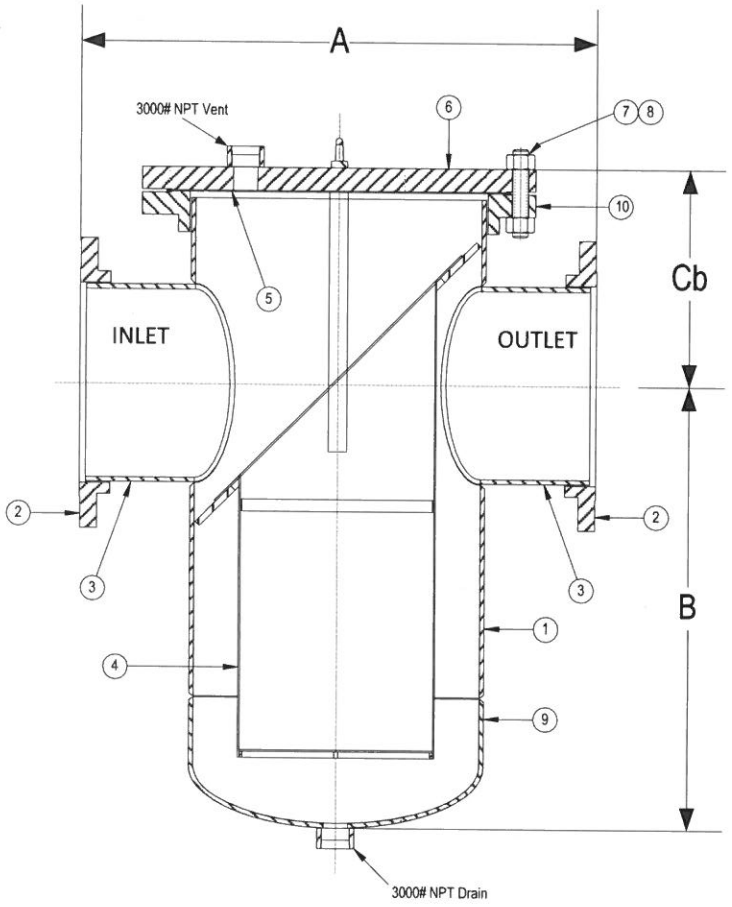
E1	Dwgs: M-0000-019 & M-0000-021 The above listed chiller piping detail drawings both show crossover, interconnecting piping overhead with normally closed "NC" and normally open "NO" valves in the line. This piping is not shown as new on the respective plan views M-0000-008 & M-0000-016 although it appears to be new "dark lined" on the detail prints. Are these pipelines new or existing? Are these pipelines new or existing?	Lines in question are existing. Note #2 on DWG. M-0000-019 and M-0000-021 instruct the contractor to “replace chilled water and condenser water supply and return pipe, valves, & fittings from chiller to and including nearest isolation valve”. The nearest isolation valve correctly illustrates this by showing point of new connection to existing symbol on both plan and detail view at the isolation valve noted. Additionally, chillers on DWG. M-0000-019 are incorrectly labelled – chillers #1 and #2 should be #3 and #4, respectively.	
E2	Drawing M-0000-016 The new compression tank to be provided per note 25 has no capacities, or sizes listed. Please provide. Also, please provide a piping detail for the compression tank, there is none shown.	Note #25 on DWG. M-0000-016 states “replace compression tank in kind. Review exact location of tank and associated piping with (AR)”. Existing tank is to be disconnected from existing piping and new tank shall be connected to point of disconnection of the removed expansion/compression tank. See attached photo for expansion/compression tank nameplate data (typ. For all sites). Expansion tanks shall be 96” in length, 48” diameter.	
E3	Drawings E-601 for all 3 Stations Drawing CHPC1-E-601 Can modifications shown for MCC-A and MCC-B be performed during normal business hours or must they be done on scheduled shut downs on premium/overtime hours? Can final tie in to SWBD be done during normal business hours or must they be done on scheduled shutdowns on premium hours? Question 2 above also applies to Crystal City & Potomac Ave Stations, drawings: Drawing CHPC5-E-601 M-0000-063 Drawing CHPD3-E-601 M-0000-067	Drawing CHPC1-E-601 modification showing changing power cable from chiller to Switchboard must be performed during non-revenue hours all other installation can be performed during revenue hours providing LOTO was done. This applies to other chiller plants.	

E4	Drawings M-0000-008 and M-0000-059 At Metro Center it appears from the notes on M-0000-008 that pumps P-1, P-2, P-3, P-4, P-7 and P-8 receive new Variable Frequency Drives (VFD's). But on electrical one-line diagram on page M-0000-059 VFD's are not implied for pumps P-1 & P-2. 1. Which pumps exactly get new VFD's at this station? Shouldn't there be a note? 2. Shouldn't the one-line electrical diagram show the VFD's not just imply them in note 10? This is confusing	Pump P-1 and P-2 should receive new VFDs along with pumps P-3, P-4, P-7 and P-8. These were not shown on the electrical drawings. VFD schedule, as well as notes on plan view pointing to P-1 and P-2 ("coordinate with elec. For new VFD's for existing CW pumps & motors") indicate new VFD should be installed. Additionally, other stations pumps have all new VFD's shown and scheduled, thus indicating Metro Center's (CHPC1) should as well.	
E5	Spec# 15 185 Hydronic Pumps. DWG M-0000-023, DWG M-0000-024 and DWG M-0000-025. Note on DWG said that strainers shall be SSI Fabricated, Vertical Flanges (10" Dia) and some (8dia) with T-Bolt Hinged cover. Provide (1-1 ½) Dia Drain Valve.	Specification Section 15185 does not have any information on strainers. The strainers section in Section 15205 Piping Systems indicate strainer types which differ from those listed in Note #3 on DWG. M-0000-023. Please use a strainer of the type indicated on the DWG. M-0000-023 (note: "T-Bolt" should read "T-Type, bolted…"). See attached cut sheet for a strainer of the indicated type.	
F1	Drawing M-500 Specs using Victaulic Fittings on large pipe and fittings. Specification 15205 states piping over 2" shall be welded. Which is correct?	The designer intent was stated in Note #8 on DWG. M-500. This exception is only for the piping connection to the chiller and to both Condenser and Chilled water piping.	
F2	DWG M-500 shows Chiller by pass pipe to be new (by the use of dark lines). However these are no new connection points/ (Additional Tees) is bypass new or existing?	The bypass piping is existing. New piping at chillers is only up to (and including) the nearest isolation valve as specified in Note #2.	

DRAWING NO.
AL 93060



PARTS LIST

Item	Description	Material
1	BODY	STAINLESS STEEL PIPE (ASTM A 312, GRADE TP-304) Sch STD
2*	150LB RFSO Flange	STAINLESS STEEL (ASTM A 182, GRADE F-304) B16.5
3	NOZZLE	STAINLESS STEEL PIPE (ASTM A 312, GRADE TP-304) Sch STD
4	BASKET	STAINLESS STEEL (304) – 1/8" PERFORATION
5	GASKET	FIBER
6	150LB BLIND FLANGE (COVER)	STAINLESS STEEL (ASTM A 182, GRADE F-304) B16.5
7	STUDS	STAINLESS STEEL (ASTM A193, GRADE B8)
8	NUTS	STAINLESS STEEL (ASTM A 194, GRADE 8)
9	WELD CAP	STAINLESS STEEL (ASTM A 403, GRADE WP-304) Sch STD
10*	150LB RFSO Flange	STAINLESS STEEL (ASTM A 182, GRADE F-304) B16.5

*30" & Larger Flanges are RFWN Series B.

Product Numbers†	DIMENSIONS (in) SIZE	A	B	Cb	Vent	Drain	Body (Housing)	WEIGHT (lbs) Cover	Total
12RFFB-F34125P34-FBB	1	10	7	4-1/2	1/4	1/2	3	9	43
11/22RFFB-F34125P34-FBB	1-1/2"	11	8	5-1/2	1/4	1/2	4	17	68
22RFFB-F34125P34-FBB	2"	12	8	6-1/2	1/4	1/2	4	17	72
21/22RFFB-F34125P34-FBB	2-1/2"	14	13	10	1/4	1/2	5	20	91
32RFFB-F34125P34-FBB	3"	14	13	10	1/4	1/2	6	27	131
42RFFB-F34125P34-FBB	4"	16	14	10-1/2	1/2	1	8	47	241
52RFFB-F34125P34-FBB	5"	16	15	11	1/2	1	8	47	277
62RFFB-F34125P34-FBB	6"	20	17	11	1/2	1	10	70	336
82RFFB-F34125P34-FBB	8"	22	21	12	1/2	1-1/2	12	123	479
102RFFB-F34125P34-FBB	10"	32	25	13	1/2	1-1/2	16	180	740
122RFFB-F34125P34-FBB	12"	35	28	15	1/2	1-1/2	18	220	862
142RFFB-F34125P34-FBB	14"	37	33	16-1/2	1/2	2	20	285	1096
162RFFB-F34125P34-FBB	16"	42	36	17-1/2	1/2	2	24	430	1573
182RFFB-F34125P34-FBB	18"	42	39	18-1/2	1/2	2	24	430	1607
202RFFB-F34125P34-FBB	20"	43	44	20	1/2	2	30	543	2201
242RFFB-F34125P34-FBB	24"	48	44	21	1/2	2	30	543	2233
302RFFB-F34125P34-FBB	30"	60	54	31	1/2	2	36	890	3410

†See ***"Style FB Product Number Configuration"*** for additional options.

BODY PRESSURE & TEMPERATURE RATINGS – NON SHOCK	
NOM. RATING	1" to 30"
150# RFSO	275 PSI @ 100°F

Strainer indicated is SS, 10" dia, vertical flanged, T-Type, bolted hinge cover, w/ 1-1/2" drain valve as indicated on DWG. M-0000-023 Note #3.

KECKLEY
3400 CLEVELAND SKOKIE ILLINOIS

DRAWING NO.
AL 93060

DIMENSIONAL ASSEMBLY

PART NO.

150Lb. Flg. Style FB, Fabricated 304SS

SCALE: NTS

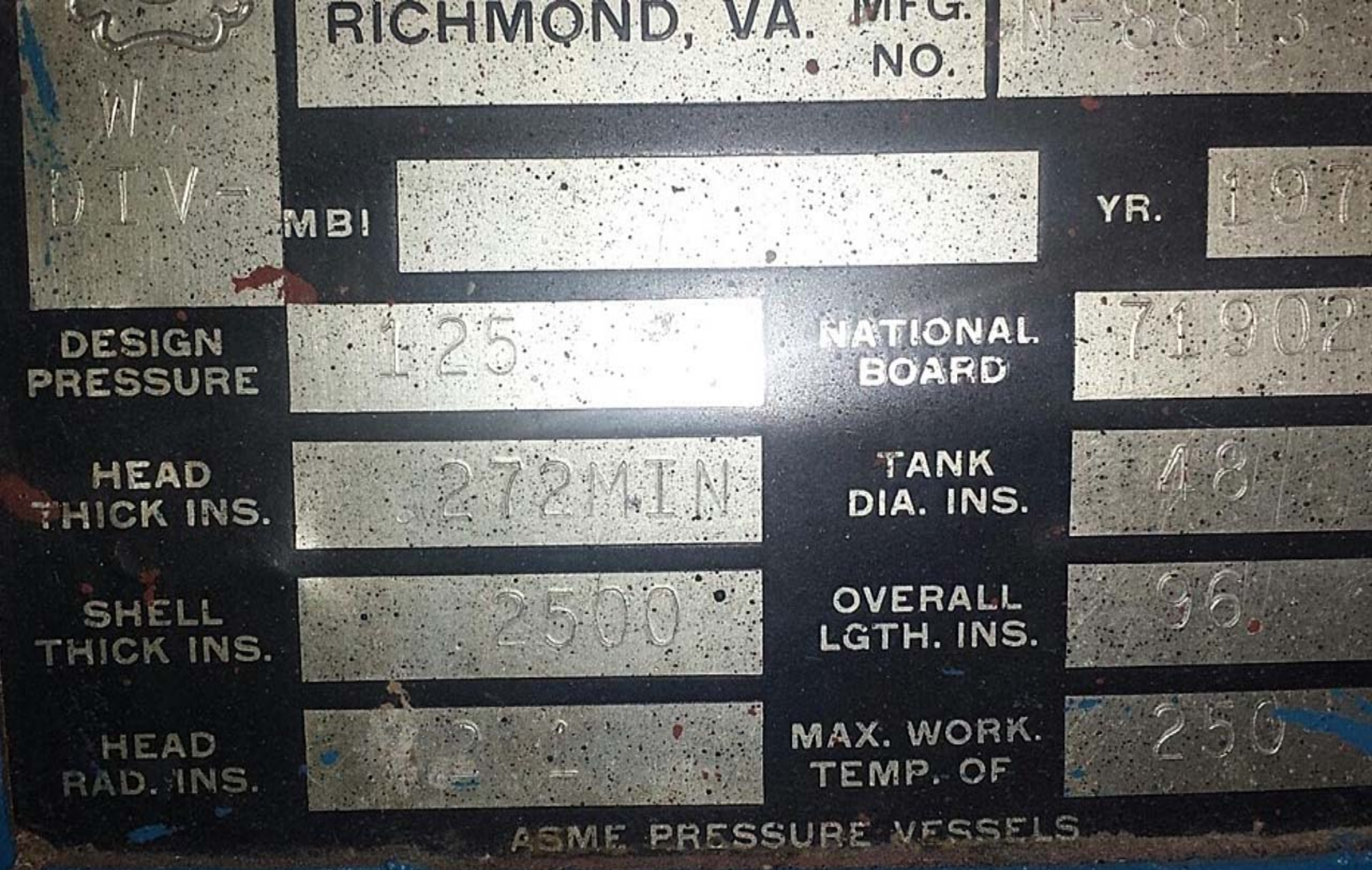
Basket strainer, Bolted Cover

DATE: 07/01/2011

MAT'L: Fabricated 304SS

REQ. ---

DR. BY DSF


RICHMOND, VA.
MFG. NO.
DIV-
MBI
YR.
DESIGN PRESSURE
125
NATIONAL BOARD
71902
HEAD THICK INS.
.272MIN
TANK DIA. INS.
48
SHELL THICK INS.
.2500
OVERALL LGTH. INS.
96
HEAD RAD. INS.
MAX. WORK. TEMP. OF
250
ASME PRESSURE VESSELS