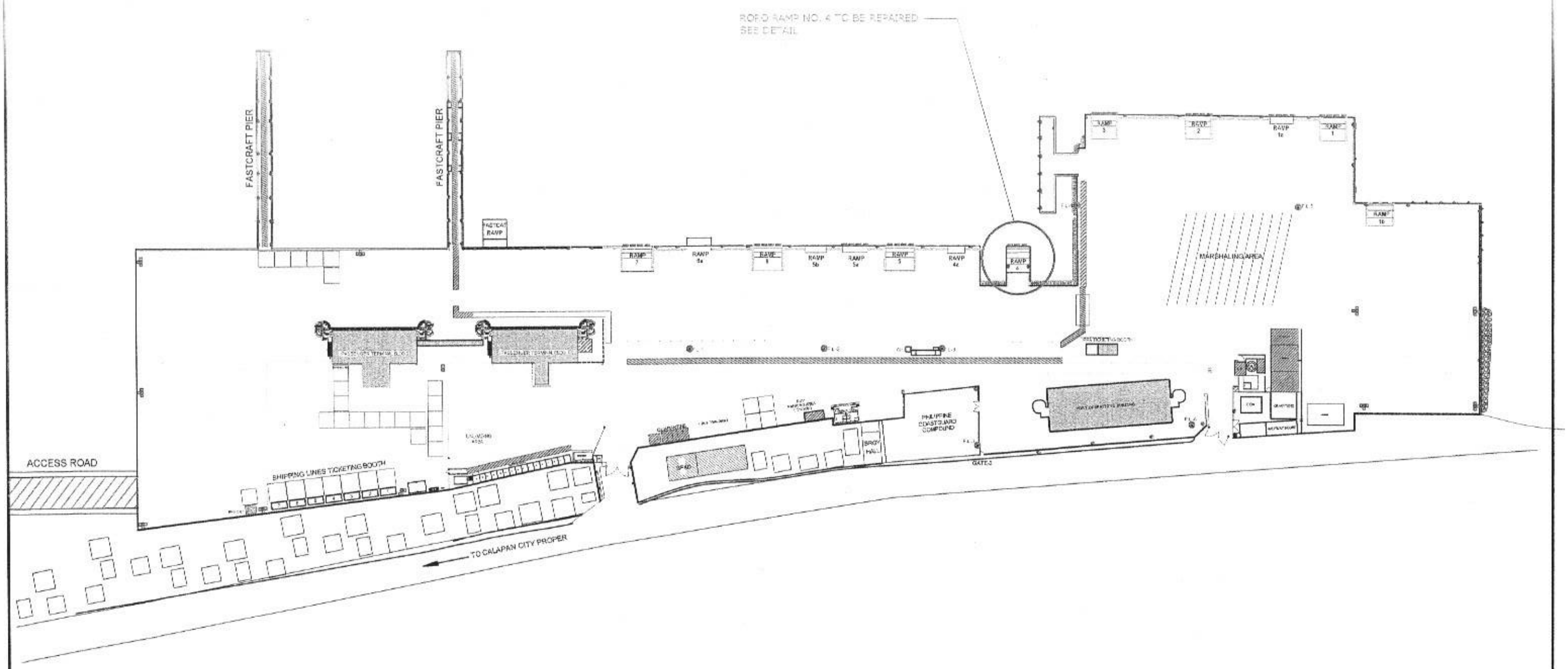
PHILIPPINE PORTS AUTHORITY

PMO- MINDORO

REPAIR OF RORO RAMP NO. 4

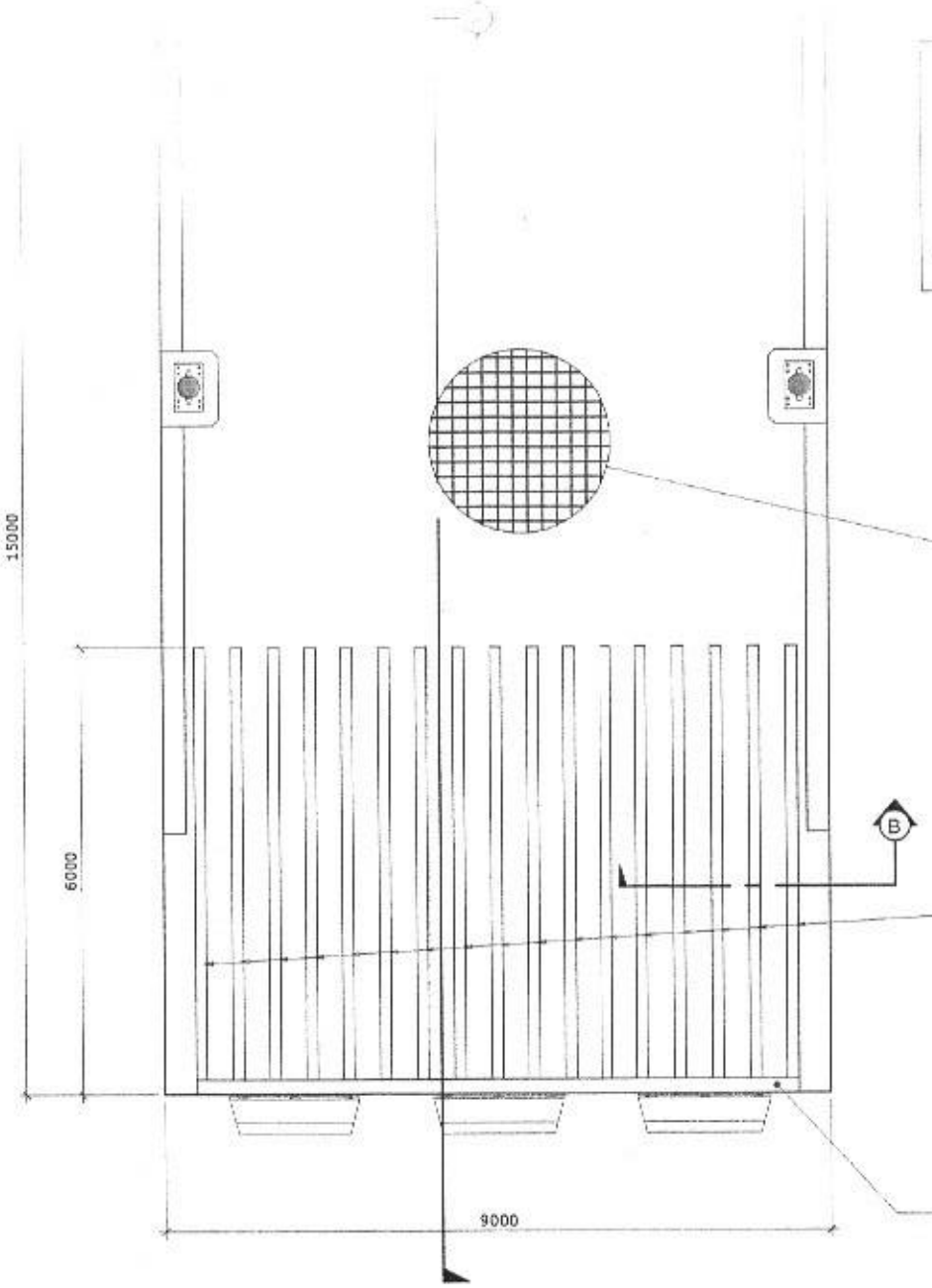
PORT OF CALAPAN, ORIENTAL MINDORO



PORT LAYOUT PLAN
PORT OF CALAPAN
ORIENTAL MINDORO

SCALE 1:2500 M

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4 PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO L. GALVEZO, Engineering Assistant A	SUBMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MATABAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. DIMALIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 1 of 10
						DATE : 18 JAN 2021



TO BE DEMOLISHED

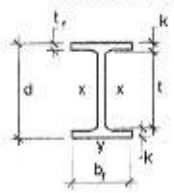
* RAMP DECK
* RO CURB
* BEAMS
* PILE CAP (see joint detail typical symbol)
* BOLLARD BLOCKS

NOTE: Retain the slope of RoRo Ramp

2 LAYER 20mmØ RSB @ 200mm B.W.
SEE DETAIL ON SECTION THRU "A"

STEEL RAMP PROTECTION @ 500mm O.C

25mm thk. STEEL PLATE
CORNER RAMP PROTECTION
SEE DETAIL



DESIGNATION	DEPTH	WEB	FLANGE		DISTANCE
nominal depth (mm) x nominal weight (kg/m)	d (mm)	Thickness t_w (mm)	Width b_f (mm)	t_f (mm)	DISTANCE x (mm)
W150 x 37.1	162	8.1	154	11.6	21

PLAN OF RAMP NO. 4

SHOWING RAMP DECK TO BE REPAIRED

SCALE 1:100 MTS.

CONCRETE COVER WAS PROVIDED AS FOLLOWS:

FOR SLABS, BEAMS AND GIRDERS, 40mm ON TOP AND 75mm ON UNDERSIDE MEASURED FROM THE OUTER SURFACE OF THE CONCRETE TO THE NEAREST SURFACE OF THE STEEL. THE EDGES OF BEAMS, PILE CAPS, CURTAIN WALLS, R/C CURB AND ALL OTHERS PARTS OF THE SUPERSTRUCTURE WERE CHAMFERED BY AT LEAST 25mm.

SPLICES FOR MAIN BARS AT CRITICAL SECTION THAT FOUND NECESSARY WERE PROVIDED A MINIMUM LAP OF 40 X BAR DIAMETER.

ALL STEEL REINFORCEMENT WERE DEFORMED BARS AND SHALL CONFORM TO ASTM AS FOLLOWS:

16MMØ AND ABOVE—ASTM 305, M.N. YIELD STRENGHT OF 414 MPA (GRADE 60)

12MMØ AND SMALLER—ASTM A615-74a, MIN. YIELD STRENGHT OF 275MPA (GRADE40)

SPLICE BARS WERE JOINED TOGETHER BY FILLET ELECTRIC WELD IN WHICH CASE THE LAP WERE AT LEAST 75mm. WELDING WERE CONTINUOUS THROUGHOUT THE LENGTH OF LAP.

ALL INTERSECTION OF REINFORCING BARS WERE ELECTRICALLY SPOT WELDED IN LIEU OF TYING THEM WITH G.I. WIRES. WELDING ELECTRODES WERE SHIELDED ARC TYPE HEAVILY COATED WITH CLASSIFICATION No. E6010 OR 601 OF THE AMERICAN WELDING SOCIETY AND WERE SUITABLE FOR THE POSITIONS AND OTHER CONDITIONS OF INTENDED USE. DIMENSIONS OF STEEL REINFORCEMENT WERE TAKEN ON CENTER OF BARS. BAR DETAILS WERE NOT TO SCALE.

HOOKS WERE PROVIDED AT OUTER ENDS OF TOP BARS ALONG EXTERIOR BAYS. HOOKS OF BARS HAD A MINIMUM DIAMETER OF 4 TIMES THE DIAMETER ON SIDES OF BARS. DRAIN AND AIR HOLES WERE PROVIDED AS INDICATED IN THE PLAN.

CONCRETE STRENGTH (fc) USED WAS 24.14MPa (3,500psi) UNLESS OTHERWISE SPECIFIED.

ROCKS USED HAD A MINIMUM SPECIFIC GRAVITY OF 2.65, ANGULAR IN SHAPE, HARD, DURABLE, NOT EASILY DISINTEGRATE UNDER LONG EXPOSURE TO SEA WATER AND FREE FROM THE ACTION OF AIR, SEAWATER OR IN HANDLING AND PLACING.

REFERED TO TECHNICAL SPECIFICATIONS OF BID DOCUMENTS FOR MORE DETAILS/SPECIFICATIONS.

PHILIPPINE PORTS AUTHORITY
PMC- MINDORO

PROJECT TITLE: REPAIR OF RORO RAMP NO. 4
PORT OF CALAPAN, ORIENTAL MINDORO

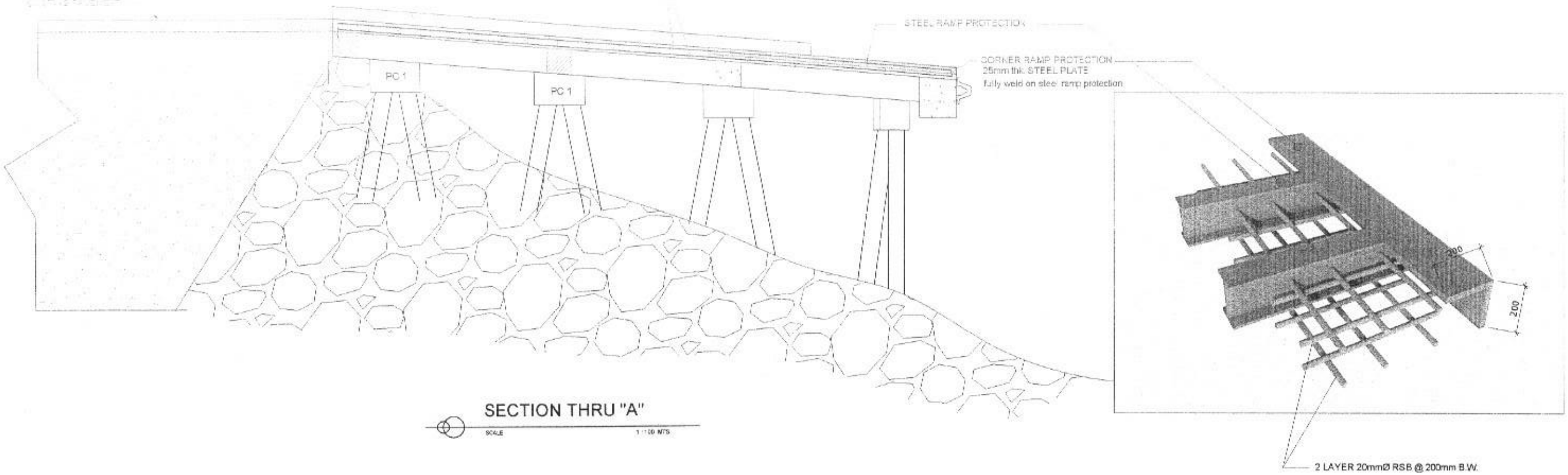
SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. 2 of 10

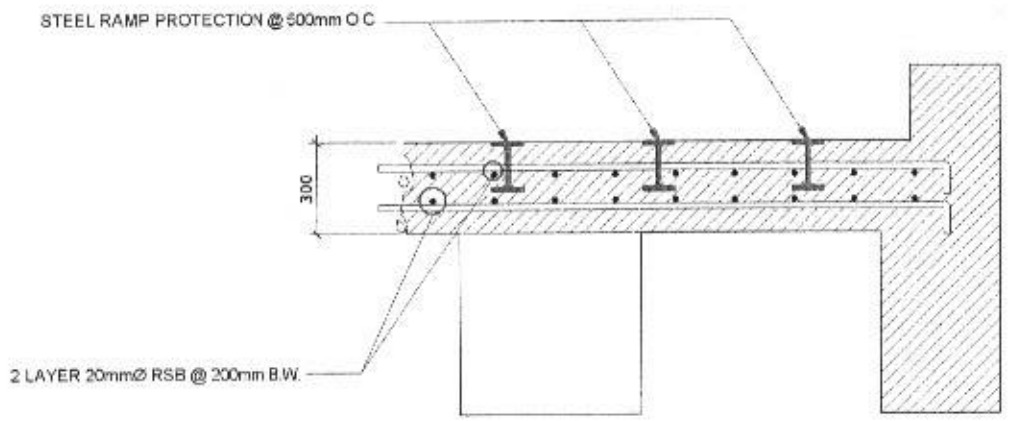
DATE : 18 JAN 2021

PREPARED BY:	SUBMITTED BY:	CHECKED / REVIEWED BY	RECOMMENDING APPROVAL	APPROVED
FERNANDO J. GALVEZO	JESSIE J. MERILLO	RONALD O. MATIBAG	MARGARITO P. DIMAILIG	LEO A. ROMERO
Engineering Assistant A	Engineer A	Acting Principal Engineer A	Acting Division Manager A, ESD	Acting Port Manager A



SECTION THRU "A"

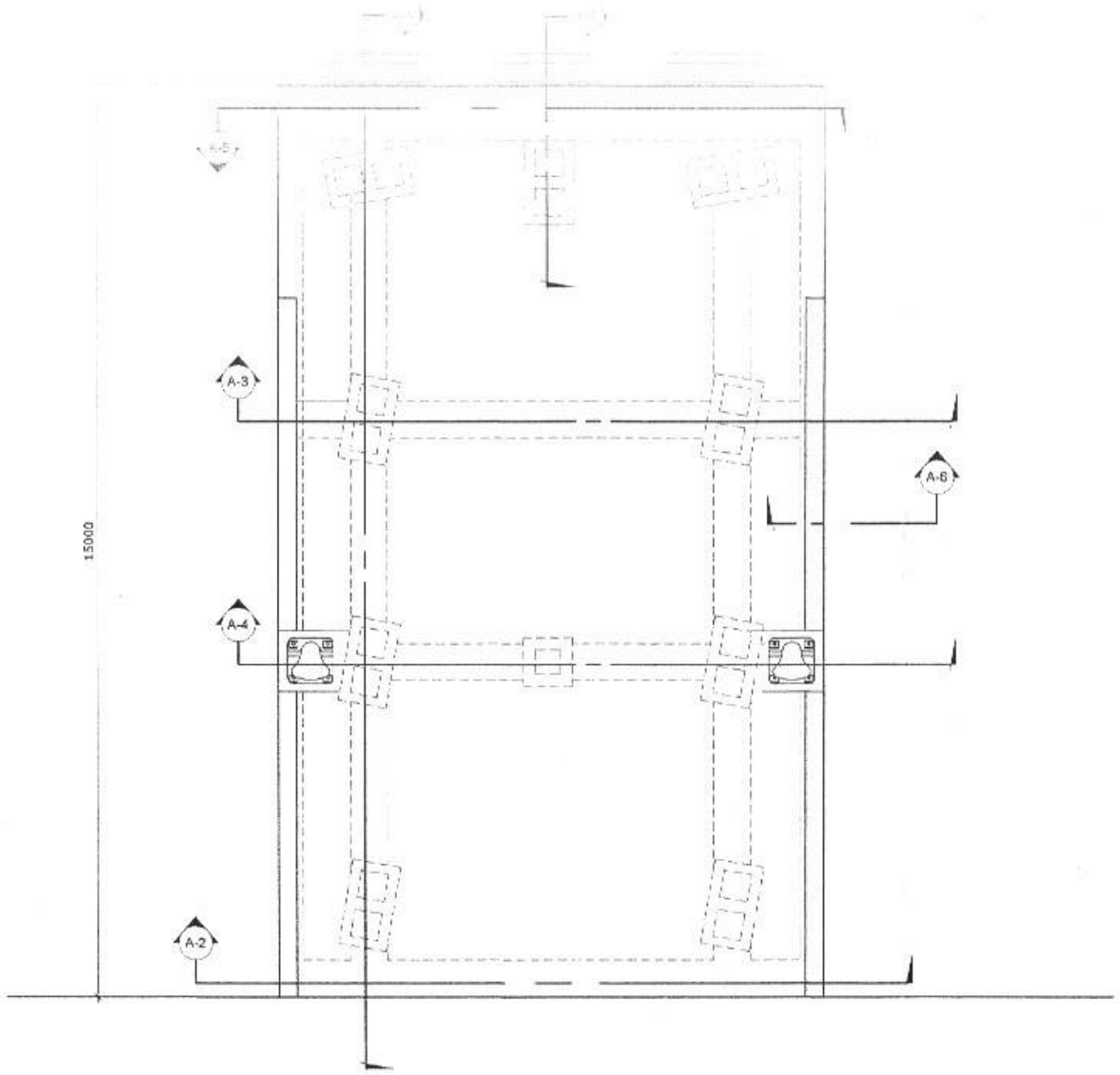
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SECTION THRU "B"

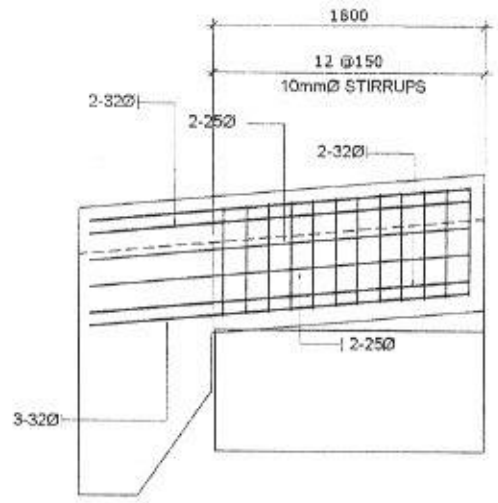
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PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4 PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO U. GALVEZO, Engineering Assistant A	SUBMMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MAJIBAG, Acting Principal Engineer A	RECOMMENDING APPROVA.: MARGARITO P. DIMAILIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 3 of 10
						DATE : 18 JAN 2021



RAMP FRAMING PLAN

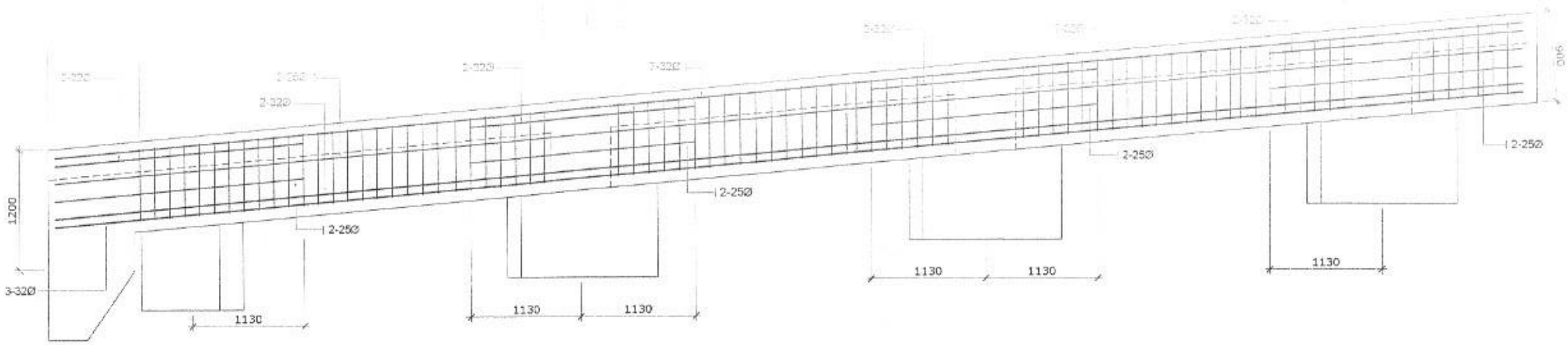
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SECTION A-7

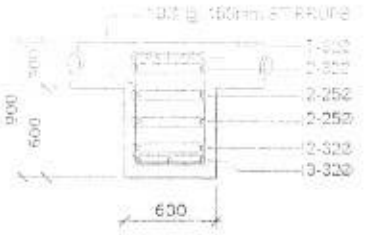
SCALE 1 : 50

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4 PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO J. GALVEZO, Engineering Assistant A	SUBMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MATIBAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. DIMALIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 4 of 10
						DATE: 18 JAN 2021



SECTION A-1

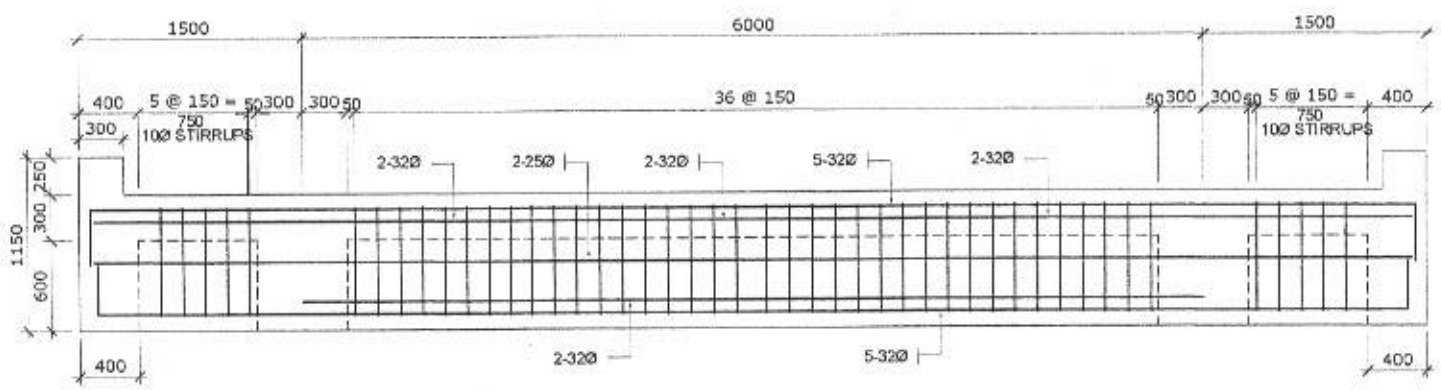
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A-1

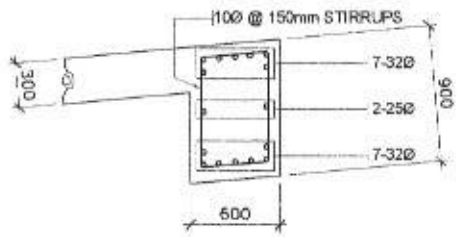
CROSS SECTION

SCALE 1:50



SECTION A-2

SCALE 1:50

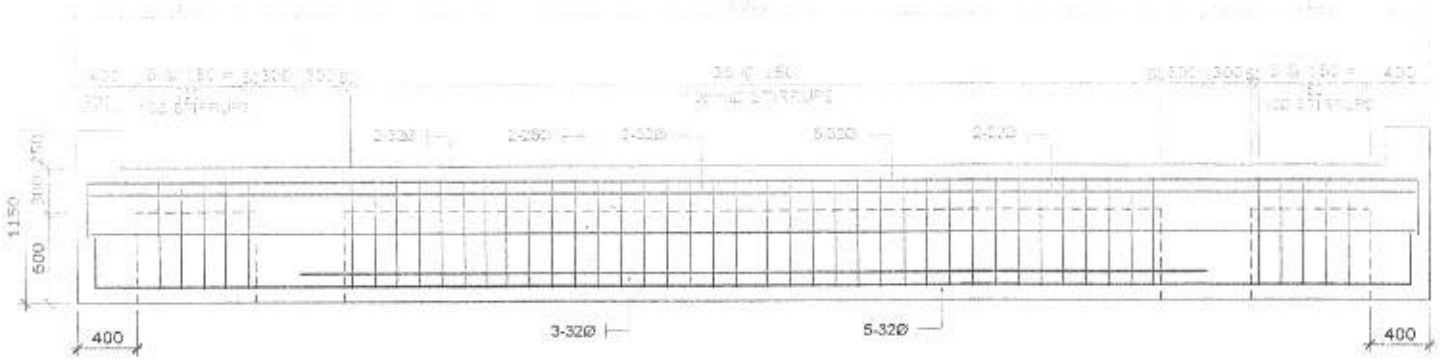


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CROSS SECTION

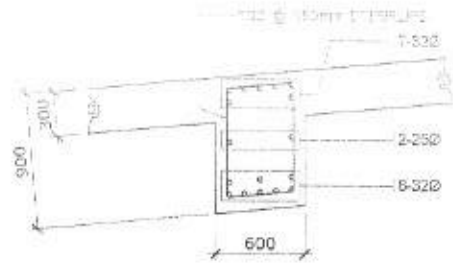
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PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO J. GALVEZO, Engineering Assistant A	SUBMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MATIBAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. DIMAPILIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 5 of 10
						DATE: 18 JAN 2021



SECTION A-3

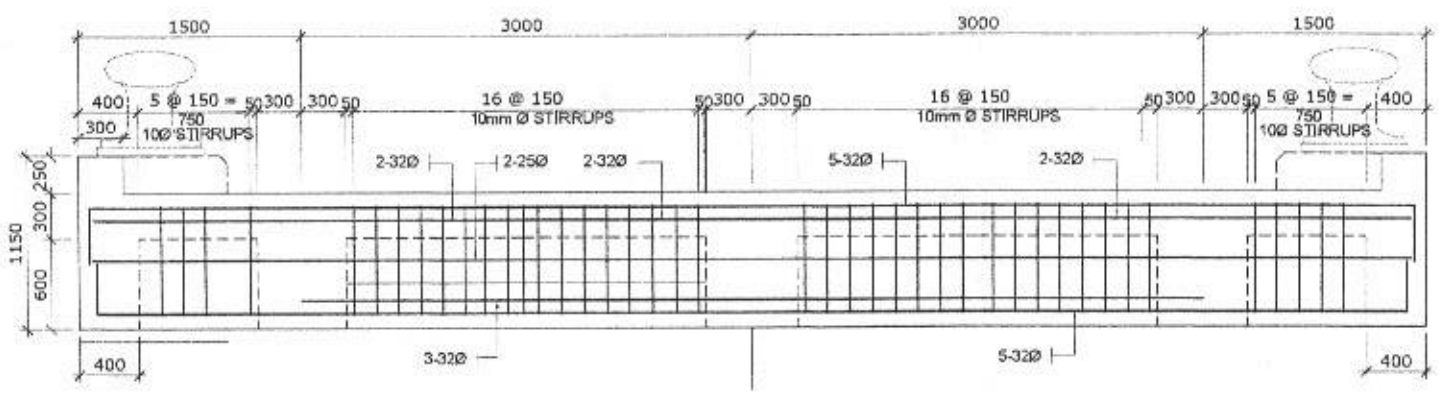
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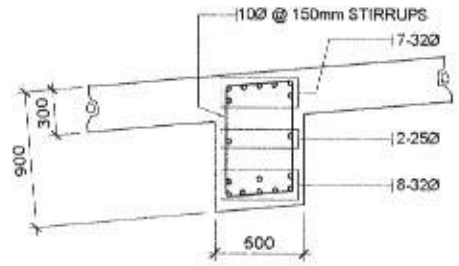
CROSS SECTION

SCALE 1 : 50



SECTION A-4

SCALE 1 : 50



A-4

CROSS SECTION

SCALE 1 : 50

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REPAIR OF RORO RAMP NO. 4
PORT OF CALAPAN, ORIENTAL MINDORO

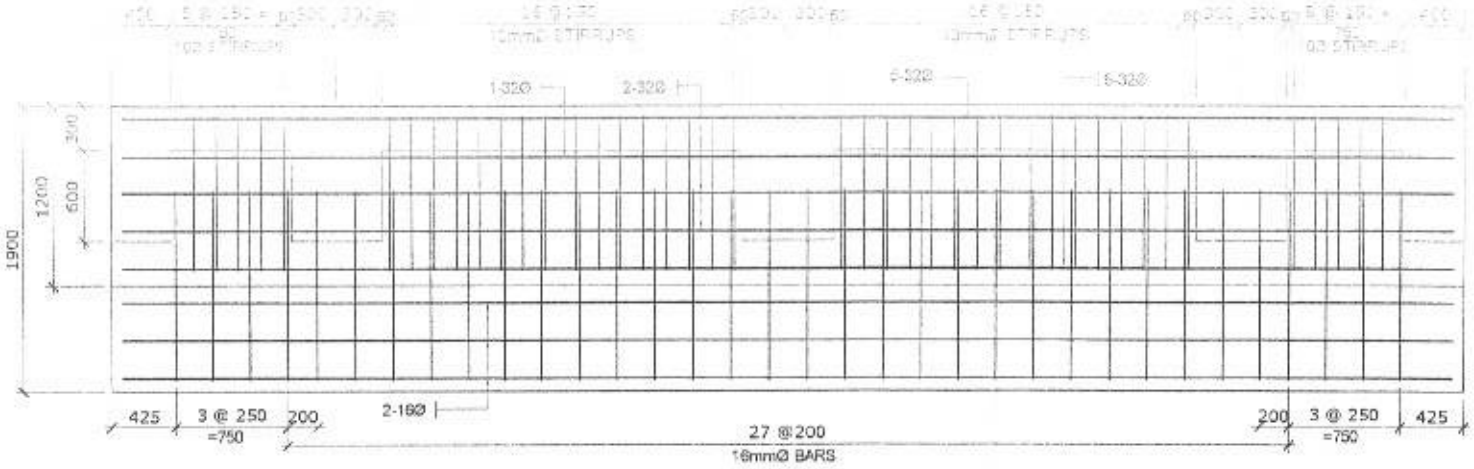
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SHEET NO. 6 of 10

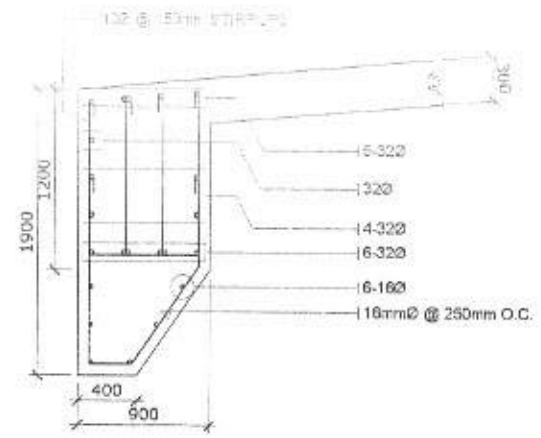
DATE : 18 JAN 2021

PREPARED BY:	SUBMMITTED BY:	CHECKED / REVIEWED BY:	RECOMMENDING APPROVAL:	APPROVED:
FERNANDO J. GALVEZO	JESSIE J. MERILLO	RONALD O. MATIBAG	MARGARITO P. DIMAILIG	LEO A. ROMERO
Engineering Assistant A	Engineer B	Acting Principal Engineer A	Acting Division Manager A, ESD	Acting Port Manager A

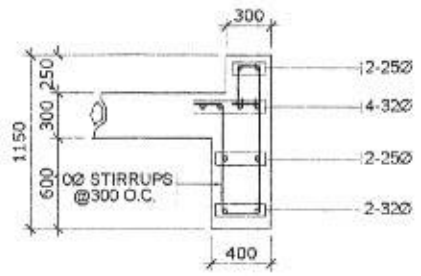


SECTION A-5

SCALE 1 : 50



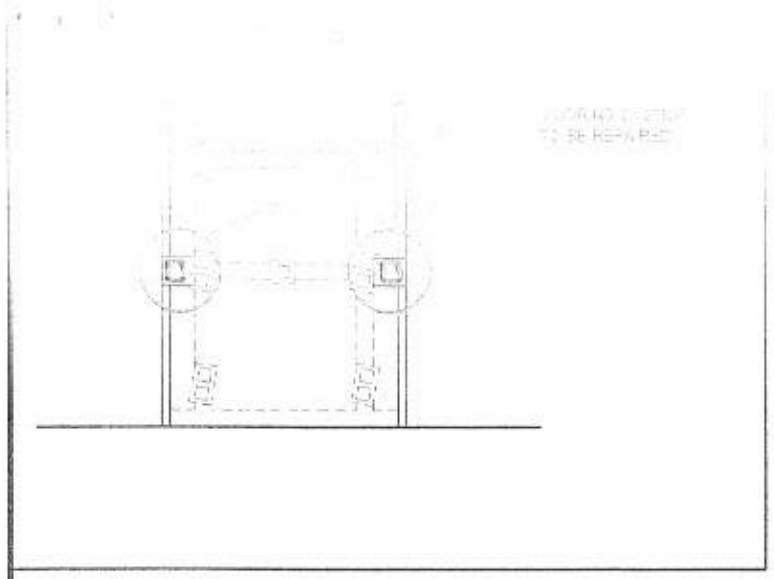
A-5
CROSS SECTION
SCALE 1 : 50

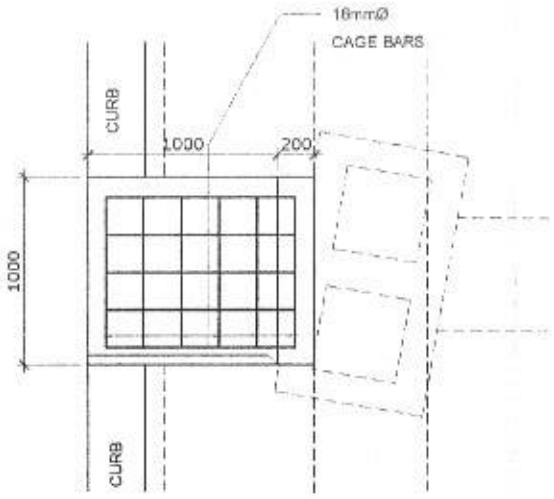


SECTION A-6

SCALE 1 : 50

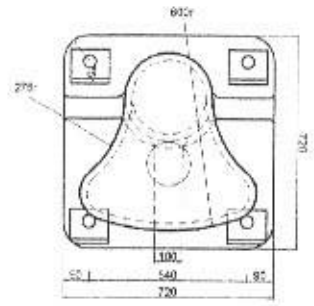
PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4 PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO J. GALVEZO, Engineering Assistant A	SUBMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MATIBAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. DIMAILIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 7 of 10
						DATE : 18 JAN 2021



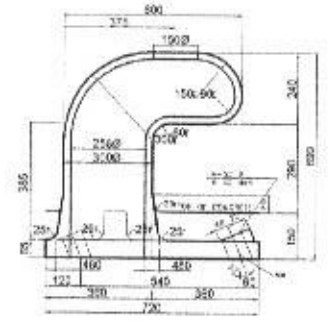


PLAN

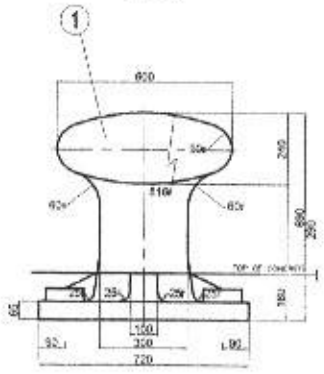
1	BODY	JIS G 5101 C GRADE SS41	1,400	1	1,400	53
2	ANCHOR BOLT	JIS G 5101 C GRADE SS41 JIS B 0205 M 45 B	1,400	4	5	53
3	HEXAGON NUTS	JIS B 1181 GRADE 4T M42-4 B	-	12	-	-
4	PLAIN WASHER	JIS B 1256 ROUND STEEL	-	4	-	-
5	ANCHOR RING	JIS G 3101 2 GRADE SS41 OR JIS G 5101 3 GRADE SC46	1,400	4	5	53



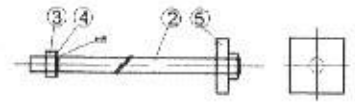
PLAN

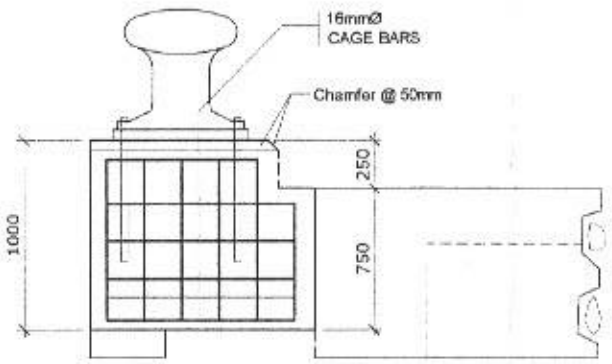


SECTION



ELEVATION



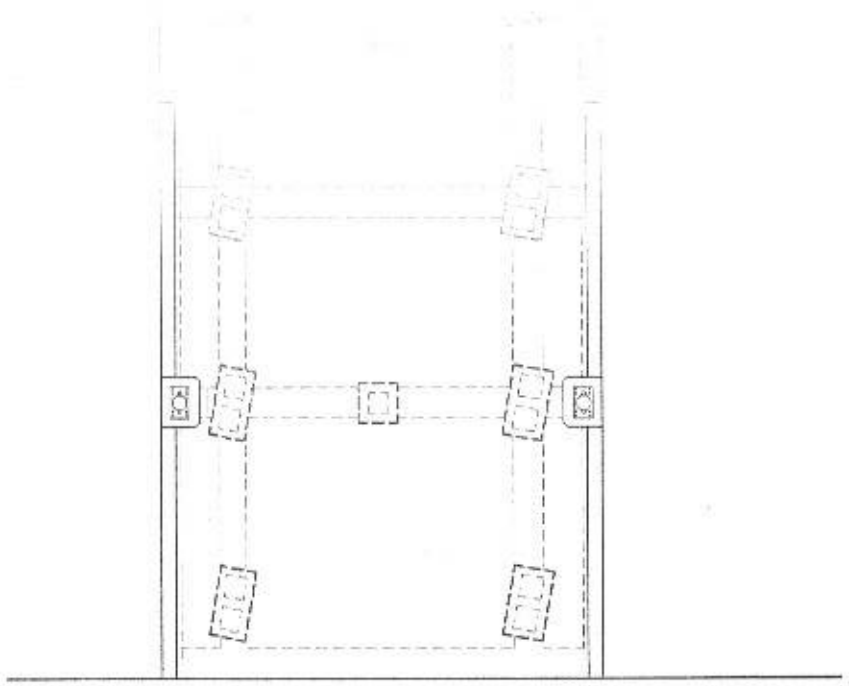


TYPICAL REINFORCEMENT OF BOLLARD BLOCK

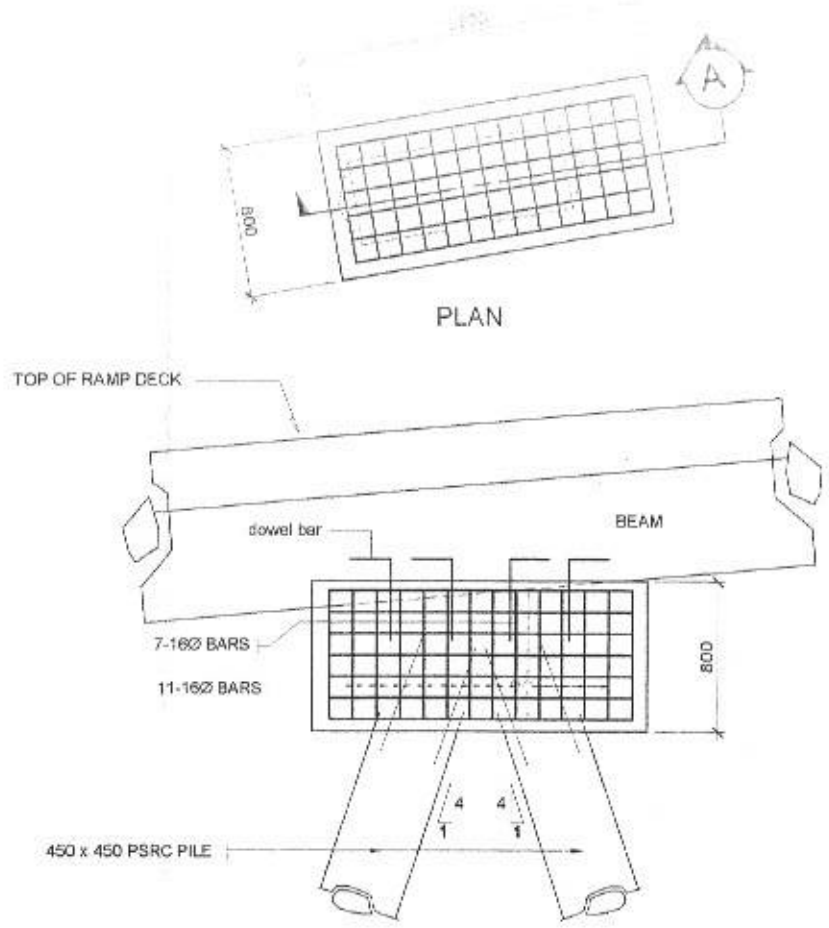
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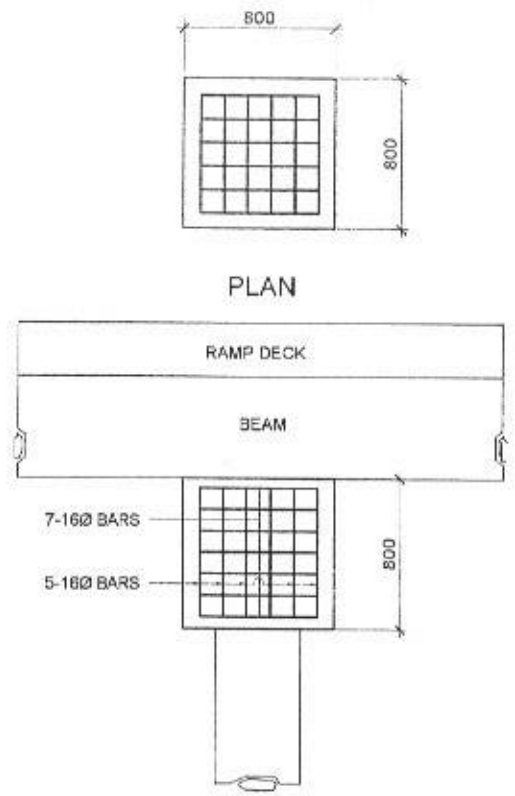
25 TON MOORING BOLLARD DETAIL

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4 PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS: AS SHOWN / SCALE: AS SHOWN
PREPARED BY: FERNANDO J. GALVEZO, Engineering Assistant A	SUBMMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MATIBAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. ENMAILIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	SHEET NO. 8 of 10 DATE : 18 JAN 2021



PLAN OF RAMP NO. 4
SHOWING PILE CAP
SCALE 1:100 MTS





LEGEND:

PILE CAP TO BE REPAIRED - PC 1

PILE CAP TO BE REPAIRED - PC 2

PILE CAP TO BE RETAINED

DETAIL OF PILE CAP - 1
SCALE 1:40 M.

DETAIL OF PILE CAP - 2
SCALE 1:40 M.

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REPAIR OF RORO RAMP NO. 4
PORT OF CALAPAN, ORIENTAL MINDORO

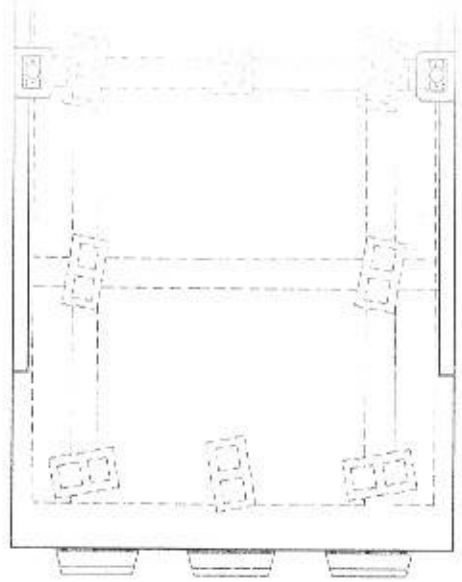
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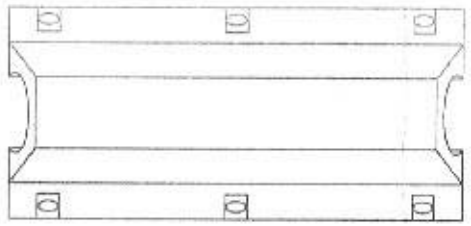
SHEET NO. 9 of 10

DATE : 18 JAN 2021

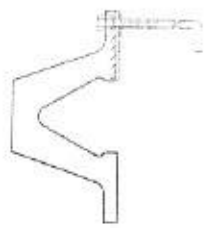
PREPARED BY:	SUBMMITTED BY:	CHECKED / REVIEWED BY:	RECOMMENDING APPROVAL:	APPROVED :
FERNANDO J. GALVEZO	JESSIE J. MERILLO	RONALD O. MARIBAG	MARGARITO P. DIMATING	LEO A. ROMERO
Engineering Assistant A	Engineer B	Acting Principal Engineer A	Acting Division Manager A, ESD	Acting Port Manager A



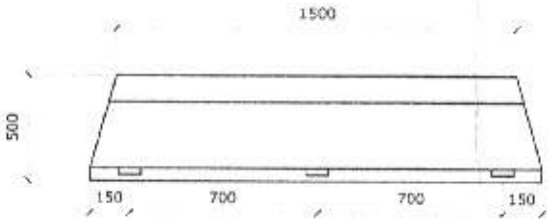
PLAN



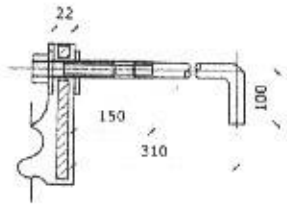
PLAN



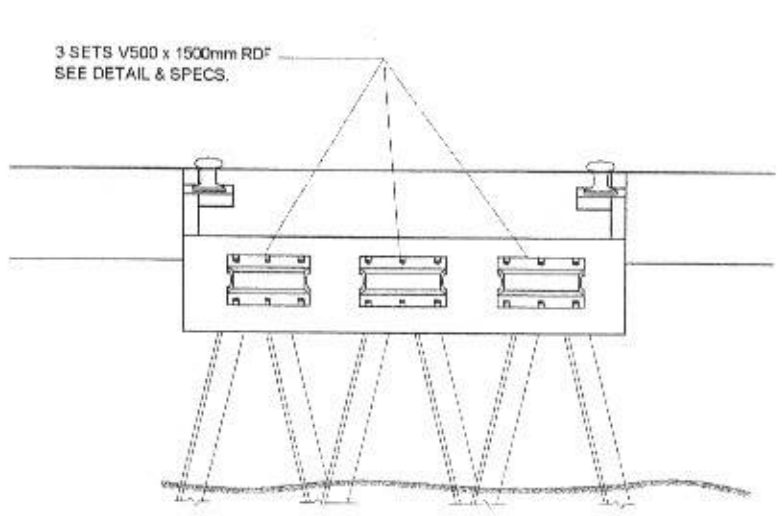
SIDE ELEVATION



ELEVATION



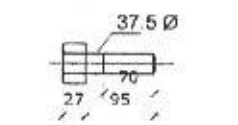
VIEW A



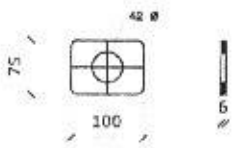
ELEVATION

FENDERING SYSTEM TO BE REPAIRED

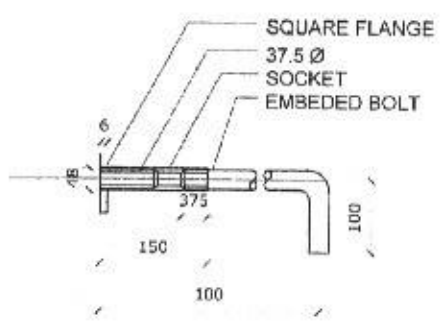
SCALE 1:100 VTS.

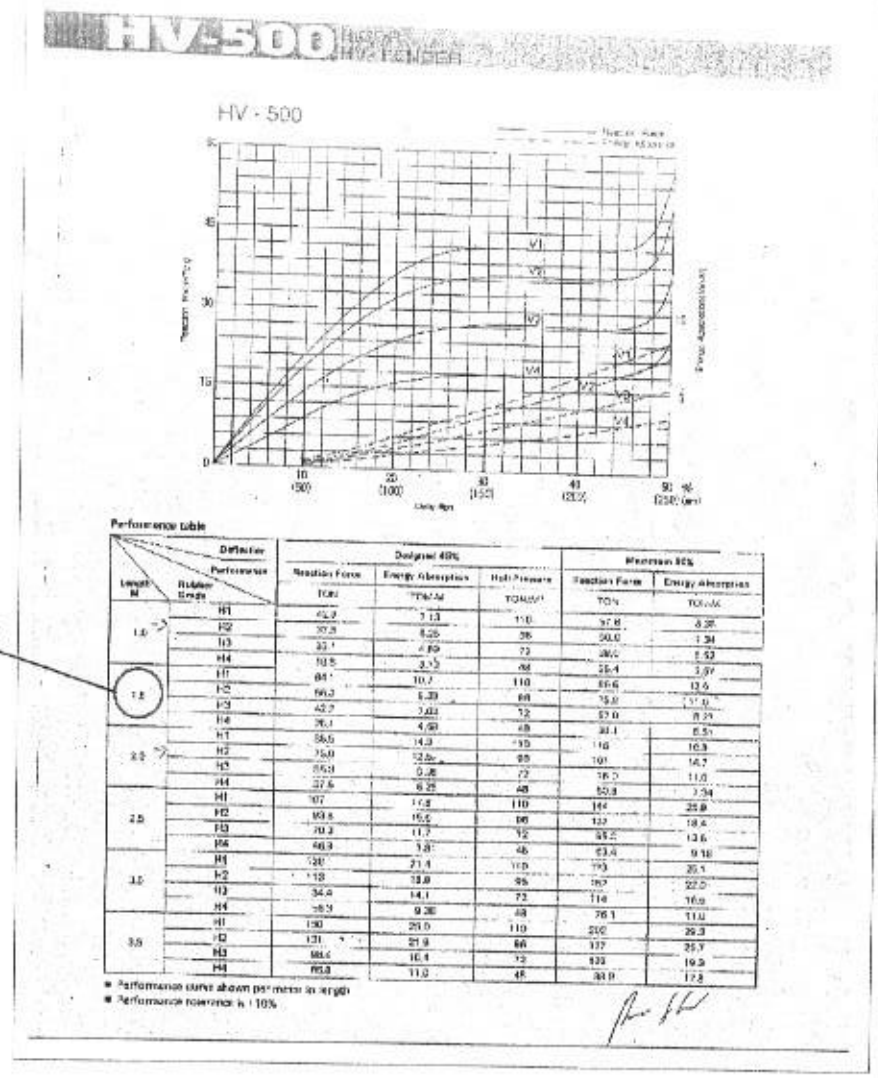


FIXING BOLT



WASHER





PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REPAIR OF RORO RAMP NO. 4, PORT OF CALAPAN, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: FERNANDO J. GALVEZO, Engineering Assistant A	SUBMITTED BY: JESSIE J. MERILLO, Engineer B	CHECKED / REVIEWED BY: RONALD O. MADIBAG, Acting Principal Engineer A	RECOMMENDING APPROVAL: MARGARITO P. DIMAILIG, Acting Division Manager A, ESD	APPROVED: LEO A. ROMERO, Acting Port Manager A	AS SHOWN	SHEET NO. 10 of 10
							DATE : 18 JAN 2021