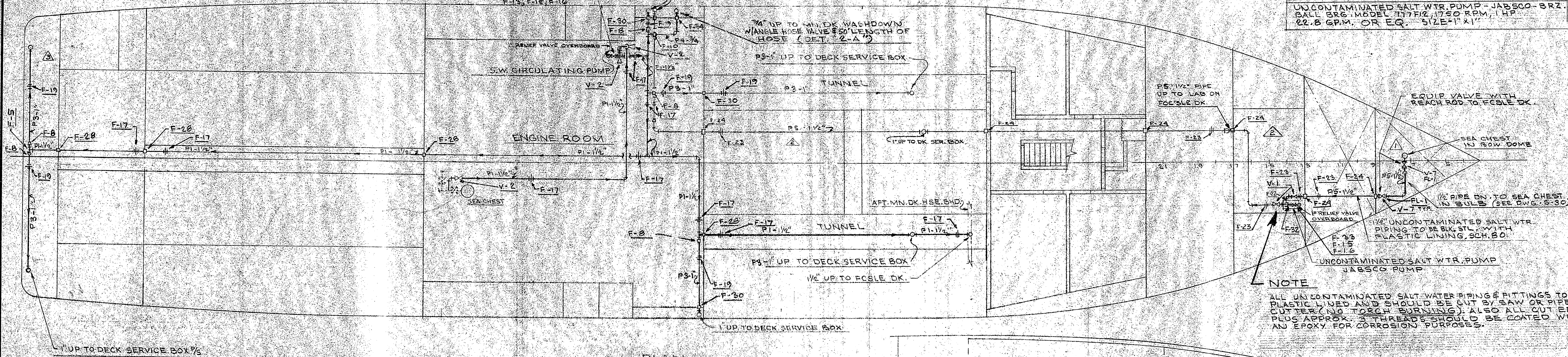
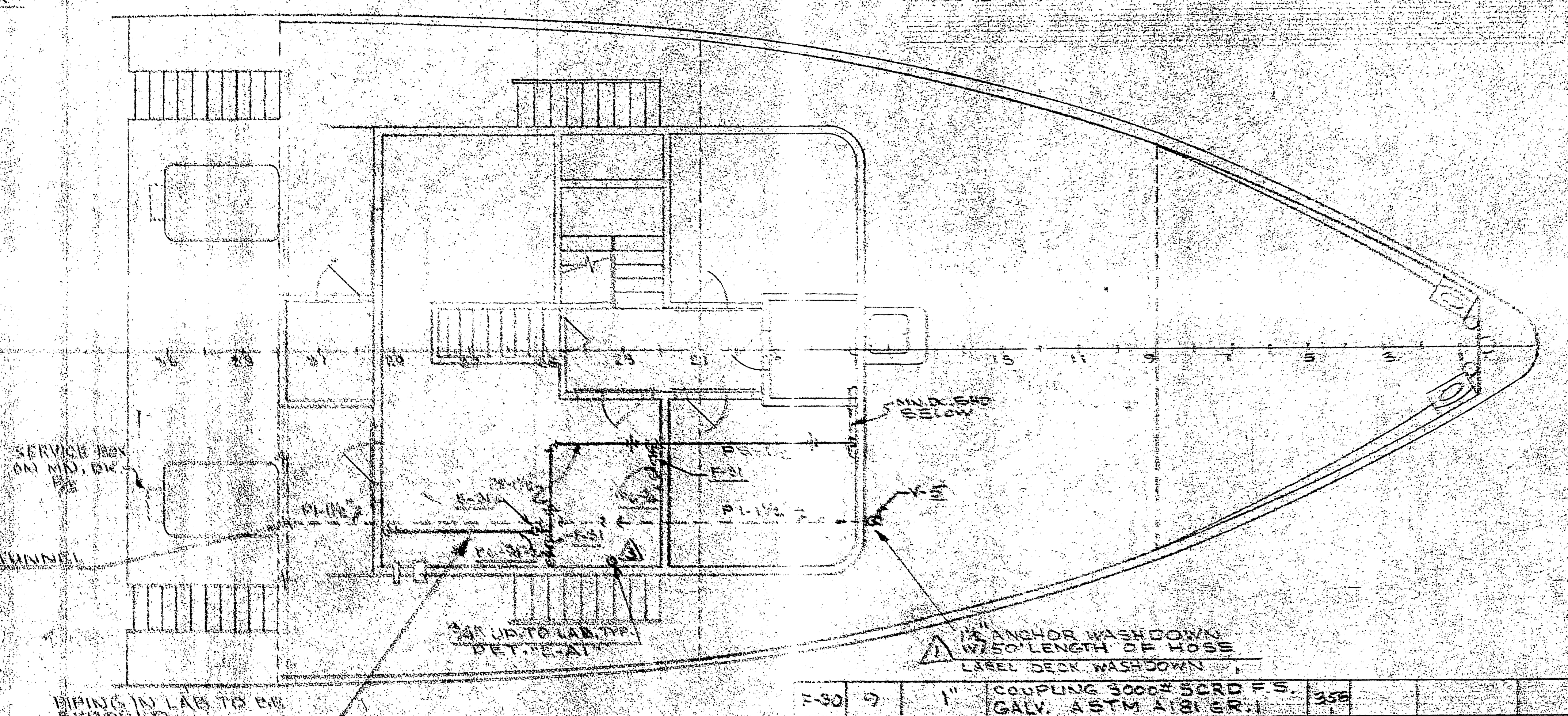


PLAN
PIPING BELOW MAIN DECK
3/16" = 1'-0"

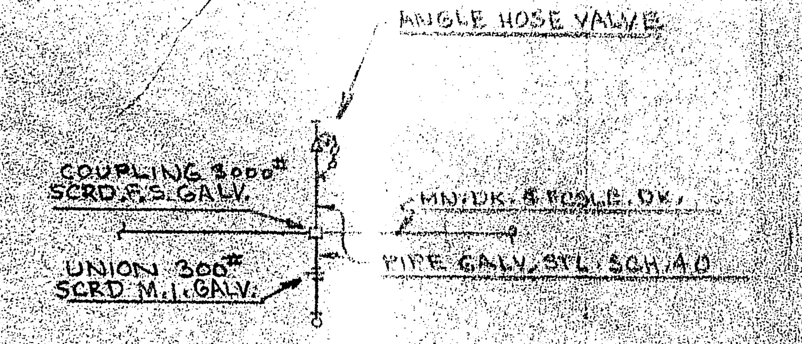
PUMP DATA
SALT WTR. CIRCULATING PUMP - DEMING - FIG. 4353 3450 RPM - ½ H.P. 23 GPM UNIT 132 OR EQ. SIZE - 1½" x 1"
UNCONTAMINATED SALT WTR. PUMP - JABSCO - BRZ. BALL BRG. MODEL 7717 F12, 1750 RPM, 1 HP. 22.8 GPM, OR EQ. SIZE - 1" x 1"

NOTE

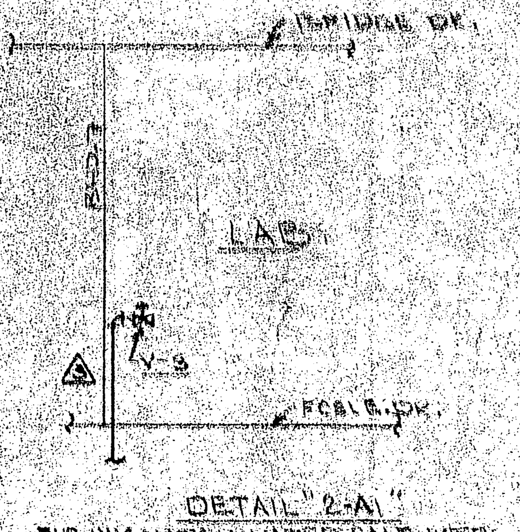
ALL UNCONTAMINATED SALT WATER PIPING & FITTINGS TO BE PLASTIC LINED AND SHOULD BE CUT BY SAW OR PIPE CUTTER (NO TORCH BURNING), ALSO ALL CUT EDGES PLUS APPROX. 3 THREADS SHOULD BE COATED WITH AN EPOXY FOR CORROSION PURPOSES.



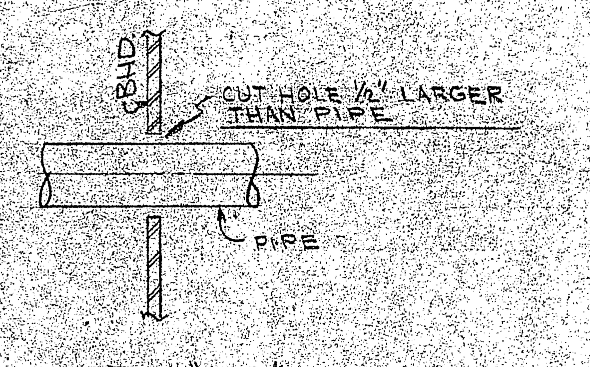
PLAN
PIPING BELOW & ABOVE FCSLE. DK.
3/16" = 1'-0"



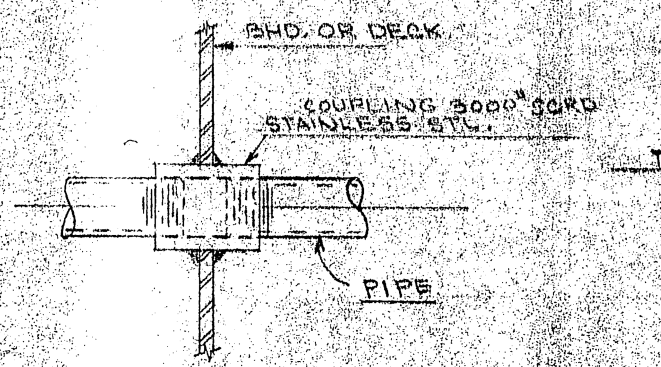
DET. "2-A"
DECK WASHDOWN
N.T.S.
SIM. DET. FOR ANCHOR WASHDOWN



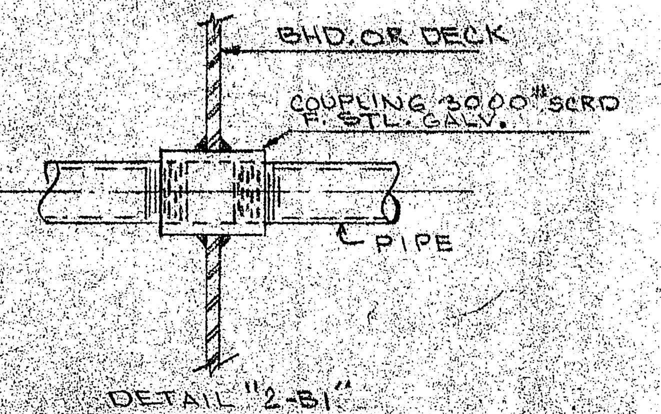
DETAIL "2-A1"
TYP. UNCONTAMINATED SALT WTR. OUTLET TO LAB.
N.T.S.



DETAIL "1-B"
TYP. N.T. BHD. PENETRATION
3" = 1'-0"



DETAIL "2-B"
W.T. BHD. & DECK PENETRATION FOR UNCONTAMINATED SALT WTR.
3" = 1'-0"



DETAIL "2-B1"
W.T. BHD. & DECK PENETRATION FOR SALT WATER SYSTEM
3" = 1'-0"

GENERAL NOTES

1. PIPING IN GALLEY & QUARTERS FROM S.W. CIRCULATING PUMP TO BE CONCEALED IN OVERHEAD.
2. ALL PIPING AND VALVES SHALL BE MARKED SHOWING ITS SERVICE AND PARTICULAR LIQUID.
3. ALL PIPING SHALL BE COLOR CODED IN ACCORDANCE WITH THE NATIONAL COLOR CODE AND SHALL INDICATE DIRECTION OF FLOW.
4. ALL LABELING SHALL BE EMBOSSED AND ATTACHED WITH SCREWS.
5. ALL PIPES SUBJECT TO MECHANICAL INJURY OR UNDUE VIBRATION SHALL BE ADEQUATELY PROTECTED AND/OR SUPPORTED.
6. PIPING SHALL BE THOROUGHLY CLEANED AFTER INSTALLATION AND BEFORE FUNCTION TESTING.
7. ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE FEDERAL REGISTER VOL. 33 - # 245, 46 CFR 56.70-15.

BILL OF MATERIALS

PC. No.	QTY.	SIZE	DESCRIPTION	COST ITEM	P.O. No.	VENDOR	DATE REQ'D YARD	DATE REC'D
P1	225'	1½"	PIPE GALV. STL. SCH. 40 SMLS ASTM A-120	358				
P3	85'	1"	↓					
P4	25'	¾"	↓					
P5	225'	1½"	PIPE BLK. STL. SCH. 80 SMLS W/PLASTIC LINING ASTM A53 GR. B					
P6	70'	¾"	↓					
F-1	10	1½"	90° ELBOW 150# SCRD M.I. GALV. ASTM A-153					
F-3	5	1"	↓					
F-4	4	¾"	↓					
F-5	8	1½"	TEE 150# SCRD M.I. GALV. ASTM A-153					
F-7	1	1"	↓					
F-8	7	1½" x 1"	CONC. SWAGED NIPPLE F.S. X-HVY. T.B.E. GALV. ASTM A181 GR. 1					
F-10	1	1½" x ¾"	↓					
F-12	1	1" x ¾"	↓					
F-13	1	1½" x ¼"	BUSHING HEX. HD. F.S. GALV. 3000# SCRD ASTM A181 GR. 1					
F-15	2	¼" 0 TO 100#	PRESS. GAUGE BRZ. ASHCROFT #3½-1010					
F-16	2	¼"	GAUGE COCK ASHCROFT #1092 FEMALE BOTH ENDS					
F-17	10	1½"	UNION 150# SCRD M.I. GALV. ASTM A-153					
F-18	3	1"	PIPE NIPPLE GALV. STL. 3" LG.					
F-19	6	1"	UNION 150# SCRD M.I. GALV. ASTM A-153					
F-20	2	¾"	↓					
F-22	2	1½"	[illegible]					
F-23	2	1½"	[illegible] PLASTIC LINING ASTM A181 GR. 1					
F-24	9	1½"	[illegible] SCRD ASTM A182					
F-26	10	¾"	[illegible]					
F-26	6	¾"	[illegible]					
F-27	3	¾"	COUPLING 3000# STAINLESS STL. SCRD ASTM A182	358				
F-28	6	1½"	COUPLING 3000# SCRD F.S. GALV. ASTM A181 GR. 1	358				

△ 1½" ANCHOR WASHDOWN W/50' LENGTH OF HOSE
LABEL DECK WASHDOWN

	PC. No.	QTY.	SIZE	DESCRIPTION	COST ITEM
	F-30	9	1"	COUPLING 3000# SCRD F.S. GALV. ASTM A181 GR. 1	358
	F-31	6	1½" x ¾"	CONC. SWAGED NIPPLE F.S. X-HVY. T.B.E. W/PLASTIC LINING ASTM A182	
	F-32	7	1½"	TEE 3000# F.S. SCRD W/PLASTIC LINING ASTM A181 GR. 1	
	F-33	1	1½" x ¼"	BUSHING HEX. HD. F.S. SCRD W/PLASTIC LINING 3000# ASTM A181 GR.	
	F-34	3	¾"	COUPLING 3000# SCRD F.S. GALV. ASTM A-181 GR. 1	
	V-1	2	½"	GATE VALVE 200# SCRD U.B. STAINLESS STL. LADISH #7250 (OR EQ)	
	V-2	3	1½"	GATE VALVE 150# SCRD U.B. BRZ. CRANE #431 UB OR EQ.	
	V-3	4	¾"	STERLING HEX SHOULDERS SS SINGLE SINK FAUCET WOOD. W/GHT #30-4352 OR EQ.	
△1	V-4	2	¾"	ANGLE VALVE 200# SCRD U.B. STAINLESS STL. W/NIPPLE, CAP & CHAIN LADISH #7254 OR EQ.	
	V-5	1	1½"	ANGLE HOSE VALVE BRZ. SCRD W/CAP & CHAIN CRANE #117 OR EQ. N.F.P.T.	
	V-6	2	¾"	ANGLE HOSE VALVE BRZ. SCRD W/CAP & CHAIN CRANE #58 OR EQ. N.F.P.T.	
△1	V-7	2	1½"	GATE VALVE 150# FLGD STAINLESS STL. O.S. & Y. LADISH #8275 OR EQ.	
△1	FL-1	3	1½"	FLANGE F.F.S.O. 150# STAINLESS STL. ASTM A182 F-304	
	B-1	8	½" x 2¼ LG.	MACH. BOLTS HEX. HD. W/HEX. HD. NUTS STAINLESS STL.	
	G-1	2	1/16"	ASBESTOS GASKET GRANITE FULL FACE FOR PC. No. FL-1 OR EQ.	
△1	1	1	1½"	FIRE HOSE 50 LENGTH N.F.P.H.T.	
△1	2	2	¾"	HOSE 50' LENGTH N.F.P.H.T.	358

SYM	DESCRIPTION	DATE	BY
4	FINAL "AS BUILT"	[illegible]	
3	AS BUILT IN FIELD	[illegible]	
2	ADDED [illegible] S.W. TO PORT SIDE [illegible]	[illegible]	
1	ADDED PC. NO'S 1 & 2 & REV. PC. NO. V-4, V-7, FL-1 IN BILL OF MAT'L; ADDED VALVE @ SEA CHEST	[illegible]	

REVISIONS

APPROVALS
ABS △ 4-9-73 FCC
USCG
USPHS

U.S. NAVAL SHIP SYSTEMS COMMAND
WASHINGTON D.C. 20360

OCEANOGRAPHIC RESEARCH SHIP
AGOR (UTILITY) CLASS

HALTER MARINE SERVICES, INC.
P.O. BOX 29266 NEW ORLEANS, LA. 70129

00043

SALT WATER PIPING

SCALE: NOTE	DATE 3-27-73	HALTER DWG. NO.
DRAWN BY: BERTUCCI	CK'D BY [illegible]	P-9
HALTER HULL NO. 375 376	HALTER JOB NO. 2187 2188	
NAVSHIPS NO. AGOR 21-506-001		REV. 2

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