



HALLIBURTON

Pioneer

Irish Sea



OPERATIONAL ENVELOPE

WORKING AREA	Liverpool Bay
MAX WATERDEPTH	39.3m
@ airgap	30m
@ penetration	2.0m (max allow 3.96)
DESIGN CRITERIA	
WATER DEPTH	39.3m/36.0m
WAVE HEIGHT	9.45m/13.1m
WAVE PERIOD	10.2s/12.2s
WIND SPEED	Sea Level 60kt/70kt
CURRENT	Tidal 2.4kt, Wind driven at surface 1.02/1.38kt
TRANSIT MODE	
WAVE HEIGHT	2.0m
JACKING MODE	
WAVE HEIGHT	2.0m
WAVE PERIOD	9s
WIND SPEED	40kt
CURRENT	1.9kt
LOGISTICS	
ENDURANCE	Elevated 30 days/46 POB Transit 12.5 days

GENERAL

OWNER	Halliburton Manufacturing & Services Limited
OPERATOR	Halliburton Manufacturing & Services Limited
YEAR BUILT	Keel laid 11th August 1994 Entered service 1st April 1996
MISSION	SEWOP
CERTIFYING AUTHORITY	ABS +A1, +AMS, +ACCU, Self Elevating Unit
CERTIFICATION	
United Kingdom COF	Yes
Holland COF	No
MODU Code	MODU Code (modified MODU)
MARPOL 1978	Yes
USCG	No



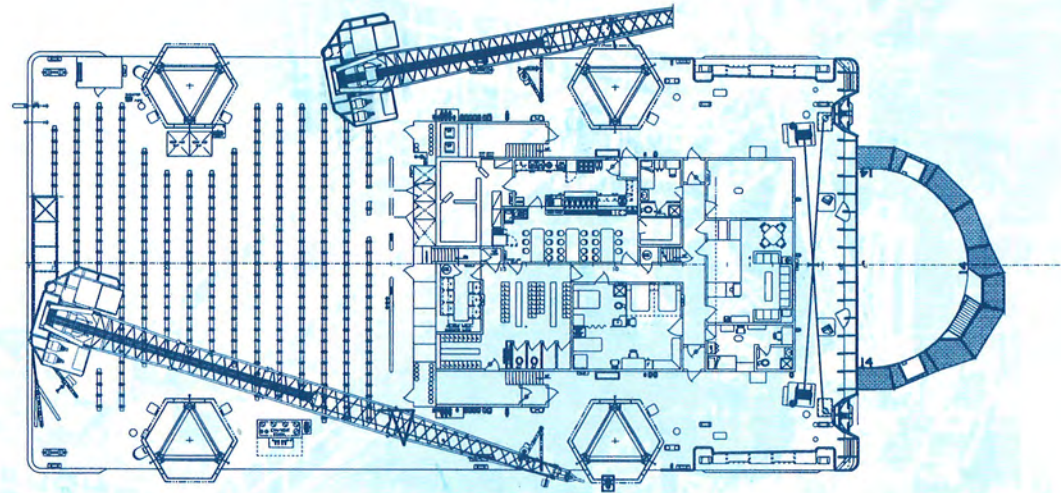
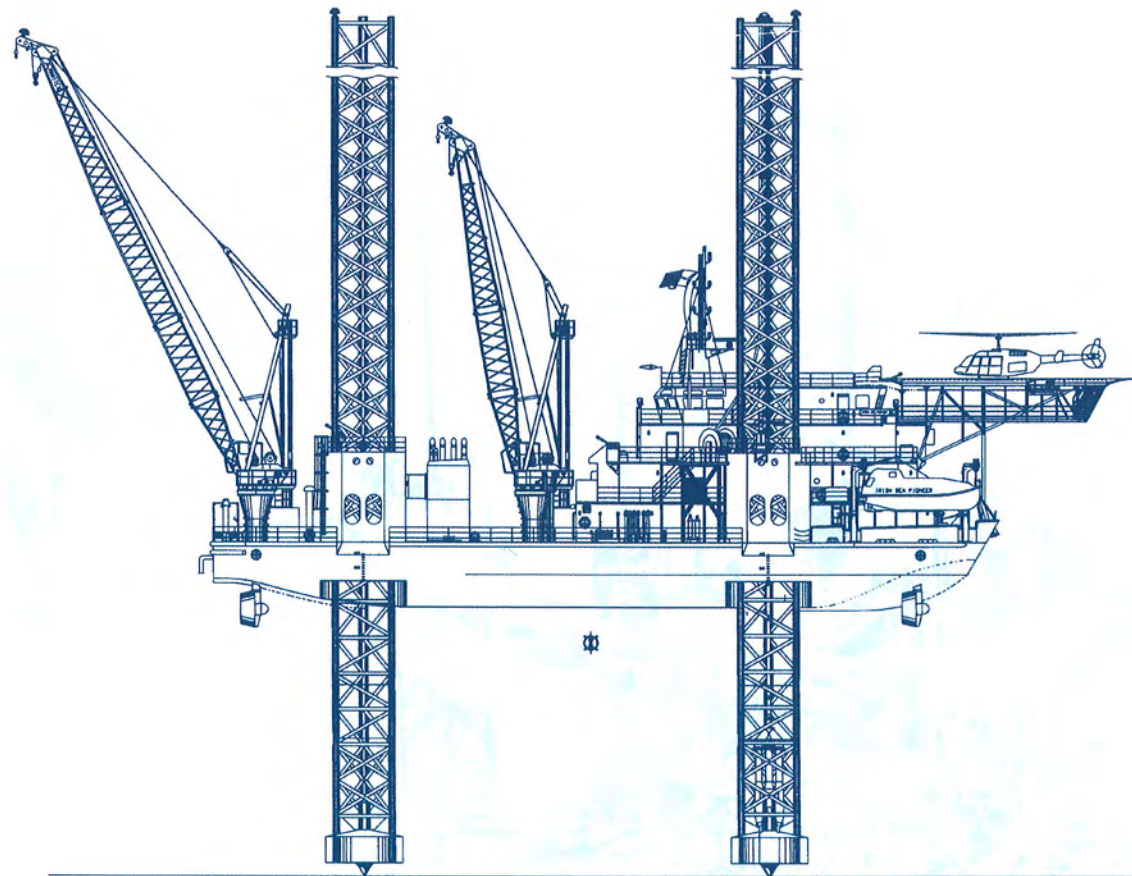
HALLIBURTON MANUFACTURING & SERVICES LTD
REGISTERED IN ENGLAND No. 611451. REGISTERED OFFICE: HILL PARK COURT, SPRINGFIELD DRIVE, LEATHERHEAD, SURREY KT22 7NL

WORKOVER PLATFORM (SEWOP)

SELF ELEVATING

MARINE SPECIFICATION

LENGTH	55.168m
MAX LENGTH	56.61m
BREADTH	28.041m
DEPTH	4.876m
JACKHOUSE	6.4m main deck to house top
DRAFT	3.32m summer, actual add 1.6m to tip of spud can
MAX VDL MOVING	227te
MAX VDL ELEVATED	227te
NAVIGATION	Simrad Robertson AP9Mk2 Autopilot ROBPOS RDP600 joystick control CD109 course detector
PROPULSION CONFIG.	4 azimuthing thrusters, 2 on bow, 2 on stern 3928kW 8kt
MAIN PROPULSION	Aquamaster
DRIVE TYPE	Caterpillar 3512
PROPS TYPE	US401/3000
POWER	2 x 1119kW
OTHER	Aquamaster
THRUSTERS	
MANUFACTURER	Aquamaster
MODEL	US1401/3000
DRIVE TYPE	Elect var Hz
POWER	2 x 895kW
OTHER	
MAIN POWERPLANT	
ENGINES	3
MANUFACTURER	Caterpillar
MODEL	3512
TOTAL POWER	3210kW/600VAC
EMERGENCY GENERATOR	250kW/480v Caterpillar 3406
WINCHES	2
TYPE	Single drum
RATED PULL	5.5te
HOLDING CAP	8te
SPEED	6m/min
DRUM CAPACITY	300m
CABLE SIZE	50mm
ANCHORS	2
WEIGHT	1.5te
TYPE	-
LEGS	4
TYPE	Le Tourneau lattice
SIZE	3.97 triangle
LENGTH	73.24
FOOTING AREA/LEG	23m ²
SPUDS RETRACTABLE	Semi 1.6m pr'tuson
JETTING SYSTEM	In cans only



CONTACT

ISP RIG MANAGER
HALLIBURTON MANUFACTURING & SERVICES LTD
FORTIES ROAD, MONTROSE, ANGUS, SCOTLAND DD10 9ET
TEL. +44 (0)1674 675959 • FAX +44 (0)1674 674385

MARINE SPECIFICATION cont.

JACKING SYSTEM	
TYPE	Rack & pinion
SPEED	3.7m/min raise & lower legs 1.8m/min raise hull
FUEL STORAGE	208m ³
POTABLE WATER	300m ³
INDUSTRIAL WATER	230m ³ (in Brine Tanks)
ACCOMODATION	
PERMANENT BEDS	46
1 MAN CABINS	4
2 MAN CABINS	21
4 MAN CABINS	0
DECK MODULES	Can fit if required
AIR CONDITIONED	TR yes
GALLEY SEAT	22
LIFEBOATS	
NR	2
MODEL	Watercraft 8.5 Mk IV
TYPE	Gravity Davit
CAPACITY	60
TOTAL CAPACITY	2 x 60
LIFERAFTS	6 each RFD
TOTAL CAPACITY	6 x 20
HELIDECK	
HELICOPTER TYPE	Dauphine 365N
REFUELLING FACILITIES	No

AUXILIARIES

AIR COMPRESSORS	3
PRESSURE	8.6 bar (125 psi)
CAPACITY	2 x 1.56cmm, 1 x 7cmm (2 x 55cfm, 1 x 250cfm)
WELDING PLANT	1
WATER MAKERS	None fitted
SEWAGE TREATMENT	Yes

WELL SERVICE FACILITIES

WORK DECK AREA	399/492m ²
WORK DECK CAPACITY	2.63 Te/m ²

Item	Units	Description
<u>GENERAL</u>		
OWNER		ENI UK Ltd
OPERATOR/DUTY HOLDER		Petrofac Facilities Management Ltd
YEAR BUILT		Keel laid 11 th Aug 1994. First registered 1 st April 1996.
MISSION		SEWOP
CERTIFYING AUTHORITY		ABS +A1, +AMS, +ACCU, Self Elevating Unit.
CERTIFICATION		
United Kingdom COF		Yes
Holland COF		No
MODU Code		MODU Code (modified MODU)
MARPOL 1978		Yes
USCG		No
<u>OPERATIONAL ENVELOPE</u>		
WORKING AREA		Liverpool Bay
MAX WATERDEPTH	m	39.3
@ airgap	m	30
@ penetration	m	2.0 (max allow 3.96)
<u>DESIGN CRITERIA</u>		
Water depth	m	39.3 / 36.0
Wave height	m	9.45 / 13.1
Wave period	s	10.2 / 12.2
Wind speed	kt	Sea level 60 / 70
Current	kt	Tidal 2.4, Wind driven at surface 1.02 / 1.38
TRANSIT MODE		
Wave height	m	2.0
JACKING MODE		
Wave height	m	2.0
Wave period	s	9
Wind speed	kt	40
Current	kt	1.9
<u>MARINE SPECIFICATION</u>		
LENGTH	m	55.168
MAX LENGTH	m	56.61
BREADTH	m	28.041
DEPTH	m	4.876
JACKHOUSE	m	6.4 main deck to house top.
DRAFT	m	3.32 summer, actual add 1.6 to tip of spud can.
DRAFT LIGHTSHIP	m	1.83
DISPLACEMENT	Te	2,692.0
MAX VDL MOVING	Te	227
MAX VDL ELEVATED	Te	227

Item	Units	Description
NAVIGATION		Simrad Robertson AP9Mk2 Autopilot ROBPOS RDP600 joystick control. CD109 course detector.
PROPULSION CONFIG.		4 azimuthing thrusters 2 on bow, 2 on stern 3928 kW 8 kt
MAIN PROPULSION		Aquamaster
drive type	-	Caterpillar 3512
props type	-	US 1401 / 3000
power	kW	2 x 1119 kW
other		
THRUSTERS		
Mnfr		Aquamaster
Model		US 1401 / 3000
Drive type		Elect var Hz
Power		2 x 895 kW
Other		
MAIN POWERPLANT		
Engines	qty	3
Mnfr	-	Caterpillar
Model	-	3512
Total power	kW/VAC	3210 / 600
EMERGENCY GENERATOR	kW	250 kw / 480 V Caterpillar 3406
WINCHES	each	2
Type	-	single drum
Rated pull	Te	5.5
Holding cap	Te	8
Speed	m/min	6
Drum capacity	m	300
Cable size	mm	50
ANCHORS	each	2
Weight	Te	1.5
Type	-	
LEGS	each	4
Type	-	LeTourneau lattice
Size	m	3.97 triangle
Length	m	73.24
Maximum Elevation Height	m	69.93
Footing area / leg	m ²	23
Spuds retractable		semi 1.6m protrusion
Jetting system		in cans only (No longer functioned)
JACKING SYSTEM		
Type	-	Rack & pinion
Speed	m / hr	219.6 raise & lower legs 109.8 raise hull Siemens var Hz
FUEL STORAGE	m ³	208
POTABLE WATER	m ³	300

Item	Units	Description
ACCOMODATION		
Permanent beds	beds	46
1 man cabins	-	6
2 man cabins		18
4 man cabins		0
Deck modules		can fit if required
Air conditioned		TR yes
Galley seats		22
LIFEBOATS		
Nr		2
Model		Watercraft 8.5 Mk IV
Type		Gravity davit
Capacity		46
Total capacity		2 x 46
LIFERAFTS	each	6 RFD
total capacity		6 x 20
HELIDECK		
Helicopter type		Dauphine 365N
Refuelling facilities		No
AUXILLIARIES		
AIR COMPRESSORS	qty	3
Pressure	bar (psi)	8.6 (125)
Capacity	cmm (cfm)	2 x 1.56, 1 x 7 (2 x 55, 1 x 250)
WELDING PLANT		1
WATER MAKERS		No
SEWAGE TREATMENT		Yes
<u>WELL SERVICE FACILITIES</u>		
WORK DECK AREA	m ²	399 / 492
WORK DECK CAPACITY	Te / m ²	2.63
DRILLING FLUID STORAGE		BRINE
Tanks	m ³	200
Total surface volume	m ³	2 x 100
HP pumping	y/n	no
ENVIRONMENTAL		OWS >15 ppm
Waste water treatment		no
CRANE 1		
Mnfr	-	Port Manitex
Model	-	ML 7200
boom length	m	24.38
max load	Te	36
radius @ max load	m	20.0
max radius	Te	25.47 m
max radius load	m	19.8 Te
CRANE 2		
		Aft

Item	Units	Description
mnftr	-	Manitex
model	-	ML 7200
boom length	m	33.53
max load	Te	36
radius @ max load	m	13
max radius	Te	34.6 m
max radius load	m	12.6 Te
GANGWAYS (personnel bridge)	Qty	1 (Fixed location Stb'd Aft)
Bridge Length	m	10.5m
Length from Transom	m	10.2

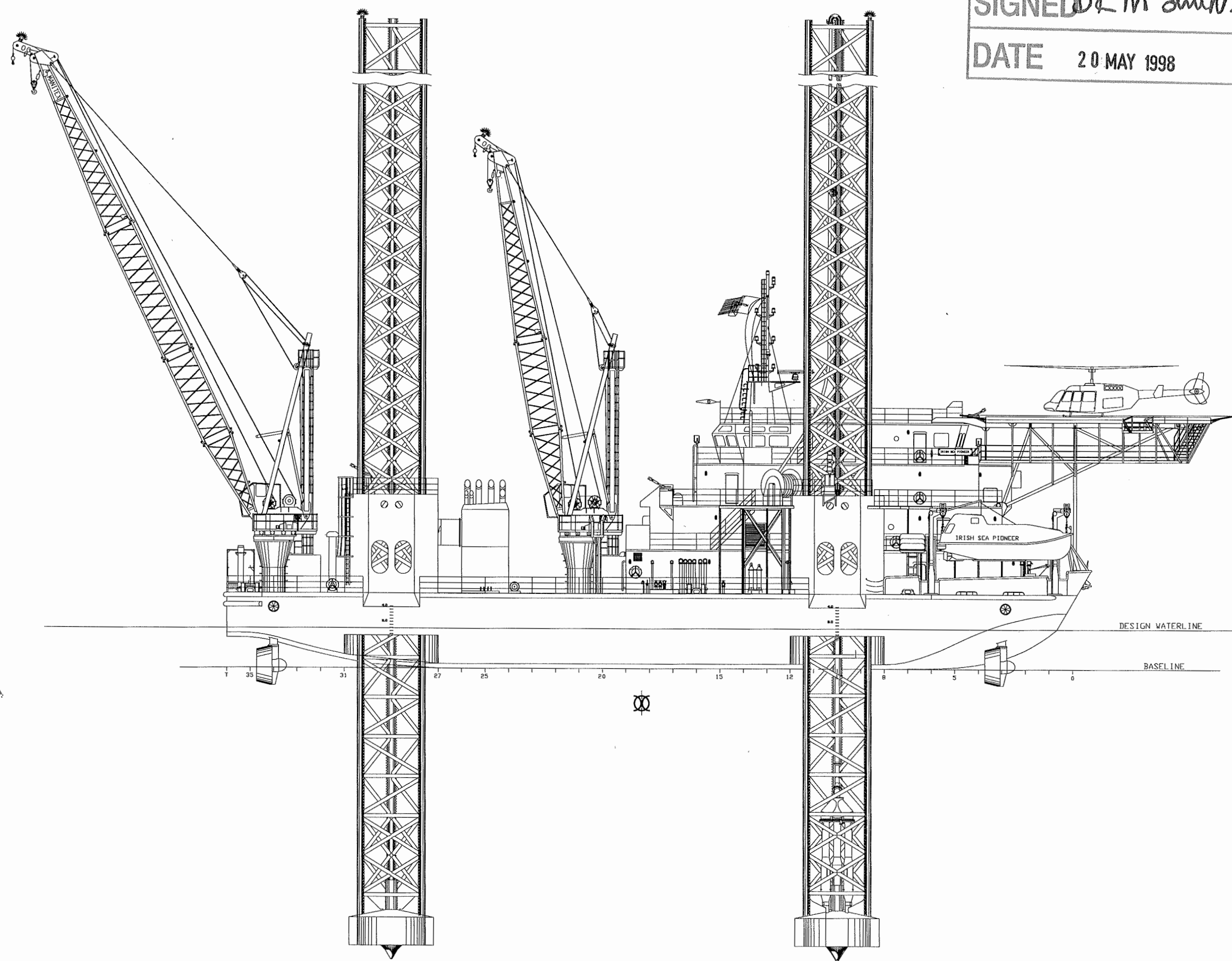
Further useful information

Distances from lowest point on leg: Tip of spike to base of spud Can: 1.20 metres Tip of spike to top of Spud Can: 3.42 metres Tip of spike to first horizontal lacing: 4.49 metres Tip of spike to submersible pumps suction strainers: 5.32 metres
Dimensions of leg components: Lacing diameter: 9" Height of one leg bay: 2.55 metres (8' 4.5") One round = 4 leg bays = 10.21 metres (33' 6.125")
Detail on Spud Can Jetting System: Jetting supply via 4" diameter X-HVY A-53 pipework. Inlet flange 4" 150# FFSO Jetting nozzles 1.5" diameter X-HVY A-53 pipe. Nine in total. Jetting deflectors 4" Nine in total on base of Spud Can.
Power supply: Based on 600 V, 60 Hz, 250 kW

MASTER COPY

SIGNED *DK M Smith*

DATE 20 MAY 1998



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INCORPORATES MORE REALISTIC CONCEPT OF FINAL HELIPAD DESIGN. REMOVED ENGINE EXHAUST STACK. ADDS DEVELOPED CONCEPT OF JACKHOUSES. INCORPORATES LEG STRUCTURE OF CURRENT DESIGN W/SUBMERSIBLE PUMP CLUSTER. (FWD) ADDS: FIRE MONITORS, DEVELOPED MAST, INFLATABLE LIFE RAFTS, SELECTED CRANES, EXTERIOR DECKHOUSE LIGHTING, SEARCHLIGHTS, VESSEL NAME, AND RECESSES IN HULL FOR LEG CANS.	11/30/94	
B	SHEET 1 1) REVISED PLATFORM BRIDGE, JACKHOUSES, BITS, VENT TRUNK, MAST, LIFERAFTS ON D2 DECK, ANCHOR, DRAFT MARKS AND HELIPAD 2) ADDED VENTS AND LIFE RING	1/16/95 1/16/95 1/16/95	BB JCB R.J.L.
C	REVISED TO INCORPORATE OWNER CHANGE AND TO REFLECT CURRENT CONFIGURATION.		

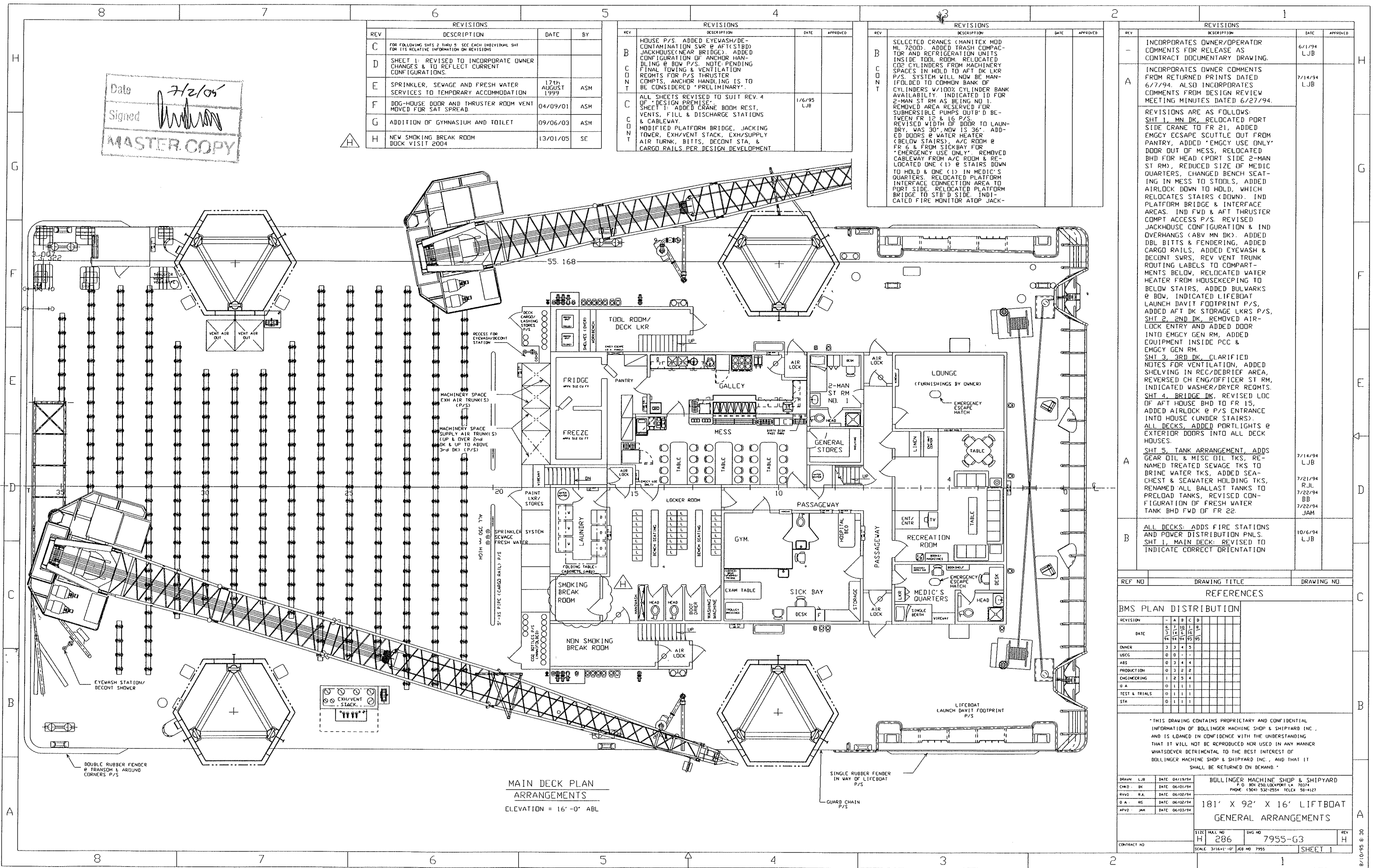
- GENERAL NOTES
- 1) HELIPAD AS SHOWN IS CONCEPTUAL ONLY.
 - 2) LIFEBOAT SHOWN REPRESENTS SCHAT PRODUCT MODEL V/1V 60-MAN.
 - 3) CABLE AND HOSE REEL AS SHOWN FOR SUBMERSIBLE PUMPS IS A GENERAL REPRESENTATION WHICH IS IN DEVELOPMENT. DETAILS OF REEL & LOCATION WILL BE FINALIZED PENDING REV. B OF THIS DWG.
 - 4) ANCHOR AS SHOWN IS CONCEPTUAL ONLY.
 - 5) FINAL EXHAUST STACK ARRANGEMENT DEVELOPMENT IS PENDING JACKHOUSE DEVELOPMENT.

REF NO	DRAWING TITLE	DRAWING NO.
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REFERENCES				
BMS PLAN DISTRIBUTION				
REVISION	A	B	C	
DATE	11/01/98	05/10/98	04/05/95	
OWNER	4	5		
ABS	4	4		
ENG	4	4		
PRODUCTION	2	2		
Q.A.	1	1		
T & T	1	1		
CHAND	1	1		
PROJECT MGR	1	1		

THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION OF BOLLINGER MACHINE SHOP & SHIPYARD INC., AND IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED NOR USED IN ANY MANNER WHATSOEVER DETRIMENTAL TO THE BEST INTEREST OF BOLLINGER MACHINE SHOP & SHIPYARD INC., AND THAT IT SHALL BE RETURNED ON DEMAND.

DRAWN: LJB	DATE: 04/29/94	BOLLINGER MACHINE SHOP & SHIPYARD	
CHKD: B.K.	DATE: 06/14/94	P.O. BOX 850, LOCKPORT LA. 70374	
REV'D: R.J.L.	DATE: 06/14/94	PHONE: (504) 538-2554 TELE: 58-4187	
Q.A.: RC	DATE:	181' X 92' X 16' LIFTBOAT	
APVD: JMH	DATE: 06/14/94	OUTBOARD PROFILE	
SIZE: H	SCALE: 1/8"=1'-0"	NO: 286	REV: C
CONTRACT NO:	JOB NO: 7955	SHEET 1 OF 1	



REVISIONS			
REV	DESCRIPTION	DATE	BY
C	FOR FOLLOWING SHEETS 2 THRU 5 SEE EACH INDIVIDUAL SHEET FOR ITS RELATIVE INFORMATION ON REVISIONS		
D	SHEET 1 REVISED TO INCORPORATE OWNER CHANGES & TO REFLECT CURRENT CONFIGURATIONS		
E	SPRINKLER, SEWAGE AND FRESH WATER SERVICES TO TEMPORARY ACCOMMODATION	17th AUGUST 1999	ASM
F	DOG-HOUSE DOOR AND THRUSTER ROOM VENT MOVED FOR SAT SPREAD	04/09/01	ASM
G	ADDITION OF GYMNASIUM AND TOILET	09/06/03	ASM
H	NEW SMOKING BREAK ROOM DOCK VISIT 2004	13/01/05	SE

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	HOUSE P/S. ADDED EYEWASH/DECONTAMINATION SWR @ AFT (STBD) JACKHOUSE (NEAR BRIDGE). ADDED CONFIGURATION OF ANCHOR HANDLING @ BOW P/S. NOTE: PENDING FINAL TOWING & VENTILATION ROOMS FOR P/S THRUSTER COMPTS. ANCHOR HANDLING IS TO BE CONSIDERED 'PRELIMINARY'.		
C	ALL SHEETS REVISED TO SUIT REV. 4 OF 'DESIGN PREMISE'. SHEET 1: ADDED CRANE BOOM REST, VENTS, FILL & DISCHARGE STATIONS & CABLEWAY. MODIFIED PLATFORM BRIDGE, JACKING TOWER, EXH/VENT STACK, EXH/SUPPLY AIR TURNK, BITTS, DECONT STA, & CARGO RAILS PER DESIGN DEVELOPMENT	1/6/95	LJB

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	SELECTED CRANES (MANITEX MOD ML 7200). ADDED TRASH COMPACTOR AND REFRIGERATION UNITS INSIDE TOOL ROOM. RELOCATED CO2 CYLINDERS FROM MACHINERY SPACES IN HOLD TO AFT DK LKR P/S. SYSTEM WILL NOW BE MAN-IFOLDED TO COMMON BANK OF CYLINDERS W/100% CYLINDER BANK AVAILABILITY. INDICATED ID FOR 2-MAN ST RM AS BEING NO 1. REMOVED AREA RESERVED FOR SUBMERSIBLE PUMPS OUTB'D BETWEEN FR 12 & 16 P/S. REVISED WIDTH OF DOOR TO LAUNDRY WAS 30", NOW IS 36". ADDED DOORS @ WATER HEATER (BELOW STAIRS). A/C ROOM @ FR 6 & FROM SICKBAY FOR 'EMERGENCY USE ONLY' REMOVED CABLEWAY FROM A/C ROOM & RELOCATED ONE (1) @ STAIRS DOWN TO HOLD & ONE (1) IN MEDIC'S QUARTERS. RELOCATED PLATFORM INTERFACE CONNECTION AREA TO PORT SIDE. RELOCATED PLATFORM BRIDGE TO STB'D SIDE. INDICATED FIRE MONITOR ATOP JACK-		

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
-	INCORPORATES OWNER/OPERATOR COMMENTS FOR RELEASE AS CONTRACT DOCUMENTARY DRAWING.	6/1/94	LJB
A	INCORPORATES OWNER COMMENTS FROM RETURNED PRINTS DATED 6/7/94. ALSO INCORPORATES COMMENTS FROM DESIGN REVIEW MEETING MINUTES DATED 6/27/94. REVISIONS ARE AS FOLLOWS: SHEET 1, MN DK, RELOCATED PORT SIDE CRANE TO FR 21, ADDED EMGCG ESCAPE SCUTTLE OUT FROM PANTRY, ADDED 'EMGCG USE ONLY' DOOR OUT OF MESS, RELOCATED BHD FOR HEAD (PORT SIDE 2-MAN ST RM), REDUCED SIZE OF MEDIC QUARTERS, CHANGED BENCH SEATING IN MESS TO STOOLS, ADDED AIRLOCK DOWN TO HOLD, WHICH RELOCATES STAIRS (DOWN) IND PLATFORM BRIDGE & INTERFACE AREAS. IND FWD & AFT THRUSTER COMPT ACCESS P/S. REVISED JACKHOUSE CONFIGURATION & IND OVERHANGS (ABV MN DK). ADDED DBL BITTS & FENDERING, ADDED CARGO RAILS, ADDED EYEWASH & DECONT SWRS, REV VENT TRUNK ROUTING LABELS TO COMPARTMENTS BELOW, RELOCATED WATER HEATER FROM HOUSEKEEPING TO BELOW STAIRS, ADDED BULKWARKS @ BOW, INDICATED LIFEBOAT LAUNCH DAVIT FOOTPRINT P/S, ADDED AFT DK STORAGE LKRS P/S, SHEET 2, 2ND DK, REMOVED AIR-LOCK ENTRY AND ADDED DOOR INTO EMGCG GEN RM, ADDED EQUIPMENT INSIDE PCC & EMGCG GEN RM. SHEET 3, 3RD DK, CLARIFIED NOTES FOR VENTILATION, ADDED SHELVE IN REC/DEBRIEF AREA, REVERSED CH ENG/OFFICER ST RM, INDICATED WASHER/DRYER RELOC. SHEET 4, BRIDGE DK, REVISED LOC OF AFT HOUSE BHD TO FR 15, ADDED AIRLOCK @ P/S ENTRANCE INTO HOUSE (UNDER STAIRS). ALL DECKS, ADDED PORTLIGHTS @ EXTERIOR DOORS INTO ALL DECK HOUSES. SHEET 5, TANK ARRANGEMENT, ADDS GEAR OIL & MISC OIL TKS, RE-NAMED TREATED SEWAGE TKS TO BRINE WATER TKS, ADDED SEACHEST & SEAWATER HOLDING TKS, RENAMED ALL BALLAST TANKS TO PRELOAD TANKS, REVISED CONFIGURATION OF FRESH WATER TANK BHD FWD OF FR 22.	7/14/94 LJB	
A		7/21/94 R.JL	
		7/22/94 BB	
		7/22/94 JAM	
B	ALL DECKS: ADDS FIRE STATIONS AND POWER DISTRIBUTION PNLS. SHEET 1, MAIN DECK: REVISED TO INDICATE CORRECT ORIENTATION	10/6/94	LJB

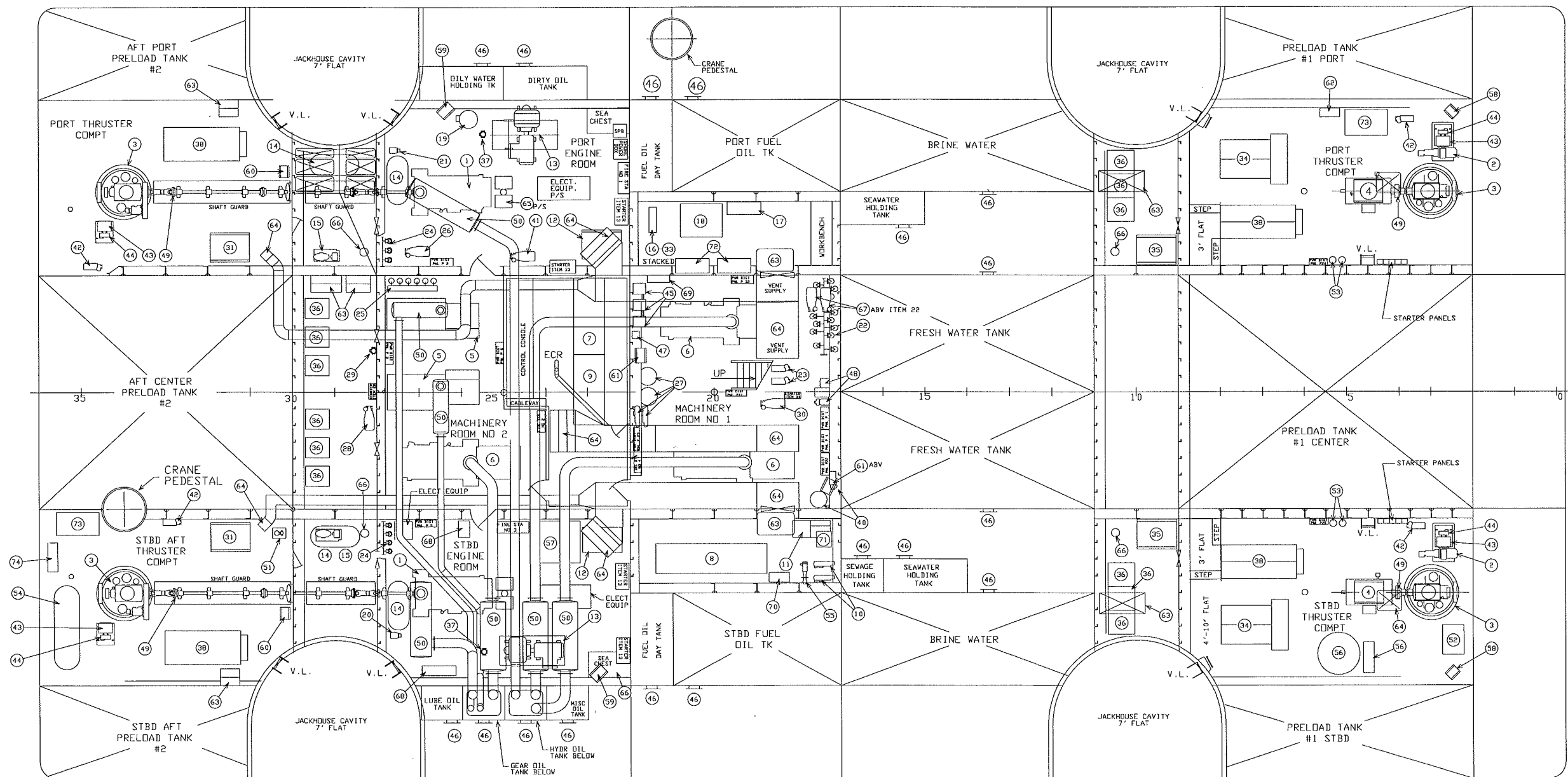
REF NO		DRAWING TITLE	DRAWING NO
REFERENCES			
BMS PLAN DISTRIBUTION			
REVISION	A	B	C
DATE	6/7/94	10/1/94	10/1/94
OWNER	3	4	5
USCG	0	0	0
ABS	0	3	4
PRODUCTION	0	3	2
ENGINEERING	1	2	4
U A	0	1	1
TEST & TRIALS	0	1	1
STA	0	1	1
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DRAWN	LJB	DATE	04/19/94
CHKD	BM	DATE	04/01/94
RVSD	R.A.	DATE	04/08/94
D A	RG	DATE	04/08/94
APVD	JAM	DATE	04/03/94
BOLLINGER MACHINE SHOP & SHIPYARD P.O. BOX 250, LOCKPORT LA 70374 PHONE (504) 532-2534 TELEFAX 58-4127		181' X 92' X 16' LIFTBOAT GENERAL ARRANGEMENTS	
SIZE	HAL NO	DWG NO	REV
H	286	7955-G3	H
CONTRACT NO		SCALE	3/16"=1'-0" ASB NO 7955
		SHEET 1	

MAIN DECK PLAN
ARRANGEMENTS
ELEVATION = 16'-0" ABL

MASTER COPY

SIGNED *DK M Smith*

DATE 20 MAY 1998



MACHINERY ARRANGEMENT

MACHINERY ARRANGEMENT

SIZE	HALL NO	DWG NO	REV
H	286	7955-M1	D
SCALE: 3/16" = 1'-0"			JOB NO: 7955
			SHEET 2 OF 2

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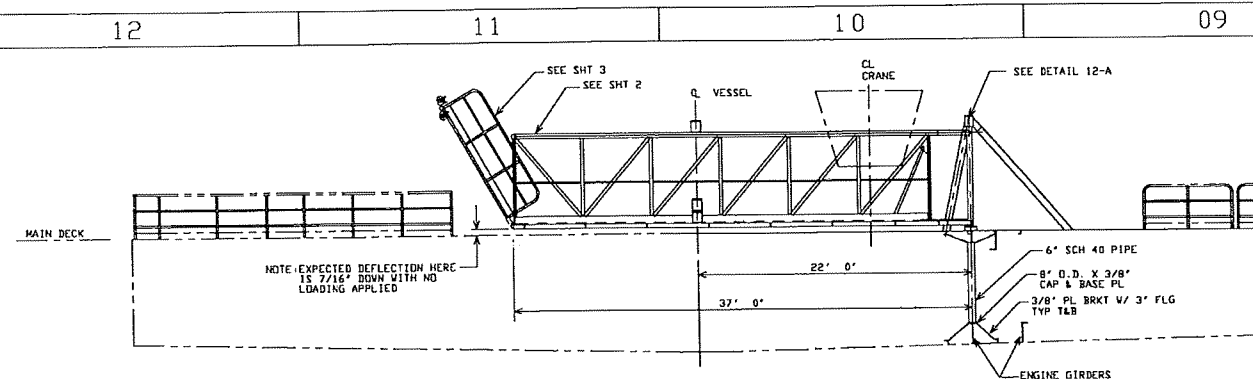
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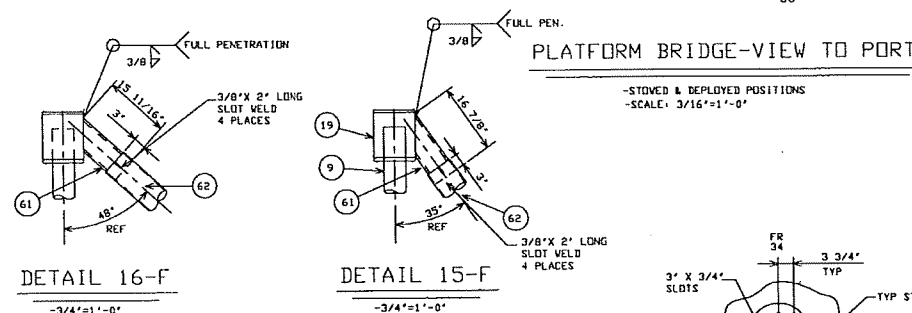
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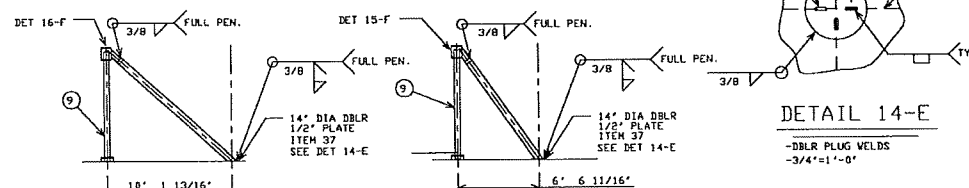
PLATFORM BRIDGE-STOWED POSITION

-VIEW ON TRANSOM
-SCALE: 3/16"=1'-0"



PLATFORM BRIDGE-VIEW TO PORT

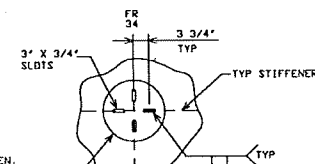
-STOWED & DEPLOYED POSITIONS
-SCALE: 3/16"=1'-0"



DETAIL 16-F

$$-3/4' \equiv 1' - 0'$$

DETAIL 15-F

$$-3/4' = 1' - 0$$


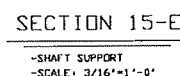
DETAIL 14-E

-DBLR PLUG WELDS
-3/4"=1'-0"



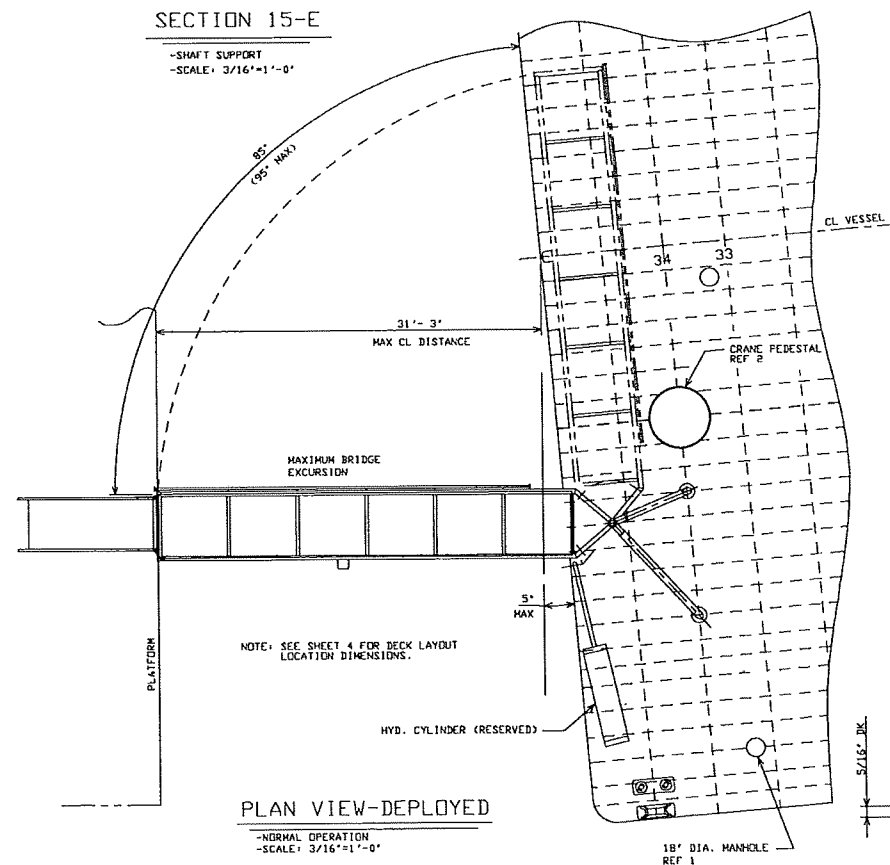
SECTION 16-E

-SHAFT SUPPORT
-SCALE: 3/16"=1'-0"



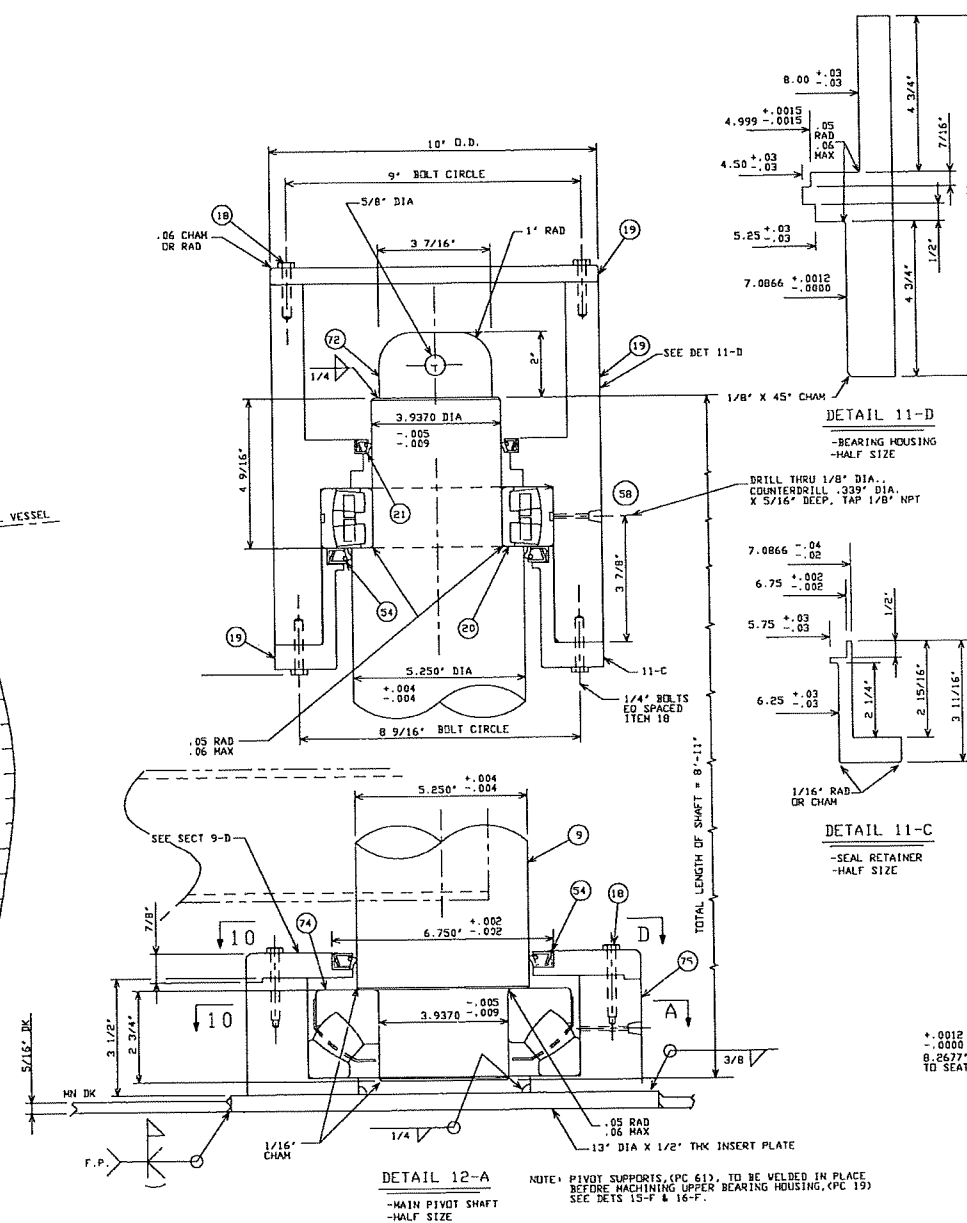
SECTION 15-E

-SHAFT SUPPORT
-SCALE: $3/16" = 1' - 0"$



PLAN VIEW-DEPLOYED

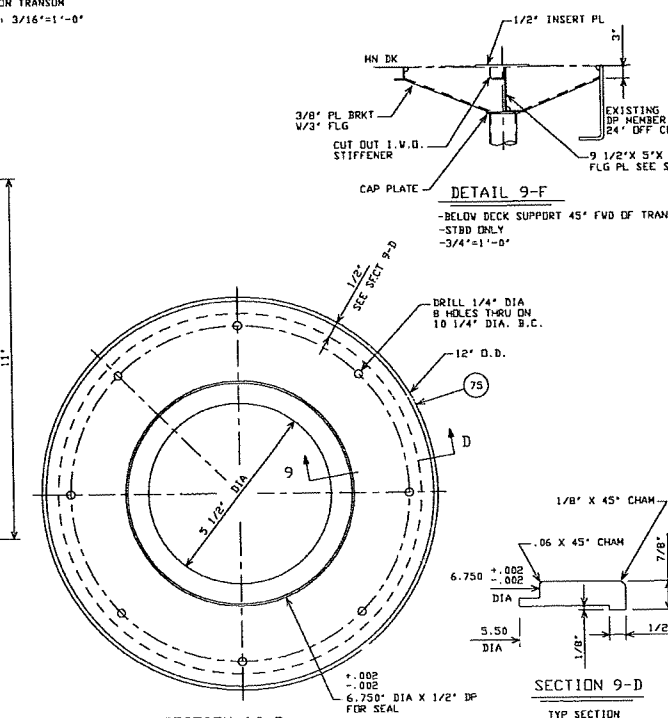
-NORMAL OPERATION
-SCALE: 3/16"=1'-0"



DETAIL 12-A

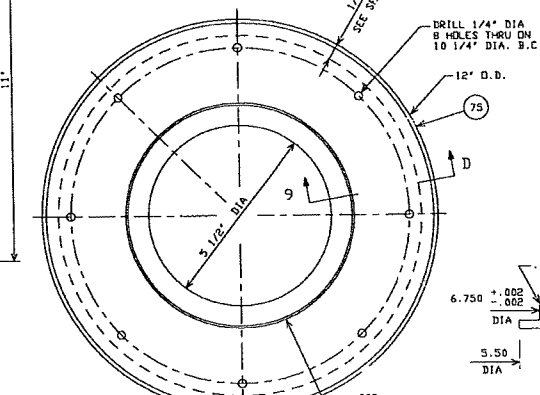
-MAIN PIVOT
-HALF SIZE

NOTE: PIVOT SUPPORTS, (PC 61), TO BE WELDED IN PLACE BEFORE MACHINING UPPER BEARING HOUSING, (PC 19) SEE DETS 15-F & 16-F.



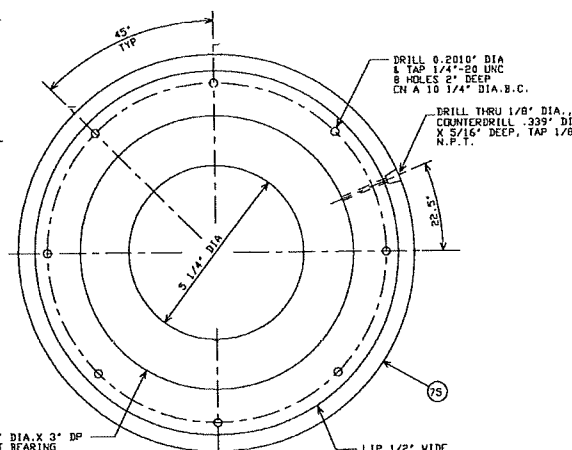
DETAIL 9-F

- BELOW DECK SUPPORT 45' FWD OF TRANSOM
- STBD ONLY
- 3/4'±1'-0"



SECTION 10-D

-COVER PLATE
-HALF SIZE

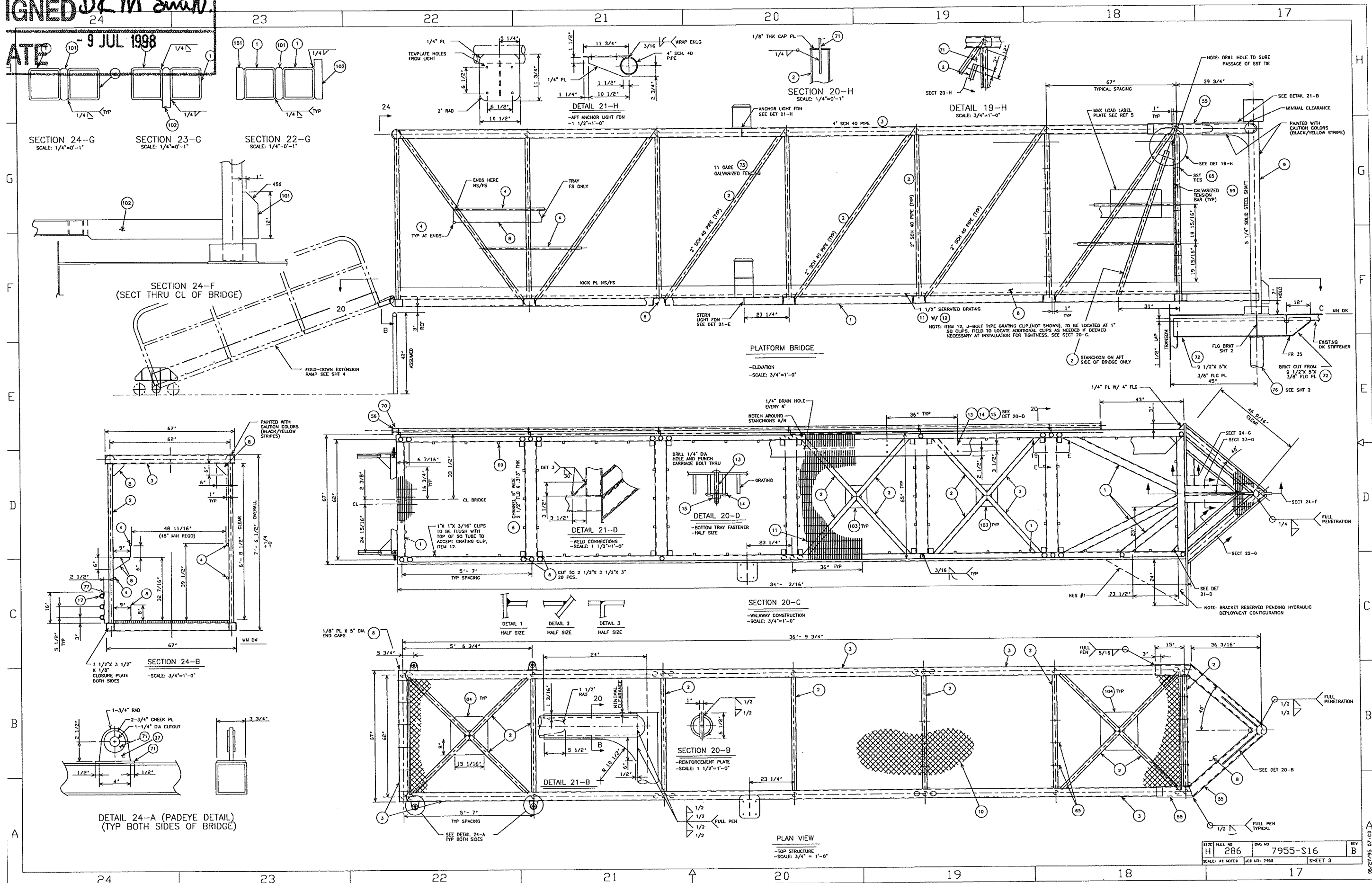


SECTION 10-A

-BEARING SEAT
-HALF SIZE

SIZE	HULL NO	DWG NO	REV
H	286	7955-S16	B
SCALE: AS SHOWN		JOB NO: 7955	SHEET 2

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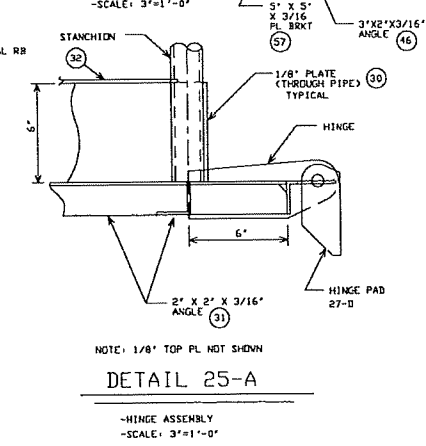
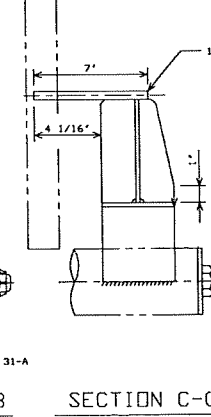
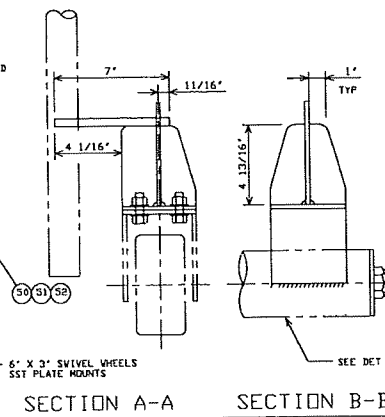
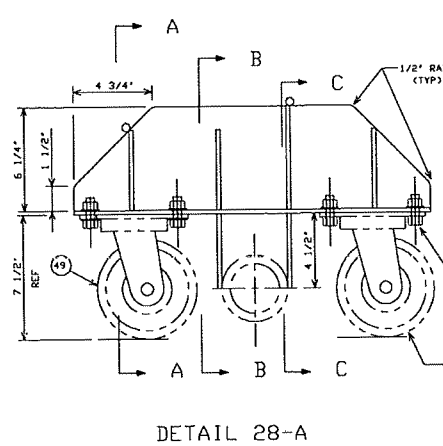
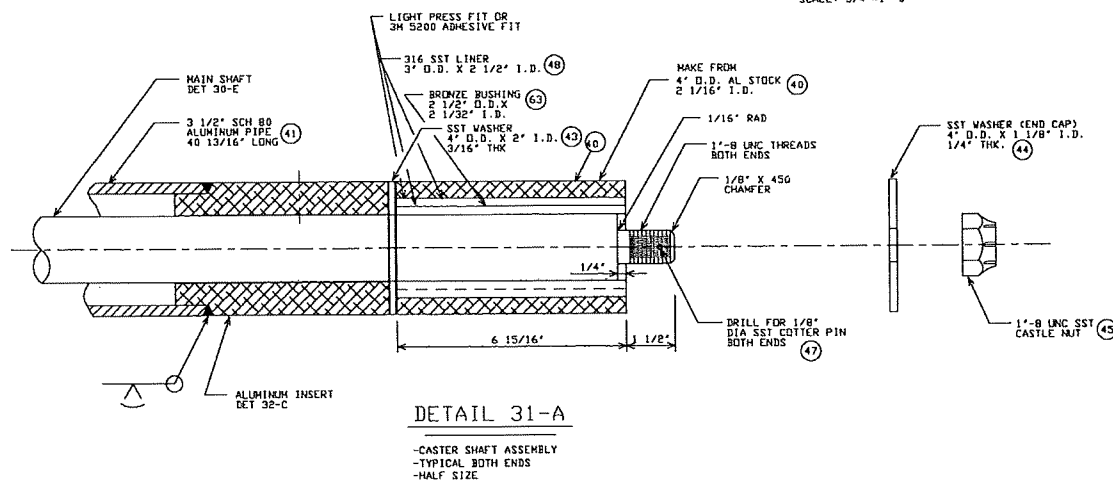
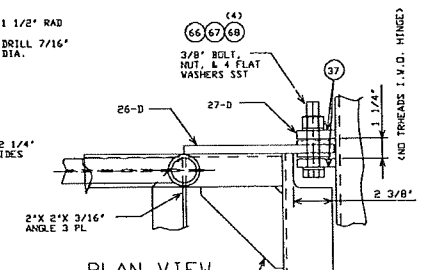
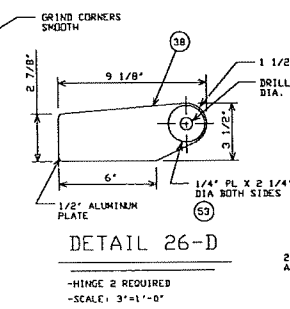
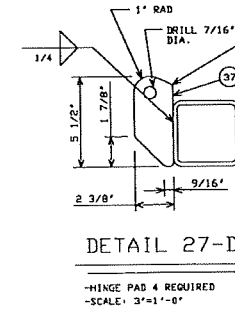
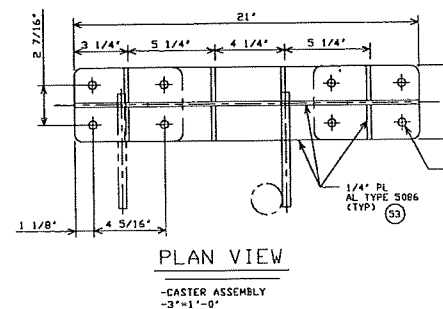
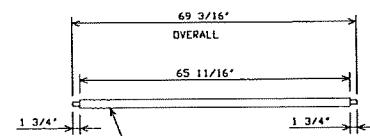
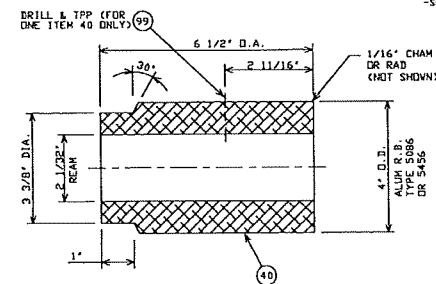
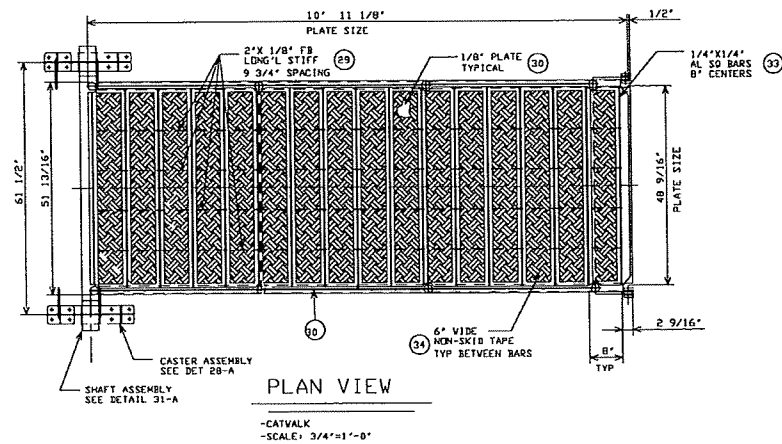
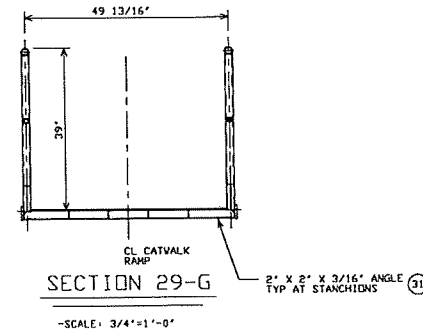
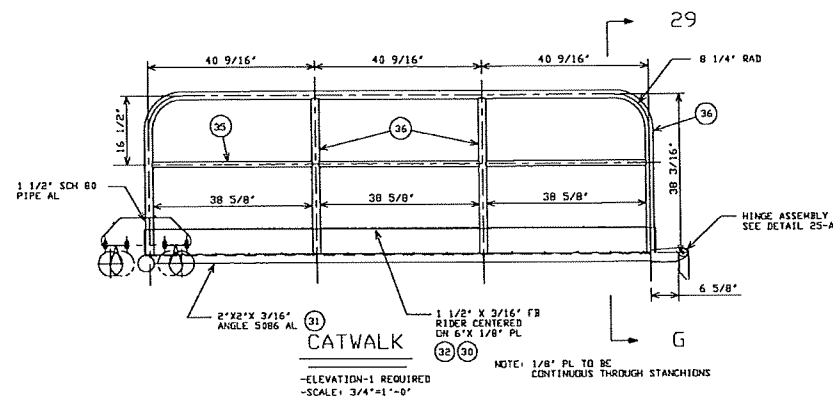
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MASTER COPY

SIGNED *DK M Smith*

DATE - 9 JUL 1998

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PARTS LIST								PARTS LIST CONTINUED								REVISONS								REVISONS							
ITEM NO. QUANTITY DESCRIPTION MATERIAL SPECIFICATION REMARKS QTY REQ								ITEM NO. QUANTITY DESCRIPTION MATERIAL SPECIFICATION REMARKS QTY REQ								REV. ZONE DESCRIPTION DATE APPROVED								REV. ZONE DESCRIPTION DATE APPROVED							
1 SQUARE TUBE 154X4X .250 STEEL ASTM A-36 (GRADE A) 114'								53 PLATE 1/4" ALUMINUM TYPE 5086 6 SQ FT								7-D SHEET 1								A GEN ADDED SHEET 5 TO BRACING WHICH ADDS A HANDWINDING AND SHEAVE SYSTEM TO THE BRIDGE FOR RAISING AND LOWERING THE FOLD DOWN EXTENSION RAMP.							
2 2" SCH 40 PIPE STEEL ASTM A-53 (GRADE B) 260'								54 BEARING SEAL 5.250" SHAFT LIP CODE V CR SEALS TYPE CRWHI STK #32649 2								7-C 2)ADDED ITEMS 99 THRU 104 TO PARTS LIST								GEN SHEET 1							
3 4" SCH 40 PIPE STEEL ASTM A-53 (GRADE B) 71'								55 PIPE 5" SCH 120 STEEL ASTM A-53 (GRADE B) 15'								7-G 3)REVISED MATERIAL & REMARKS COLUMN ON ITEM 9 IN PARTS LIST								GEN ADDED PARTS 74-98. REVISED QUANTITIES OF ITEMS 1,2,4,8,9,13,14,15,18,19,20,58, (NEW ITEM 60).							
4 1" SCH 10S PIPE STEEL ASTM A-53 (GRADE B) 132'								56 PIPE FLANGE 150# ANSI SLIP ON STEEL ASTM A105 ANSI B16.5 SIZE 1" 6								14-C 4)REVISED DEPLOYMENT SYSTEM PLAN								2-D ADDED LABEL PLATE DWG TO REF LIST.							
5 PLATE 1" STEEL ASTM A-36 (GRADE A) 4 SQ FT								57 PLATE 3/16" ALUMINUM TYPE 5086 1 SQ FT								15-C 5)ADDED NOTE IN ZONE 15-C & 11-H								3-A ADDED SHT 5 TO "REV STATUS OF SHEETS".							
6 CHANNEL MC 6 X 12 STEEL ASTM A-36 (GRADE A) 30'								58 GREASE FITTING 1/8" N.P.T. SST 5								11-H 6)IN ZONE 15C & 16C ADDED FULL PEN CALL OUT TO WELDING SYMBOL								8-H DELETED ITEM 5 AND REPLACED W/ 1" PLATE.							
7 ROUND BAR 1/2" DIA ALUMINUM TYPE 5086 3'								59 TENSION BAR 3/16" X 5/8" GALVANIZED 2 B 5'-0" 4 B 6'-0"								15E SHEET 3								SHEET 2							
8 PLATE 1/8" STEEL ASTM A-36 (GRADE A) 140 SQ FT								60 WIRE ROPE CLIPS 3/16" ROPE U-BOLT TYPE W/SADDLE SST TYPE 316 MCHASTER-CARR #B913T13 6								16E 7)REVISED BOTTOM STRUCTURE FROM PIVOT SHAFT TO THIRD BOTTOM CHANNEL FROM PIVOT SHAFT ON "SECT 20-C"								GEN 7)REVISED DEPLOYMENT SYSTEM PLAN							
9 ROUND BAR 5/16" DIA STEEL 1010 CP PER ASTM A109 MIN YIELD 40 KSI 9'-1 1/2'								61 MECH. TUBING 6" O.D. X 5' I.D. (PIVOT SUPPORTS) STEEL ASTM A-36 (GRADE A) 3'								18-C 8)CUT BACK ON PIPE (ITEM 17) ON "SECT 20-C"								15-C 8)CHANGED ITEM 60.							
10 FENCE 11 GAGE CHAIN LINK KNUCKLED & KNUCKLED GALVANIZED (5' WD ROLL) 35'								62 PIPE 6" SCH 80 (PIVOT SUPPORTS) STEEL ASTM A-53 (GRADE B) 23'								19-G 9)REVISED VERT STANCHION LOCATION ON PLATFORM BRIDGE SIDE STRUCTURE								2-D ADDED LABEL PLATE DWG TO REF LIST.							
11 SERRATED GRATING 1 1/4" X 1/8" 1 3/16" CTR MAX GALVANIZED STEEL 7 LBS/SQ FT 185 SQ FT								63 BUSHING 1/2" O.D. X 2 1/32" I.D. BRONZE 2'								18-F 10)ADDED VERT STANCHION B/W FIRST AND SECOND STANCHION CLOSES TO PIVOT SHAFT ON A/T SIDE OF BRIDGE ONLY.								3-A DELETED ITEM 5 AND REPLACED W/ 1" PLATE.							
12 GRATING CLIP 1/2" X 1/4" X 1/8" U-BOLT TYPE W/ HOLDER PLATE GALVANIZED STEEL MCHASTER-CARR # 626BT2B 112								64 PIN 1/2" DIA X 2" GRIP LENGTH PUSH BUTTON TYPE OR SIMILAR SST TYPE 316 MCHASTER-CARR 2								19-E 11)ADDED FLAT BAR UNDER BOTTOM CHANNEL SEE "SECT 19-E"								8-H CHANGED ITEM 6 TO MC 6 X 12 CHANNEL.							
13 CARRIAGE BOLTS 1/4" X 2" LONG SST TYPE 316 (BOTTOM TRAY) 30								65 TIE WIRE OR EXTERIOR ELECTRICAL TIE WRAP CORROSION RES. SST TYPE 316 2								18-B 12)REMOVED DET 24-G, 23-H, 23-A, & 18-D								SHEET 2							
14 SADDLE CLIPS FOR 1 3/16" CTRS SST TYPE 316 (BOTTOM TRAY) 30								66 BOLT 3/8"-16 UNC SST TYPE 316 2								19-C 13)ADDED DET 23-G & 24-A								GEN 9-F ADDED STANCHION AND BRACKETS BELOW DECK TO SUPPORT ADDITIONAL LOAD OF PIVOT SHAFT.							
15 NUTS 1/4" HEX SST TYPE 316 (BOTTOM TRAY) 30								68 FLATWASHER 3/8" SST TYPE 316 8								20-B 14)ADDED "NEW" DET 24-A AND SECT 24-G, 23-G, 22-G, & 20-E								14-E ADDED DBLR PLATE DETAIL 14-E; ADDITION OF PLUG WELDS.							
16 ANGLE 2" X 2" X 3/16" STEEL ASTM A-36 (GRADE A) 8.3'								70 PIPE 1 1/2" SCH 40 STEEL ASTM A-53 (GRADE B) 108'								18-F 15)ADDED 6" X 1/8" F.B. TO PARTS LIST								12-A REMOVED RESERVATION FROM DETAIL 12-A, WHICH ADDS A LARGER LOWER BEARING TO SUPPORT THE PIVOT SHAFT.							
17 U-BOLT 1/4" X 1 1/2" MIN I.D. SST TYPE 316 FOR 1 1/2" PIPE 21								71 PLATE 1/4" STEEL ASTM A-36 (GRADE A) 7 SQ. FT								21-A 16)IN ZONE 21-A ADDED FULL PEN VELD SYMBOL								GEN SHEET 3							
18 BOLT 1/4" X 2" LONG (BEARING ASSY) SST TYPE 316 24								72 PLATE 3/8" STEEL ASTM A-36 (GRADE A) 2 SQ. FT								27-E 17)RESERVED "PLAN VIEW - DECK LAYOUT" PENDING FURTHER ENG. DEVELOPMENT								20-C ADDED KICK PLATE TO OPPOSITE SIDE OF WALKWAY FOR ADDITIONAL GRATING SECURITY.							
19 10" O.D. STOCK (TOP BEARING HSG) STEEL ASTM A-36 (GRADE A) 1'								73 FENCE 11 GAGE CHAIN LINK KNUCKLED & KNUCKLED GALVANIZED STEEL 6' WIDE ROLL 70 FT								32-C 18)COMPLETELY REVISED "DET 32-C"								18-F ADDED MID PIPE RAIL ALSO TO OPPOSITE SIDE OF BRIDGE CENTERED VERTICALLY BETWEEN TOP OF KICK PLATE AND TOP HANDRAIL.							
20 BEARING 3.9370" STRAIGHT BORE X 7.0866" O.D. HFG-TORRINGTON #22220-V33 1								74 ROLLER BEARING SELF-ALIGNING 3.9370" BORE X 8.2677" O.D. SKF # 29420 E 1								31-A 19)REVISED "DET 31-A" TO SUIT REVISED "DET 32-C"								24-B RAISED PIPE RACK 4" AND CUT ANGLE TO 2 1/2" (ITEM 77)							
21 BEARING SEAL 3.937" SHAFT LIP CODE V CR SEALS TYPE CRWHI STOK #32677 1								75 12" O.D. STOCK (CLOVER BEARING HOUSING) STEEL ASTM A-36 (GRADE A) 5'								20-B 20)REVISED ELEVATION OF BRIDGE TO REFLECT "NEW STRUCTURE SEE SHT 2"								21-F TRANSVERSE BOTTOM MEMBERS ARE NOW 6" WIDE X 2 1/2" FLG X .313" THK CHANNEL.							
22 HAND WINCH WORM GEAR W/2000# LOAD RATING STEEL CORROSION RES. PAINT FINISH #482 1								76 PIPE 6" SCH 40 STEEL ASTM A-53 (GRADE B) 6 1/2'								21-A 21)REVISED PULLING PAD ARRANGEMENT AND ADDED 1/4" DRAIN HOLES.								24-C ADDED BRIDGE STOP DETAILS AND PIN LOCK PADS.							
23 WIRE ROPE 1/4" DIA 7 X 19 STRAND CORE 7000H BRK GALVANIZED STEEL 40'								77 ANGLE 3" X 2" X 3/16" STEEL ASTM A-36 (GRADE A) 8 1/2'								21-F 22)STRENGTHENED BRIDGE AT PIVOT SHAFT WITH 1" PLATE REINFORCEMENTS ON TOP AND 4" SQUARE TUBE BRKTS ON BOTTOM (DET 21-D, DET 20-B)								GEN REVISED PULLING PAD ARRANGEMENT AND ADDED 1/4" DRAIN HOLES.							
24 3" WIRE ROPE BLOCK (6" O.D.) 5/16" MAX WIRE SIZE 3500 COATED ALUMINUM HARKEN #504 4'								78 WIRE ROPE 3/16" DIA 7 X 19 STRAND CORE 4200H MIN BK GALVANIZED STEEL 80 FT								21-F 23)ADDED DET 21-D, DET 20-B								24-G ADDED STERN AND ANCHOR LIGHT FOUNDATIONS.							
25 WIRE ROPE SHEAVE 1/4"-2/8" ROPE SIZE W/ROLLER BEARING STEEL MCKISSICK #472517 3								79 WIRE ROPE THIMBLE 3/16" SST TYPE 316 2								21-F 24)ADDED DET 21-D, DET 20-B								17-D STRENGTHENED BRIDGE AT PIVOT SHAFT WITH 1" PLATE REINFORCEMENTS ON TOP AND 4" SQUARE TUBE BRKTS ON BOTTOM (DET 21-D, DET 20-B)							
26 WIRE ROPE THIMBLE 1/4" ROPE DIA SST TYPE 316 MCHASTER-CARR #B913T14 1								80 SHAFT 1" DIA. X 2 1/2" LONG SST TYPE 316 SEE SPECS FOR SHEAVE, ITEM 25 3								21-F 25)ADDED DET 21-D, DET 20-B								31-A SHEET 1 D.D. OF ITEMS 48, 63, AND 44 FOR TOLERANCE FITTING.							
27 WIRE ROPE CLIP 1/4" ROPE DIA U-BOLT W/SADDLE TYPE SST TYPE 316 MCHASTER-CARR #B913T14 3								81 ANCHOR SHACKLE 7/16" NOM SIZE 2.6 TON WK LOAD W/SCREW PIN FORGED ALLOY STEEL QUENCHED TEMPERED CROSBY #1017472 3								21-F 26)ADDED DET 21-D, DET 20-B								32-C ADDED 300 CHAM TO ALUMINUM INSERT FOR WELDING.							
28 SHACKLE BOLT PIN TYPE 3/8" STOCK DIA 1.000 WK LD LIMIT SST TYPE 316 MCHASTER-CARR #3585T3B 4								82 PLATE 1/8" GALVANIZED STEEL 44 SF								21-F 27)ADDED DET 21-D, DET 20-B								GEN ADDED LARGER SCALE PLAN VIEW OF BRIDGE PIVOT SUPPORTS.							
29 FLAT BAR 2" X 1/8" ALUMINUM TYPE 5086 44'								83 ROUND BAR 1/2" DIA STEEL ASTM A-36 (GRADE A) 9'								21-F 28)ADDED DET 21-D, DET 20-B								THIS REVISION CLOSSES FIANS 286-082 AND 286-083.							
30 PLATE 1/8" ALUMINUM TYPE 5086 44 SF								84 BOLT 1/4"-20 UNC X 1" LONG SST TYPE 316 6								21-F 29)ADDED DET 21-D, DET 20-B								4/17/95 J.C.B.							
31 ANGLE 2" X 2" X 3/16" ALUMINUM TYPE 5086 34'								85 HEX NUT 1/4"-20 UNC SST TYPE 316 6								21-F 30)ADDED DET 21-D, DET 20-B								4/17/95 R.G.							
32 FLAT BAR 1 1/2" X 3/16" ALUMINUM TYPE 5086 20'								86 NOT USED								21-F 31)ADDED DET 21-D, DET 20-B															
33 SQUARE BAR 1/4" ALUMINUM TYPE 5086 66'								87 NOT USED								21-F 32)ADDED DET 21-D, DET 20-B															
34 NON-SKID STRIP 6" WIDE MARINE GRADE MCHASTER-CARR #6970T53 66'								88 NOT USED								21-F 33)ADDED DET 21-D, DET 20-B															
35 PIPE 1" SCH 80 ALUMINUM TYPE 5086 20'								89 NOT USED								21-F 34)ADDED DET 21-D, DET 20-B															
36 PIPE 1 1/2" SCH 80 ALUMINUM TYPE 5086 47'								90 NOT USED								21-F 35)ADDED DET 21-D, DET 20-B															
37 PLATE 1/2" STEEL ASTM A-36 (GRADE A) 3 SQ FT								91 WOOD BLOCK 2" THK X 3 5/16" HIGH X 4" WIDE DAK 2								21-F 36)ADDED DET 21-D, DET 20-B															
38 PLATE 1/2" ALUMINUM TYPE 5086 .5 SQ FT								92 ROUND BAR 1/8" DIA STEEL ASTM A-36 (GRADE A) 6'								21-F 37)ADDED DET 21-D, DET 20-B															
39 ROUND BAR 2" O.D. SST TYPE 316 7'								93 NOT USED								21-F 38)ADDED DET 21-D, DET 20-B															
40 4" O.D. STOCK ALUMINUM TYPE 5086 OR 5456 1 1/2'								94 NOT USED								21-F 39)ADDED DET 21-D, DET 20-B															
41 PIPE 3 1/2" SCH 80 ALUMINUM TYPE 5086 OR 5456 5 1/2'								95 NOT USED								21-F 40)ADDED DET 21-D, DET 20-B															
42 FLAT BAR 1" X 1/4" ALUMINUM TYPE 5086 OR 5456 6'								96 NOT USED								21-F 41)ADDED DET 21-D, DET 20-B															
43 FLAT WASHER 4" O.D. X 2 1/16" I.D. 3/16" THICK SST TYPE 316 2								97 NOT USED								21-F 42)ADDED DET 21-D, DET 20-B															
44 FLAT WASHER 4" O.D. X 1 1/8" I.D. X 1/4" THICK SST TYPE 316 2								98 NO. 14 FLAT PHILIPS HEAD WOOD SCREWS 1 1/2" LONG GALVANIZED STEEL 8								21-F 43)ADDED DET 21-D, DET 20-B															
45 CASTLE NUT 1" UNC SST TYPE 316 2								99 SET SCREW 1/4" X 1-1/2" LONG SST 1								21-F 44)ADDED DET 21-D, DET 20-B															
46 ANGLE 3" X 2" X 3/16" ALUMINUM TYPE 5086 4'								100 FLAT BAR 6-3/4" X 5/16" THK STEEL ASTM A-36 25'								21-F 45)ADDED DET 21-D, DET 20-B															
47 COTTER PIN 1/8" DIA. SST TYPE 316 2								101 FLAT BAR 4" X 1" THK STEEL ASTM A-36 20'								21-F 46)ADDED DET 21-D, DET 20-B															
48 LINER 3" O.D. X 2 1/2" I.D. SST TYPE 316 2'								102 FLAT BAR 5" X 1" THK STEEL ASTM A-36 12'								21-F 47)ADDED DET 21-D, DET 20-B															
49 CASTER 6" X 3" SWIVEL WHEEL 2500 LB CAPACITY SST TYPE 304 MCHASTER-CARR #2705T11 4								103 FLAT BAR 4" X 1/4" THK STEEL ASTM A-36 5'								21-F 48)ADDED DET 21-D, DET 20-B															
50 BOLT 1/2"-13 UNC 1 3/4" LONG CASTERS SST TYPE 316 16								104 FLAT BAR 6" X 1/8" THK STEEL ASTM A-36 12'								21-F 49)ADDED DET 21-D, DET 20-B															
51 FLAT WASHER 1/2" SST TYPE 316 32																21-F 50)ADDED DET 21-D, DET 20-B															
52 LOCKNUT 1/2"-13 UNC SST TYPE 316 16																21-F 51)ADDED DET 21-D, DET 20-B															

MASTER COPY

SIGNED *D & M Smith*

DATE - 9 JUL 1998

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