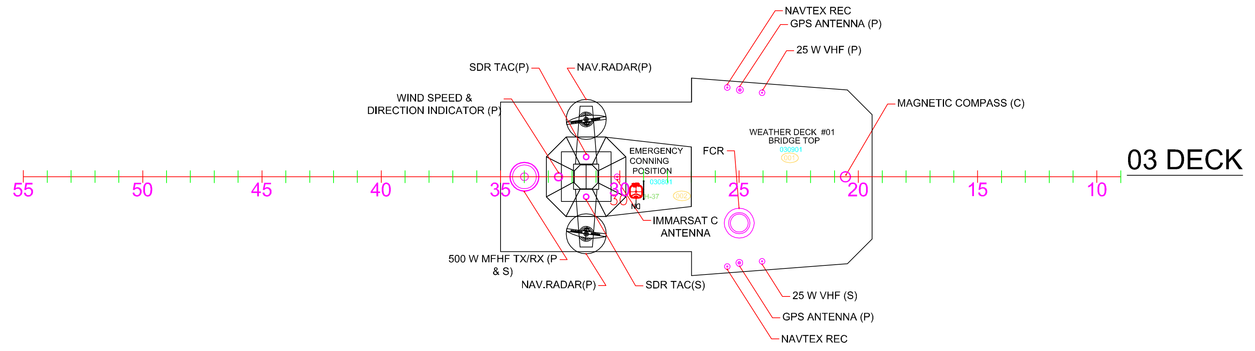
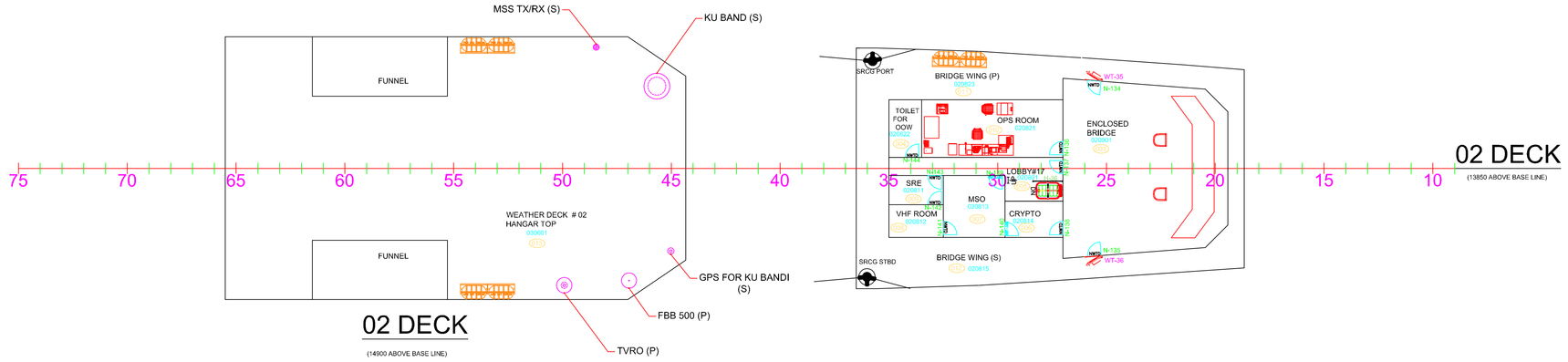
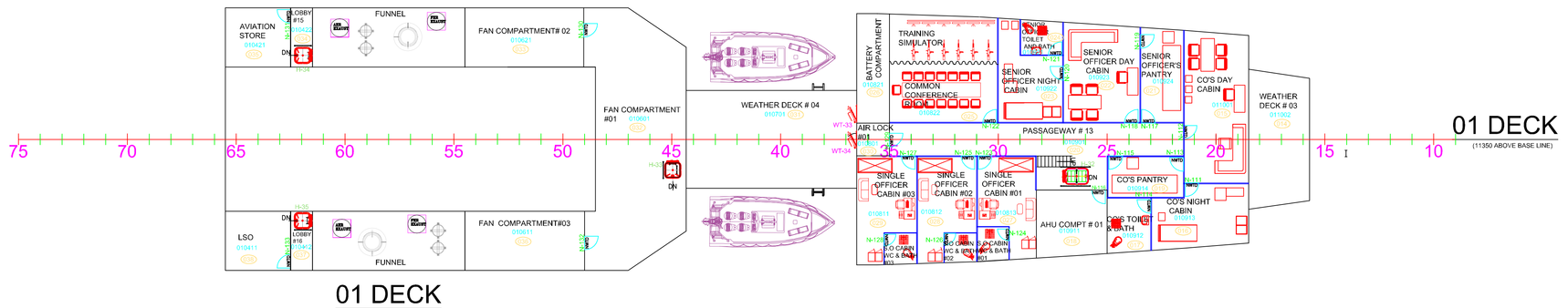
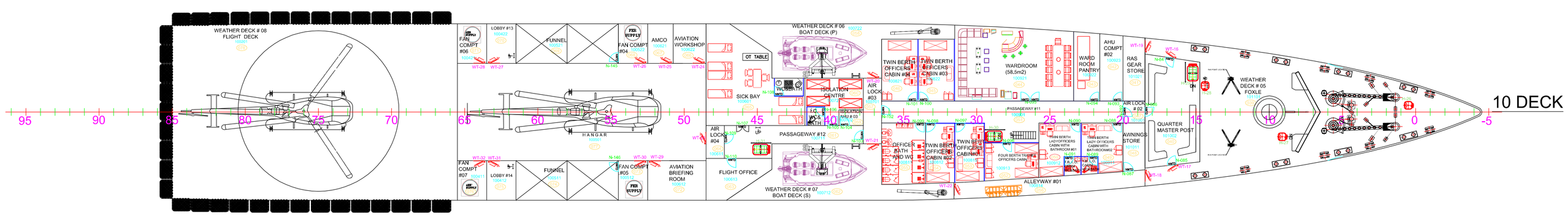
QUANTITY FOR GUARD RAIL AND STANCHIONS AROUND HATCHES

TYPE OF RAILING	SYMBOL	HATCH NO.	COMPT.	HATCH C.O.	REF.	RIGGING DRG. NO.1612-- 02		NO. OF STANCHIONS PIPE
					DROP NOSE PIN	RIGGING CHAIN	RING LUG	
A	P ← EYE PLT.	H-01	BOW THRUSTER COMPT.	600x600	2	6	12	600x600=06
	P ← EYE PLT.	H-12	CABLE LOCKER	600x600	2	6	12	
		H-13	SPARE SPACE	600x600	2	6	12	
B	P ← EYE PLT.	H-03	LOBBY #01	800x800	1	3	6	600x600=01 800x800=04 1200x800=02
		H-04	WATER EQUIPMENT ROOM	800x800	1	3	6	
		H-22	LOBBY #09	1200x800	1	3	6	
		H-28	LOBBY #11	600x600	1	3	6	
		H-34	LOBBY #13	800x800	1	3	6	
		H-35	LOBBY #14	800x800	1	3	6	
		H-36	PASSAGEWAY #13	1200x800	1	3	6	
C	P ← → P	H-02	MAGAZINE COMPARTMENT	800x800	2	3	6	600x600=02 800x800=08 1200x800=16
		H-05	STP COMPARTMENT	1200x800	2	3	6	
		H-06	A/C & REF COMPARTMENT	1200x800	2	3	6	
		H-07	AUXILARY MACHINERY ROOM	1200x800	2	3	6	
		H-14	LOBBY #02	800x800	2	3	6	
		H-17	LOBBY #05	1200x800	2	3	6	
		H-23	LOBBY #10	1200x800	2	3	6	
		H-25	STEERING GEAR COMPT.	800x800	2	3	6	
		H-29	LOBBY #11	1200x800	2	3	6	
		H-30	PASSAGEWAY #04	1200x800	2	3	6	
		H-31	LOBBY #12	1200x800	2	3	6	
		H-33	PASSAGEWAY #12	800x800	2	3	6	
		H-37	LOBBY #17	600x600	2	3	6	
D	P ↑ P ↓ P	H-15	LOBBY #03	1200x800	4	6	12	1200x800=12 600x600=08
		H-16	LOBBY #04	1200x800	4	6	12	
		H-26	PAINT STORE	600x600	4	6	12	
		H-27	BOSUN STORE	600x600	4	6	12	
		H-32	PASSAGEWAY #11	1200x800	4	6	12	
	TOTAL QTY.				59	108	216	59









01	ALL COMMENT INCORPORATED AS PER CGHQ LETTER-SA/0159/06NGOPVs/15, DATED-11 DEC 25.		MDSL	06/02/26	CSP/TSP
Rev.	Description		Auth.	Date	Sign

Mazagon Dock Shipbuilders Limited
Dockyard Road Mumbai 400 010

CLIENT: INDIAN COAST GUARD

SHIP: NGOPV

TITLE: GUARDRAIL AROUND HATCH

SCALE		DRAWN	CHECKED	APPROVED
1:150	NAME	GAURAV	K.P.RAJPUT	G.K.RAO
	DESGN.	SHAH (D--F)	DGM(D--F)	DGM(D--F)
	SIGN.			

YARD NUMBER: 1640 1

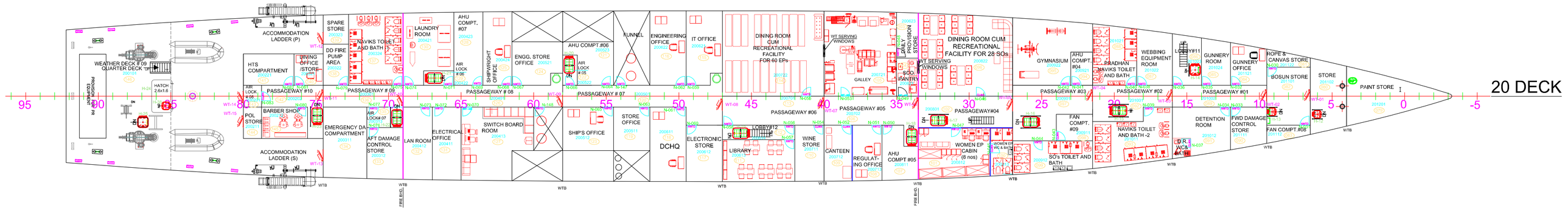
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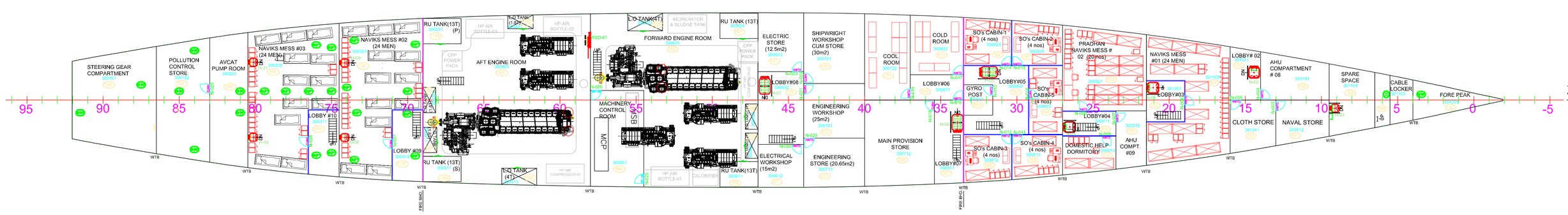
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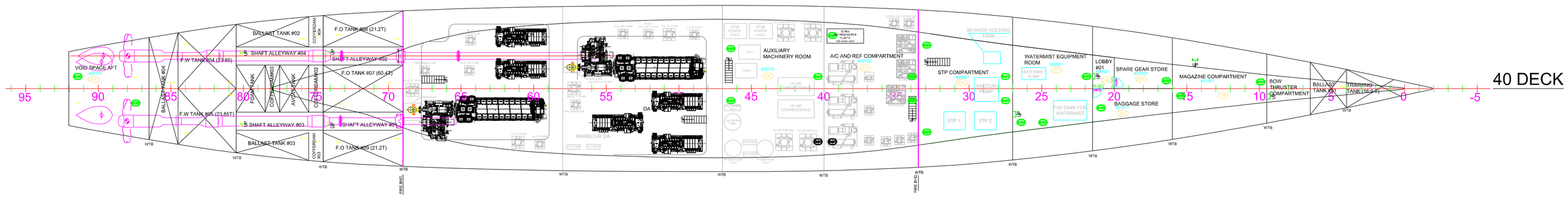
DATE 12-09-2025

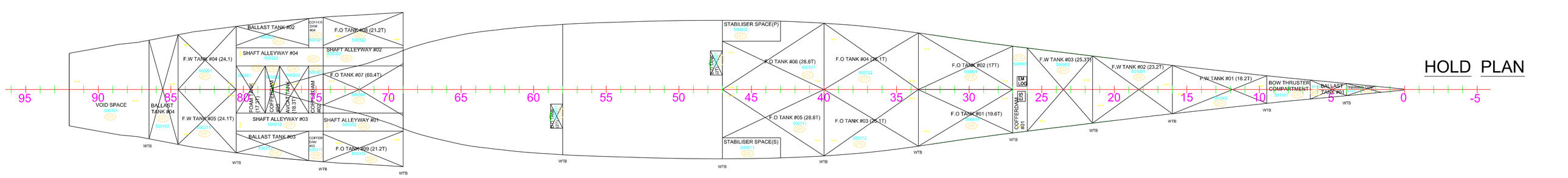
SHEET 01 OF 02

SIZE









01	ALL COMMENT INCORPORATED AS PER CGHQ LETTER-SA/0159/06NGOPVs/15, DATED-11 DEC 25.			MDSL	06/02/26	GSP/TSP
Rev.	Description			Auth.	Date	Sign

Mazagon Dock Shipbuilders Limited
Dockyard Road Mumbai 400 010

CLIENT: INDIAN COAST GUARD

SHIP: NGOPV

TITLE: GUARDRAIL AROUND HATCH

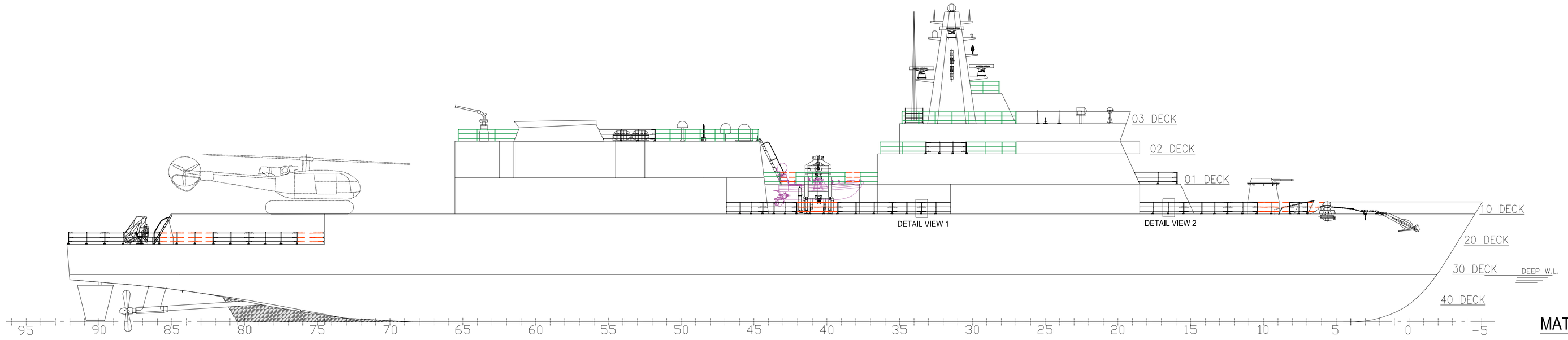
SCALE		DRAWN	CHECKED	APPROVED
1:150	NAME	GAJANAN	K.P.RAJPUT	C.K.RAO
	DESIGN.	DRAWN (D-F)	CHK(D-F)	DDM(D-F)
	SIGN.			

YARD NUMBER: 16401

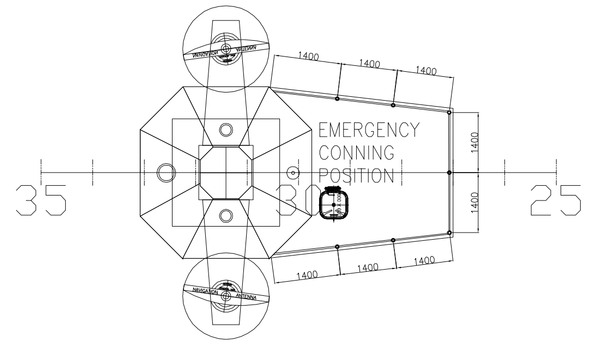
DRAWING NUMBER: 14120101

REV.: 01

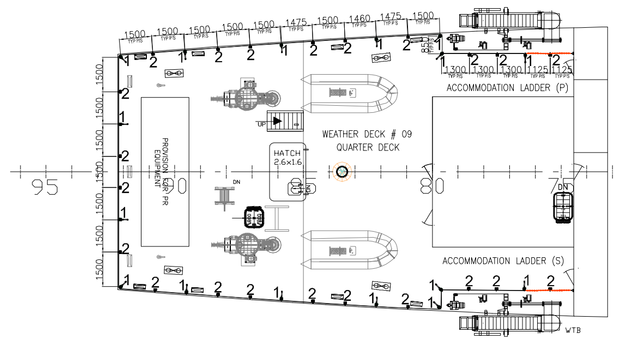
DATE 12-09-2025 SHEET 02 OF 02 SIZE



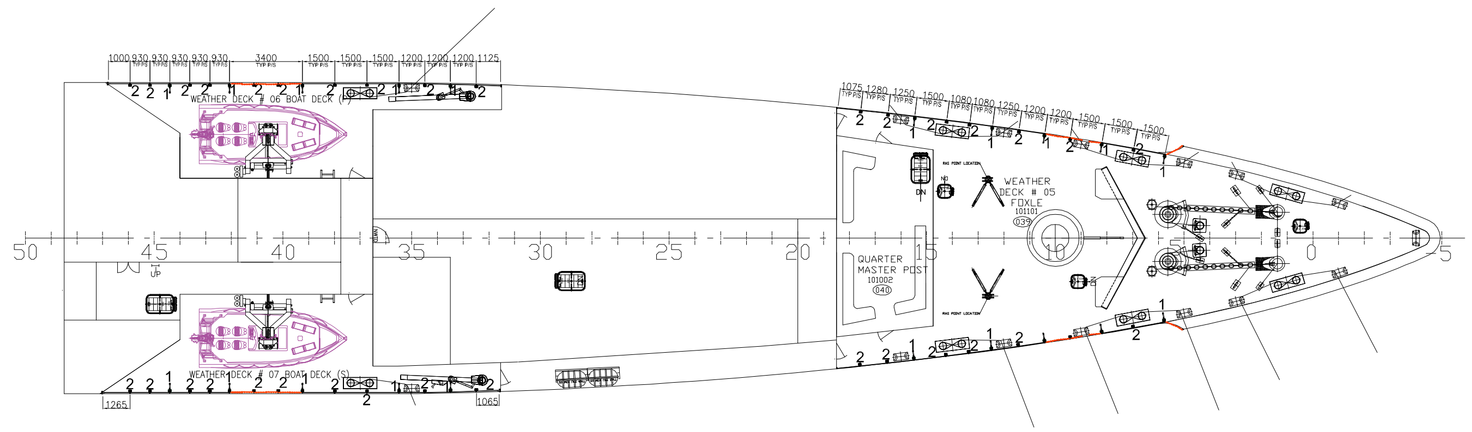
PROFILE (STBD VIEW)



04 DECK



20 DECK



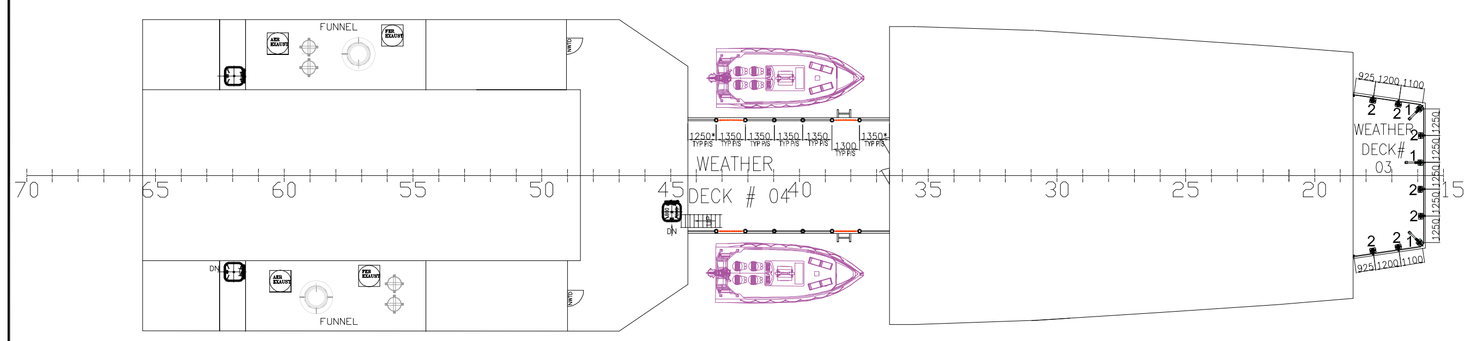
10 DECK

MATERIAL LIST OF GUARDRAIL ON WEATHER DECK'S

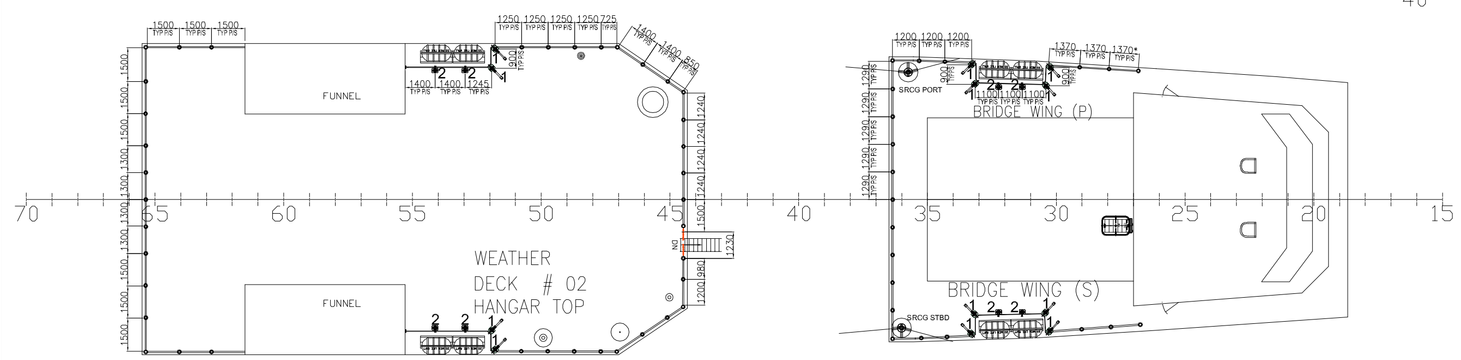
SR. No.	DESCRIPTION	PATT. NO.	MATL.	TOTAL QTY.	REMARK
25	PAD FOR HINGE STANCHION SHOE		S.S. AISI 316	230 Nos.	'1 & 2'
24	DOUBLER PLATE (90X90X 8 THK.)		M.S. Galvd.	150 Nos.	'3'
23	M8 NUT BOLT & WASHER III		S.S. AISI 316	600 Nos.	'19 & 20'
22	CHAIN FOR SECURING DROP NOSE PIN		S.S. AISI 316	150 Mtrs	'19 & 20'
21	M10 NUT BOLT & WASHER III		S.S. AISI 316	85 Nos.	TYPE "1" STN.
20	ø 16 DROP NOSE PIN		NAVAL BRASS	430 Nos.	TYPE "1&2" STN
19	ø 10 DROP NOSE PIN		NAVAL BRASS	85 Nos.	TYPE "1" STN.
18	SECURING HOOK FOR PASSING(WITH M10 NUT & WASHER III)		S.S. AISI 316	720 Nos.	TYPE 2&4 STN.
17	HOOK ø10 ROD	I.S. 2062	S.S. AISI 316	50 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
16	EYE PLATE	0262/419-5140	S.S. AISI 316	70 Nos.	0262/419-5140
15	SCREW WITH SLIP (BOTH SIDE EXTENDABLE WITH SAFETY LOCK PIN)	0263/414-9836	S.S. AISI 316	350 Nos.	DPIN/569 (a)
14	END FITTING FOR		S.S. AISI 316	350 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
13B	ø10 STEEL WIRE ROPE		S.S. AISI 316	400 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
13A	ø14 STEEL WIRE ROPE		S.S. AISI 316	200 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
12	LONG LINK 40x20xø12	0222/571-6218 I.S.2429	S.S. AISI 316	350 Nos.	AS SHOWN
11	SHACKLE BOW	0263/414-9647	S.S. AISI 316	350 Nos.	DPIN/11587 (a)
10	CHAIN (RIGGING) OPEN LINK ø10	0222/571-6220 I.S.2429	STEELGR.30	85 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
09	STAY & SHOE		M.S. Galvd.	85 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
08	BASE ON HINGE STANCHION		M.S. Galvd.	230 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
07	EYE LUG ON HINGE STANCHION		S.S. AISI 316	400 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
06	HINGE STANCHION SHOES		M.S. Galvd.	230 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
05	PIPE OD-33.4(WALL THK. 3.38)		M.S. Galvd.	400 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
04	PIPE OD-42.2(WALL THK. 3.56)		M.S. Galvd.	200 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
03	PIPE OD-60.3(WALL THK. 4.37)		M.S. Galvd.	150 Mtrs.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
02	REMOVABLE TYPE STANCHION WITHOUT STAY		M.S. Galvd.	130 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT
01	REMOVABLE TYPE STANCHION WITH STAY		M.S. Galvd.	85 Nos.	MATL. TO BE IRS/ABS GRADE OR EQUIVALENT

LOCATION OF GUARDRAIL ON WEATHER DECK'S

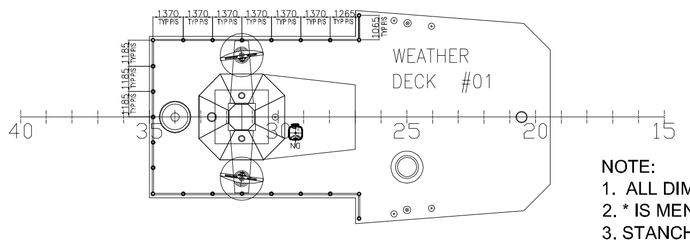
Sr. No.	LOCALITY	STNCHN. TYPE '1'	STNCHN. TYPE '2'	STAY	TURN BUCKLE	CHAIN Mtr.	CHAIN PIECES	WIRE-ø14 ROPE:M.	WIRE-ø10 ROPE:M.	EYE PLATES	REMARKS
1	04 DK.	–	–	–	–	–	–	–	–	–	
2	03 DK. WEATHER DK.01	–	–	–	–	–	–	–	–	–	
3	02 DK. BRIDGE WING (P)	4	2	4	18	–	–	–	–	–	
4	02 DK. BRIDGE WING (S)	4	2	4	18	–	–	–	–	–	
5	02 DK. WEATHER DK.02 HANGAR TOP	4	4	4	24	4	105	12	24	6	
6	01 DK. WEATHER DK.03	3	7	3	24	–	–	13	26	6	
7	01 DK. WEATHER DK.04	–	–	–	–	16	420	–	–	–	
8	10 DK. WEATHER DK.05 FOXLE DK.	10	14	10	48	6	158	31	62	12	
9	10 DK. WEATHER DK.06 BOAT DK. PORT	5	10	5	30	12	315	19	38	6	
10	10 DK. WEATHER DK.07 BOAT DK. STBD	5	10	5	30	12	315	19	38	6	
11	20 DK. WEATHER DK.08 QUARTER DK.	16	22	16	90	15	394	43	86	6	
	TOTAL	51	71	51	282	65	1707	137	274	42	
	EXTRA	19	29	19	68	20	393	63	126	28	
	GRAND TOTAL	70	100	70	350	85	2100	200	400	70	



01 DECK



02 DECK



03 DECK

NOTE:
1. ALL DIMENSIONS ARE IN mm.
2. * IS MENTION FOR DIMENSION WHICH ARE SUITE AT SITE.
3. STANCHION TEST LOAD SHOULDN'T BE LESS THAN 760 KG i.a.w. INBR 1552, GUARDRAIL BREAKING STRENGHT/LOAD SHOULDN'T BE LESS THAN 2.5 TON.
4. DOUBLE PVC COATED FSWR TO BE PROVIDED AS GUARDRAIL.
5. EARTHING/BONDING STRAPS SHALL BE PROVIDED FOR COLLAPSIBLE / REMOVABLE GUARDRAIL STANCHIONS & ALL STANCHION SECURING DROP NOSE PIN TO BE SECURED WITH SS.
6. CHAIN NEAR FOXLE DECK SUIT AT SITE AS PER REQUIREMENTS.
7. TURNBUCKLE IS USED FOR GUARDRAIL IS i.a.w. INBR 1552
8. ALL STANCHIONS TO BE GROUNDED PROPERLY WITH SUFFICIENT GROUNDING STRIPS.
9. EXTRA STANCHIONS AS SPARE OF DIFFERENT SIZE TO BE ADDED.

SAP No.150000000000090087 MATERIAL FOR GUARDRAIL

DRAWING APPROVED BY ABS VIDE LETTER NO.WO0322699 DATE:-20-JUNE-2025.

DRAWING APPROVED BY IRS VIDE LETTER NO.E-259782-345807 DATE:-30-MAY-2025.

Rev.	Description	Auth.	Date	Sign
4	ALL COMMENTS INCORPORATED AS PER CGHQ LETTER: SA/0159/06 NGOPVs/15 DATED: 05 JAN 2026	MDL	08/01/26	GSP/TSP
3	ALL COMMENTS INCORPORATED AS PER CGHQ LETTER: SA/0159/06 NGOPVs/15 DATED: 03 SEPT 2025	MDL	09/12/25	GSP/TSP
2	ALL COMMENTS INCORPORATED AS PER IRS LETTER No:E-259782-345807 DATED:30 MAY 25 & ABS LETTER No:WO0322699 DATED:20 JUNE 25 & CGHQ LETTER: SA/0159/06 NGOPV/15 DATED:16 JULY 25	MDL	18/07/25	GSP/TSP
1	ALL COMMENTS INCORPORATED AS PER IRS LETTER No:E-259782-345807 DATED 30 MAY 2025 & ABS LETTER No:WO0322699 DATED 20 JUNE 2025	MDL	30/06/25	GSP/TSP

Mazagon Dock Limited
Dockyard Road Mumbai 400 010

CLIENT: INDIAN COAST GUARD
SHIP: NGOPV

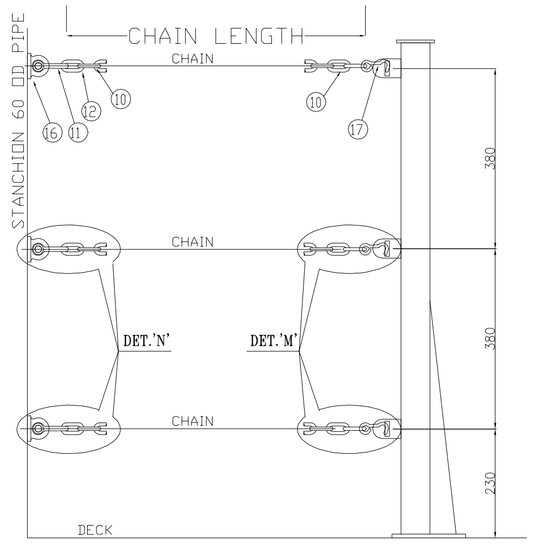
RESTRICTED

TITLE: GUARD RAIL & STANCHIONS ARRANGEMENT ON WEATHER DECKS

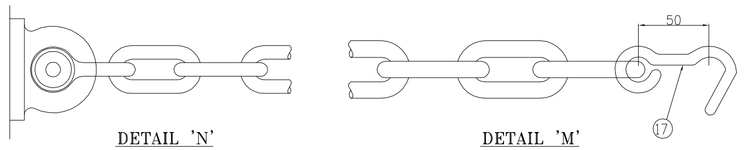
SCALE		DRAWN	CHECKED	SEC. HEAD
NTS	NAME	G.S.PAWAR	T.S.PATIL	K.RAJPUT
	DESGN.	D'MAN(D-F)	DM(D-F)	CM(D-F)
	SIGN.			

YARD NUMBER 16401
DRAWING NUMBER 1401-01
REV. 4
DATE 09/05/2025
SHEET 1 OF 2
A1

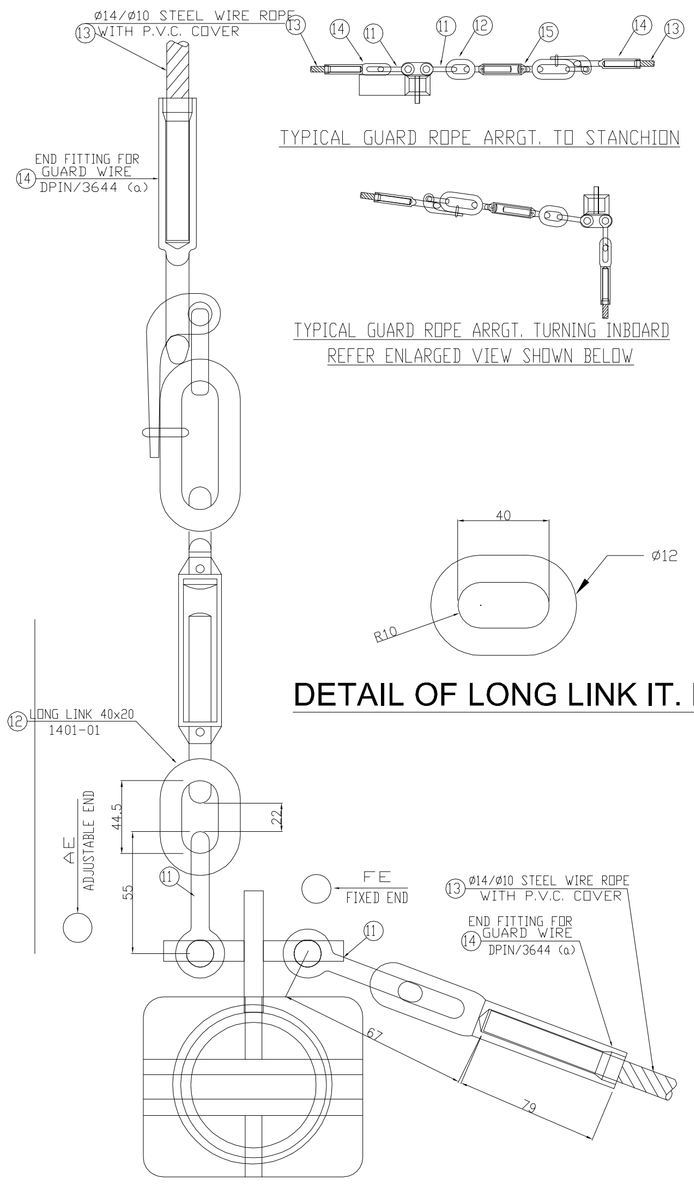
841 x 594



DETAIL IN WAY OF CHAIN



DETAIL 'N' DETAIL 'M'



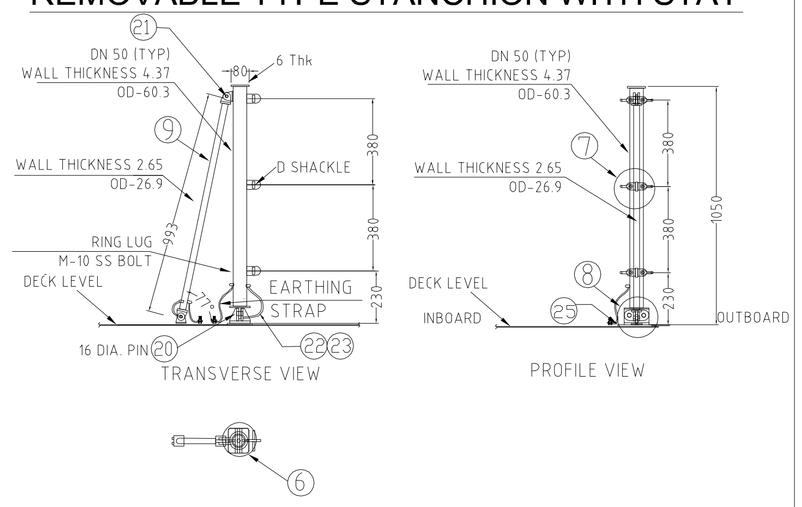
TYPICAL GUARD ROPE ARRGT. TO STANCHION

TYPICAL GUARD ROPE ARRGT. TURNING INBOARD
REFER ENLARGED VIEW SHOWN BELOW

DETAIL OF LONG LINK IT. NO. 12

TYPICAL GUARD ROPE ARRGT. TO STANCHION AT CORNERS

DETAIL VIEW 1 (TYPE-1)
REMOVABLE TYPE STANCHION WITH STAY

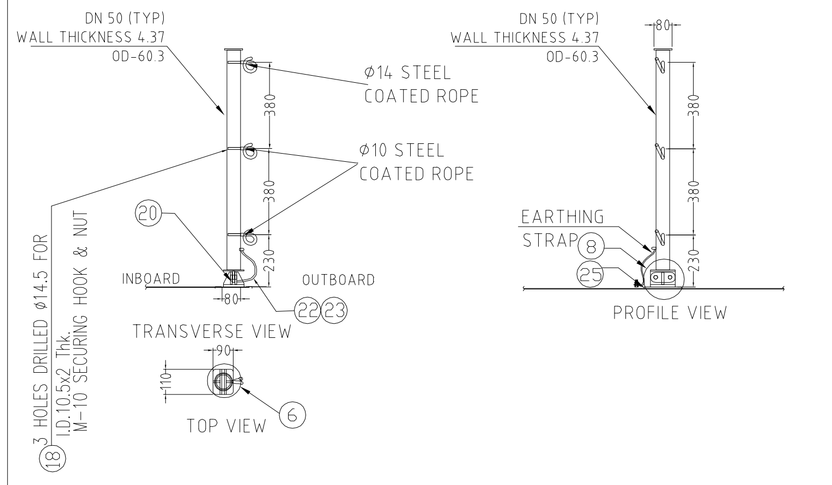


TRANSVERSE VIEW

PROFILE VIEW

TOP VIEW

DETAIL VIEW 2 (TYPE-2)
REMOVABLE TYPE STANCHION WITHOUT STAY

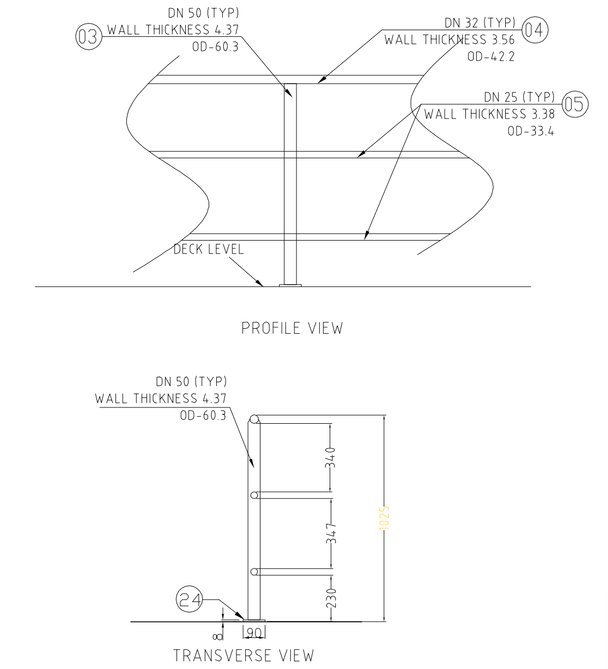


TRANSVERSE VIEW

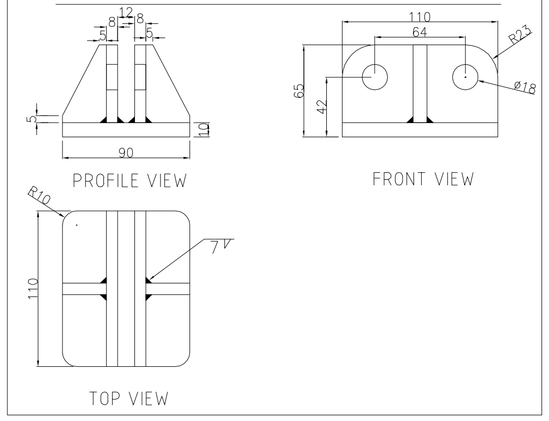
PROFILE VIEW

TOP VIEW

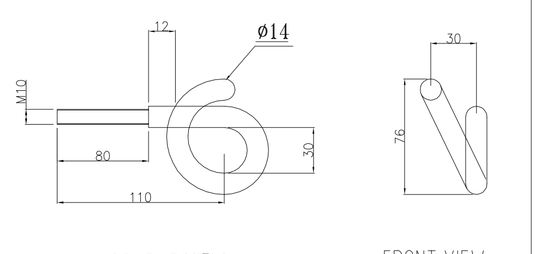
DETAIL VIEW 3 (TYPE-3)



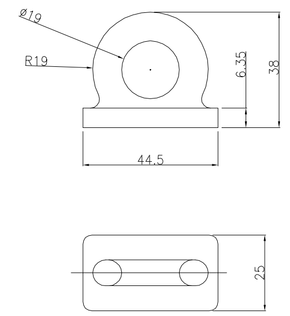
DETAIL VIEW 6
HINGE STANCHION SHOES



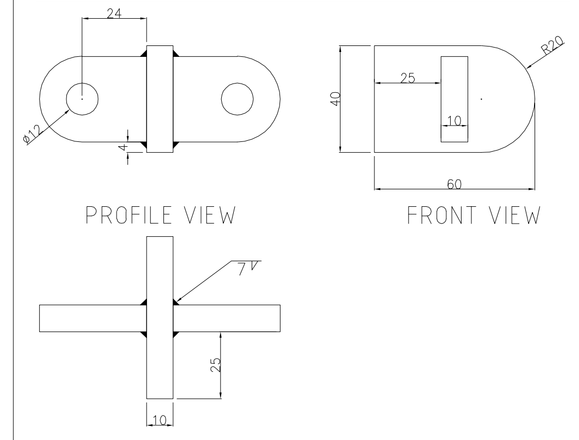
DETAIL VIEW 18
SECURING HOOK FOR PASSING



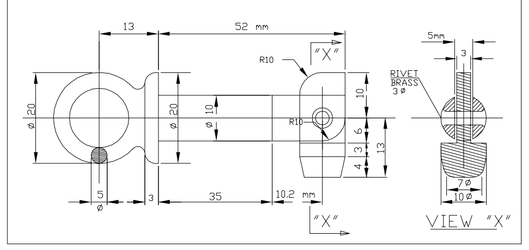
DETAIL VIEW 17
EYE PLATE



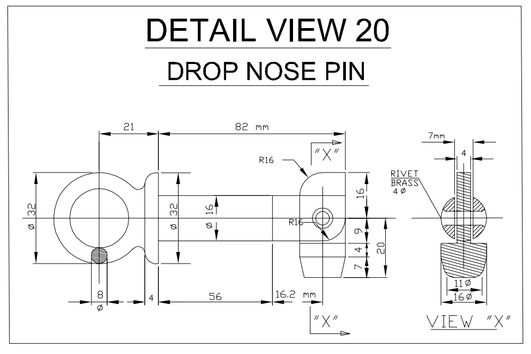
DETAIL VIEW 7
EYE LUG ON HINGE STANCHION



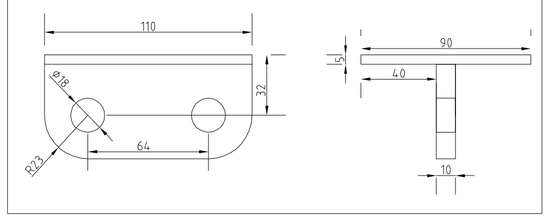
DETAIL VIEW 19
DROP NOSE PIN



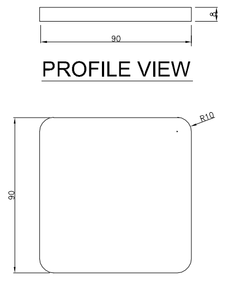
DETAIL VIEW 20
DROP NOSE PIN



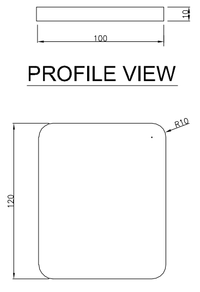
DETAIL VIEW 8
BASE OF HINGE STANCHION



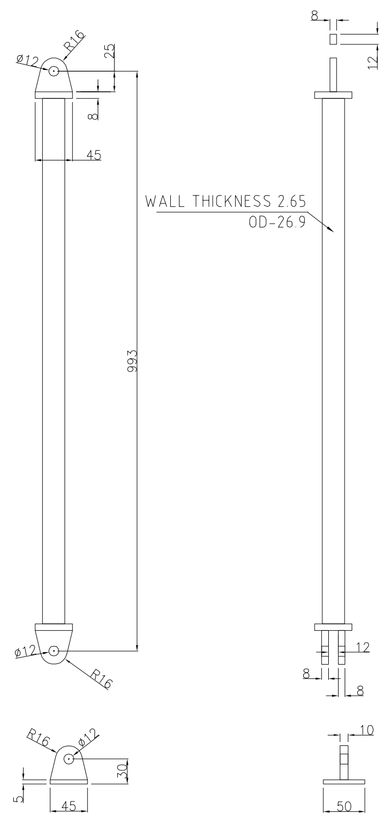
DETAIL VIEW 24
DOUBLER PLATE



DETAIL VIEW 25
PAD FOR HINGE STANCHION SHOES



DETAIL VIEW 9
STAY AND SHOE



SAP No.150000000000090087 MATERIAL FOR GUARDRAIL

DRAWING APPROVED BY ABS VIDE LETTER NO.WO0322699 DATE:-20-JUNE-2025.

DRAWING APPROVED BY IRS VIDE LETTER NO.E-259782-345807 DATE:-30-MAY-2025.

NOTE:
1. ALL DIMENSIONS ARE IN mm.
2. * IS MENTION FOR DIMENSION WHICH ARE SUITE AT SITE.
3. STANCHION TEST LOAD SHOULDN'T BE LESS THAN 760 KG i.a.w. INBR 1552, GUARDRAIL BREAKING STRENGHT/LOAD SHOULDN'T BE LESS THAN 2.5 TON.
4. DOUBLE PVC COATED FSWR TO BE PROVIDED AS GUARDRAIL.
5. EARTHING/BONDING STRAPS SHALL BE PROVIDED FOR COLLAPSIBLE / REMOVABLE GUARDRAIL STANCHIONS & ALL STANCHION SECURING DROP NOSE PIN TO BE SECURED WITH SS.
6. CHAIN NEAR FOXLE DECK SUIT AT SITE AS PER REQUIREMENTS.
7. TURNBUCKLE IS USED FOR GUARDRAIL IS i.a.w. INBR 1552
8. ALL STANCHIONS TO BE GROUNDED PROPERLY WITH SUFFICIENT GROUNDING STRIPS.
9. EXTRA STANCHIONS AS SPARE OF DIFFERENT SIZE TO BE ADDED.

Rev.	Description	Auth.	Date	Sign
4	ALL COMMENTS INCORPORATED AS PER CGHQ LETTER: SA/0159/06 NGOPVs/15 DATED: 05 JAN 2026	MDL	08/01/26	GSP/TSP
3	ALL COMMENTS INCORPORATED AS PER CGHQ LETTER: SA/0159/06 NGOPVs/15 DATED: 03 SEPT 2025	MDL	09/12/25	GSP/TSP
2	ALL COMMENTS INCORPORATED AS PER IRS LETTER No:E-259782-345807 DATED:30 MAY 25 & ABS LETTER No:W00322699 DATED:20 JUNE 25 & CGHQ LETTER: SA/0159/06 NGOPV/15 DATED:16 JULY 25	MDL	18/07/25	GSP/TSP
1	ALL COMMENTS INCORPORATED AS PER IRS LETTER No:E-259782-345807 DATED 30 MAY 2025 & ABS LETTER No:W00322699 DATED 20 JUNE 2025	MDL	30/06/25	GSP/TSP

Mazagon Dock Limited
Dockyard Road Mumbai 400 010

CLIENT: INDIAN COAST GUARD

SHIP: NGOPV

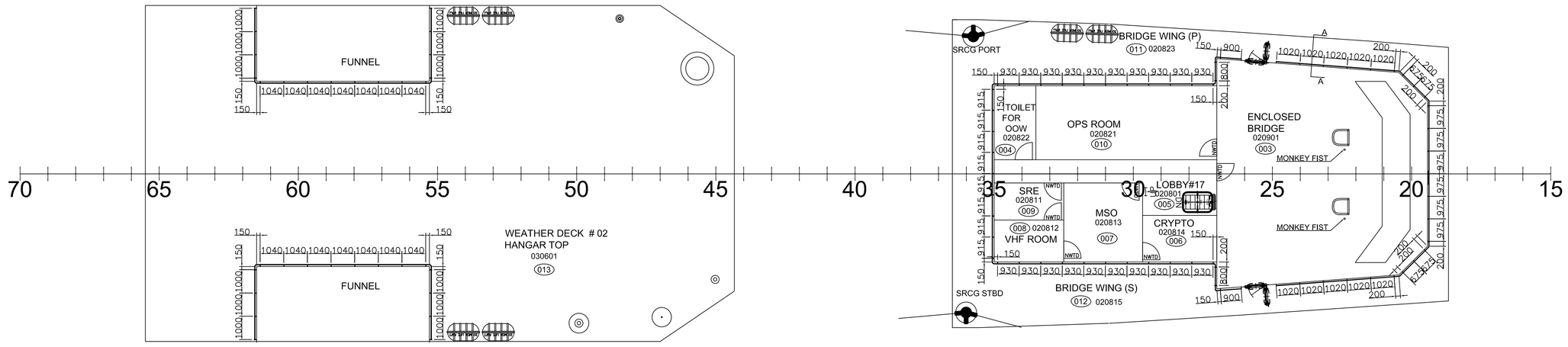
RESTRICTED

TITLE: GUARD RAIL & STANCHIONS ARRANGEMENT ON WEATHER DECKS

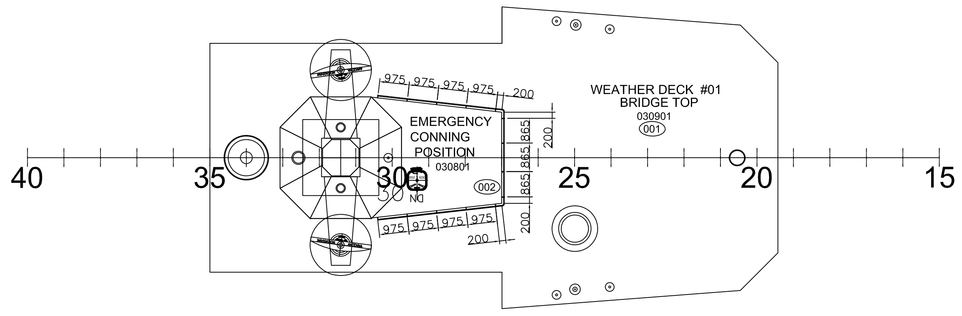
		DRAWN	CHECKED	SEC. HEAD
SCALE: NTS	NAME	G.S.PAWAR	T.S.PATIL	K.RAJPUT
	DESGN.	D'MAN(D-F)	DM(D-F)	CM(D-F)
	SIGN.			

YARD NUMBER: 16401
DRAWING NUMBER: 1401-01
REV.: 4
DATE: 09/05/2025
SHEET 2 OF 2
A2

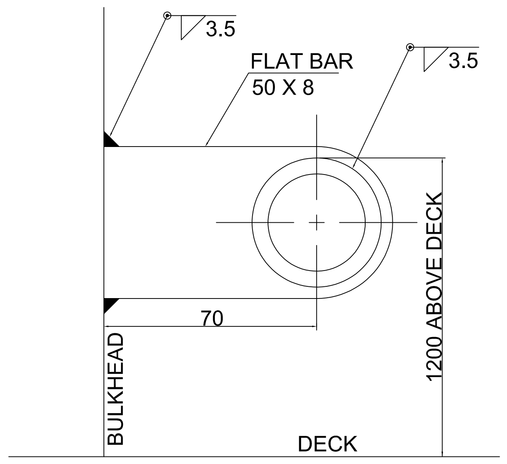
594 x 420



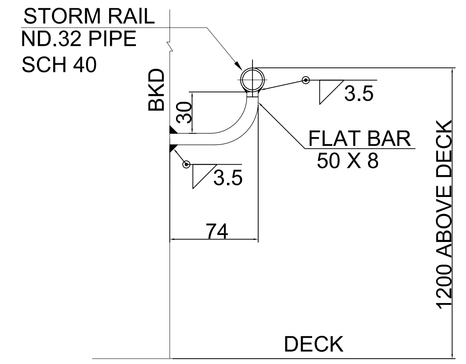
02 DECK



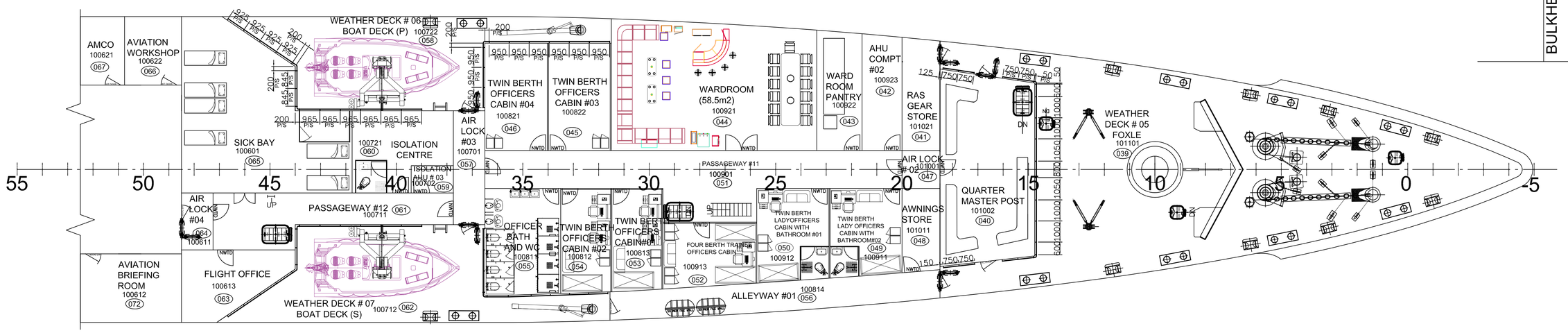
03 DECK



END BRACKET



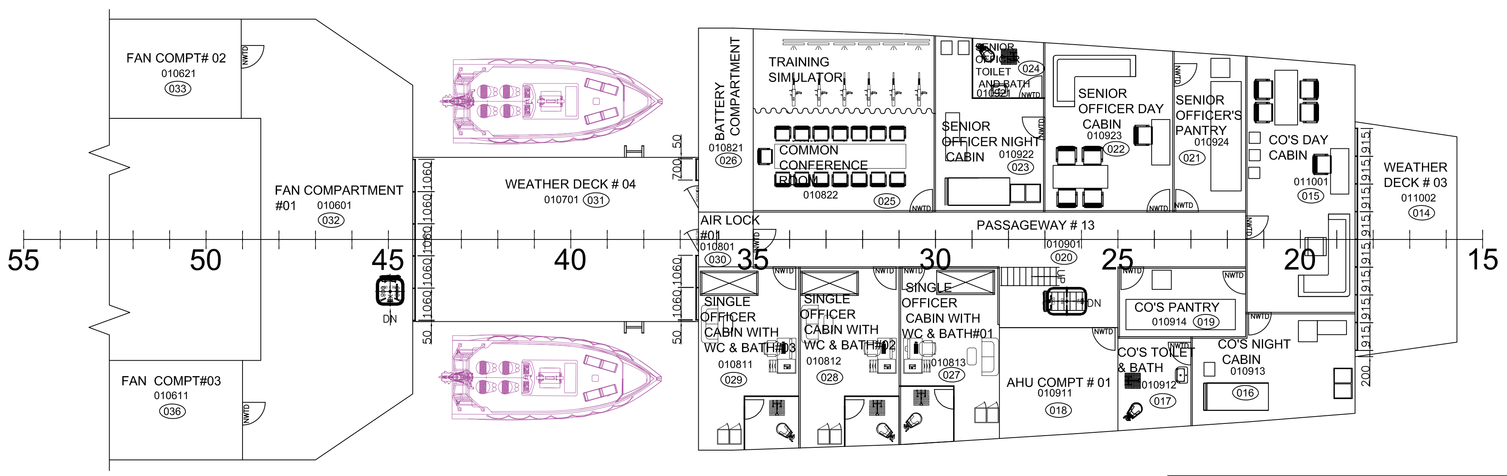
SECTION A-A
INTERMEDIATE BRACKET



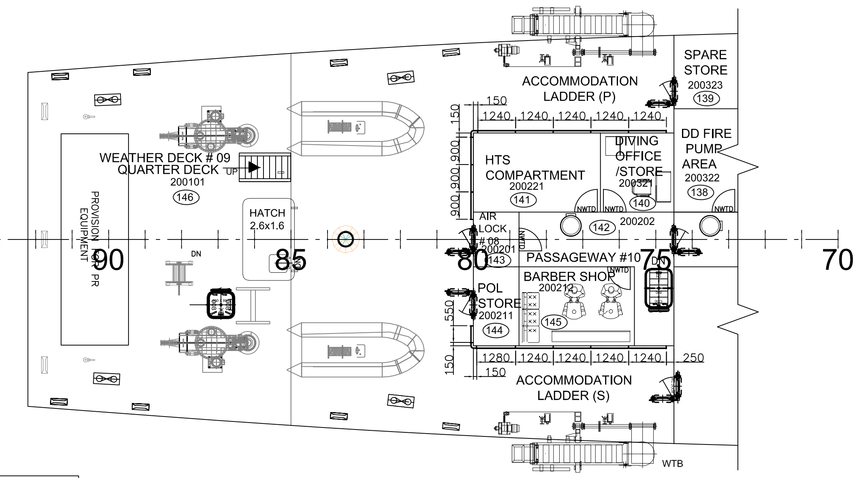
10 DECK

MATERIAL LIST OF HANDRAIL ON WEATHER DECK

Sr. No.	LOCALITY	HANDRAIL PIPE 32NB SCH40 Lenght in Mtrs MATERIAL SS-316	FLAT BAR(50X8) FOR END BRACKET & INTERMEDIATE BRACKET Length in Mtrs MATERIAL SS-316	REMARKS
1	03 DK. WEATHER DK#01 BRIDGE TOP	12	2	
2	02 DK. BRIDGE WING (P)	26	4	
3	02 DK. BRIDGE WING (S)	26	4	
4	02 DK. WEATHER DK#02 HANGAR TOP	28	4	
5	01 DK. WEATHER DK#03	8	2	
6	01 DK. WEATHER DK#04	9	2	
7	10 DK. WEATHER DK#05 FOXLE DK	12	2	
8	10 DK. WEATHER DK#06 BOAT DK(P)	21	3	
9	10 DK. WEATHER DK#07 BOAT DK(S)	21	3	
10	20 DK. WEATHER DK#09 QUARTER DK	17	2	
	TOTAL	180	28	
	EXTRA	40	12	
	GRAND TOTAL	220	40	



01 DECK



20 DECK

SAP No.150000000000090168 MATERIAL FOR HANDRAIL/STORM RAIL

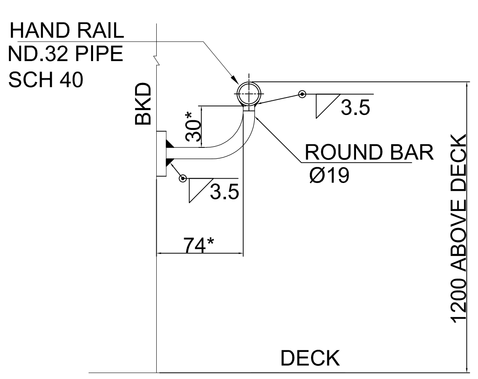
DRAWING REVIEWED BY ABS VIDE LETTER NO.WO0347053 DATE:-22-JULY-2025

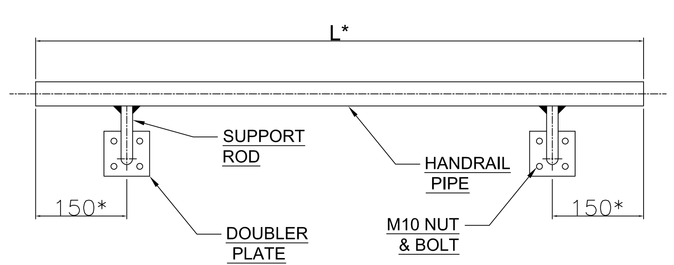
DRAWING APPROVED BY IRS VIDE LETTER NO.E-266785-355400 DATE:-07-AUG-2025

MATERIAL LIST OF HANDRAIL(INTERNAL PASSAGE)

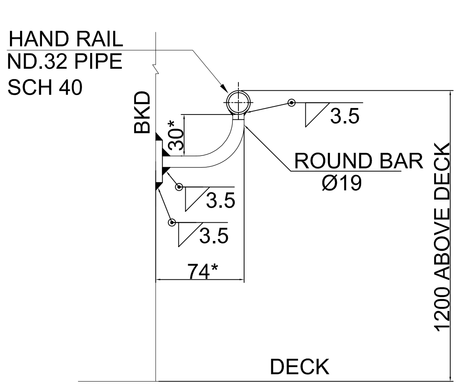
Sr. No.	LOCALITY	HANDRAIL PIPE 32NB SCH40 Lenght in Mtrs MATL:SS-316	SUPPORT ROD(ø19mm) Lenght in Mtrs MATL:SS-316	DOUBLER PLATE 50x50x5THK. ON MODULER BULKHEAD MATL:SS-316	END CAP FOR HANDRAIL ø50x5THK. MATL:SS-316	DOUBLER PLATE ø50x5THK. NON MODULER BULKHEAD MATL:SS-316	NUT & BOLT M10x70L MATERIAL S.S.AISI 316	REMARKS
1	HANDRAIL FOR INTERNAL PASSAGE ON MODULAR BULKHEAD	40	10	70	50	–	250	
2	HANDRAIL FOR INTERNAL PASSAGE ON NON MODULAR BULKHEAD	170	34	–	150	300	–	
	TOTAL	210	44	70	200	300	250	

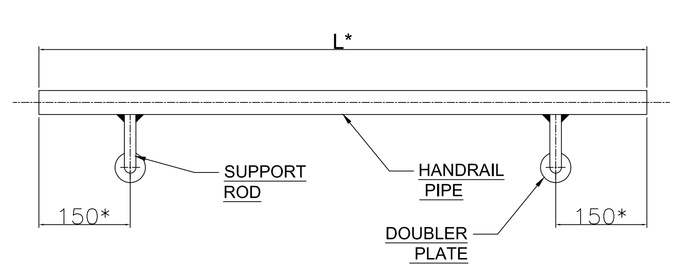
NOTE:
1. ALL DIMENSIONS ARE IN mm.
2. * IS MENTION FOR DIMENSION WHICH ARE SUIT AT SITE.
3. ALL BURRS & SHARP EDGES TO BE GROUND SMOOTH.
4. END OF RAILS WILL BE CLOSED WITH PLATES.
5. MATERIAL FOR ALL PLATE:- IS-GRADE A STEEL.
6. PIPE SPECIFICATION: SEAMLESS ASTM A312
7. LOCATIONS OF HAND RAIL ARE INDICATIVE & TO BE INSTALLED TO SUIT AT SITE.
8. CONSTRUCTION STANDARD TO BE FOLLOWED: IS 9488 (PART3)
9. HAND RAIL WITH IN INTERNAL PASSAGEWAY'S TO BE PROVIDED TO SUIT AT SITE AS PER AVAILABLE SPACE.
10. MONKEY FIST IN ENCLOSED BRIDGE TO BE PROVIDED TO SUIT AT SITE.





HANDRAIL FOR INTERNAL PASSAGE ON MODULER BULKHEAD





HANDRAIL FOR INTERNAL PASSAGE NON MODULAR BULKHEAD

Rev.	Description	Auth.	Date	Sign
02	ALL COMMENTS INCORPORATED AS PER CGHQ LETTER SA/0159/06NGOPVs/15 DATED 02 SEPT 2025	MDSL	14/10/25	GSP/TSP
01	ALL COMMENTS INCORPORATED AS PER IRS LETTER NO: E-266785-355400 DATED 07/08/2025 & ABS LETTER NO. WO0347053 DATED 22/07/2025	MDSL	08/08/25	GSP/TSP

MAZAGON DOCK SHIPBUILDERS LIMITED
DOCKYARD ROAD Mumbai 400 010

CLIENT: INDIAN COAST GUARD

SHIP: NGOPV

CONFIDENTIAL

TITLE: HAND RAIL/STORM RAIL ARRANGEMENT ON WEATHER DECKS

SCALE		DRAWN	CHECKED	SEC. HEAD
NTS	NAME	G.S.PAWAR	T.S.PATIL	K.RAJPUT
	DESGN.	D'MAN,(D-F)	DM,(D-F)	CM,(D-F)
	SIGN.			

YARD NUMBER: 1640 1

11-07-2025

DRAWING NUMBER: 1411 12

REV. 2

SHEET 01 OF 01 A0