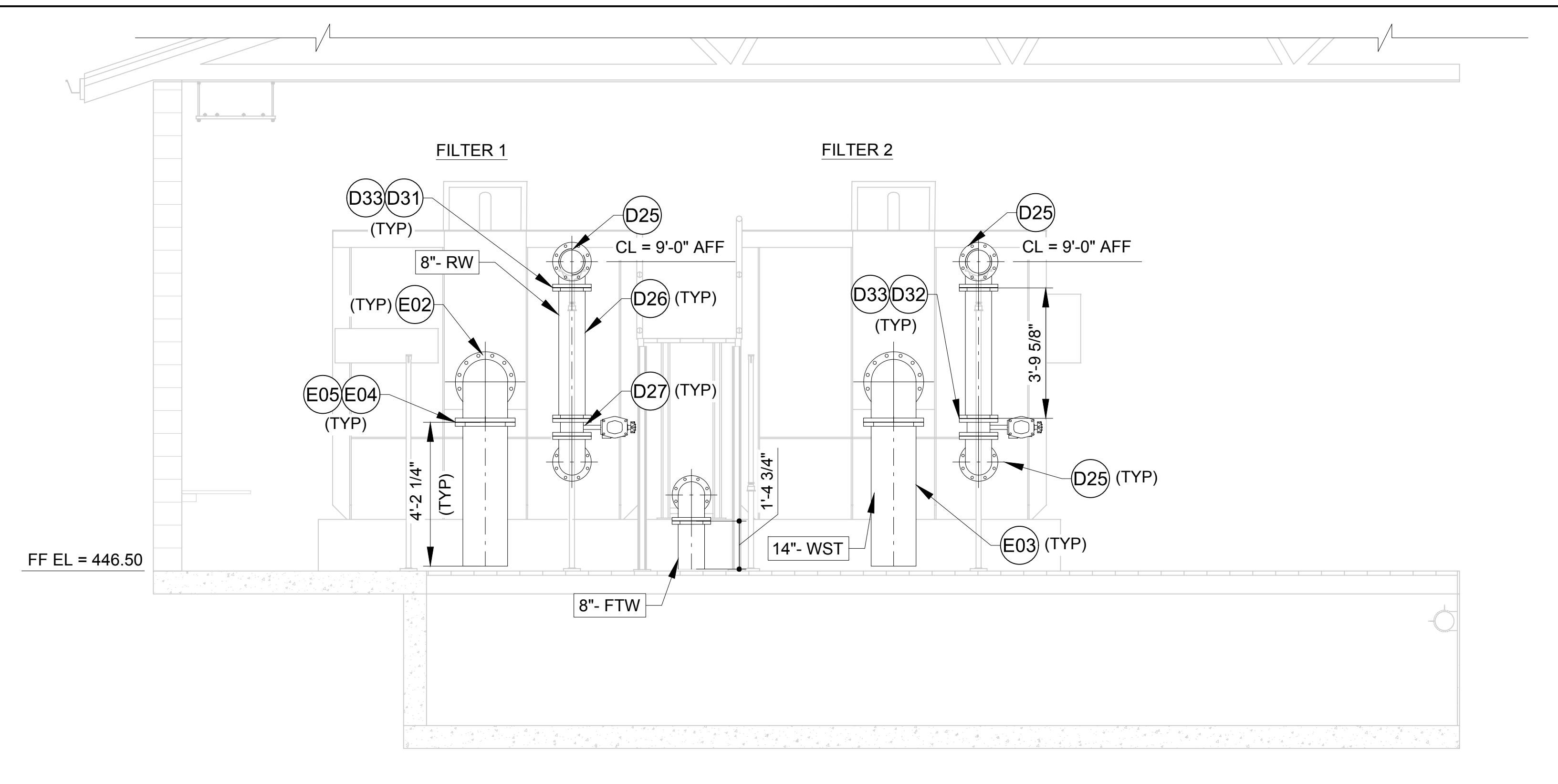
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SECTION-D



SECTION-E

BILL OF MATERIALS					
8" & 12" DIP RW LINE FROM RAW WATER INFLUENT CONNECT TO FILTER 1 & 2 INLETS (DWG #: M1, M4 & M5)					
TAG #	QTY	SIZE	DESCRIPTION	ACTUAL LENGTH	NOTES
D01	1	12"	PE X FLG CL53 / CL / TN # 90-97 PRIMER	3'- 9 1/4"	
D02	2	12"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 311
D03	1	12"	AWWA C504 FLG BUTTERFLY VALVE W/ HAND WHEEL, FBE (VLV-001).	LL = 8.00"	BID LINE # 312
D04	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	0'-8"	BID LINE # 313
D05	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	1'-5 1/2"	BID LINE # 314
D06	-	-	1/2" TAPS ARE TO BE DONE IN THE FIELD BY THE CONTRACTOR		
D07	1	12"	FLG WYE STRAINER, 77F-DI-125. (STRAINER-002)	LL = 29.87"	BID LINE # 315
D08	1	1" X 3"	SCH40 304SS NIPPLE		BID LINE # 316
D09	1	1"	SS FULL PORT BALL VALVE W/LATCH-LOCK LEVER AND NUT AIS COMPLIANT 6F-105-27-UAA APOLLO		BID LINE # 317
D10	2	12"	RESTRAINED FLANGE COUPLING ADAPTER - 13.20, FBE		BID LINE # 318
D11	1	12"	PE X FLG CL53 / CL / TN # 90-97 PRIMER	1'-2 1/8"	
D12	1	12"	MIXER (MXR-005)	LL = 67.00"	BID LINE # 319
D13	1	12"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	4'- 5 1/2"	BID LINE # 320
D14	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	5'- 1 1/4"	BID LINE # 321

D15	1	12"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	5'- 1 3/8"	BID LINE # 322
D16	1	12" X 1/2"	IPT SADDLE, EPOXY COATED, SST DOUBLE STRAP, FOR DIP		
D17	2	12"	BLIND FLANGE AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 324
D17A	1	12"	BLIND FLANGE W/ 1" TAP FOR ARV AWWA - C110 / CL / TN # 90-97 PRIMER		
D18	3	12" X 12"	FLG TEE AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 323
D19	1	12"	FLG X FLG W/ 1" IPT TAP FOR ARV CL53 / 90-97 PRIMER	9'- 9 3/4"	BID LINE # 325
D20	2	12" X 8"	FLG ECCENTRIC REDUCER AWWA - C110, CL / TN # 90-97 PRIMER		BID LINE # 326
D21	2	8"	AWWA C504 FLG BUTTERFLY VALVE W/ HAND WHEEL (VLV-101 & 102)	LL = 6.00"	
D22	2	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	4'- 9 1/2"	BID LINE # 327
D23	2	8"	FLG MAG METER (FE-101 & 102)	LL = 13.78"	BID LINE # 328
D24	2	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	3'- 7"	BID LINE # 329
D25	4	8"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		BID LINE # 330
D26	2	8"	FLG X FLG CL53 / CL / TN # 90-97 PRIMER	3'- 9 5/8"	BID LINE # 331
D27	2	8"	AWWA C504 FLG BUTTERFLY VALVE W/ MOTOR OPERATOR (VLV-103 & 203).	LL = 6.00"	
D28	2	8"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	0'- 11 1/4"	
D29	19	12"	SET 12" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHERS		BID LINE # 332
D30	19	12"	1/8" FF GARLOCK 3760-U FLG GASKET		BID LINE # 333

D31	10	8"	SET 8" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHER. AIS		BID LINE # 334
D32	8	8"	SET 8" A307B BOLT, A563A HVY HEX NUT, 2-F844 WASHER (FOR FLG BFV) AIS		BID LINE # 336
D33	18	8"	1/8" FF GARLOCK 3760-U FLG GASKET		BID LINE # 335
14" DIP WST LINE FROM FILTER 1 & 2 OUTLETS CONNECT TO WASTE TROUGH (DWG #: M1, M4 & M5)					
E01	2	14"	PE X FLG CL53 / CL / TN # 90-97 PRIMER	1'- 10 1/4"	
E02	2	14"	FLG 90 DEGREE BEND AWWA - C110 / CL / TN # 90-97 PRIMER		
E03	2	14"	FLG X PE CL53 / CL / TN # 90-97 PRIMER	4'- 2 1/4"	
E04	4	14"	SET 12" BLK A307B BOLT, A563A HVY HEX NUT, 2 - F844 WASHERS. AIS		
E05	4	14"	12" 1/8" FF GARLOCK 3760-U FLG GASKET		

STD ABBREVIATIONS & NOTES LEGEND

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LINING	COATING
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