

TENDER NO: WAP/NK/DAM/JHARKHAND/2026

TENDER DOCUMENT

FOR

**Execution of balance Civil, Electrical and Hydro Mechanical works of
Mandal Dam under North Koel Reservoir Project, Jharkhand and Bihar**

Estimated Cost (Rs. 26.60 Crores)

TENDER NO: WAP/NK/DAM/JHARKHAND/2026

TENDER DRAWINGS

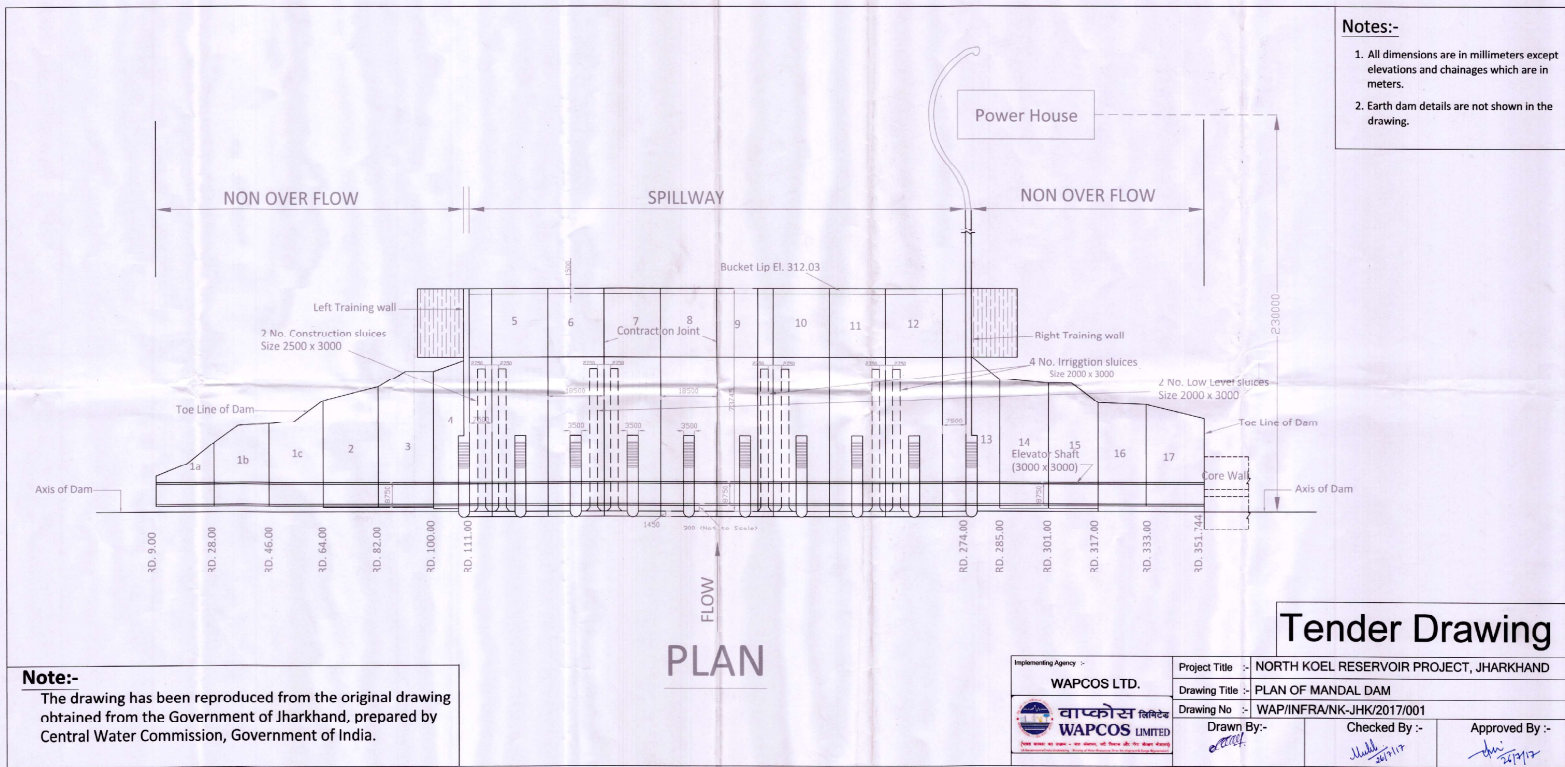
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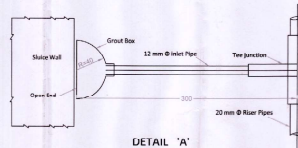
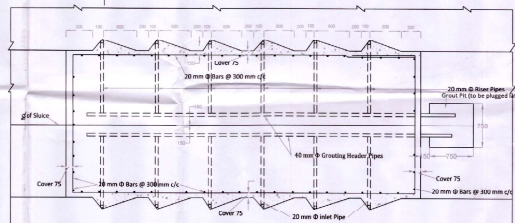
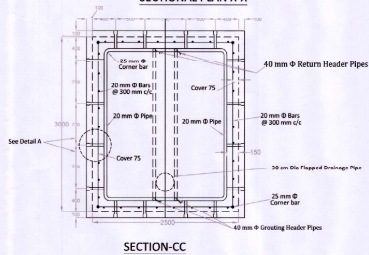


(भारत सरकार का उपक्रम-जल शक्ति मंत्रालय)
(A Government of India Undertaking-Ministry of Jal Shakti)

LIST OF TENDER DRAWINGS

S. No.	Drawing Description	Drawing No.
1	Plan of Mandal Dam	WAP/INFRA/NK-JHK/2017/001
2	Maximum Sections	WAP/INFRA/NK-JHK/2017/002 (R-1)
3	Construction Sluice (Plugging details)	WAP/INFRA/NK-JHK/2017/003
4	Layout details of Elevator Shaft	WAP/INFRA/NK-JHK/2017/004
5	Details of Protective Apron on D/S of Bucket Lip	WAP/INFRA/NK-JHK/2017/005 (R-1)
6	Spillway Bridge	
i	General Arrangement (Plan & Section)	OMIL/NKRP/SPB/501 (R-0) Sheet 1 of 2
ii	General Arrangement (Plan & Section)	OMIL/NKRP/SPB/501 (R-0) Sheet 2 of 2
iii	Slab Reinforcement detail	OMIL/NKRP/SPB/502 (R-0)
iv	Removable Slab Reinforcement detail	OMIL/NKRP/SPB/503 (R-0)
v	Cross Girder Reinforcement detail	OMIL/NKRP/SPB/504 (R-0) Sheet 1 of 3
vi	Cross Girder Reinforcement detail	OMIL/NKRP/SPB/504 (R-0) Sheet 2 of 3
vii	Cross Girder Reinforcement detail	OMIL/NKRP/SPB/504 (R-0) Sheet 3 of 3





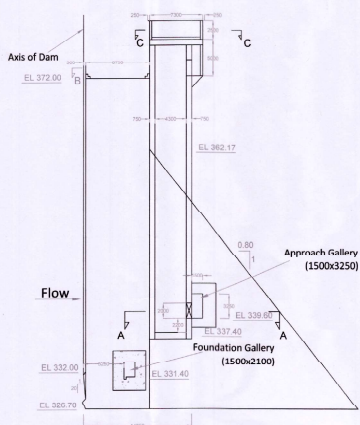
1. All dimensions are in millimeters except elevations and chainage which are in meters.
2. The grouts should be held clean during construction of concrete plug by flushing water.
3. Piping system should be kept clean during construction of concrete plug by flushing water.
4. The concrete shall conform to M200 grade as per IS:456-1964
5. All laps in reinforcement to be staggered.
6. Headers shall be used in both ways i.e. as per return headers and grout headers.
7. Reinforcement shall be of cold twisted deformed bars conforming to IS-1786-1966
8. Anchorage and bond length for reinforcement shall be as per IS:456-1964
9. Proper bond between the plug concrete and the concrete of the sluice is to be ensured by means of contact grouting.

Note:-

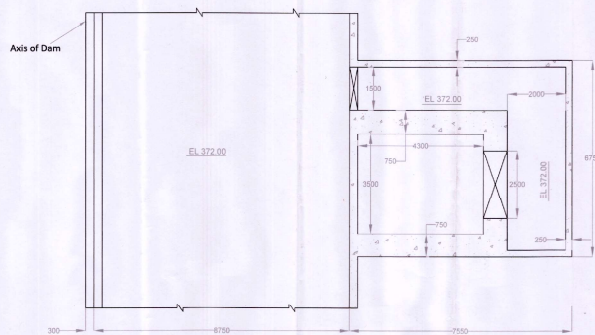
The drawing has been reproduced from the original drawing obtained from the Government of Jharkhand, prepared by Central Water Commission, Government of India.

 WAPCOS LTD. वाफ्कोस लिमिटेड WAPCOS LIMITED (एकल मालिकता का उद्देश्य - नए मालिकों, नए प्रभागों और नए प्रभागों के लिए मालिकता प्रमाण)	Project Title :-	NORTH KOEL RESERVOIR PROJECT, JHARKHAND		
	Drawing Title :-	CONSTRUCTION SLUICE (PLUGGING DETAILS)		
	Drawing No :-	WAP/INFRA/NK-JHK-2017/003		
	Drawn By :- 	Checked By :-  24/1/22	Approved By :-  24/1/22	

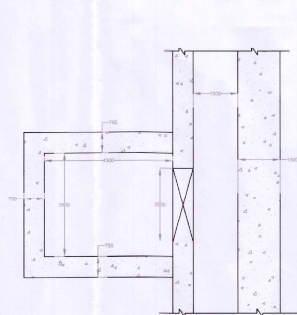
Tender Drawing



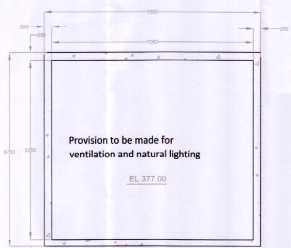
SECTIONAL ELEVATION THROUGH Ø OF ELEVATOR SHAFT



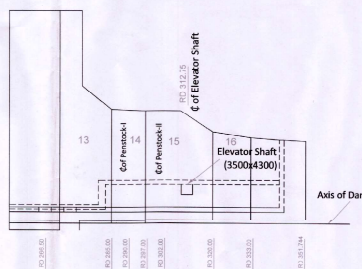
SECTION - B B



SECTION - A A



SECTION - C C



KEY PLAN

Notes:-

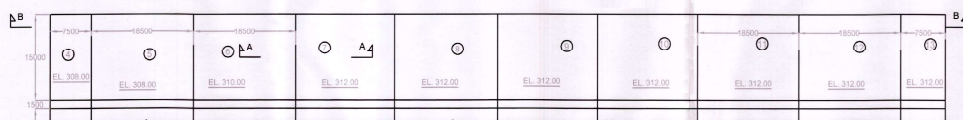
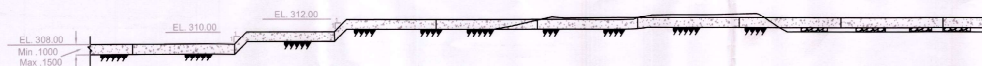
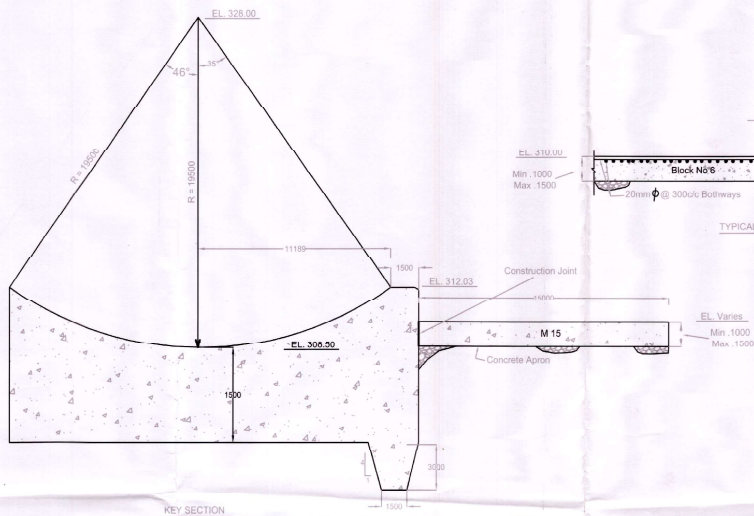
1. All dimensions are in millimeters unless otherwise specified.
2. Minimum concrete thickness around opening of Elevator shaft shall be 750 mm.
3. The size of machine room and depth of pit for the lift are tentative and shall be finalized in consultation with the lift manufacturer.
4. For reinforcement detail around Elevator shaft refer separate drawing.
5. The block out and embedded parts shall be provided in consultation with the lift manufacturer.

Note:-

The drawing has been reproduced from the original drawing obtained from the Government of Jharkhand, prepared by Central Water Commission, Government of India.

Tender Drawing

Implementing Agency :-	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, JHARKHAND
Drawing Title :-	LAYOUT DETAILS OF ELEVATOR SHAFT	Drawing No. :-	WAP/INFRA/NK-JHK/2017/004
Drawn By:-	<i>[Signature]</i>	Checked By :-	<i>[Signature]</i>
		Approved By :-	<i>[Signature]</i>



Notes:-

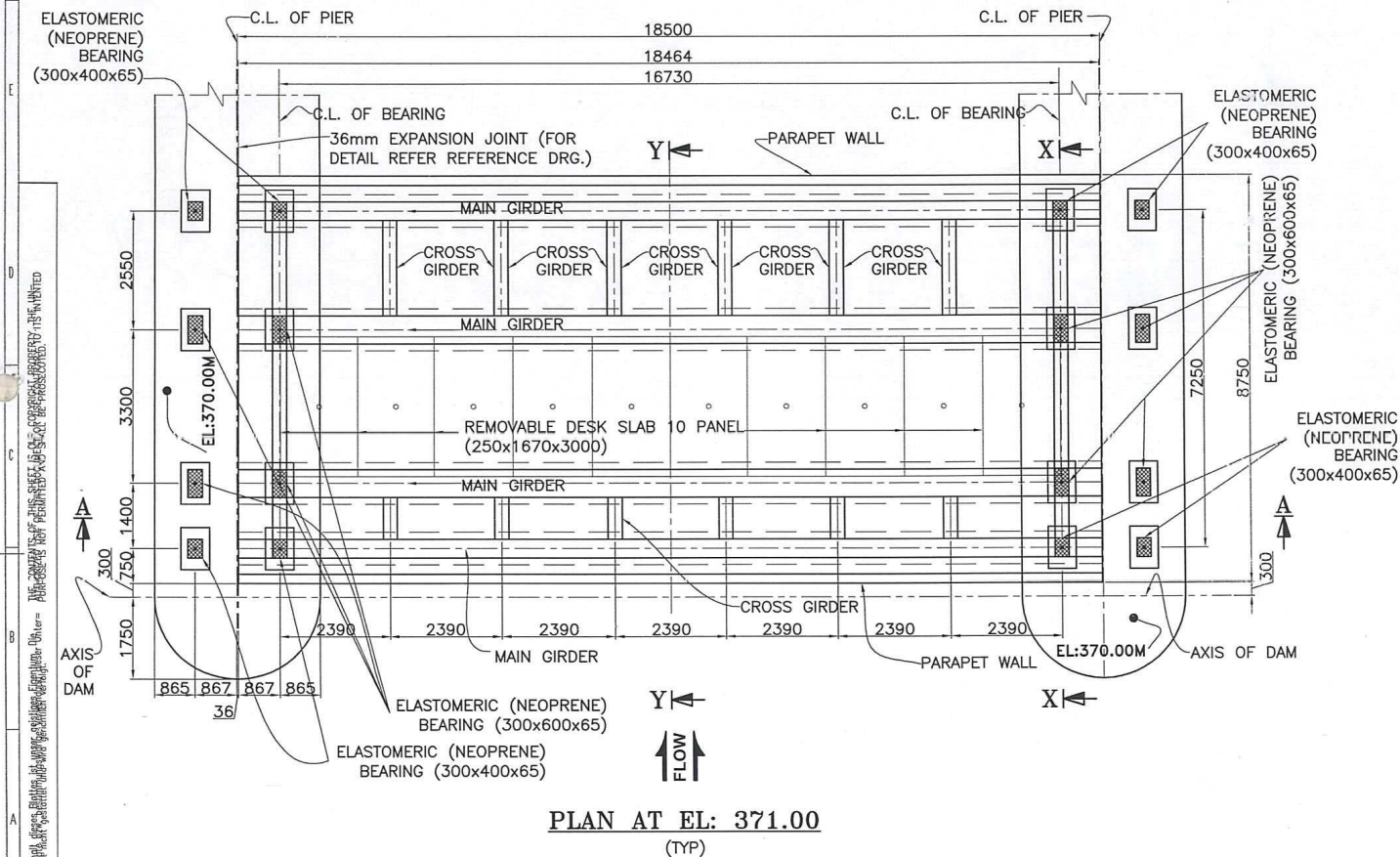
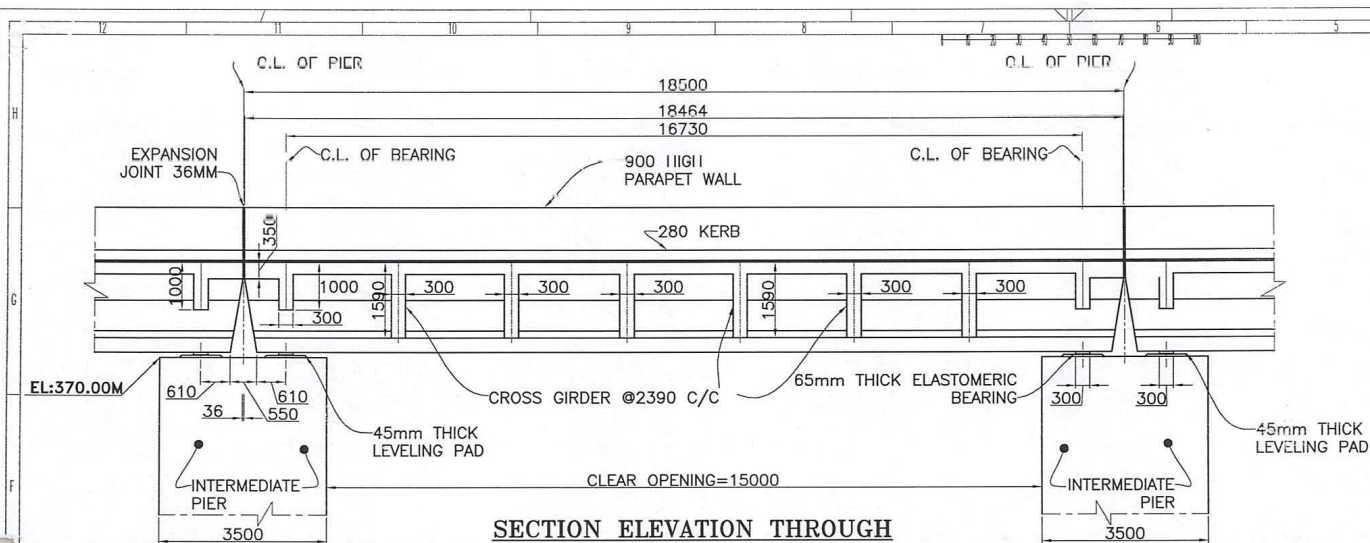
1. All dimensions are in millimeters except elevations which are in metres
2. The concrete used in the apron shall be of grade M15
3. The rock surface shall be cleared of all loose and weak materials before concreting
4. The rock surface shall be dry roughened and shall be spread with cement slurry prior to the placing of concrete
5. The concrete apron shall be properly anchored to the foundation rock
6. After removing all loose materials rock bed downstream of the spillway bucket shall be filled with masonry so that maximum depth of concrete apron is 1500 mm
7. It is presumed that spot levels of block 13 to 14 are in accordance with those of Block 11. In case there is appreciable variation in spot levels the level of concrete apron in these blocks can be suitable modified

Tender Drawing

Note:-

The drawing has been reproduced from the original drawing obtained from the Government of Jharkhand, prepared by Central Water Commission, Government of India.

Implementing Agency :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, JHARKHAND		
WAPCOS LTD.	Drawing Title :-	DETAILS OF PROTECTIVE APRON ON D/S OF BUCKET LIP		
वापकोस लिमिटेड WAPCOS LIMITED	Drawing No :-	WAP/INFRA/NK-JHK/2017/005 (R-1)		
	Drawn By:-	Checked By :-	Approved By :-	



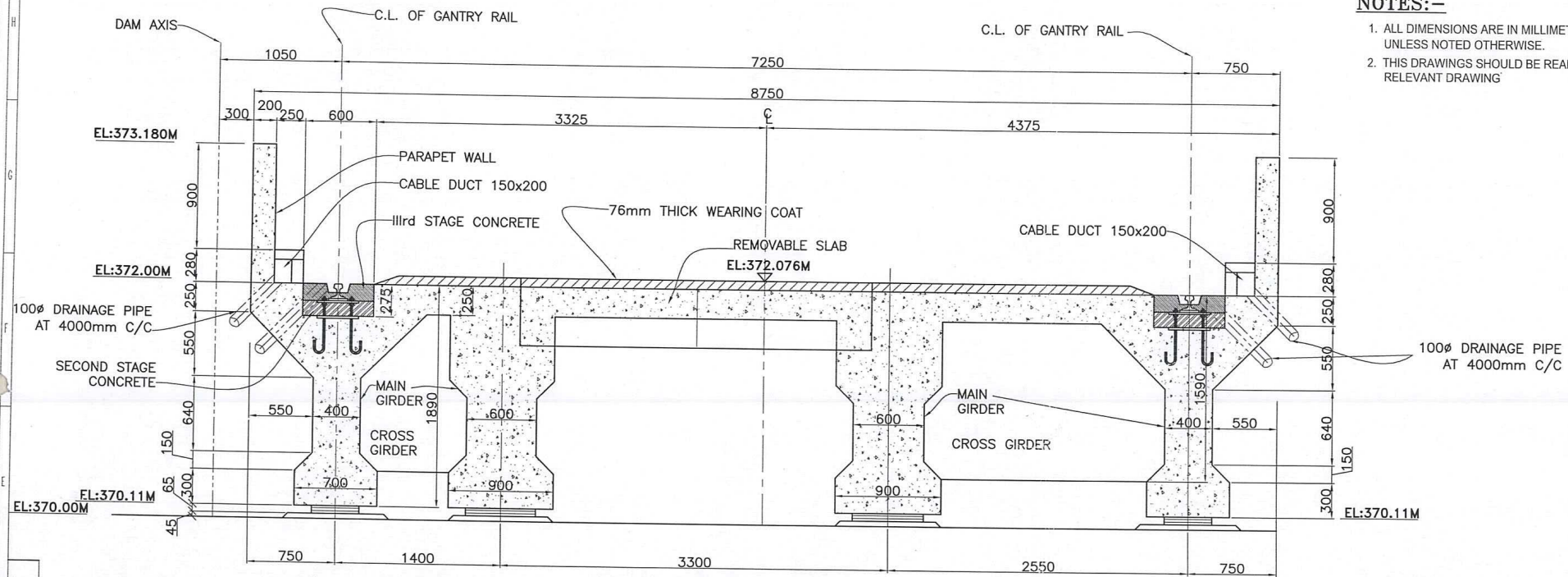
NOTES:-

1. ALL DIMENSION ARE IN MILLIMETERS AND ELEVATION ARE IN METERS.
2. FOR REINFORCEMENT DETAILS OF BEAMS DECK SLAB ETC. REFER SEPARATE DRAWINGS
3. IN BETWEEN UPSTREAM AND DOWN STREAM MIDDLE GIRDER REMOVABLE DECK SLAB HAS BEEN PROVIDED FOR STOPLOG OPERATION.
4. FOR BLOCK-OUT DETAILS RAILO REFER RELEVANT DRAWINGS
5. THE ELASTOMERIC (NEOPRENE) BEARING SHOULD BE PLACED IN POSITION BEFORE THE CONCRETE OF THE SUPER STRUCTURE IS CAST. FOR DETAILS REFER SEPARATE DRAWINGS.
6. THE POSITION OF BEARING SHALL BE ACCURATELY MARKED AND THE CLEAN WHERE THE BEARING WILL BE SEATED ACCURATELY LEVELED.
7. THE SHUTTERING AND CONCRETING OF GIRDER SHALL BE TAKEN UP ONLY AFTER INSURING THAT THE ADHESIVE FOR FIXING THE BEARING TO THE PIER HAS SET.
8. ONCE PREPARED THE LEVELING PAD AND THE ELASTOMERIC SURFACE SHOULD NOT BE HANDLING WITH BARE HANDS.
9. DURING CONCRETING NECESSARY PRECAUTION SHOULD BE TAKEN TO ENSURE THAT THE BEARING ARE NOT DISTURBED.
10. ANY PROVISION MADE TO COVER THE BEARINGS, SHALL BE REMOVE AFTER PROPER STRUCTURE CONCRETE IS SET AND THE FORM WORK ARE DISMANTLED.
11. THE CONCRETE SHALL BE MADE A20, M35 GRADE CONFORMING TO IS:456.
12. THE MIX PROPORTIONS SHALL BE SELECTING TO ENSURE THAT THE WORKABILITY OF FRESH CONCRETE IS SUITABLE FOR THE CONDITION OF HANDLING AND IT PLACING. SO THAT AFTER COMPACTION IT FILL UP THE SPACES REINFORCEMENT AND COMPLETELY FILLS THAT FORM WORK.
13. THIS DRAWINGS SHOULD BE READ ALONG WITH CONCRETE OUTLINE & REINF. DRAWINGS

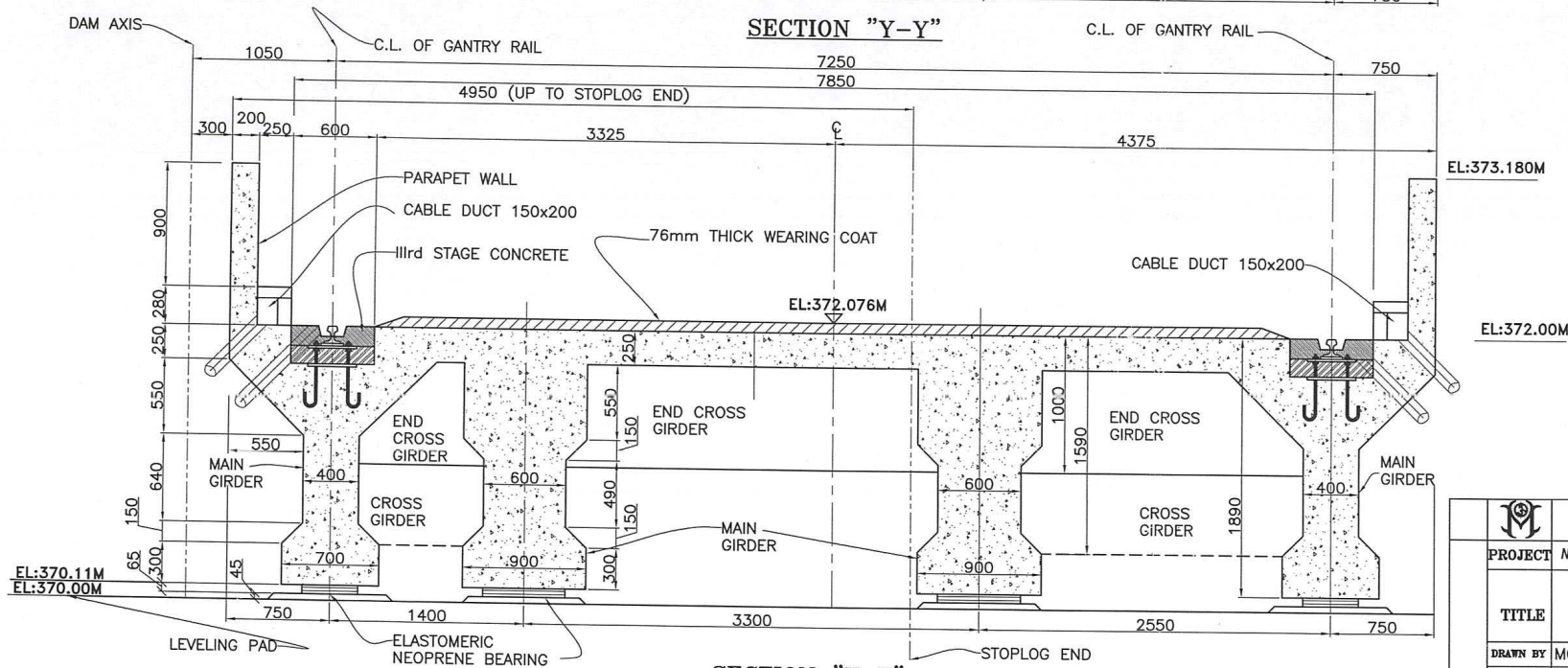
	OM METALS INFRAPROJECTS LTD.			
PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND			
TITLE	SPILLWAY BRIDGE GENERAL ARRANGEMENT DRAWING (PLAN & SECTION) (SHEET 01 OF 02)			
DRAWN BY	MOHAN SANGWAN	SUBMITTED BY:		
CHECKED BY	ANURAG	DRG NO : OML/NKRP/SPB/501		REV-0
SIZE	A1	SCALE		

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. THIS DRAWINGS SHOULD BE READ ALONG WITH ALL RELEVANT DRAWING

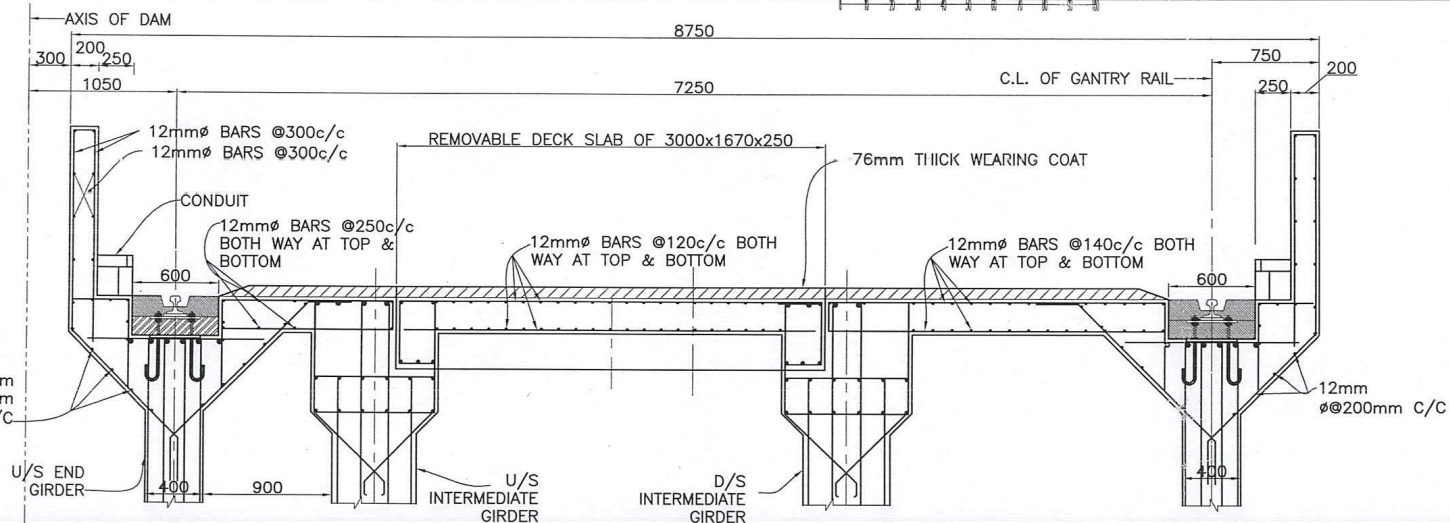


SECTION "Y-Y"

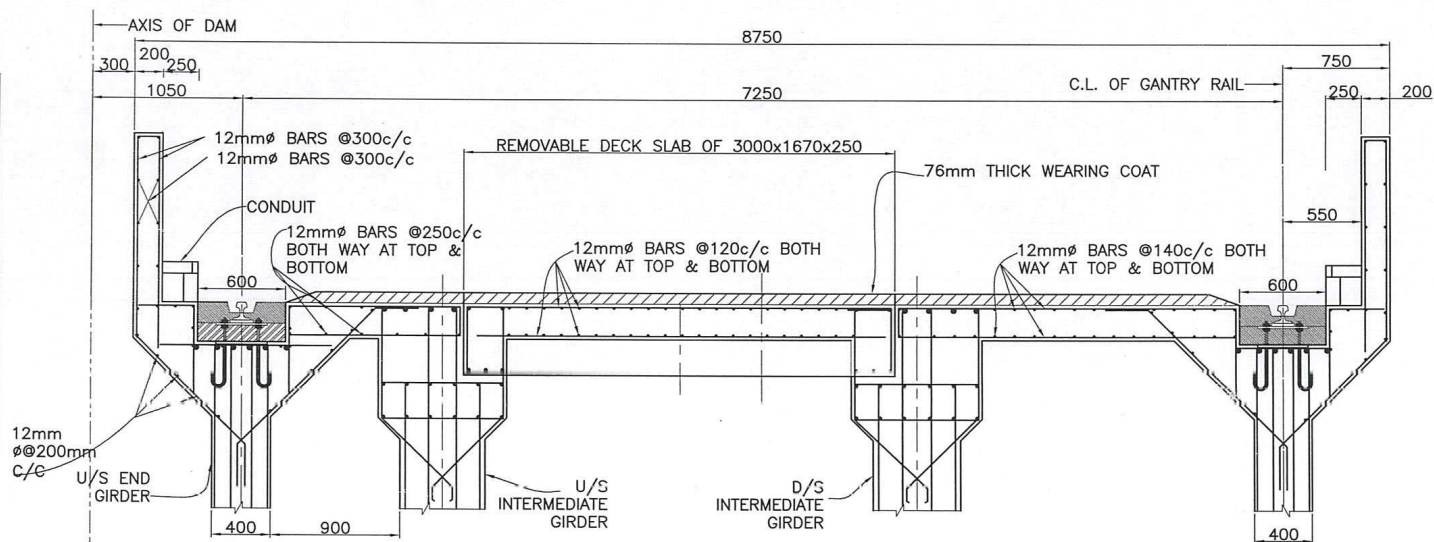


SECTION "X-X"

			OM METALS INFRAPROJECTS LTD.	
PROJECT		<i>NORTH KOEL RESERVOIR PROJECT JHARKHAND</i>		
TITLE		SPILLWAY BRIDGE GENERAL ARRANGEMENT DRAWING (PLAN & SECTION) (SHEET 02 OF 02)		
DRAWN BY		MOHAN SANGWAN <i>Mohan Sangwan</i>		
CHECKED BY		ANURAG <i>Anurag</i>		
SIZE		A1 SCALE		SUBMITTED BY: <i>AKR</i>
		DRG NO : OMIL/NKRP/SPB/501		REV-0



CROSS SECTION OF DECK SLAB IN NON PIER PORTION
(STIRRUPS IN SLAB NOT SHOWN FOR CLARITY, FOR DETAIL REFER REMOVABLE SLAB DRG.)
(FOR GIRDER REINF.DETAIL REFER RELEVANT DRG.)



CROSS SECTION OF DECK SLAB IN NON PIER PORTION
(FOR GIRDER REINF.DETAIL REFER RELEVANT DRG.)

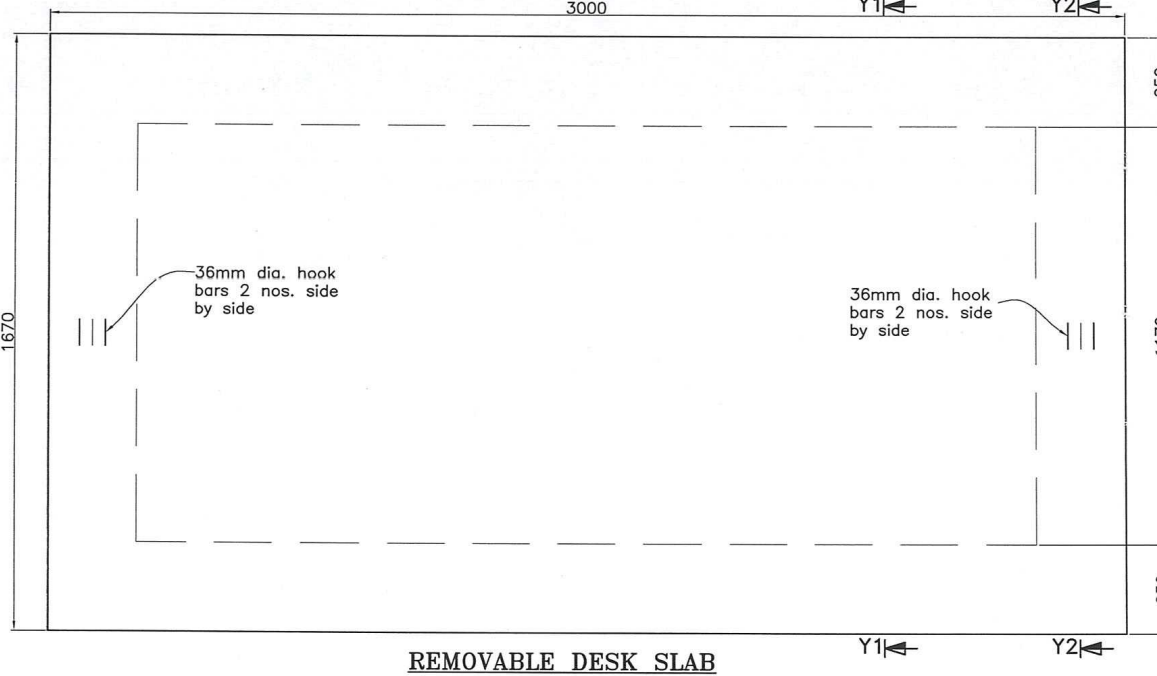
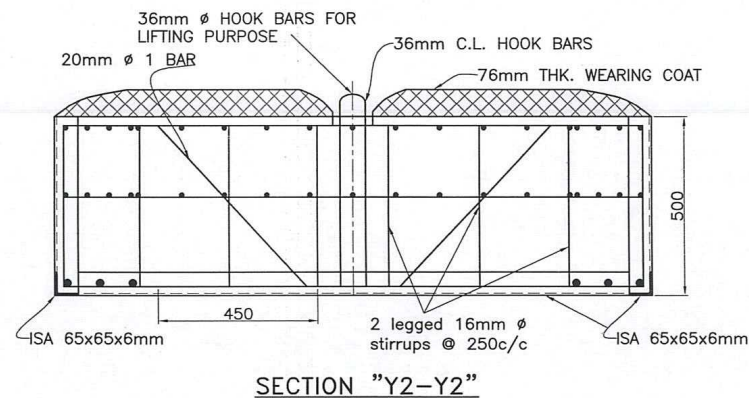
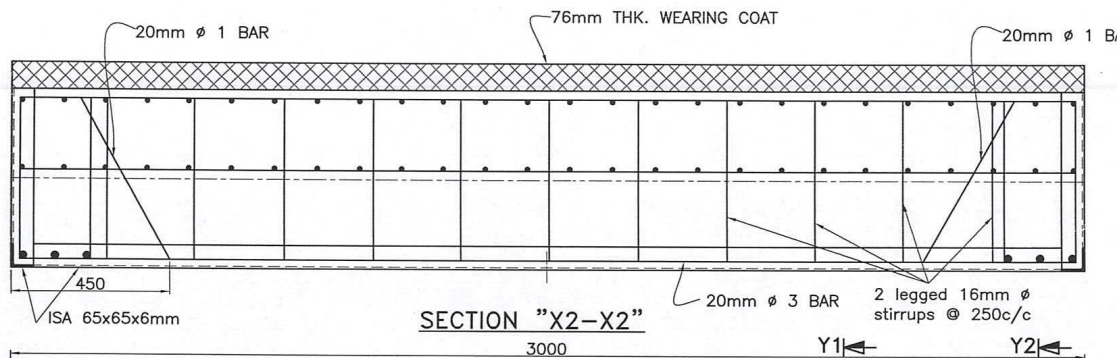
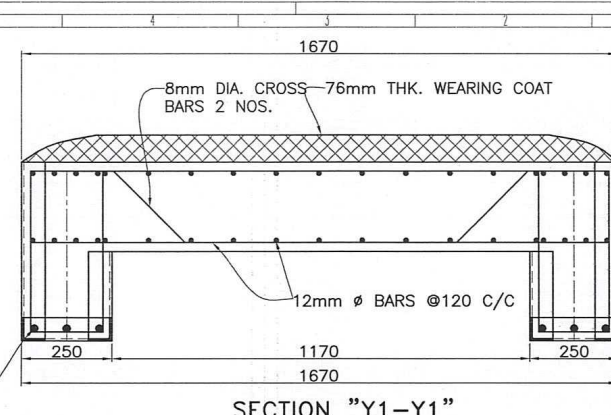
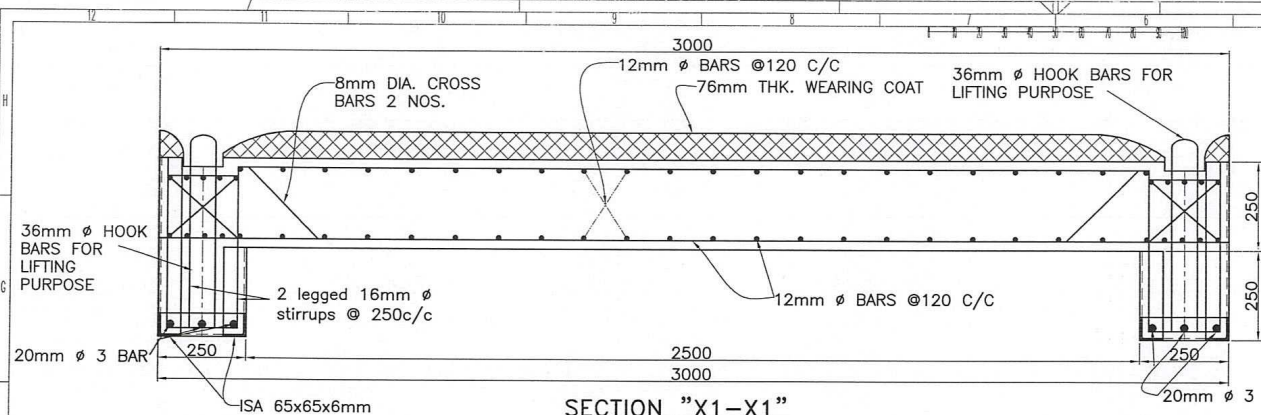
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. DIMENSIONS ARE NOT TO BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. CLEAR COVER TO REINFORCEMENT IS 40mm.
4. MINIMUM LAP LENGTH FOR FAVOURABLE CONDITION SHALL BE 50ϕ , WHERE ϕ IS THE DIA. OF BAR LAPPED. FOR UNFAVOURABLE CASES THE LAP LENGTH SHALL BE INCREASED BY A FACTOR 1.43 (AS PER IRC: 112-2011 CLAUSE NO. 15.2.5.(2)).
5. NO MORE THAN 50% OF TOTAL BARS SHALL BE LAPPED AT ANY SECTION.
6. GRADE OF CONCRETE FOR GIRDER AND DECK SLAB SHALL BE M35.
7. WELDING OF REINFORCEMENT BAR SHALL NOT BE PERMITTED.
8. THIS DRAWINGS SHOULD BE READ ALONG WITH ALL RELEVANT DRAWING

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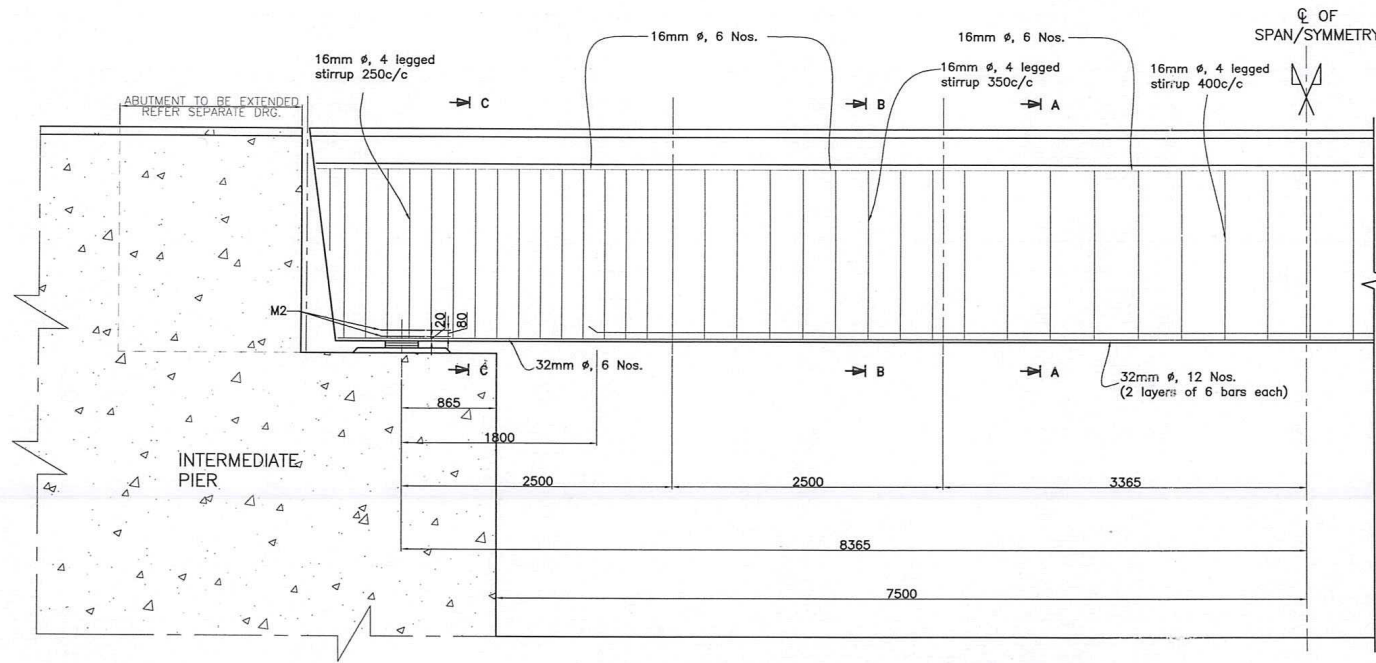
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PROJECT		NORTH KOEL RESERVOIR PROJECT JHARKHAND	
TITLE		SPILLWAY BRIDGE SLAB REINFORCEMENT DETAIL	
DRAWN BY	MOHAN SANGWAN	SUBMITTED BY:	
CHECKED BY	ANURAG		
SIZE	A1	SCALE	DRG NO : OML/NKRP/SPB/502 REV-0

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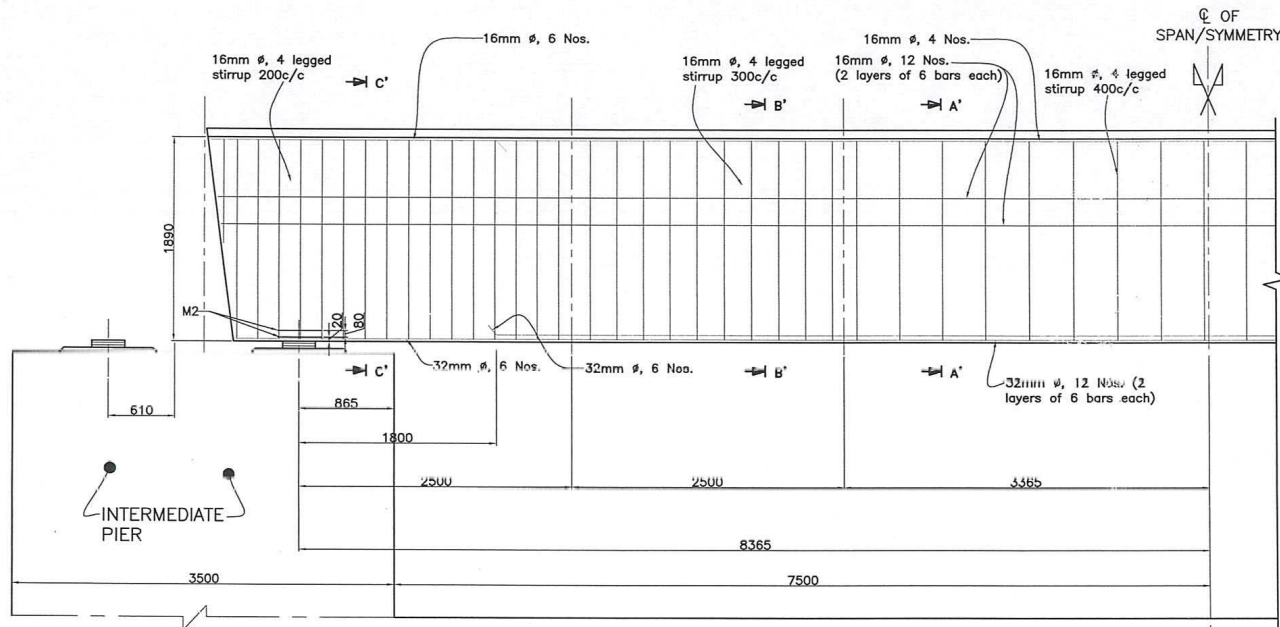


			OM METALS INFRAPROJECTS LTD.	
PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND			
TITLE	SPILLWAY BRIDGE			
	REMOVABLE SLAB REINFORCEMENT DETAIL			
DRAWN BY	MOHAN SANGWAN		SUBMITTED BY: 	
CHECKED BY	ANURAG			
SIZE	A1	SCALE	DRG NO : OML/NKRP/SPB/503	REV-0

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**L-SECTION OF U/S & D/S END GIRDERS
(BETWEEN END PIER & INTERMEDIATE PIER)**

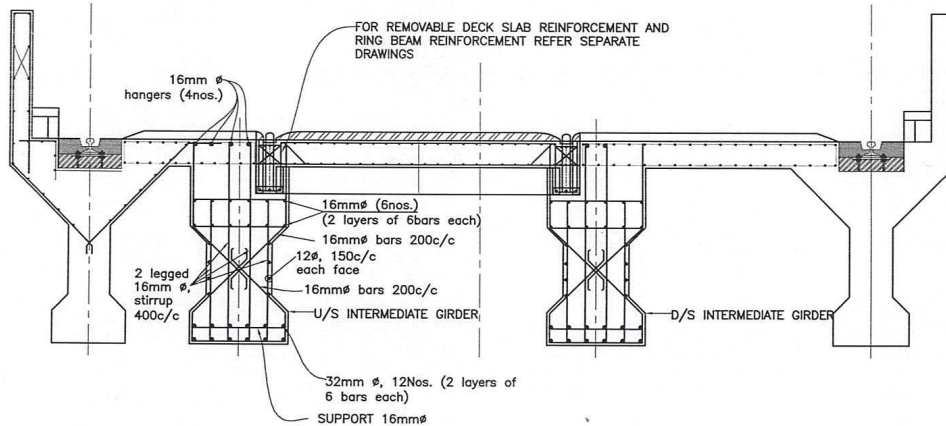


**L-SECTION OF INTERMEDIATE GIRDERS
(OVER INTERMEDIATE PIER)**

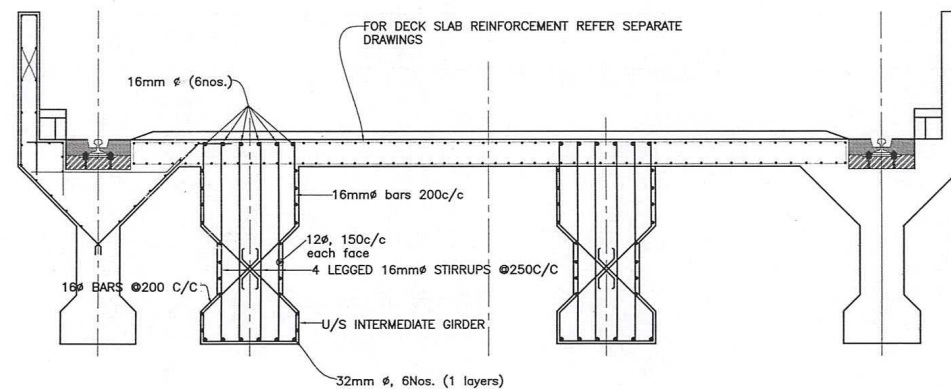
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. THIS DRAWINGS SHOULD BE READ ALONG WITH ALL RELEVANT DRAWING

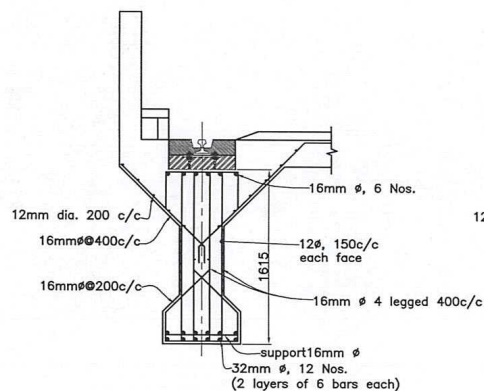
	OM METALS INFRAPROJECTS LTD.		
PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND		
TITLE	SPILLWAY BRIDGE CROSS GIRDER REINFORCEMENT DETAIL (SHEET 01 OF 03)		
DRAWN BY	MOHAN SANGWAN	SUBMITTED BY:	
CHECKED BY	ANURAG	SIZE A1 SCALE 1:21 DRG NO : OMIL/NKRP/SPB/504 REV 0	



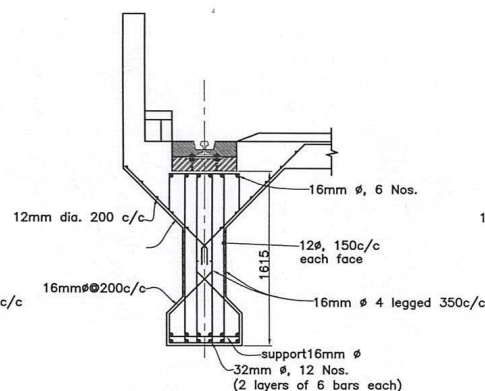
CROSS-SECTION IN NON PIER PORTION AT CENTER OF GIRDER
(PIER AND CROSS GIRDER NOT SHOWN)



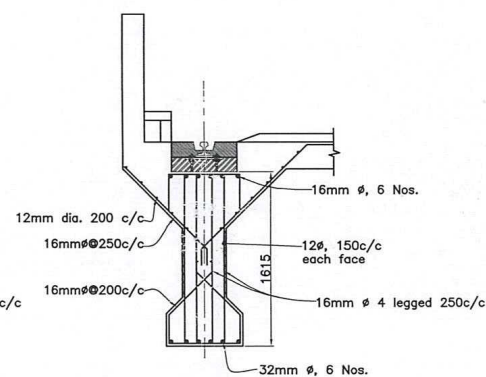
CROSS-SECTION IN PIER PORTION ON BETWEEN BEARING
(PIER AND CROSS GIRDER NOT SHOWN)



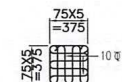
SECTION A-A



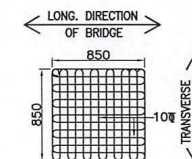
SECTION B-B



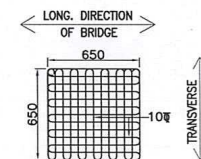
SECTION C-C



TYPE - M2
(AT JACK LOCATIONS)
(IN TWO LAYERS)



TYPE - M1
(BEARINGS LOCATIONS AT
INTERMEDIATE GIRDER)



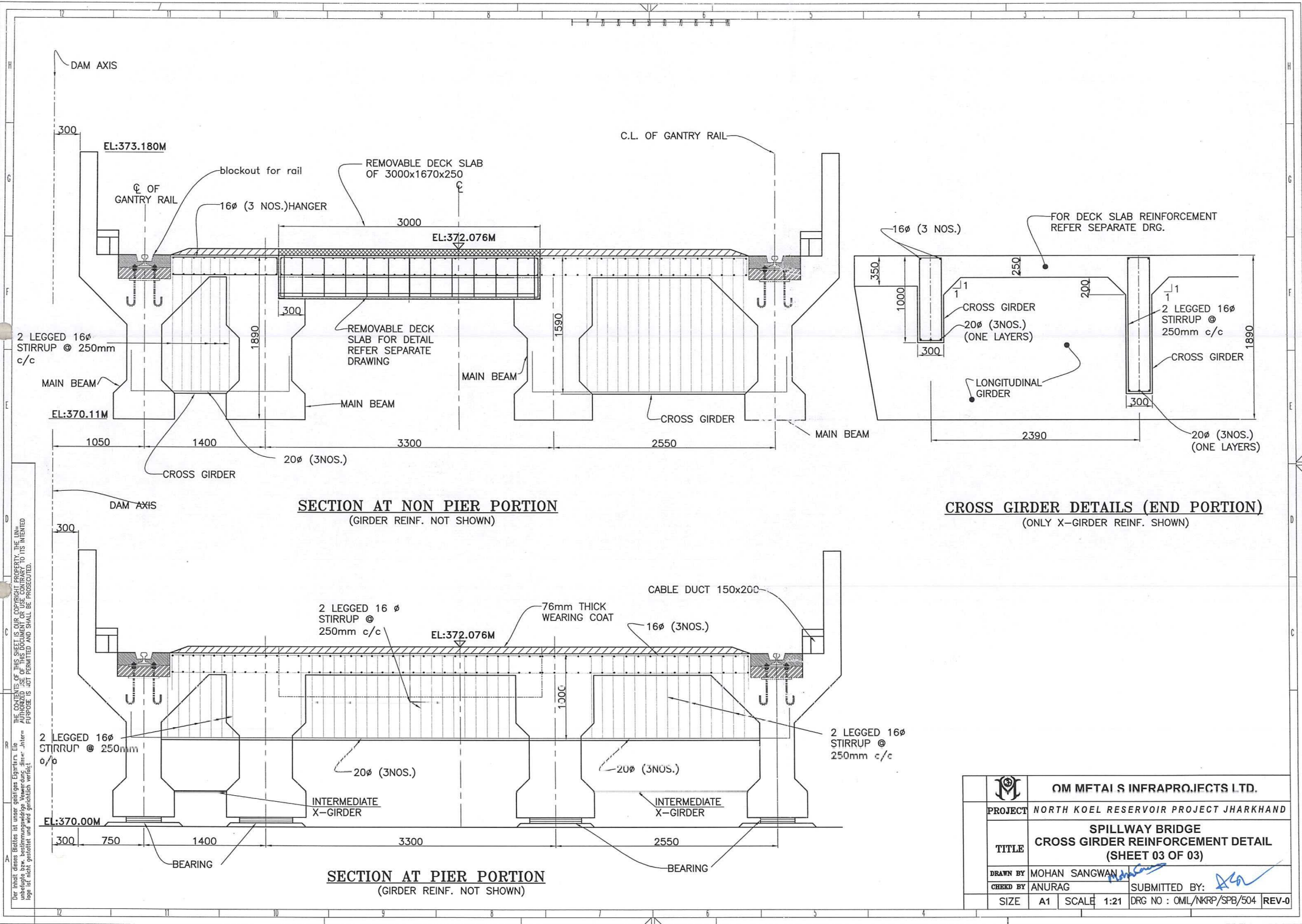
TYPE - M1
(BEARINGS LOCATIONS AT
END GIRDER)

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. THIS DRAWINGS SHOULD BE READ ALONG WITH ALL RELEVANT DRAWING

			OM METALS INFRAPROJECTS LTD.		
PROJECT		NORTH KOEL RESERVOIR PROJECT JHARKHAND			
TITLE		SPILLWAY BRIDGE CROSS GIRDER REINFORCEMENT DETAIL (SHEET 02 OF 03)			
DRAWN BY		MOHAN SANGWAN		SUBMITTED BY: 	
CHECKED BY		ANURAG			
SIZE		A1	SCALE	1:21	DRG NO : OMI/NKRP/SPB/504
REV-0					

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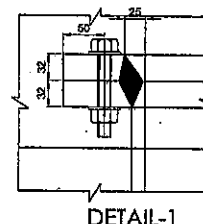


		OM MFTAI S INFRAPROJECTS LTD.			
PROJECT		NORTH KOEL RESERVOIR PROJECT JHARKHAND			
TITLE		SPILLWAY BRIDGE CROSS GIRDER REINFORCEMENT DETAIL (SHEET 03 OF 03)			
DRAWN BY		MOHAN SANGWAN		SUBMITTED BY: 	
CHECKED BY		ANURAG			
SIZE		A1	SCALE	1:21	DRG NO : OMIL/NKRP/SPB/504
		REV-0			

LIST OF DRAWINGS FOR FABRICATED GATES

S. No.	Drawing Description	Drawing No.
1	Irrigation Sluice Gate	
i	General Arrangement	OMIL/NKRP/ISG/300 (R2)
ii	Gate Assembly	OMIL/NKRP/ISG/302 (R4) Sheet 1 of 2
iii	Gate Details	OMIL/NKRP/ISG/302 (R3) Sheet 2 of 2
iv	Wheel Assembly	OMIL/NKRP/ISG/303 (R3)
2	Low Level Sluice Gate	
i	Gate Leaf Details	OMIL/NKRP/LLSG/02 (R3) Sheet 1 of 2
ii	Details of Seal	OMIL/NKRP/LLSG/02 (R3) Sheet 2 of 2
iii	Wheel Assembly & Guide Shoe Details	OMIL/NKRP/LLSG/03 (R2)
3	Intake Service Gate	
i	General Arrangement	OMIL/NKL/ISG/200 (R0)
ii	Gate Assembly	OMIL/NKL/ISG/202 (R1) Sheet 1 of 2
iii	Gate Details	OMIL/NKL/ISG/202 (R1) Sheet 2 of 2
iv	2nd Stage Embedded Parts	OMIL/NKL/ISG/201 (R3) Sheet 1 of 2
v	2nd Stage Embedded Parts	OMIL/NKL/ISG/201 (R3) Sheet 2 of 2
vi	Ballast Details	OMIL/NKL/ISG/202A (R1)
vii	Details of connecting Beam, Pin & Spacer	OMIL/NKL/ISG/203 (R1)
viii	Wheel Assembly	OMIL/NKL/ISG/204 (R5)
ix	Detail to Supporting Structure	OMIL/NKL/ISG/205 (R0)
4	Irrigation Emergency Sluice Gate	
i	Gate Leaf Details	OMIL/NKRP/ESG/505 (R2)
ii	Gate Leaf Details	OMIL/NKRP/ESG/505A (R0)
iii	Filling Valve Details	OMIL/NKRP/ESG/506 (R1)
iv	Seal assembly and Details	OMIL/NKRP/ESG/507 (R2)
v	Rubber Part details	OMIL/NKRP/ESG/507A (R0)
vi	Gate Leaf Assembly and Guide Details	OMIL/NKRP/ESG/508 (R3)
vii	General Arrangement for Irrigation Sluice	OMIL/NKRP/ESG/500 (R3)
viii	Block-out Details for Irrigation Sluices	OMIL/NKRP/ESG/501 (R2)
ix	General Arrangement for Low Level Sluice	OMIL/NKRP/ESG/500A (R2)
x	Block-out Details for Low Level Sluice	OMIL/NKRP/ESG/501A (R1)
xi	General Installation of Embedded Parts for Low Level and Irrigation Sluices	OMIL/NKRP/ESG/504 (R1)
xii	Embedded Details Side Seal Seat & Slide Track	OMIL/NKRP/ESG/502 (R2)
xiii	Embedded Parts Detail of Bottom Sill Beam & Top Seal Seat	OMIL/NKRP/ESG/503 (R2)
5	Intake Bulkhead Gate	
i	Gate Assembly	OMIL/NKRP/IBG/600 (R2)
ii	Gate Leaf Details	OMIL/NKRP/IBG/605 (R2)
iii	Detail of CR. Steel Fixed Beam	OMIL/NKRP/IBG/600A (R1)
iv	Blockout Details	OMIL/NKRP/IBG/601 (R1)
v	E.P Installation Details	OMIL/NKRP/IBG/604 (R1)
vi	Bottom & Top Seal Embedded Parts	OMIL/NKRP/IBG/602 (R2)
vii	Slide Track/Side Seal Seat & Guide	OMIL/NKRP/IBG/603 (R0)
viii	Seal Assembly & Details	OMIL/NKRP/IBG/605 (R1)

ix	Filling Valve Assembly and Details	OMIL/NKRP/IBG/607 (R1)
x	Detail of Gate Groove Angle Frame	OMIL/NKRP/IBG/608 (R2)
xi	Groove Cover Details	OMIL/NKRP/IBG/609 (R1)



BONNET COVER FLANGE

✓
DETAIL-1

|EL.339.50 M

TOP OF SEAL
EL. 335.15 M

TOP OF SEAL
EL. 335.15 M

SILL EL.	
332.00 M	

ELEVATION

SIDE ELEVATION

ROLLER C/C=2500
SKIN PLATE =2800
SECTION - CC

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. NUMBER OF OPENING = 4 NOS.
3. ALL WELDS ARE 6MM CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED.
4. FABRICATION ERECTION TOLERANCES TO BE AS PER IS:4622.
5. IRRIGATION SLUICE GATE IS OPERATED BY HYDRAULIC HOIST.
THE CAPACITY OF HYDRAULIC CYLINDER IS 35MT DOUBLE ACTING TYPE.
6. VENT, GROOVE & BONNET LINERS HAVE BEEN ALREADY ERECTED
AT SITE THESE ARE REFLECTED IN DRGS FOR CLARITY.

OM METALS INFRAPROJECTS LTD.

WAPCOS LTD.

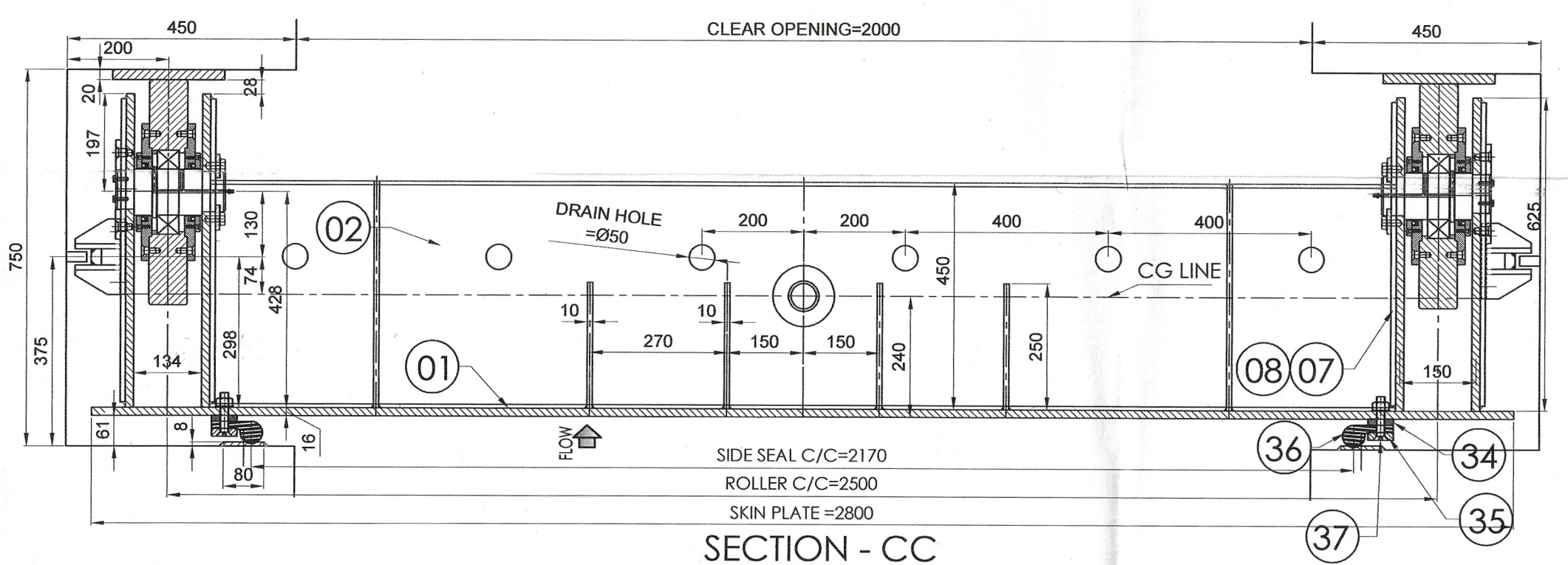
NORTH KOEL RESERVOIR PROJECT, JHARKHAND
IRRIGATION SLUICE GATE (2.0M x 3.0M)
GENERAL ARRANGEMENT

DRAWN BY	IDREES AHMAD
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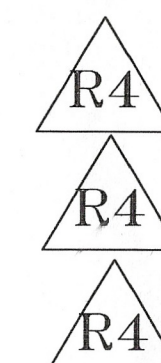
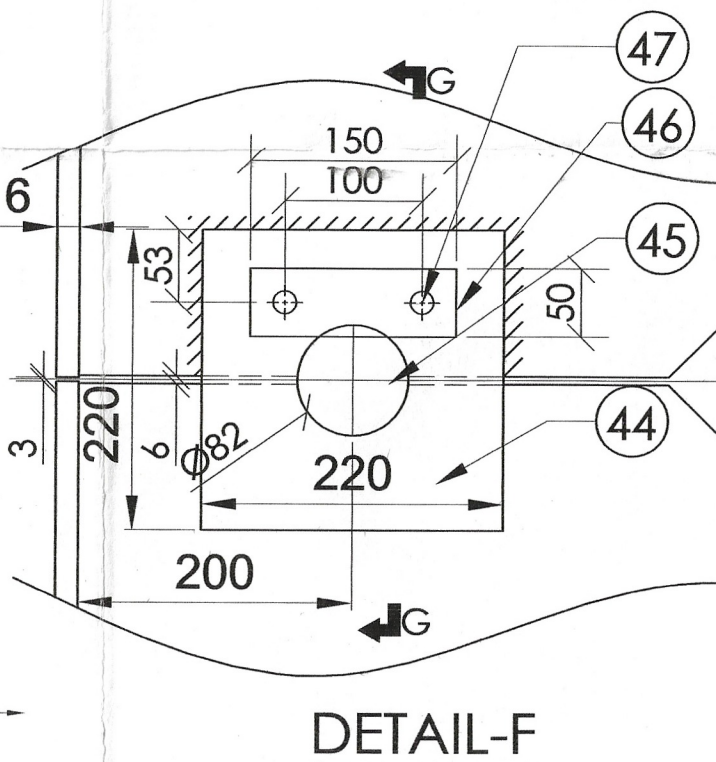
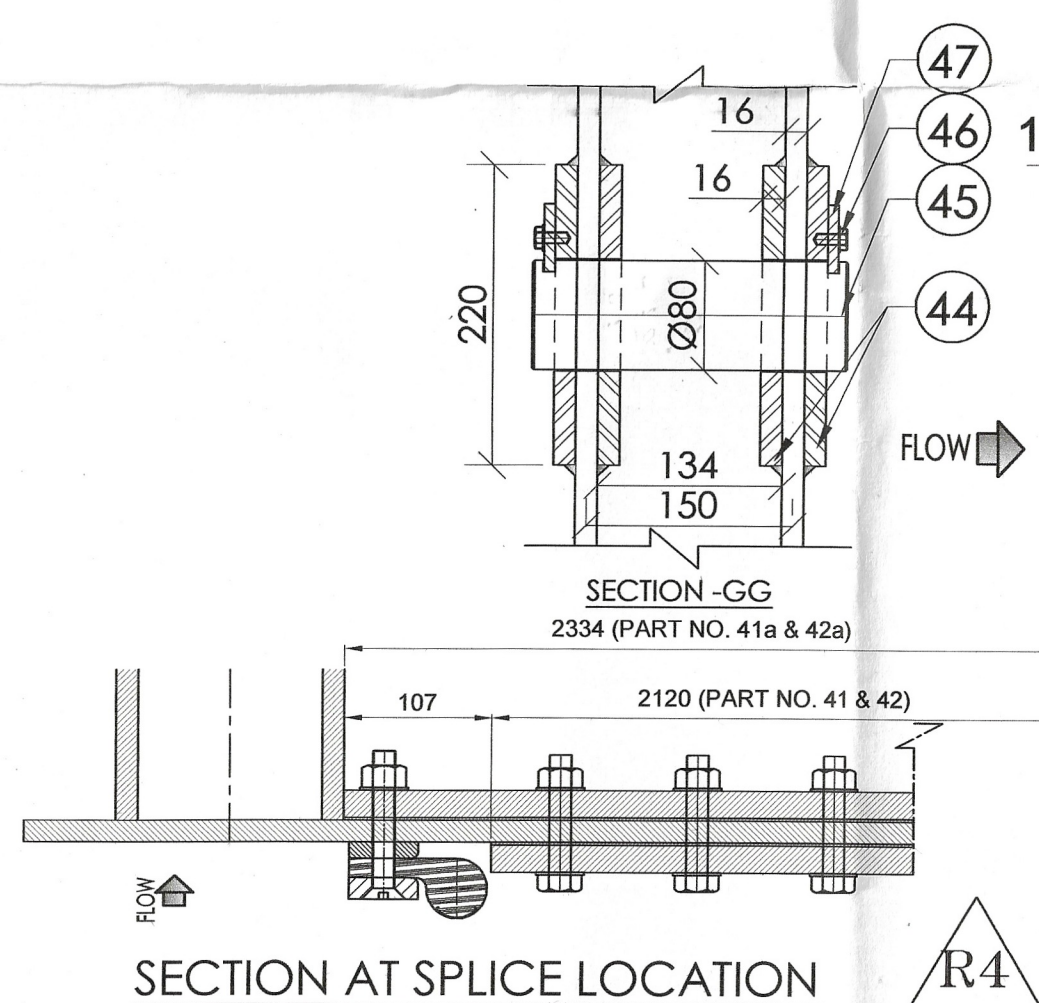
SUBMITTED BY: M. SRIVALLABHA

DRG NO : OMILNKRPI/SGI/300

REV-2



1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. NUMBER OF OPENING =4 NOS.
3. ALL WELDS ARE 6MM CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED
4. THE QUANTITY INDICATED FOR ONE GATE ONLY.TOTAL REQUIRED =4 NOS.
5. FABRICATION ERECTION TOLERANCES TO BE AS PER IS:4622.



APPROVED BY VIDE WAPCOS LETTER NO.
WAP/Infra./NKRP/20, DATED 14.01.2020



REMARKS

However, the contractor is not responsible for accuracy and correctness of design, Drags, fabrications, Erection Commissioning and Satisfactory performance of the equipment at site until guarantee etc.

2



Amr
2018/20

20/8/2020
निदेशक व
Director
कैन्द्रीय जल आयोग
Central Water Commission
नई दिल्ली/New Delhi

		OM METALS INFRAPROJECTS LTD.	
WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)		CLIENT	
NORTH KOEL RESERVOIR PROJECT, JHARKHAND IRRIGATION SLUICE GATE (2.0M x 3.0M) GATE ASSEMBLY		TITLE	
(SHEET 1 OF 2)		DRAWN BY IDREES AHMAD <i>Moham</i>	
SUBMITTED BY: M. SRIVALLABHA <i>AS</i>		CHECKED BY ANURAG	
DRG NO : OMIL/NKRP/ISG/302		SCALE	
REV-4		REVISED AS WAPCOS MAIL DATED 12-02-2018	
REVISED AS PER WAPCOS MAIL DATED 19-03-2018		REVISED AS PER WAPCOS MAIL DATED 31-03-2018	
REVISED AS PER WAPCOS CHAIRMAN'S LETTER NO. WAPCOS/HR/MS-CHK/2019, DATED 20/12/2019.12/2019		REVISED AS PER WAPCOS CHAIRMAN'S LETTER NO. WAPCOS/HR/MS-CHK/2019, DATED 20/12/2019.12/2019	
R1	R2	R3	R4

FLOW

FLOW

FLOW

ITEM-20
(OUTER SIDE)

ITEM-20
(INNER SIDE)

ITEM-03
(OUTER SIDE)

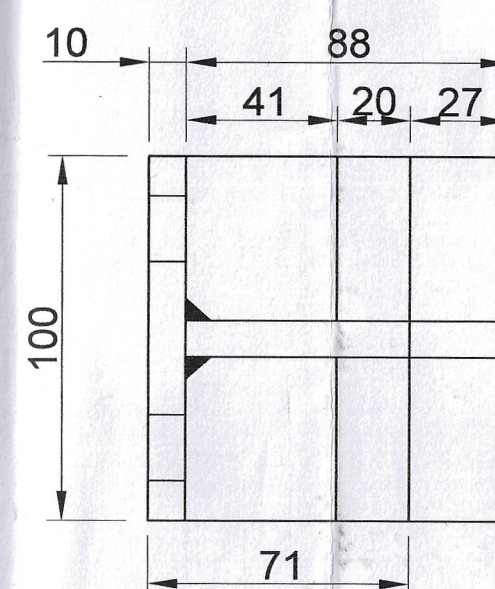
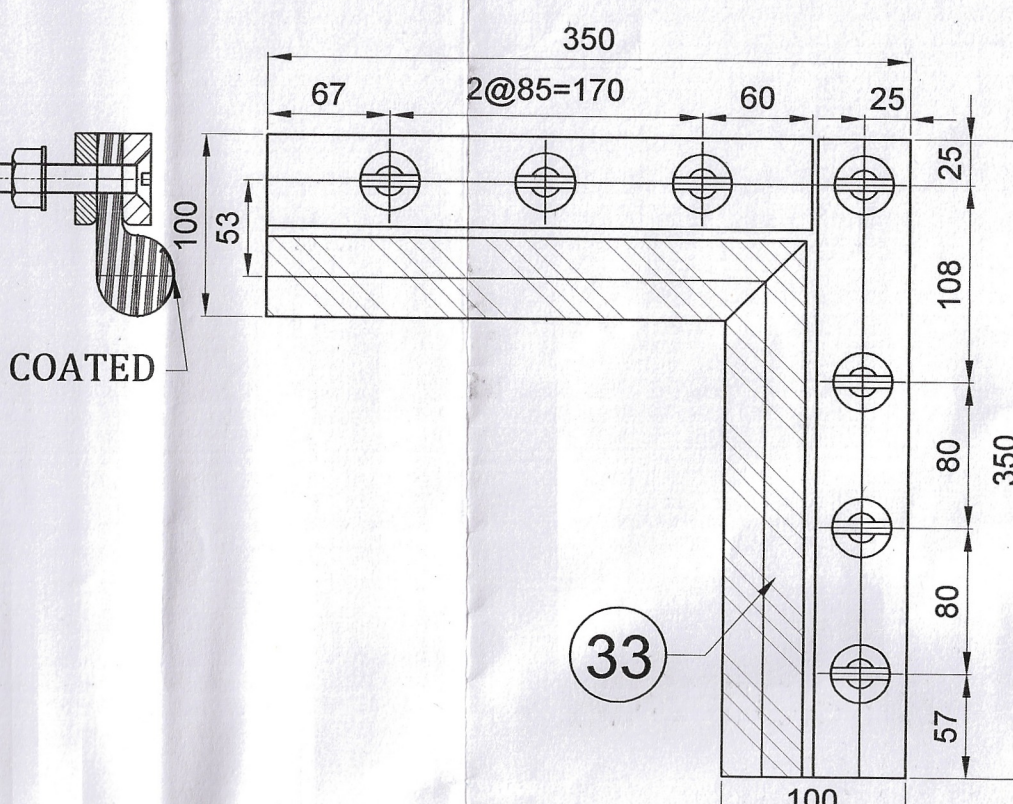
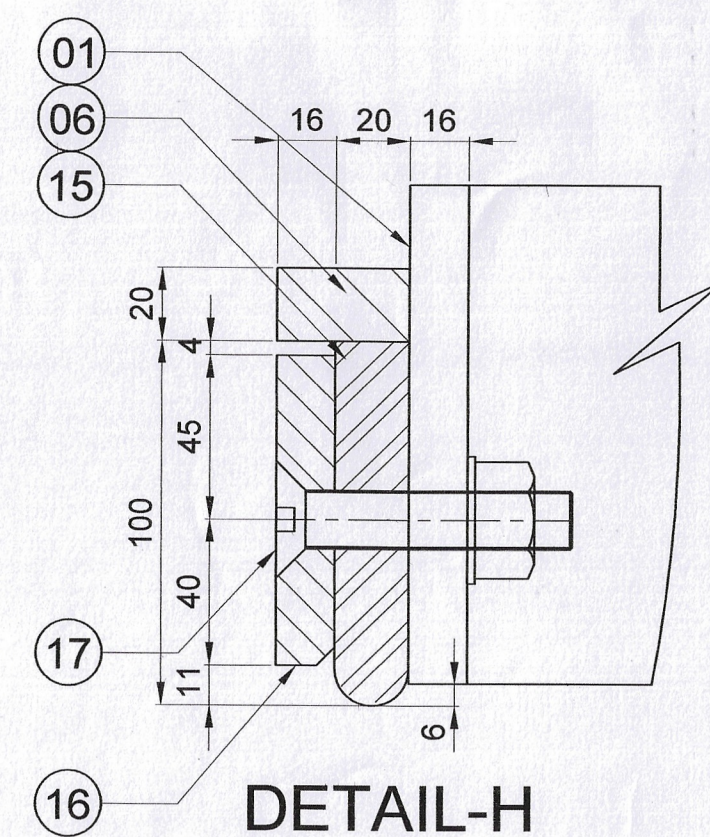
ITEM-03
(INNER SIDE)

ITEM-7 & 25
(OUTER SIDE)

ITEM-8 & 26
(INNER SIDE)

ITEM-7 & 25
(OUTER SIDE)

ITEM-8 & 26
(INNER SIDE)



GUIDE SHOE
DETAILS

TOP RUBBER SEAL & CLAMP DETAILS

BOTTOM RUBBER SEAL & CLAMP DETAILS

ITEM-33
TOP CORNER SEAL

(SIDE VIEW)

ITEM-45

ITEM-36
SIDE SEAL

NOTE:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. NUMBER OF OPENING = 4 NOS.
3. ALL WELDS ARE 6MM CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED
4. THE QUANTITY INDICATED FOR ONE GATE ONLY. TOTAL REQUIRED = 4 NOS.
5. FABRICATION ERECTION TOLERANCES TO BE AS PER IS:4622.



OM METALS INFRAPROJECTS LTD.

WAPCOS LTD.

(A GOVT. OF INDIA ENTERPRISE)

NORTH KOEL RESERVOIR PROJECT, JHARKHAND
IRRIGATION SLUICE GATE (2.0M x 3.0M)
GATE DETAILS

(SHEET 2 OF 2)

CLIENT	WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)		
TITLE	NORTH KOEL RESERVOIR PROJECT, JHARKHAND IRRIGATION SLUICE GATE (2.0M x 3.0M) GATE DETAILS		
DRAWN BY	IDREES AHMAD		
CHECKED	ANURAG		
SCALE		SUBMITTED BY: M. SRIVALLABHA	
REV.		DRG NO : OMIL/NKRP/ISG/302	
		REV-3	

DESCRIPTION	REV.
REVISED AS WAPCOS MAIL DATED 12-02-2016	R1
REVISED AS WAPCOS MAIL DATED 19-03-2018	R2
REVISED AS WAPCOS MAIL DATED 31-03-2018	R2
REVISED AS PER WAPCOS COMPLIANCE WAPCOS LETTER NO. WAP/Infra/NK-JHK/2019/ DATED 20.12.2019/12.2019	R3



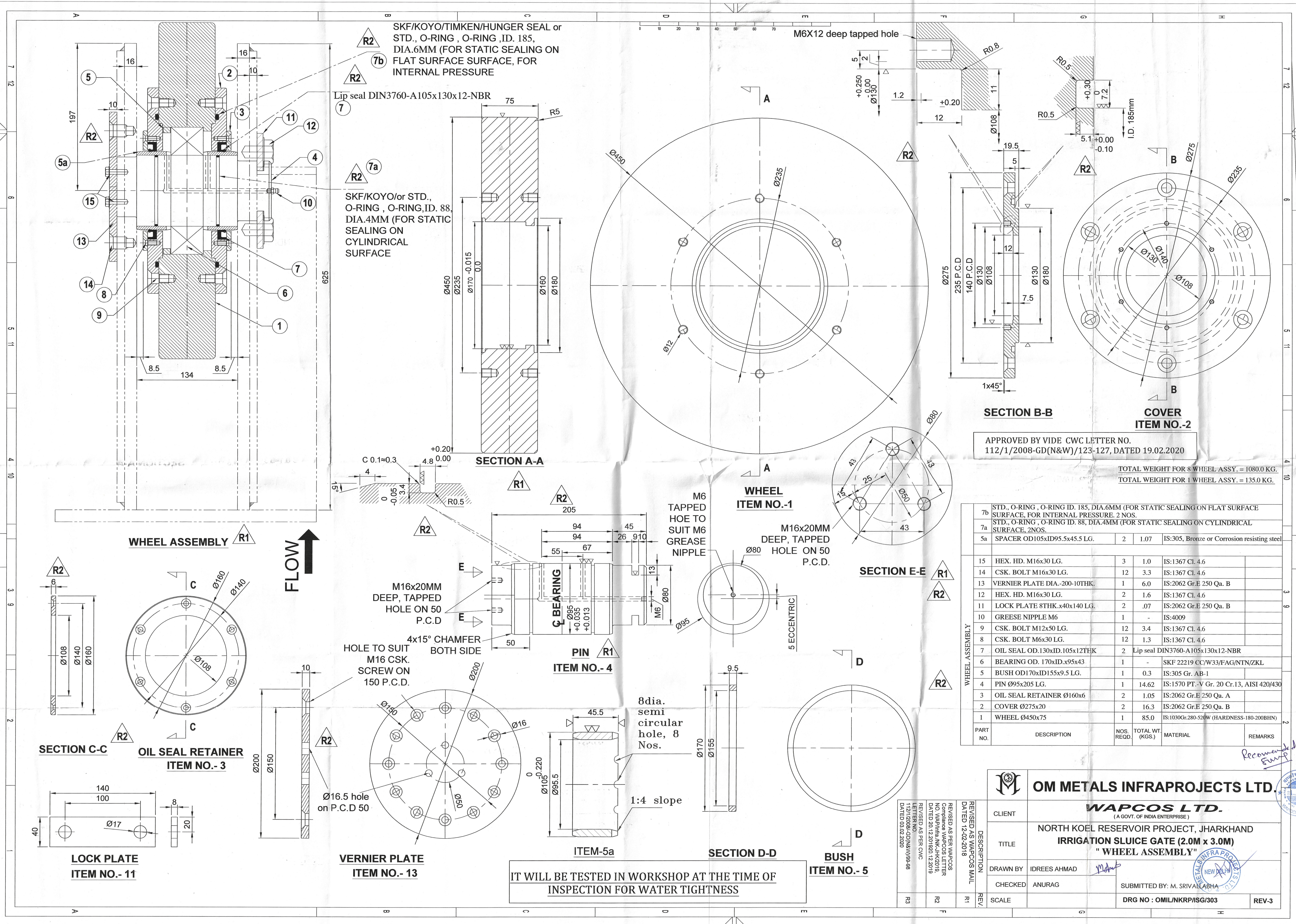
Recommended for
Approval

However this approval does not
relieve the contractor of any
responsibility for accuracy
and completion of design
drawings, fabrication,
erection, commissioning
and satisfactory
performance of the
equipment at site
and guarantee etc.

Amir
20/8/20

shah
20/8/20

Director
Central Water Commission
and Reservoir Duty



APPROVED BY VIDE CWC LETTER NO.
112/1/2008-GD(N&W)/123-127, DATED 19.02.2020

TOTAL WEIGHT FOR 8 WHEEL ASSY. = 1080.0 KG.
TOTAL WEIGHT FOR 1 WHEEL ASSY. = 135.0 KG.

PART NO.	DESCRIPTION	NOS. REQD.	TOTAL WT. (KGS.)	MATERIAL	REMARKS
7b	STD., O-RING, O-RING ID. 185, DIA.6MM (FOR STATIC SEALING ON FLAT SURFACE, FOR INTERNAL PRESSURE. 2 NOS.				
7a	STD., O-RING, O-RING ID. 88, DIA.4MM (FOR STATIC SEALING ON CYLINDRICAL SURFACE. 2NOS.				
5a	SPACER OD105xID95.5x45.5 LG.	2	1.07	IS:305, Bronze or Corrosion resisting steel	
15	HEX. HD. M16x30 LG.	3	1.0	IS:1367 Cl. 4.6	
14	CSK. BOLT M16x30 LG.	12	3.3	IS:1367 Cl. 4.6	
13	VERNIER PLATE DIA.-200-10THK.	1	6.0	IS:2062 Gr.E 250 Qa. B	
12	HEX. HD. M16x30 LG.	2	1.6	IS:1367 Cl. 4.6	
11	LOCK PLATE 8THK.x40x140 LG.	2	.07	IS:2062 Gr.E 250 Qa. B	
10	GREASE NIPPLE M6	1	-	IS:4009	
9	CSK. BOLT M12x50 LG.	12	3.4	IS:1367 Cl. 4.6	
8	CSK. BOLT M6x30 LG.	12	1.3	IS:1367 Cl. 4.6	
7	OIL SEAL OD.130xID.105x12THK	2		Lip seal DIN3760-A105x130x12-NBR	
6	BEARING OD. 170xID.x95x43	1	-	SKF 22219 CC/W33/FAG/NTN/ZKL	
5	BUSH OD170xID155x9.5 LG.	1	0.3	IS:305 Gr. AB-1	
4	PIN Ø95x205 LG.	1	14.62	IS:1570 PT.-V Gr. 20 Cr.13, AISI 420/430	
3	OIL SEAL RETAINER Ø160x6	2	1.05	IS:2062 Gr.E 250 Qa. A	
2	COVER Ø275x20	2	16.3	IS:2062 Gr.E 250 Qa. B	
1	WHEEL Ø450x75	1	85.0	IS:1030Gr.280-520W (HARDNESS:180-200BHN)	

OM METALS INFRAPROJECTS LTD.

WAPCOS LTD.
(A GOVT. OF INDIA ENTERPRISE)

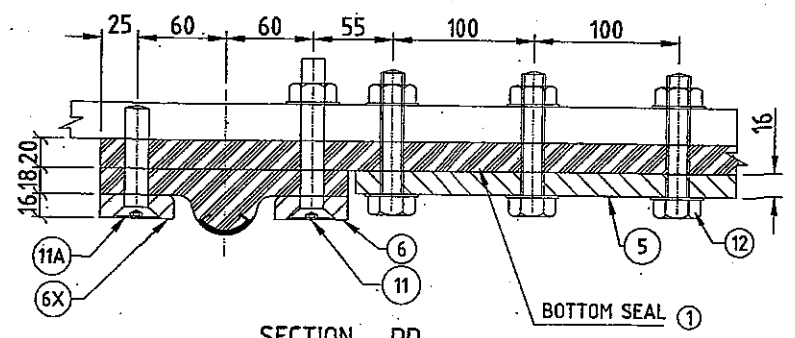
NORTH KOEL RESERVOIR PROJECT, JHARKHAND
IRRIGATION SLUICE GATE (2.0M x 3.0M)
"WHEEL ASSEMBLY"

CLIENT: WAPCOS LTD.
TITLE: NORTH KOEL RESERVOIR PROJECT, JHARKHAND IRRIGATION SLUICE GATE (2.0M x 3.0M) "WHEEL ASSEMBLY"
DRAWN BY: IDREES AHMAD
CHECKED: ANURAG
SCALE: SUBMITTED BY: M. SRIVALLABHA
DRG NO : OMIL/NKRP/ISG/303
REV-3

REVISOR AS PER WAPCOS COMPLIANCE WAPCOS LETTER DATED 20.12.2019
REVISED AS WAPCOS MAIL DATED 12.02.2018
REVISED AS PER CWC 11/21/2008/GD(N&W)/99-98 DATED 03.02.2020

For approval However this does not
Relieve the Contractor of
accuracy and correctness
of Design, Brigs, Fabrication
Erection, Commissioning
and satisfactory performance
of the equipment at site
and Guarantee etc.

28/7/2020
Director
Central Water Commission
New Delhi



SECTION - DD

- | DOZ GYIN OF SEAL ASSEMBLY FOR 1 GATE (TOTAL REQ. = 2 NOS.) | | | | | | | |
|--|---|-----|-------|-----------|------|--------|------------------------------|
| S.NO. | ITEM | THK | WIDTH | LENGTH | QTY. | WEIGHT | MATERIAL |
| 1 | BOTTOM SEAL | 20 | 100 | 2370 ±50 | 2 | - | IS:11855 |
| | SIDE SEAL - Ø45 | 18 | 170 | 2850±50 | 2 | - | IS:11855 |
| 2 | TOP SEAL - Ø45 | 18 | 170 | 1670 | 1 | - | IS:11855 |
| 4/AK | CORNER SEAL - Ø45 | 18 | 270 | (250±350) | 4+1 | - | IS:11855 |
| | BOTTOM CLAMP | 16 | 85 | 2020 | 1 | 21.57 | IS-2062 GR. E 250 QTY BR |
| 5 | SIDE CLAMP | 16 | 50 | 1369 | 2 | 19.71 | IS-2062 GR. E 250 QTY BR |
| 6 | SIDE CLAMP | 16 | 50 | 1359 | 2 | 19.71 | IS-2062 GR. E 250 QTY BR |
| 7 | TOP CLAMP | 16 | 50 | 2020 | 1 | 22.69 | IS-2062 GR. E 250 QTY BR |
| 8 | TOP CLAMP | 16 | 50 | 2370 | 1 | 14.58 | IS-2062 GR. E 250 QTY BR |
| 9 | SIDE CLAMP | 16 | 50 | 1539 | 1 | 9.66 | IS-2062 GR. E 250 QTY BR |
| 9K | SIDE CLAMP | 16 | 50 | 1539 | 1 | 9.66 | IS-2062 GR. E 250 QTY BR |
| 10 | SIDE CLAMP | 16 | 50 | 1604 | 1 | 10.07 | IS-2062 GR. E 250 QTY BR |
| 20X | SIDE CLAMP | 16 | 50 | 1604 | 1 | 10.07 | IS-2062 GR. E 250 QTY BR |
| 11 | M16 CSK SCREW WITH NUT & WASHER | | | 110 | 208 | - | IS:1367, IS: 1570 / AISI-304 |
| 11A | M16 CSK SCREW | | | 75 | 68 | - | IS:1367, IS: 1570 / AISI-304 |
| 12 | M16 HEX HD BOLT, WITH NUT AND EPRENE WASHER FOR BOTTOM SEAL | | | 85 | 20 | 5.00 | AISI-304 / IS:1367 / IS:1563 |
| TOTAL WEIGHT = | | | | | | 139.02 | KGS |

REVISED AS PER WAPCOS MAIL DATED 15.01.2018	1
REVISED AS PER WAPCOS MAIL DATED 16.05.2018	2
REVISED AS PER WAPCOS MAIL DATED 26.06.2018	3

DESCRIPTION			OM METALS INFRAPROJECTS LTD.	
	CLIENT		WAPCOS LTD.	
	PROJECT		NORTH KOEL RESERVOIR PROJECT	
	TITLE		LOW LEVEL SLUICE GATE (SIZE : 2.0M X 3.0M) "DETAIL OF SEAT"	
	DRAWN BY		PANKAJ NEGI	
REV	CHECKED BY		ANURAG SHUKLA	
	SCALE		SUBMITTED BY:  DRG NO : OMIL/NKRP/LLSG/02	
		SH.-2 OF 2		REV-3

SECTIONAL ELEVATION OF
WHEEL ASSEMBLY

VIEW -AA

VIEW -BB

8NOS. CSK HOLES
M8x10D

8 NOS. 17ø HOLES AT
EQUI. SPACED FOR
M16 HEX SCREW (TO
SUIT. ITEM NO. 2)

BEARING RETAINER
ITEM NO. 3)

8NOS. CSK HOLES FOR M8
SLOTTED HD CSK SCREW

COVER PLATE ④

PIN (ITEM-1)

VIEW-CC

37.5 Ø HOLES 8NOS
ON 375.5 PCD

M16x25mm DEEP, 8nos.
DRILL & TAP. HOLES AT
250 PCD, EQUI. SPACED

WHEEL (ITEM NO. 2)

ITEM-5

PLAN

SECTION - AA

- NOTE:-**
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
 2. ALL WELDS ARE 6MM CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED
 3. NUMBER OF GATE = 2 NO.
 4. FABRICATION ERECTION TOLERANCES TO BE AS PER IS : 4622.
 5. 4NO. OF GUIDE SHOES REQ. FOR 1 GATE.

BILL OF MATERIALS / GUIDE SHOE							
S.NO.	ITEM	THK	WIDTH	LENGTH	QTY.	WEIGHT	MATERIAL
1	BASE PL	12	210	250	1	4.95	IS-2062, Gr. E250 Qu Br
2	PLATE	12	32	240	1	0.72	IS-2062, Gr. E250 Qu Br
3	PLATE	12	45	240	2	2.03	IS-2062, Gr. E250 Qu Br
4	STIFFENER PL	10	45	70	4	0.99	IS-2062, Gr. E250 Qu Br
5	SHIM PL	5	210	250	1	2.06	IS-2062, Gr. E250 Qu Br
6	M16 HX.HD BOLT WITH WASHER			75	4		IS:1367, CL4.8
TOTAL WEIGHT =					10.75	KGS	

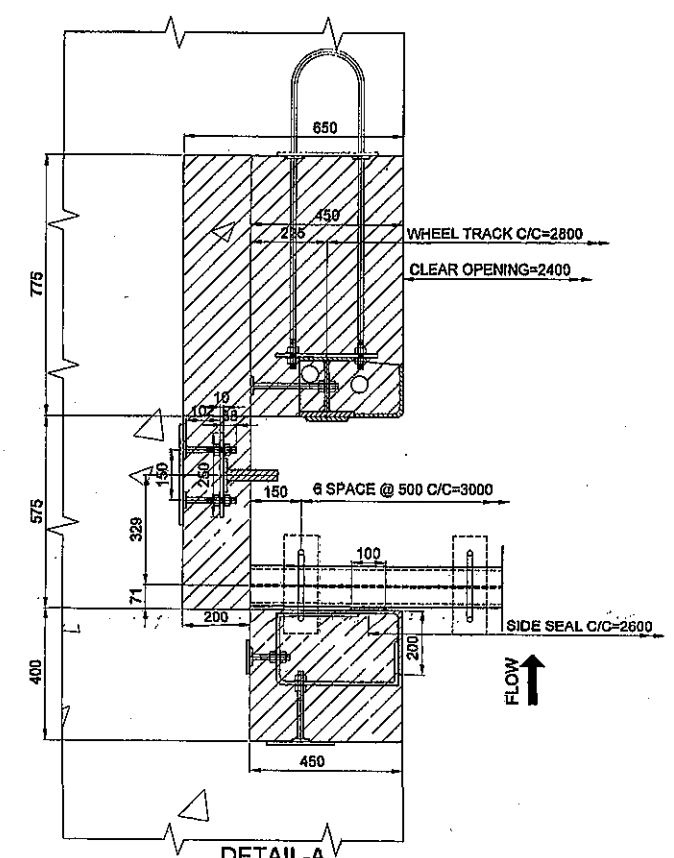
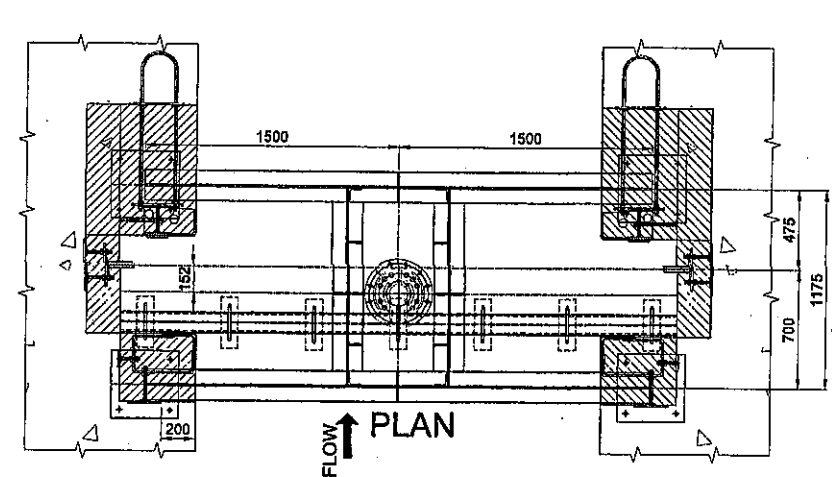
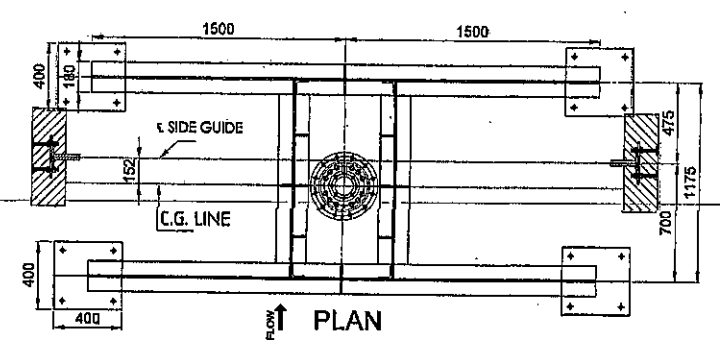
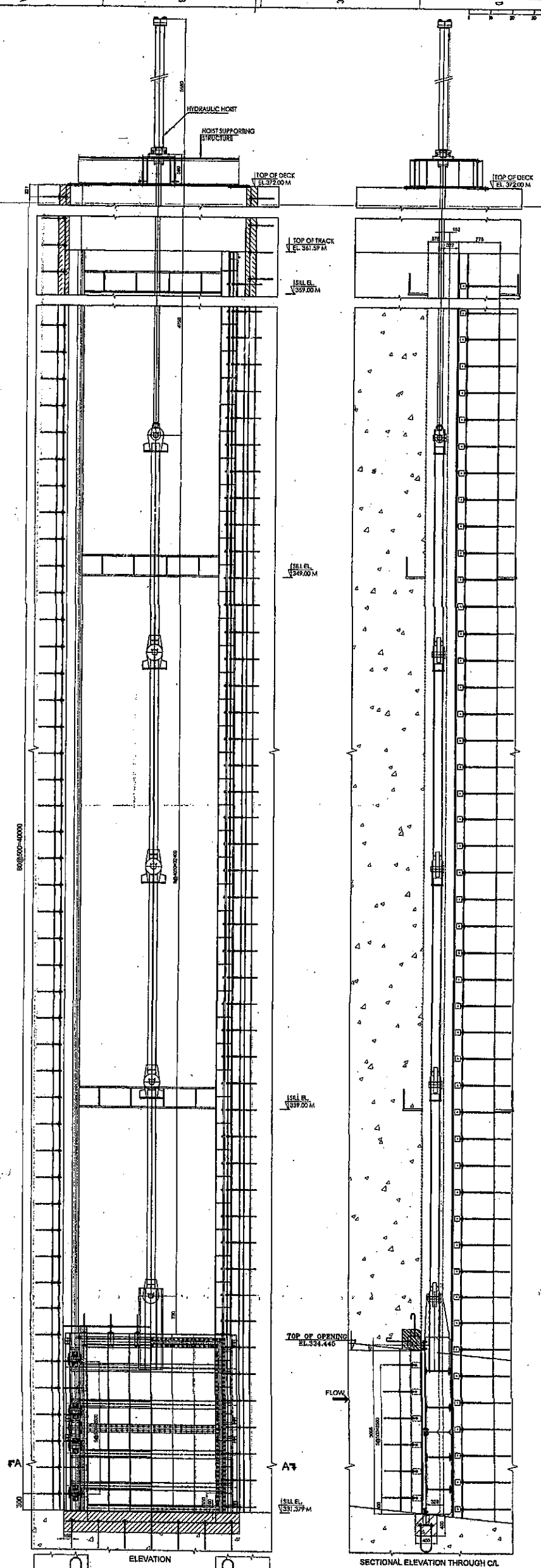
BQQ GIVEN FOR 1 WHEEL ASSEMBLY (TOTAL REQD.=8 NOS./GATE)							
S.NO.	ITEM	THK	WIDTH	LENGTH	QTY.	WEIGHT	MATERIAL
1	PIN Ø		140	300	1	36.23	AlSi:420 / IS: 1570 (P - V), 20Cr13
2	WHEEL	145	ID-200	OD-560	1	183.00	IS:1030, Gr. 280- 520
3	BEARING RETAINER	24	ID-144	OD-280	2	20.00	IS:2062 Gr. E250 Qu BR
4	COVER PL.	6	ID-144	OD-200	2	2.00	IS:2062 Gr. E250 Qu BR
5	SPACER	60	ID-120.5	OD-140	2	2.00	IS:2062 Gr. E250 Qu BR
6	VERNIAR PLATE Ø	260	16	1	1	5.67	IS:2062 Gr. E250 Qu BR
7	KEEPER PL.	16	60	260	1	1.96	IS:2062 Gr. E250 Qu BR
8	GASKET	1	ID-215	OD-280	2		RUBBER
9	HEX. HD SCREW M16		30	16	-	-	IS-1367, Cl.4.8.
10	M8 SLOTTED CSK HD SCREW		15	16	-	-	IS-1367, Cl.4.8
11	OIL SEAL	10.5	ID-140	OD-164	2		RUBBER
12	O RING (5mm IN SEC)				2	0.20	RUBBER
13	BEARING -24124CC/W33, ID-120,OD-200,W-80				1	10.30	SKF/FAG/NTN
14	HEX. HD SCREW M20		40	8			IS:1367, Cl.4.8
15	BUTTON HD GREASE NIPPLE M10				1		IS : 4009 / BRASS
					TOTAL WEIGHT=	262.36	KGS

- NOTE:-**
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
 2. ALL WELDS ARE 6MM CONTINUOUS FILET UNLESS OTHERWISE SPECIFIED
 3. NUMBER OF OPENING & GATE → 2 Nos.
 4. TOTAL Nos. OF WHEEL ASSEMBLY → 8 Nos. / GATE
 5. THE MATERIAL OF ITEM ARE MARKED IN FURNISHED SIZES.
 6. THE BEARING ARE TO BE FULLY GREASED IN THE SHOP AFTER ASSEMBLY WITH GATE IRAF.

APPROVED
Date 31/07/18

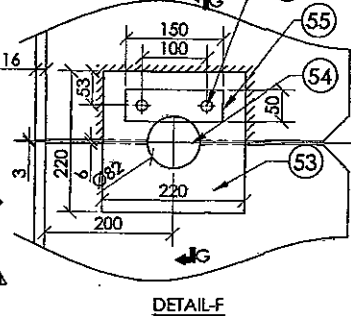
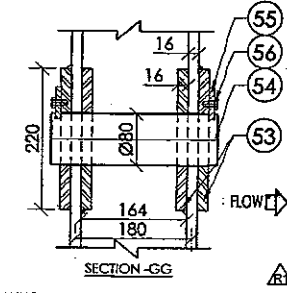
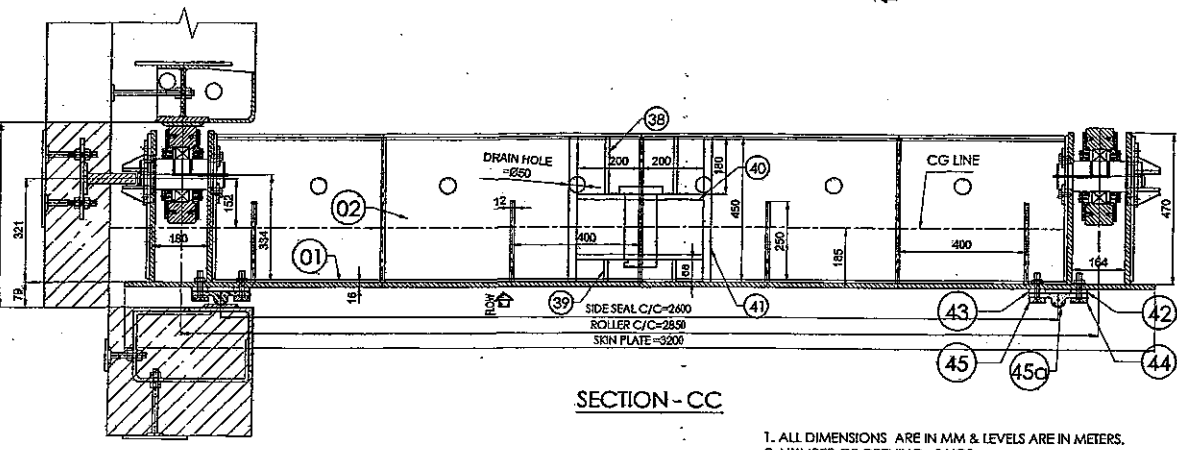
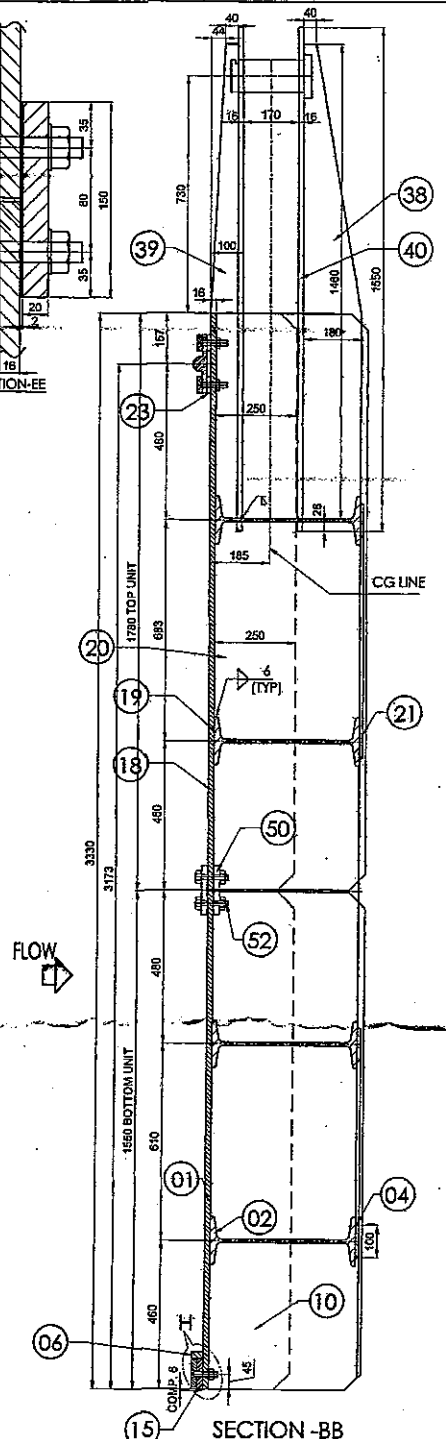
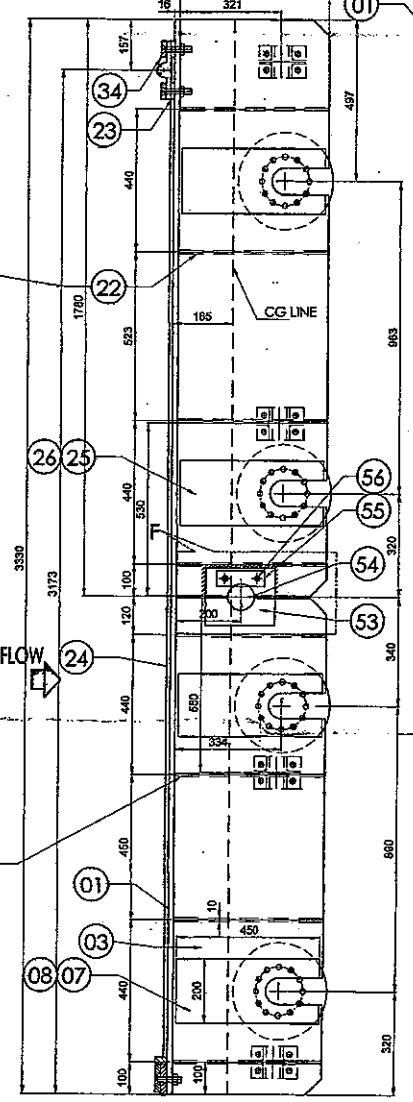
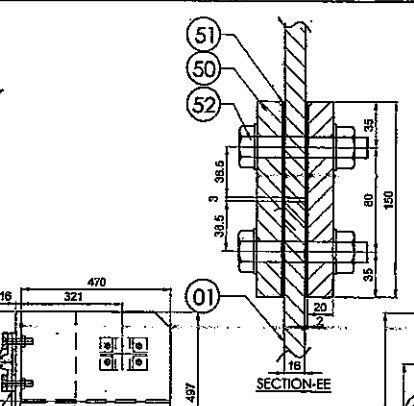
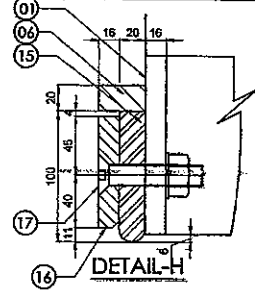
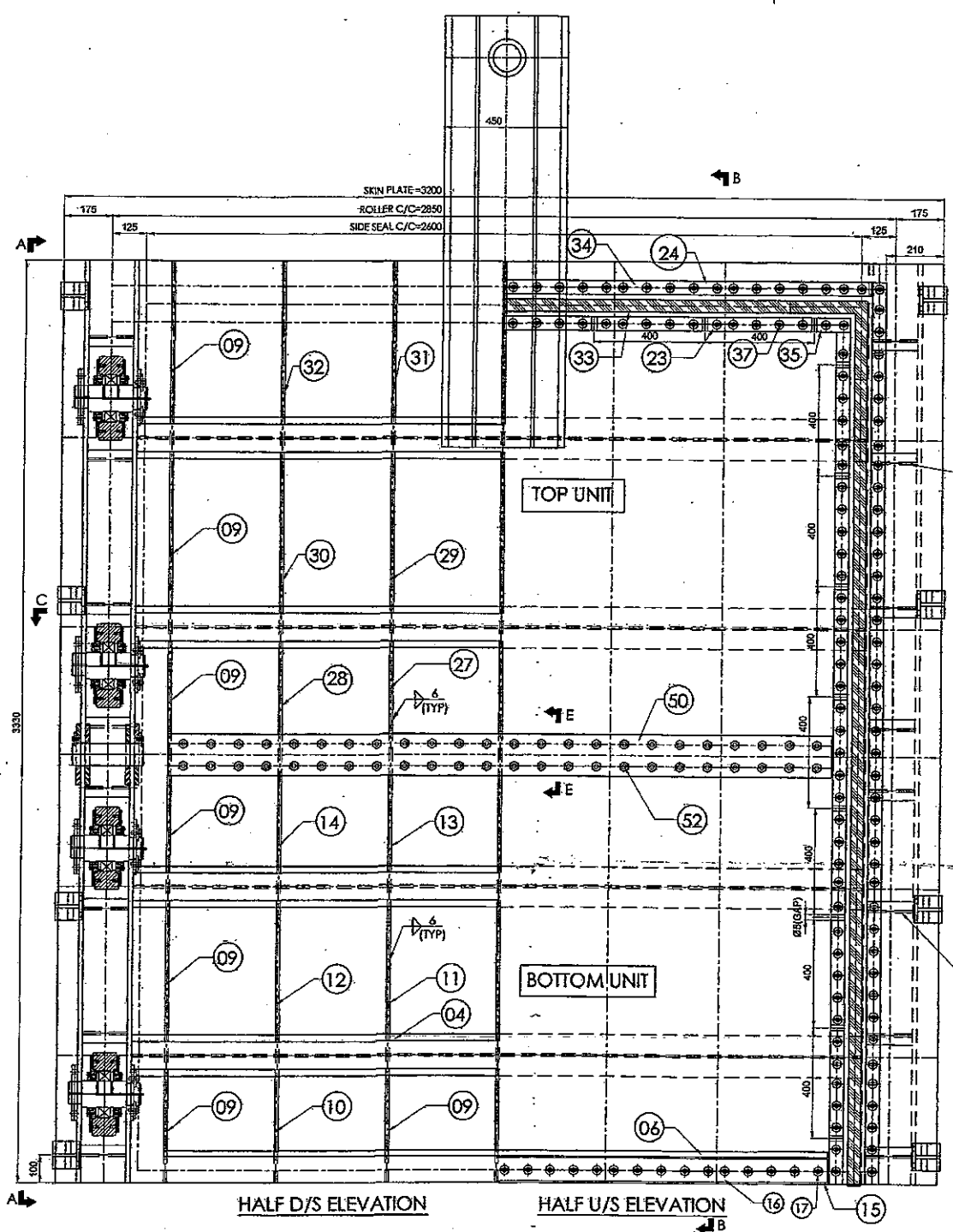
AFTER ASSEMBLY WITH

	OM METALS INFRAPROJECTS LIMITED				
	CLIENT	WAPCOS LTD.			
	PROJECT	NORTH KOEL RESERVOIR PROJECT			
	TITLE	LOW LEVEL SLUICE GATE (SIZE 2.0 M X 3.0M) WHEEL ASSEMBLY & GUIDE SHOE DETAILS			
	DR'WN BY	PANKAJ NEGI			
CHECKED BY	ANURAG SHUKLA		SUBMITTED BY 		
SIZE	A1	SCALE	NTS	DRG NO : OML/NKRP/LLSG/03	REV-2
REV	1				
2					



- NOTES:-
1. ALL DIMENSIONS ARE IN MM. AND LEVEL IN METRES UNLESS OTHERWISE SPECIFIED.
 2. 1st. STAGE CONCRETE SHOWN THUS ---
 3. 2nd. STAGE CONCRETE GRADE M30 SHOWN THUS ---
 4. ALL WELD SHALL BE 8 mm FILLET, CONTINUOUS WELDING DEPTH, (U.N.D.)

REV.	OM METALS INFRAPROJECTS LTD.
CLIENT	WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)
TITLE	NORTH KOEL RESERVOIR PROJECT, JHARKHAND INTAKE SERVICE GATE (2.4M x 3.066M) "GENERAL ARRANGMENT"
DRAWN BY	IDREES AHMAD
CHECKED BY	ANURAG
SCALE	SUBMITTED BY: M. SRIVALLABHA DRG NO : OMIL/NKL/ISG/200
	REV-0

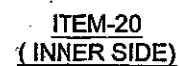
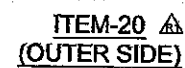


TOTAL WEIGHT FOR ONE SET = 4882.4 KGS. FOR 2SET CONSISTS = 9764.8 KGS.				
ITEM NO.	DESCRIPTION	NOS. REQD.	WEIGHT IN KGS.	MATERIAL
56	HEX HD. BOLT M8 X 18 LG.	8	488.24	IS: 1367, CL 4.6
55	PLATE 8THK X 50 X 150 LG.	4	1.88	IS: 2062, E250 Gr-B
54	PIN Ø80 X 260 LG.	2	20.52	IS: 1570, AISI-420
53	PLATE 16THK X 220 X 220 LG.	8	48.63	IS: 2062, E250 Gr-B
52	HEX HD. BOLT M12 X 100 LG. WITH NUT & WASHER	50	9.00	IS: 1367, CL 4.6
51	RUBBER 02THK X 150 X 2420 LG.	2	-	IS: 11855
50	PLATE 20THK X 150 X 2410 LG.	2	113.51	IS: 2062, E250 Gr-B
49	PLATE 10THK X 43 X 88 LG.	16	4.75	IS: 2062, E250 Gr-B
48	PLATE 20THK X 88 X 100 LG.	16	24.32	IS: 2062, E250 Gr-B
47	PLATE 10THK X 100 X 150 LG.	8	9.42	IS: 2062, E250 Gr-B
46	CSK BOLT M16 X 80 LG. WITH NUT & WASHER	150	20.20	AISI 304, IS: 1570(V) / GI
45a	SIDE SEAL Ø44 X 14THK X 180 X 320 LG.	2	-	IS: 11855 (DOUBLE STEM)
45	PL 16THK X 50 X 3080 LG. (SIDE SEAL CLAMP)	2	38.68	IS: 2062, E250 Gr-B
44	PL 16THK X 50 X 3260 LG. (SIDE SEAL CLAMP)	2	40.95	IS: 2062, E250 Gr-B
43	PL 12THK X 50 X 3070 LG. (SIDE SEAL BASE)	2	28.92	IS: 2062, E250 Gr-B
42	PL 12THK X 50 X 3250 LG. (SIDE SEAL BASE)	2	30.62	IS: 2062, E250 Gr-B
41	PL 20THK X 450 X 1460 LG.	2	206.30	IS: 2062, E250 Gr-B
40	PL 16THK X 450 X 1550 LG.	2	175.21	IS: 2062, E250 Gr-B
39	STIFFER PL. 16THK X 68 X 1460 LG.	2	24.94	IS: 2062, E250 Gr-B
38	STIFFER PL. 16THK X 180 X 1460 LG.	2	66.02	IS: 2062, E250 Gr-B
37	CSK BOLT M16 X 80 LG. WITH NUT & WASHER	66	9.45	AISI 304, IS: 1570(V) / GI
36	TOP CORNER SEAL Ø44 X 14THK X 350 X 350 LG.	2	-	IS: 11855
35	CLAMP 16THK X 50 X 2520 LG.	1	15.83	IS: 2062, E250 Gr-B
34	CLAMP 16THK X 50 X 2080 LG.	1	16.77	IS: 2062, E250 Gr-B
33	TOP SEAL Ø44 X 14THK X 180 X 2080 LG.	1	-	IS: 11855 (DOUBLE STEM)
32	STIFFER PL. 12THK X 450 X 630 LG.	3	80.12	IS: 2062, E250 Gr-B
31	STIFFER PL. 12THK X 250 X 630 LG.	4	59.35	IS: 2062, E250 Gr-B
30	STIFFER PL. 12THK X 450 X 672 LG.	3	85.46	IS: 2062, E250 Gr-B
29	STIFFER PL. 12THK X 250 X 672 LG.	4	63.30	IS: 2062, E250 Gr-B
28	STIFFER PL. 12THK X 450 X 454 LG.	3	57.74	IS: 2062, E250 Gr-B
27	STIFFER PL. 12THK X 250 X 454 LG.	4	42.77	IS: 2062, E250 Gr-B
26	PL 10THK X 200 X 450 LG.	4	28.26	IS: 2062, E250 Gr-B
25	PL 10THK X 200 X 450 LG.	4	28.26	IS: 2062, E250 Gr-B
24	PL 12THK X 50 X 2530 LG. (TOP SEAL BASE)	1	11.92	IS: 2062, E250 Gr-B
23	PL 12THK X 50 X 2680 LG. (TOP SEAL BASE)	1	12.62	IS: 2062, E250 Gr-B
22	Inner end box PL 10THK X 164 X 470 LG.	8	48.4	IS: 2062, E250 Gr-B
21	HG. PAD PL 10THK X 100 X 2650 LG.	2	41.6	IS: 2062, E250 Gr-B
20	END BOX PL 16THK X 470 X 1777 LG.	4	419.60	IS: 2062, E250 Gr-B
19	ISM 450 X 2654 LG.	2	382.18	IS: 2062, E250 Gr-A
18	SKIN PL 16THK X 1780 X 3200 LG.	1	715.42	IS: 2062, E250 Gr-B
17	CSK BOLT M16 X 80 LG. WITH NUT & WASHER	30	4.84	AISI 304, IS: 1570(V) / GI
16	CLAMP 16THK X 85 X 2410 LG.	1	25.73	IS: 2062, E250 Gr-B
15	BOTTOM SEAL 20THK X 100 X 2780 LG.	1	-	IS: 11855
14	STIFFER PL. 12THK X 450 X 474 LG.	3	60.28	IS: 2062, E250 Gr-B
13	STIFFER PL. 12THK X 250 X 474 LG.	4	44.65	IS: 2062, E250 Gr-B
12	STIFFER PL. 12THK X 450 X 599 LG.	3	76.17	IS: 2062, E250 Gr-B
11	STIFFER PL. 12THK X 250 X 599 LG.	4	56.43	IS: 2062, E250 Gr-B
10	STIFFER PL. 12THK X 450 X 454 LG.	3	57.86	IS: 2062, E250 Gr-B
9	STIFFER PL. 12THK X 250 X 454 LG.	4	42.86	IS: 2062, E250 Gr-B
8	Wheel Pad PL 10THK X 200 X 450 LG.	4	28.26	IS: 2062, E250 Gr-B
7	Wheel Pad PL 10THK X 200 X 450 LG.	4	28.26	IS: 2062, E250 Gr-B
6	SEAL STOPPER PL 36 X 20THK X 2420 LG.	1	13.7	IS: 2062, E250 Gr-B
5	Inner end box PL 10THK X 164 X 470 LG.	8	48.4	IS: 2062, E250 Gr-B
4	HG. PAD PL 10THK X 100 X 2650 LG.	2	41.6	IS: 2062, E250 Gr-B
3	END BOX PL 16THK X 470 X 1547 LG.	4	365.29	IS: 2062, E250 Gr-B
2	ISM 450 X 2654 LG.	2	382.18	IS: 2062, E250 Gr-A
1	SKIN PL 16THK X 1550 X 3200 LG.	1	622.98	IS: 2062, E250 Gr-B

Approved
Amr WAPCOS LIMITED
13/03/2018

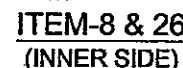
		OM METALS INFRAPROJECTS LTD.	
		(A GOVT. OF INDIA ENTERPRISE)	
CLIENT	NORTH KOEL RESERVOIR PROJECT, JHARKHAND		
TITLE	INTAKE SERVICE GATE (2.4M x 3.066M)		
	GATE ASSEMBLY		
DRAWN BY	IDREES AHMAD	(SHEET 1 OF 2)	
CHECKED BY	ANURAG	SUBMITTED BY: M. SRIVALLABHA	
SCALE		DRG NO: OMIL/NKP/ISG/202	
REV		REV-1	

1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN METERS.
2. NUMBER OF OPENING = 2 NOS.
3. ALL WELDS ARE GMAW CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED
4. THE QUANTITY INDICATED FOR ONE GATE ONLY TOTAL REQUIRED = 2 NOS.
5. FABRICATION ERECTION TOLERANCES TO BE AS PER IS: 4622.
6. INTAKE SERVICE GATE IS OPERATED BY HYDRAULIC HOST. THE CAPACITY OF HYDRAULIC CYLINDER IS 25MT SINGLE ACTING TYPE.
7. TOP AND SIDE SEAL BASE PLATE WILL BE PROVIDED WITH A GAP OF -5MM (400 C/C DISTANCE) TO PRESSURE THE RUBBER SEAL.

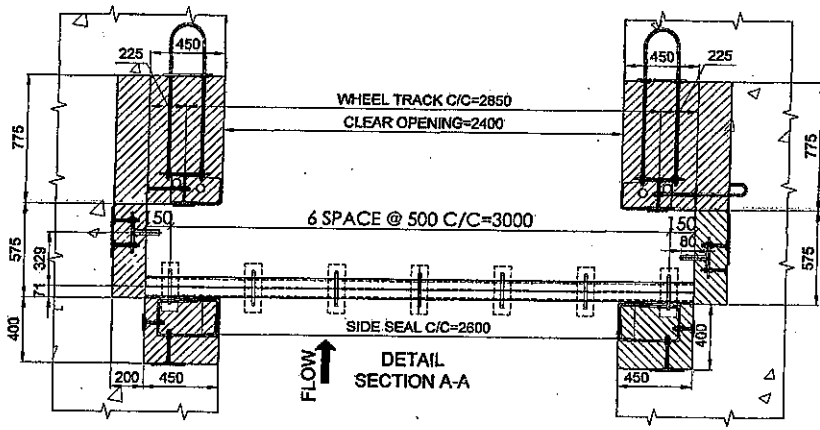
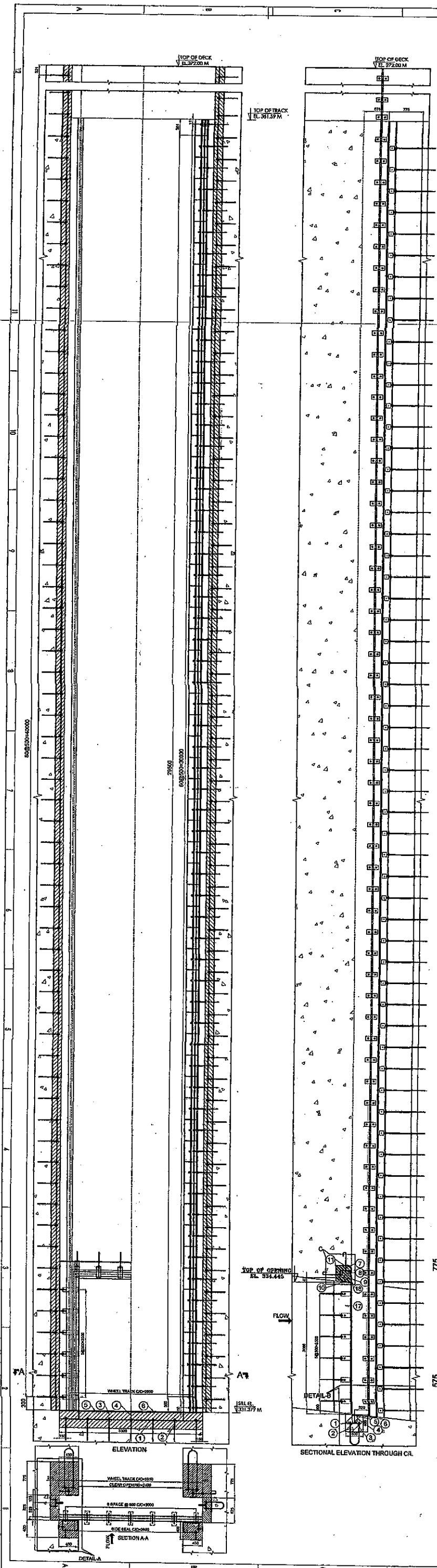


NOTE:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. NUMBER OF OPENING =2 NOS.
3. ALL WELDS ARE 6MM CONTINUOUS FILLET UNLESS OTHERWISE SPECIFIED
4. THE QUANTITY INDICATED FOR ONE GATE ONLY.TOTAL REQUIRED =2 NOS.
5. FABRICATION ERECTION TOLERANCES TO BE AS PER IS:4622.



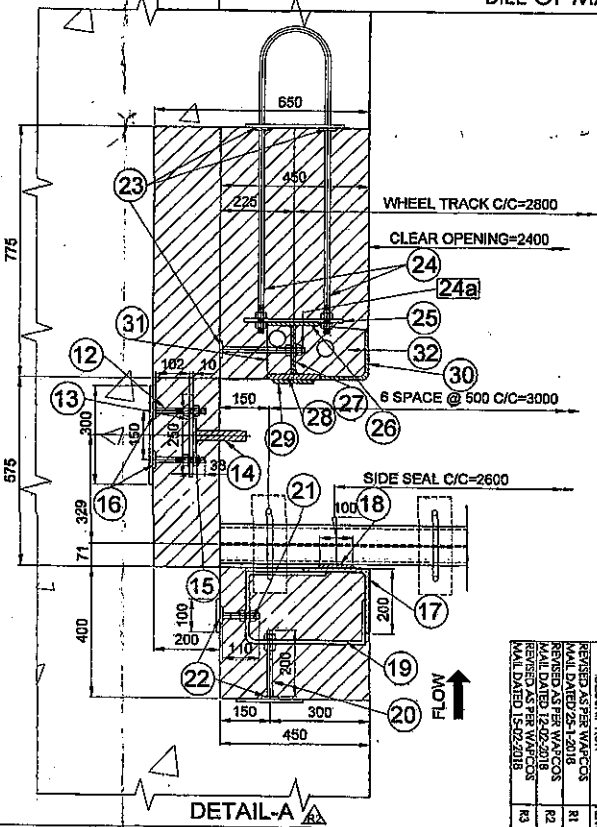
		OM METALS INFRAPROJECTS LTD.		
		WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)		
REVISIONS PER EMAIL LETTER DATED	CLIENT	NORTH KOEL RESERVOIR PROJECT, JHARKHAND INTAKE SERVICE GATE (2.4M x 3.066M) GATE DETAILS		
	TITLE			
	DRAWN BY	IDREES AHMAD	 (SHEET 2 OF 2)	
CHECKED	ANURAG	SUBMITTED BY: M. SRIVALLABHA		
REV	SCALE		DRG NO : OMIL/NKP/ISG/202	REV-1
R1				



TOTAL WEIGHT = 11653.0 KGS. FOR 2 VENTS = 23306 KGS.

TOTAL WEIGHT			11653.0	KGS.	
34	M16 HEX.HD. BOLT WITH NUT & WASHER	16	1.00	IS:1367, CL.4.6	
33	ISA-65X65X8-130	16	13.31	IS:2062 Gr.A	
32	PL. 156x10THx209 LG.	120	307.13	IS:2062 Gr.B	C/S
31	PL. 74x10THx150 LG.	120	104.56	IS:2062 Gr.B	C/S
30	PL. 300x10THx30210 LG.	2	1422.89	IS:2062 Gr.B	B/S
29	SLIDE TRACK PL. 120x12THx30210LG.	2	474.30	IS:1570.20Cr13 / AISI:420	
28	TRACK BASE PL. 160x16THx30210LG.	2	1214.20	IS:2062 Gr.B	
27	WEB PL. 150x12THx30210 LG.	2	853.73	IS:2062 Gr.B	
26	PL. 160x10THx30210 LG.	2	758.88	IS:2062 Gr.B	
25	PL. 100x10THx 300 LG.	122	287.31	IS:2062 Gr.B	
24a	ROD Ø16x250 LG. WITH DOUBLE NUT & WASHER	122	48.80	IS:2062 Gr.B	
24	ROD Ø16x625 LG. WITH DOUBLE NUT & WASHER	244	244.00	IS:2062 Gr.B	
23	PL.50x8THx30210 LG.	6	569.16	IS:2062 Gr.B	
22	PL.50x8THx3220 LG.	4	40.44	IS:2062 Gr.B	
21	ROD Ø16x110 LG. WITH DOUBLE NUT & WASHER	12	2.11	IS:2062 Gr.B	
20	ROD Ø16x200 LG. WITH DOUBLE NUT & WASHER	12	3.84	IS:2062 Gr.B	
19	PL.100x10THx941 LG.	12	88.64	IS:2062 Gr.B	
18	PL.100x10THx3210 LG.	2	50.40	IS:1570-V.04Cr18Ni10 / AISI:304	
17	ISA 200x200x12THx3220 LG.	2	237.64	IS:2062 Gr.A	
16B	THREADED ROD WITH DOUBLE NUT & WASHER- 16 Ø 70LG.	12	1.3	IS:2062 Gr.B	
16A	ISA 65X65X6THx65LG.	24	12.0	IS:2062 Gr.A	
16	PL.50x8THx40620 LG.	4	510.2	IS:2062 Gr.B	
15	PL.100x10THx40620 LG.	2	637.7	IS:2062 Gr.B	
14	GUIDE PL.150x32THx40620 LG.	2	3061.1	IS:2062 Gr.B	
13	PL.100x10THx250 LG.	162	317.9	IS:2062 Gr.B	
12	ROD Ø16x150 LG. WITH DOUBLE NUT & WASHER	324	77.76	IS:2062 Gr.B	
11	PL.50x8THx3300 LG.	2	20.72	IS:2062 Gr.B	
10	PL.400x10THx2400 LG.	1	75.36	IS:2062 Gr.B	B/S
9	PL.100x10THx2500 LG.	1	19.63	IS:1570-V.04Cr18Ni10 / AISI:304	
8	PL.100x10THx730 LG.	6	34.85	IS:2062 Gr.B	B/S
7	ROD Ø16x150 LG. WITH DOUBLE NUT & WASHER	12	2.88	IS:2062 Gr.B	
6	PL. 100x10THx2700 LG.	1	21.20	IS:1570-V.04Cr18Ni10 / AISI:304	
5	PL. 120x10THx3300 LG.	1	31.09	IS:2062 Gr.B	
4	PL. 57x10THx200 LG.	6	5.37	IS:2062 Gr.B	C/S
3	ISMB 200 x 3300 LG.	1	79.86	IS:2062 Gr.A	TOP FLANGE C/S
2	ROD Ø16x230 LG. WITH DOUBLE NUT & WASHER	14	5.15	IS:2062 Gr.B	
1	PL.100x10THx300 LG.	7	16.49	IS:2062 Gr.B	
ITEM NO.	DESCRIPTION	NOS. REQD.	WEIGHT IN Kgs.	MATERIAL	REMARKS

BILL OF MATERIAL FOR ONE VENT



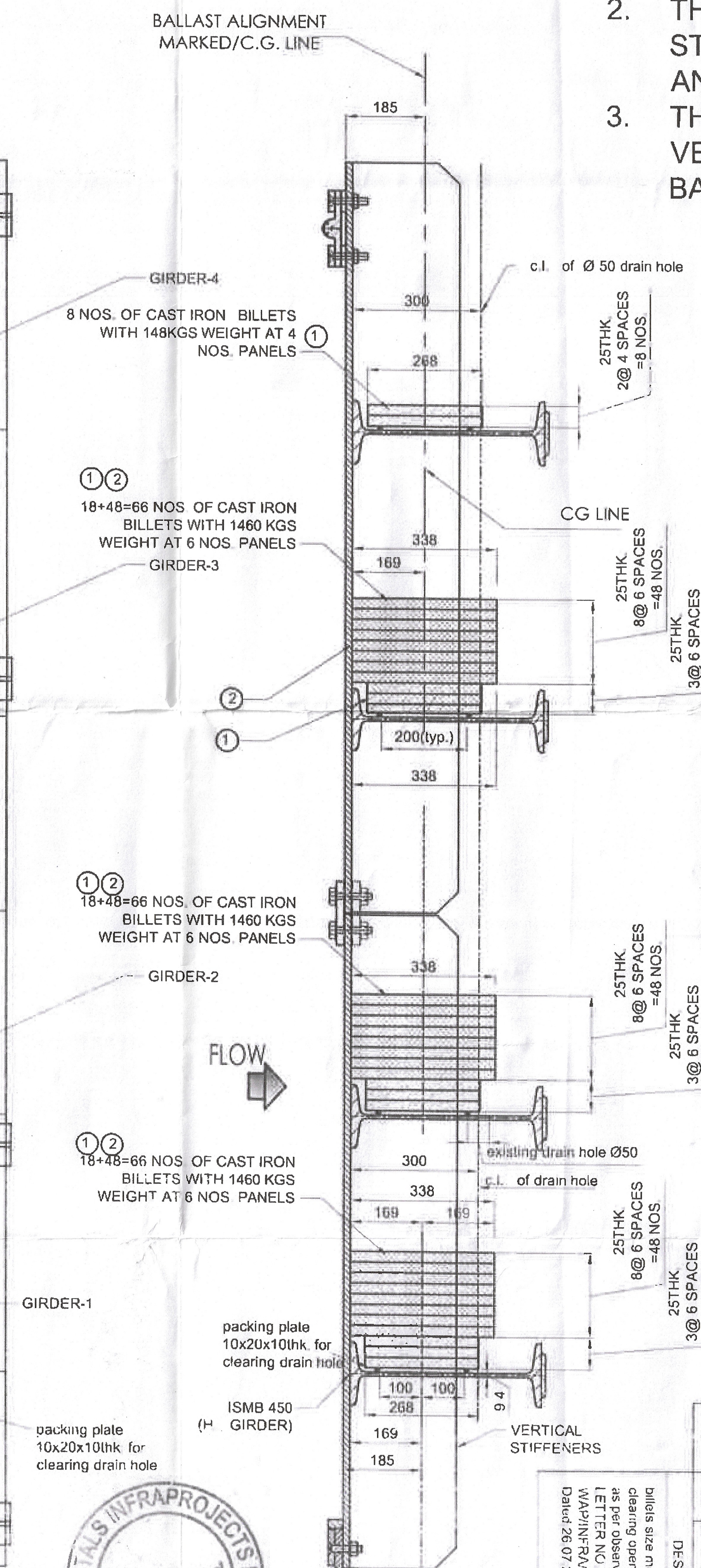
- NOTES:-
1. ALL DIMENSIONS ARE IN MM. AND LEVEL IN METRES UNLESS OTHERWISE SPECIFIED.
 2. 1st STAGE CONCRETE SHOWN THUS ---
 3. 2nd STAGE CONCRETE GRADE M30 SHOWN THUS ---
 4. ALL WELD SHALL BE 6 mm FILLET, CONTINUOUS WELDING DEPTH (U.N.O.)
 5. ITEM NO. 23 WILL BE FIXED EITHER BY WELDING TO EXISTING REINFORCEMENT ROD EXPOSED OR ANCHOR BOLT (HILTI MAKE) TO THE 1ST STAGE CONCRETE.



OM METALS INFRAPROJECTS LTD.	
CLIENT	WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)
TITLE	NORTH KOEL RESERVOIR PROJECT, JHARKHAND INTAKE SERVICE GATE (2.4M x 3.066M) "DETAIL OF SECOND STAGE EMBEDDED PARTS"
DRAWN BY	IDREES AHMAD
CHECKED BY	ANURAG
SCALE	SUBMITTED BY: M. SRIVALLABHA DRG NO: OMILNKPISG/201

REV. - 3

1. BALLAST SHOULD HOLD BY TACK WELD WITH VERTICAL STIFFENERS.
2. THE TACK WELDING QUALITY & STRENGTH SHOULD MAINTAIN THE RIGHT ANGLE WITH C.G. MARKED IN LINE.
3. THE GAP SHOULD BE 4MM BETWEEN THE VERTICAL STIFFENER OF EACH SIDE OF BALLAST.



Recommended for approval. However this approval does not relieve the contractor of any responsibility for accuracy and corrections of Design, Docs, fabrication, Erection, Commissioning and satisfactory performance of the equipment at site and guarantee etc.

billet type-2-23.4kg/pice total req. 144
nos./Gate

Director
Gates Design (N&W) Ds.
Central Water Commission
P.O. Puram, New Delhi

TOTAL WEIGHT FOR 2 GATES = 4528 KGS, FOR 2SET CONSISTS = 9056 KGS.

TOTAL WEIGHT FOR ONE

4528

KGS.

Billet 25THKx380-338 LG.

144

3375

CAST IRON

Billet 25THKx380-268 LG.

62

1153

CAST IRON

ITEM NO.

DESCRIPTION

NOS REQD.

WEIGHT IN Kgs.

MATERIAL

REMARKS

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. NUMBER OF OPENING = 2 NOS.
3. TOTAL BLAST WEIGHT :
 - I) H₁ GIRDER-1=1460KG.
 - II) H₂ GIRDER-2=1460KG.
 - III) H₃ GIRDER-3=1460KG.
 - IV) H₄ GIRDER-4=148KG.

However this does not relieve the contractor of any responsibility for accuracy and correctness of design, preparation, execution and commissioning and satisfactory performance of the equipment at site and guarantee etc.

DESCRIPTION	 OM METALS INFRAPROJECTS LTD.	
	WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)	
	NORTH KOEL RESERVOIR PROJECT, JHARKHAND INTAKE SERVICE GATE (2.4M x 3.066M) BALLAST DETAILS	
	DRAWN BY: MOHAN SANGWAN <i>Mohan Sangwan</i>	
REVISION	CHECKED BY: AJOHIT	SUBMITTED BY: <i>Arun</i> 
	SCALE	DRG NO : OMIL/NKP/ISG/202A REV-1

2

MARKS

Recommended for approval. However this does not relieve the Contractor of any responsibility for accuracy and correctness of design, Drawings, Fabrication, Erection, Commissioning and satisfactory performance of the equipment at site and Guarantee etc.

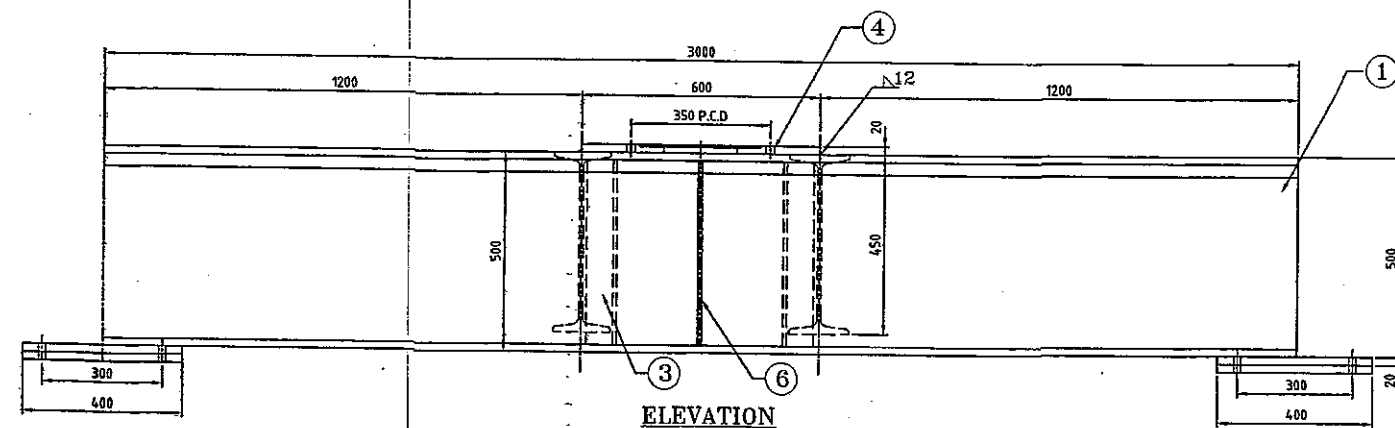
27/10/20

27/10/20

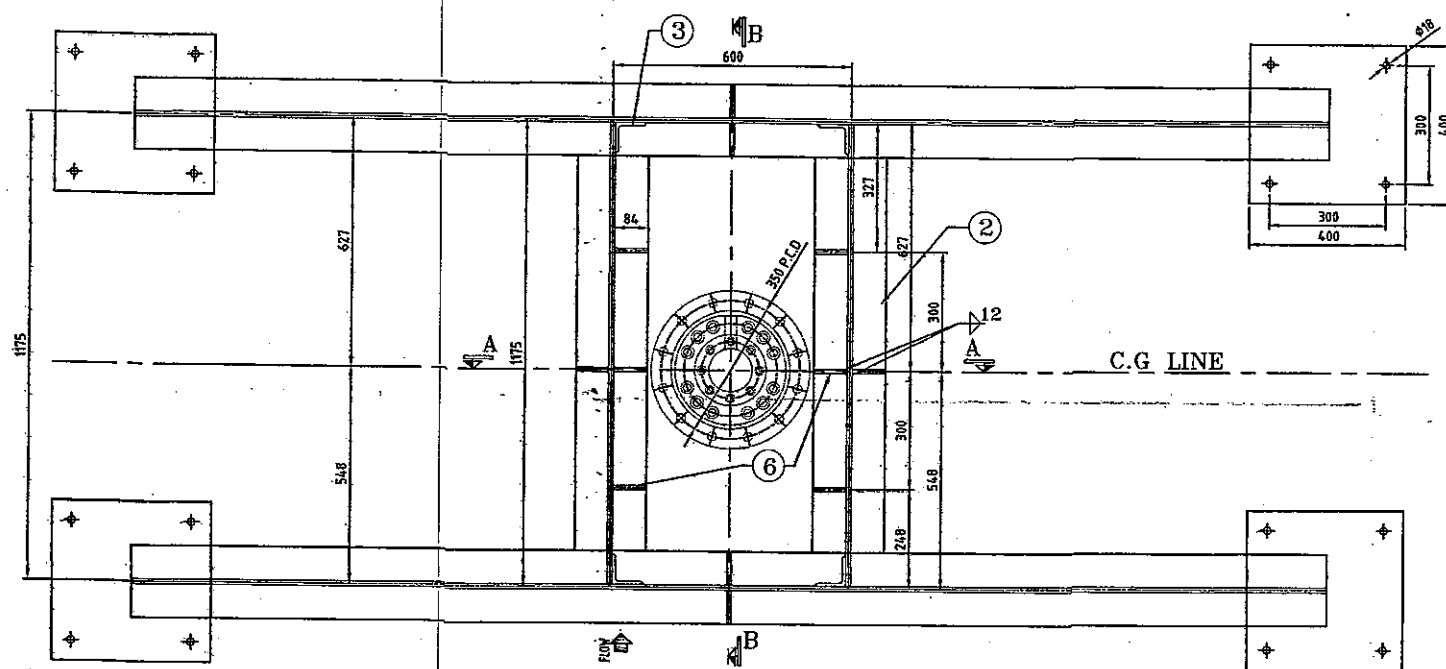
शुभ

निदेशक
Director
केन्द्रीय जल आयोग
Central Water Commission
नई दिल्ली New Delhi

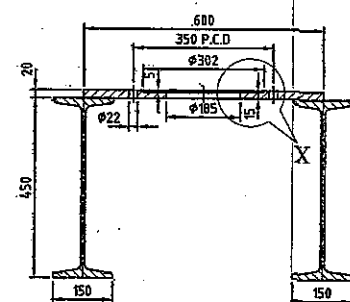
EV. -5



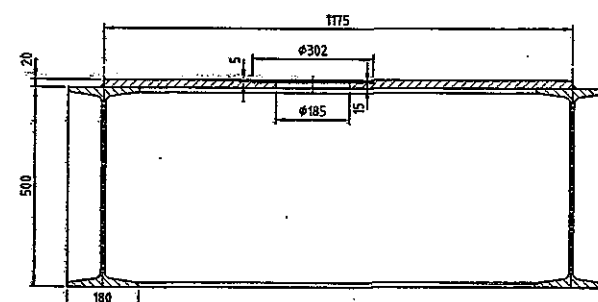
ELEVATION



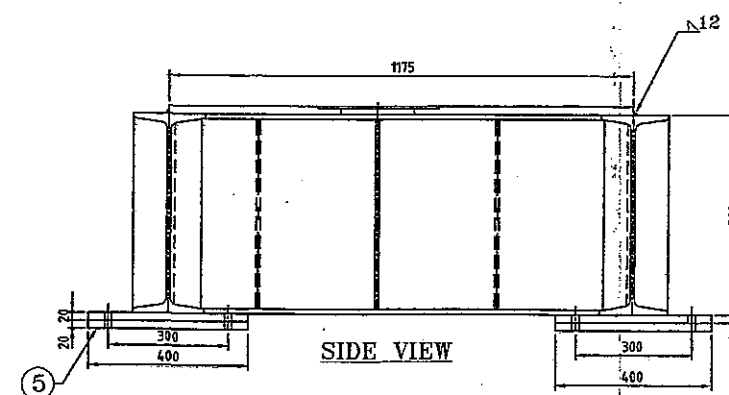
PLAN



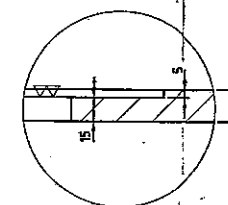
SECTION A-A



SECTION B-B



SIDE VIEW



DETAIL-X

NOTES:-

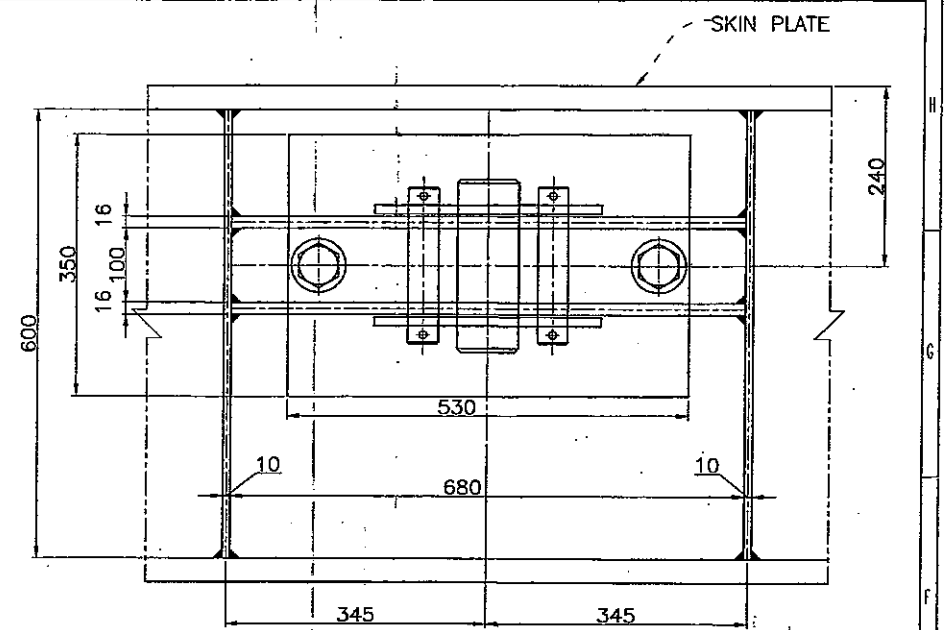
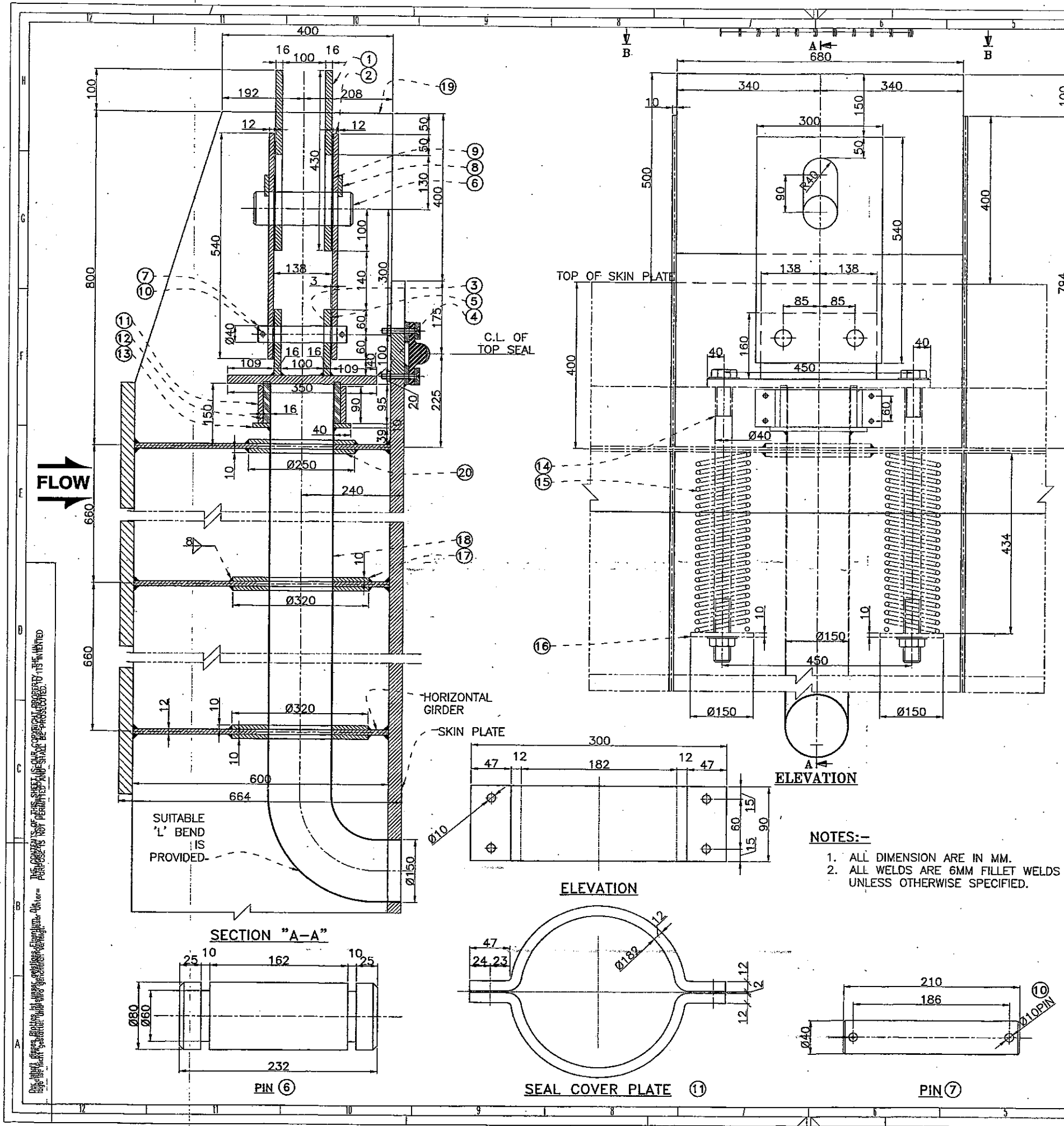
1. ALL DIMENSIONS ARE IN MM. AND LEVEL IN METRES UNLESS OTHERWISE SPECIFIED.
2. ALL WELD SHALL BE 6 mm FILLET, CONTINUOUS WELDING DEPTH. (U.N.O.)
3. ALL FABRICATED MEMBERS SHALL BE CONTROL ASSEMBLED WITH OTHERS BEFORE DISPATCH.
3. HYDRAULIC HOIST, CYLINDER DETAILS WILL BE INCORPORATED AFTER RECEIPT OF SAME FROM HYDRAULIC HOIST. MANUFACTURERS.

TOTAL WEIGHT = 1040.2 KG.

PART NO.	DESCRIPTION	NOS.	TOTAL WT. (KGS.)	MATERIAL	REMARKS
6	STIFFNER PL. 10THK.x84x415 LG.	12	31.71	IS: 2062 Gr.E 250 Qa. B	
5	PL. 20THK.x400x400 LG.	8	194.0	IS: 2062 Gr.E 250 Qa. B	
4	PL. 20THK.x600x1175 LG.	1	106.88	IS: 2062 Gr.E 250 Qa. B	CTS
3	ISA 75x75x10x415 LG.	4	18.26	IS: 2062 Gr.E 250 Qa. A	CTS
2	ISMB 450x1163 LG.	2	167.94	IS: 2062 Gr.E 250 Qa. A	
1	ISMB 500x3000 LG.	2	521.4	IS: 2062 Gr.E 250 Qa. A	
BILL OF MATERIAL FULL QUANTITY FOR ONE OPENING					



REV.	DESCRIPTION	OM METALS INFRAPROJECTS LTD.
	CLIENT	WAPCOS LTD. (A GOVT. OF INDIA ENTERPRISE)
	TITLE	NORTH KOEL RESERVOIR PROJECT, JHARKHAND INTAKE SERVICE GATE (2.4M x 3.066M) DETAILS OF SUPPORTING STRUCTURE
	DRAWN BY	IDREES AHMAD
	CHECKED BY	M. SRIVALLABHA
	SCALE	DRG NO : OMILNKP/ISG/205
		SUBMITTED BY: [Signature]
		REV-0



VIEW "B-B"

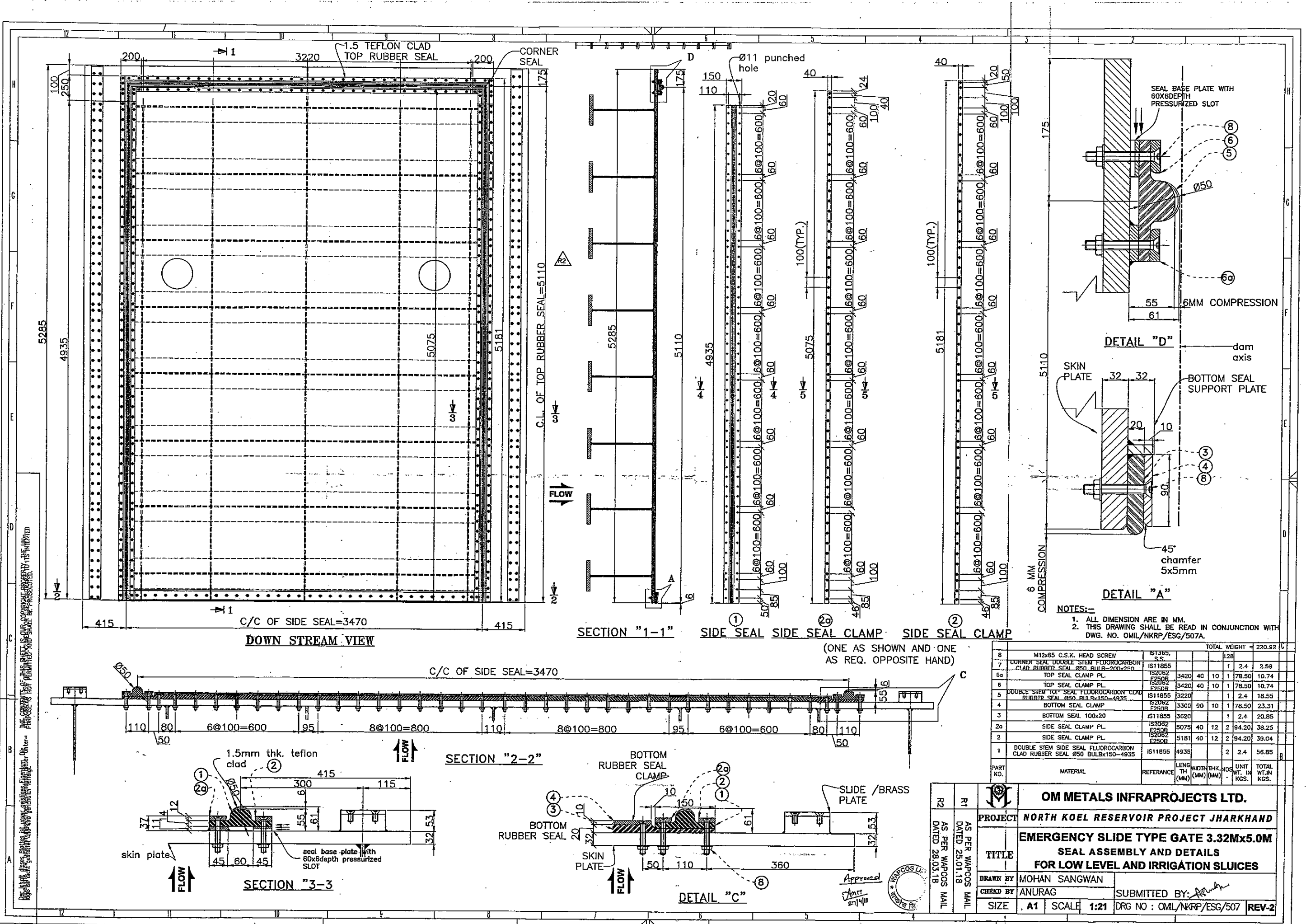
BILL OF MATERIAL FOR ONE FILLING VALVE ASSEMBLY
TOTAL MATERIAL REQ. = 2x302=604kgs.

TOTAL WEIGHT in kgs = 301.36									
20	STR. ST. PL. O.D.250, I.D. 150-10THK.	S2062 E250E			2	2.47	4.94		
19	STR. ST. PLATE	S2062 E250E	794	600	10	2	78.50	74.79	
18	Ø150-3mm thk. PIPE-2040MM LG.	S2062 E250E			1	22.00	22.00		
17	STR. ST. PL. O.D.320, I.D. 150-10THK.	S2062 E250E			4	4.99	19.96		
16	STR. ST. PL. O.D.150, I.D. 40-10THK.	S2062 E250E			2	1.29	2.58		
15	O.D.120, I.D.60, 20DIA. COIL SPRING-500LG	SPRING STEEL, IS:1570, IV			2				
14	M40-450N DIA. HEX. HD BOLT	IS1363			2	4.40	8.80		
13	STR. ST. RUBBER SEAT PL. O.D.230, I.D. 150-10THK.	S2062 E250E			1	1.87	1.87		
12	RUBBER SEAL	IS11855	470	100	16	1	38.40	1.80	
11	STR. STEEL SEAL COVER	S2062 E250E	705	90	12	1	94.20	5.98	
10	CR. RES. STEEL PIN Ø10-50LG.	STD.			2				
9	STR. STEEL WASHER O.D.150, I.D. 83-3THK.	S2062 E250E			2	.29	0.58		
8	STR. ST. KEEPER PL.	S2062 E250E	50	50	10	2	78.50	0.39	
7	CR. RES. STEEL PIN Ø40-210LG.	IS1570, V, 20Cr. 13/ AISI-420			2	2.07	4.14		
6	CR. RES. STEEL PIN Ø80-232LG.	IS1570, V, 20Cr. 13/ AISI-420			1	9.15	9.15		
5	STR. STEEL WASHER O.D.83, I.D. 43-3THK.	S2062 E250E			2	.09	0.18		
4	STR. ST. PLATE	S2062 E250E	530	350	20	1	157.00	29.12	
3	STR. ST. PLATE	S2062 E250E	276	160	16	2	125.60	11.09	
2	STR. ST. PLATE	S2062 E250E	540	300	12	2	94.20	30.52	
1	STR. ST. PLATE	S2062 E250E	680	430	16	2	125.60	73.45	
PART NO.	MATERIAL	REFERENCE	LENGTH (mm)	WIDTH (mm)	THK (mm)	NOS.	UNIT WT. IN KGS.	TOTAL WT. IN KGS.	REMARKS

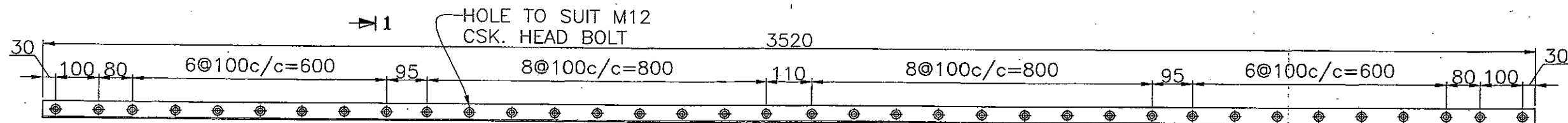
NOTES:-

1. ALL DIMENSION ARE IN MM.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.

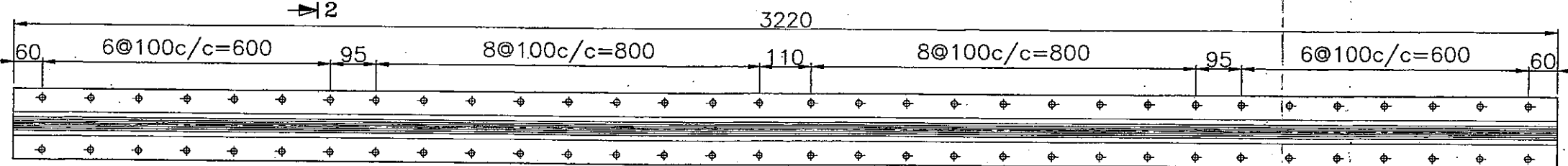
R1		AS PER WAPCOS MAIL DATED 25.01.18				OM METALS INFRAPROJECTS LTD.	
PROJECT		NORTH KOEL RESERVOIR PROJECT JHARKHAND					
TITLE		EMERGENCY SLIDE TYPE GATE 3.32Mx5.0M FILLING VALVE DETAILS FOR LOW LEVEL AND IRRIGATION SLUICES					
DRAWN BY		MOHAN SANGWAN		CHECKED BY		ANURAG	
SIZE		A1		SCALE		1:3	
SUBMITTED BY:							
DRG NO :		OMI/NKRP/ESC/506		REV-1			



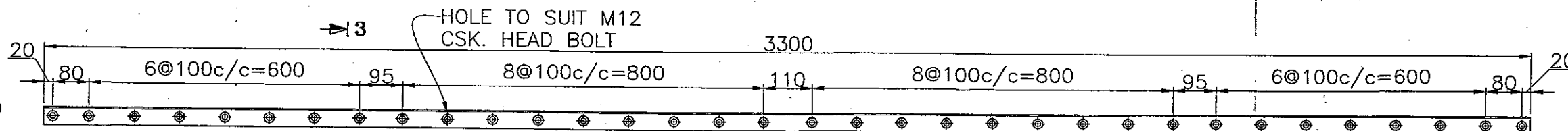
THE CONTENTS OF THIS SHEET ARE OUR CORPORA PROPERTY. ITS REUSE OR REPRODUCTION WITHOUT THE WRITTEN PERMISSION OF OM METALS INFRAPROJECTS LTD. IS PROHIBITED.



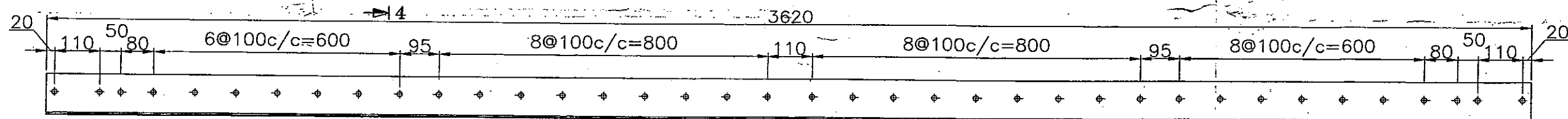
TOP SEAL CLAMP ⑥



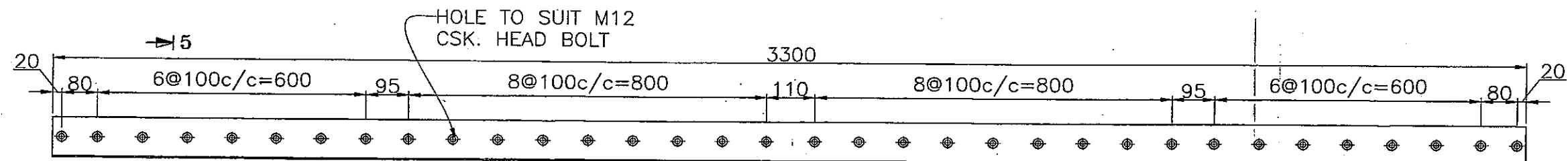
TOP RUBBER SEAL 1.5MM TEFLON CLAD ⑤



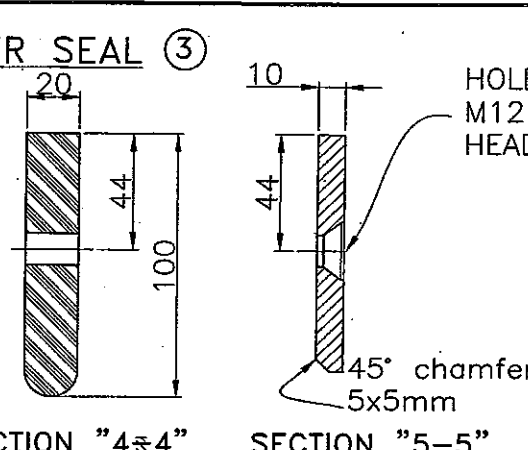
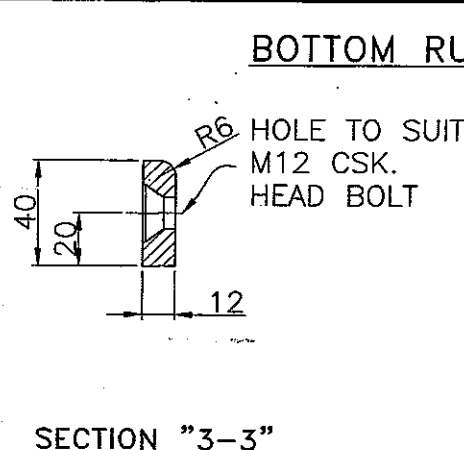
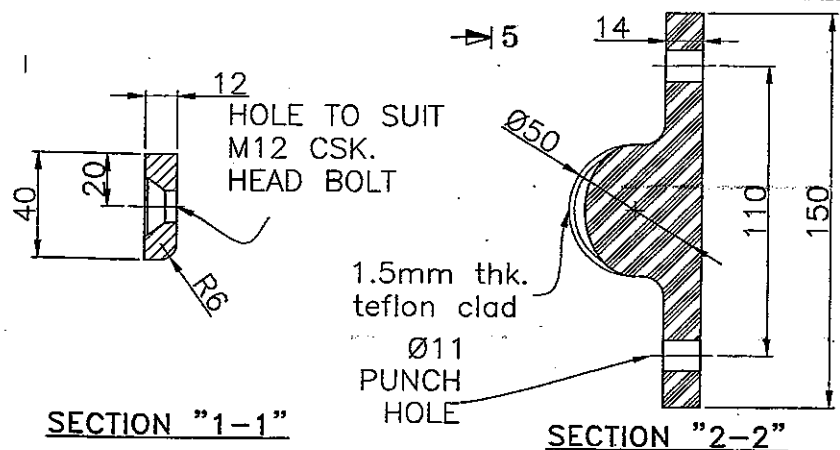
TOP SEAL CLAMP ⑥a



BOTTOM SEAL CLAMP ④



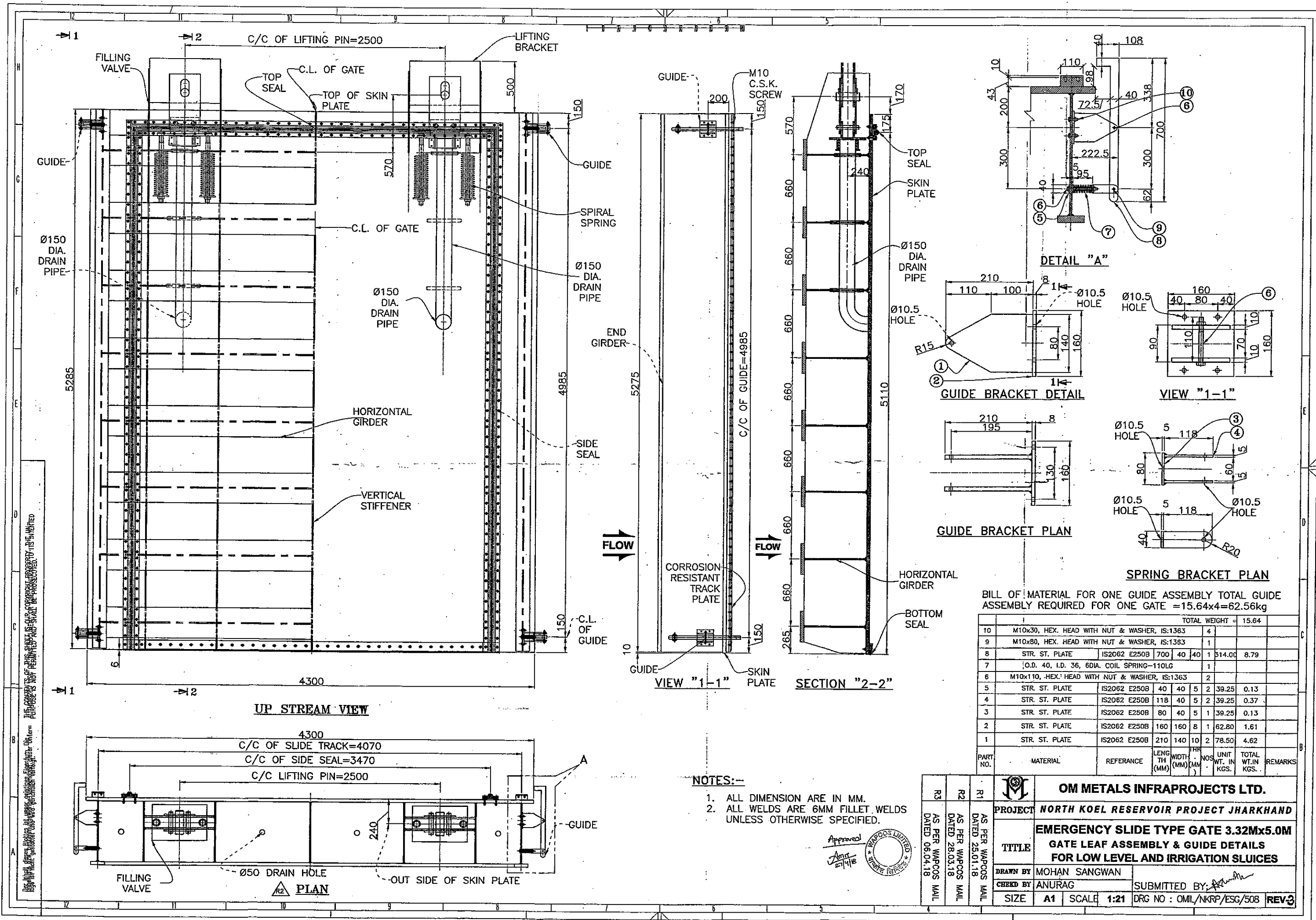
BOTTOM RUBBER SEAL ③



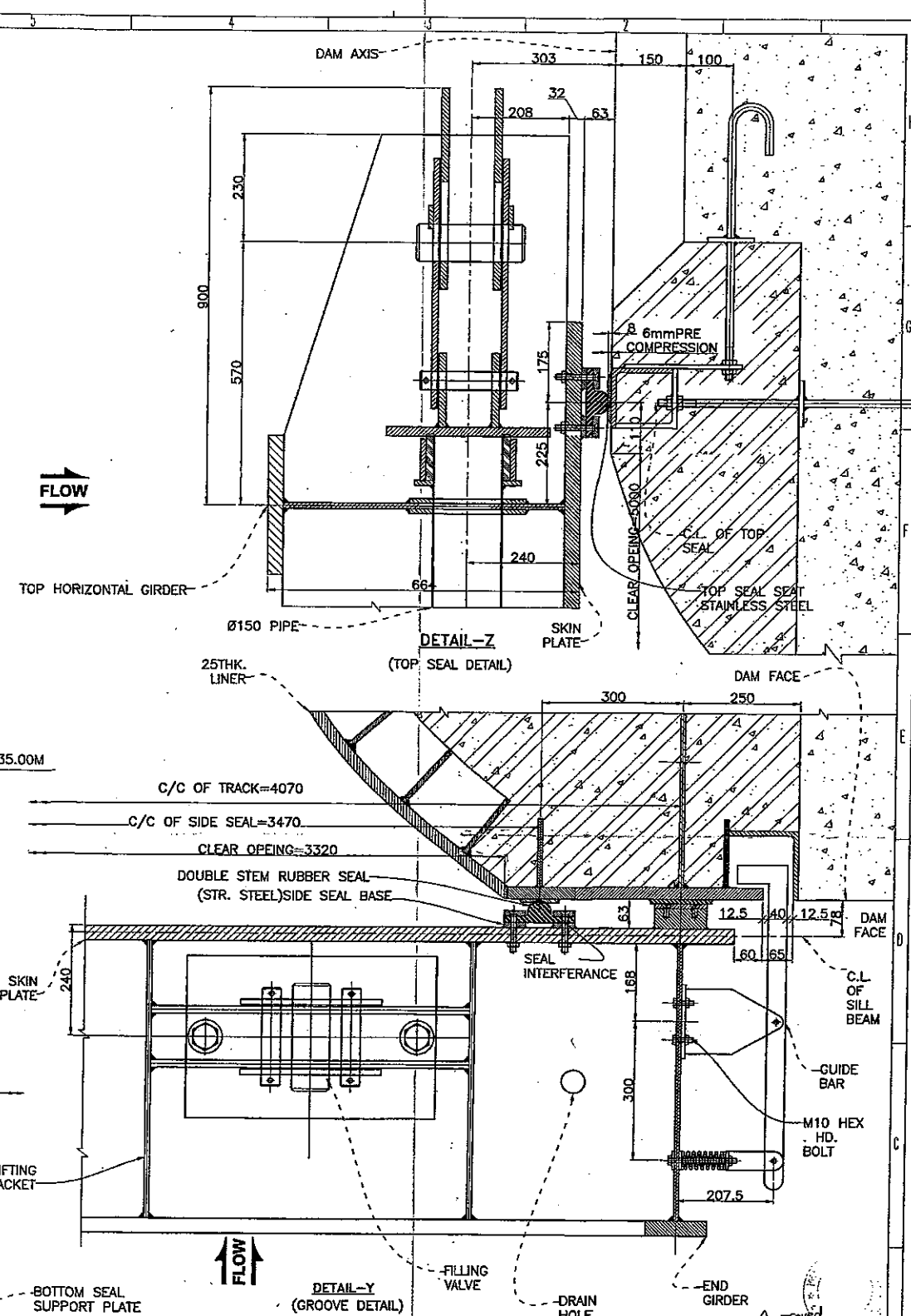
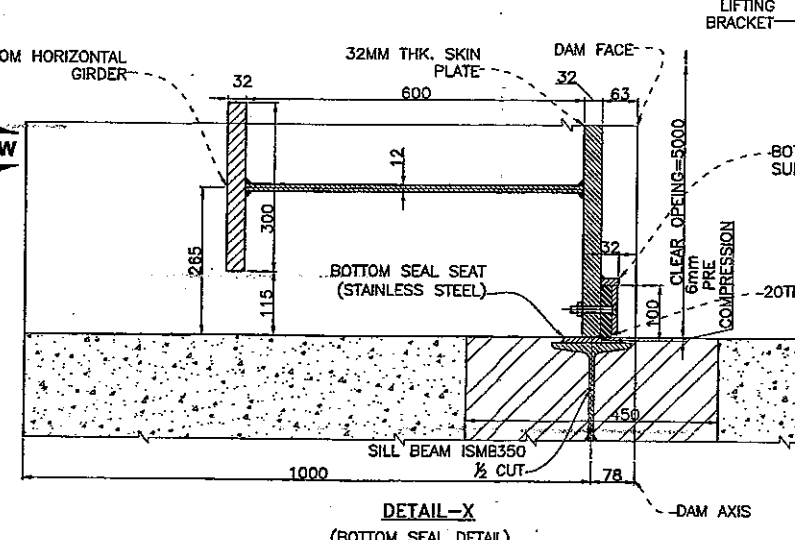
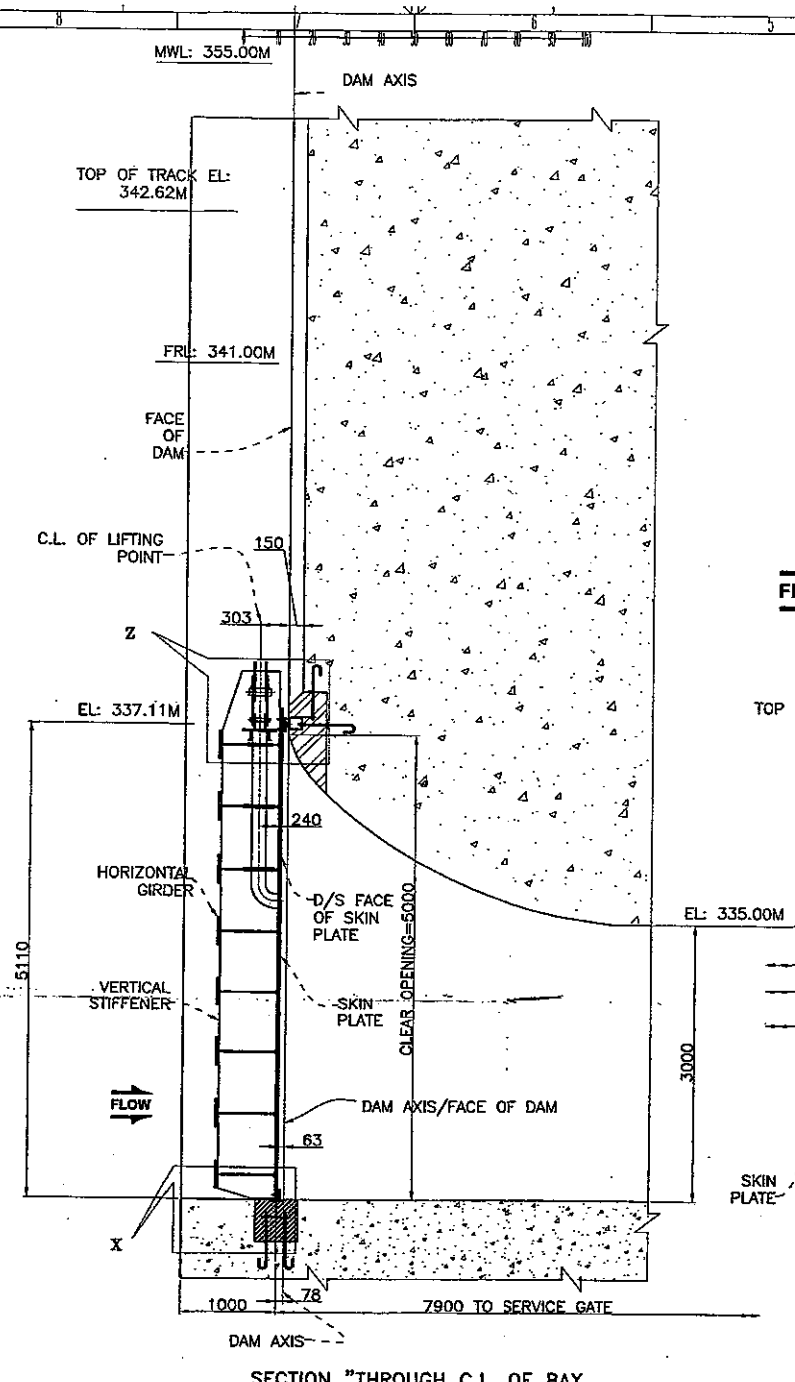
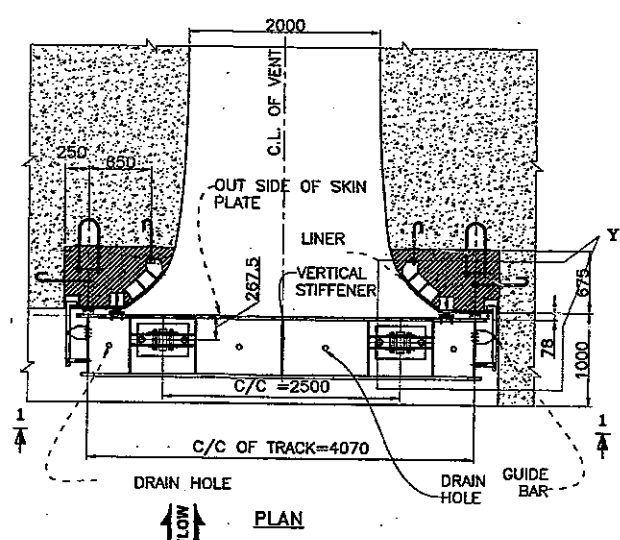
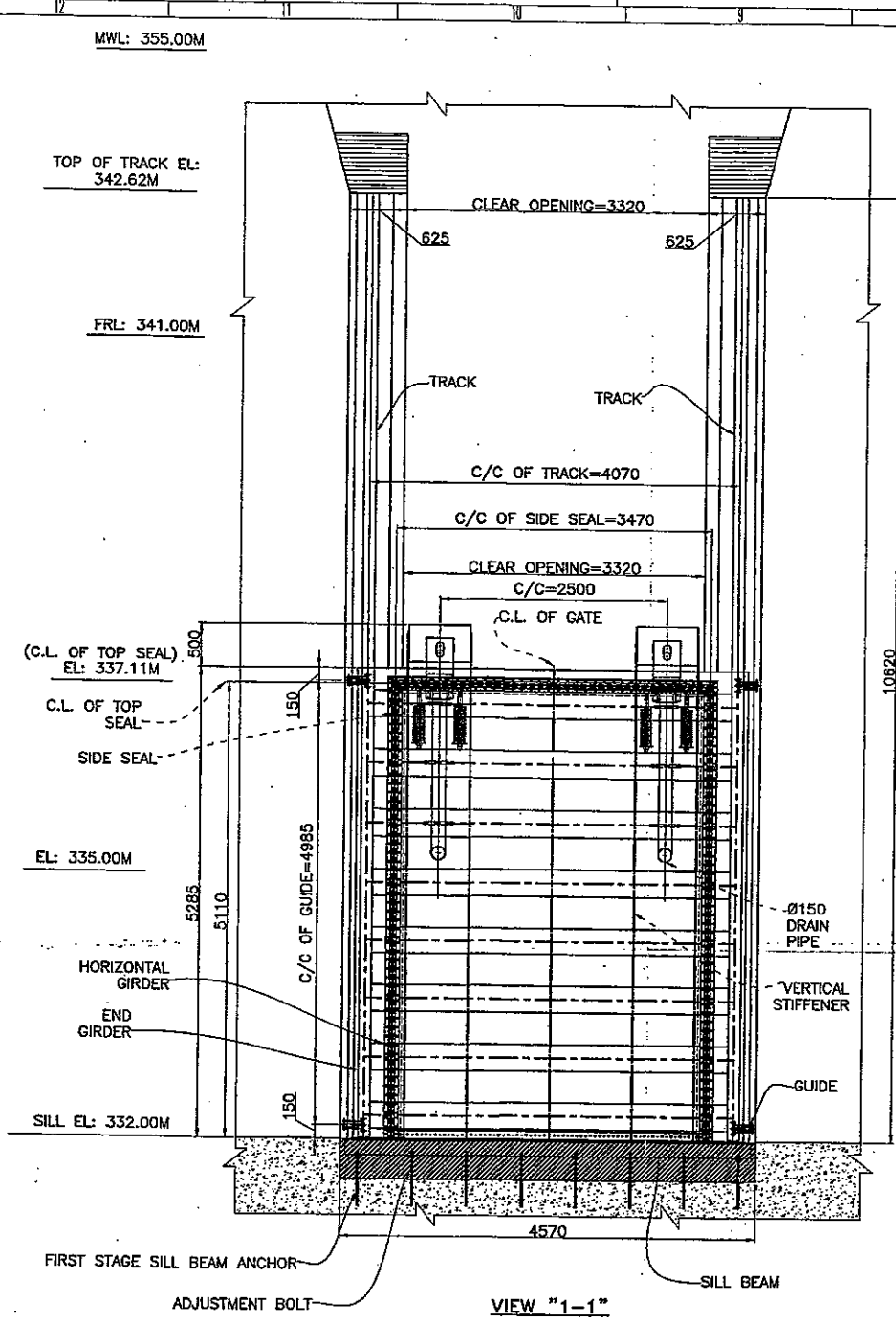
- NOTES:-**
1. ALL DIMENSION ARE IN MM.
 2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. OMIL/NKRP/ESG/507.

Approved
 27/4/18

			OM METALS INFRAPROJECTS LTD.		
	PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND			
	TITLE	EMERGENCY SLIDE TYPE GATE 3.32Mx5.0M RUBBER PARTS DETAILS FOR LOW LEVEL AND IRRIGATION SLUICES			
	DRAWN BY	MOHAN SANGWAN		SUBMITTED BY: 	
	CHECK BY	ANURAG			
	SIZE	A1	SCALE	1:21	DRG NO : OMIL/NKRP/ESG/507A REV-0

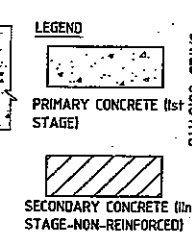


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- NOTES:-
1. ALL DIMENSION ARE IN MM AND LEVEL IN METERS.
 2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
 3. NOS. OF OPENING 2+4=6NOS.

OM METALS INFRAPROJECTS LTD.	
PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND
TITLE	EMERGENCY SLIDE TYPE GATE 3.32Mx5.0M GENERAL ARRANGEMENT FOR IRRIGATION SLUICES
DRAWN BY	MOHAN SANGWAN
CHECKED BY	ANURAG
SIZE	A1
SCALE	1:21
SUBMITTED BY	
DRG NO	OML/NKRP/ESG/500
REV	3



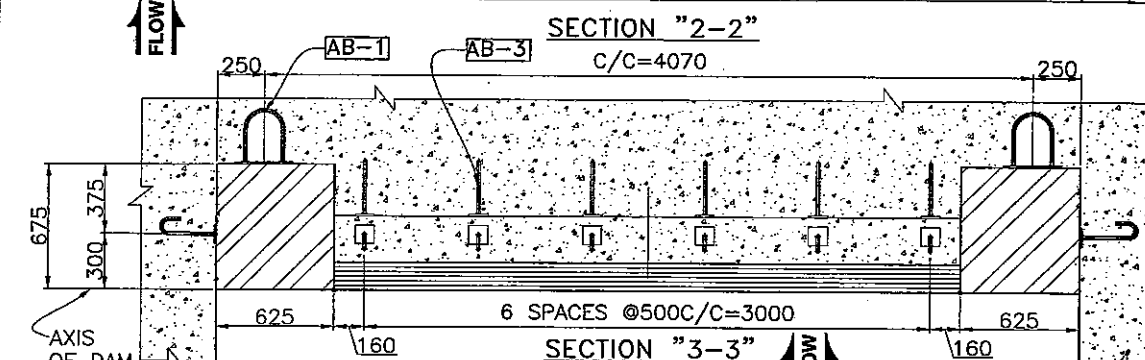
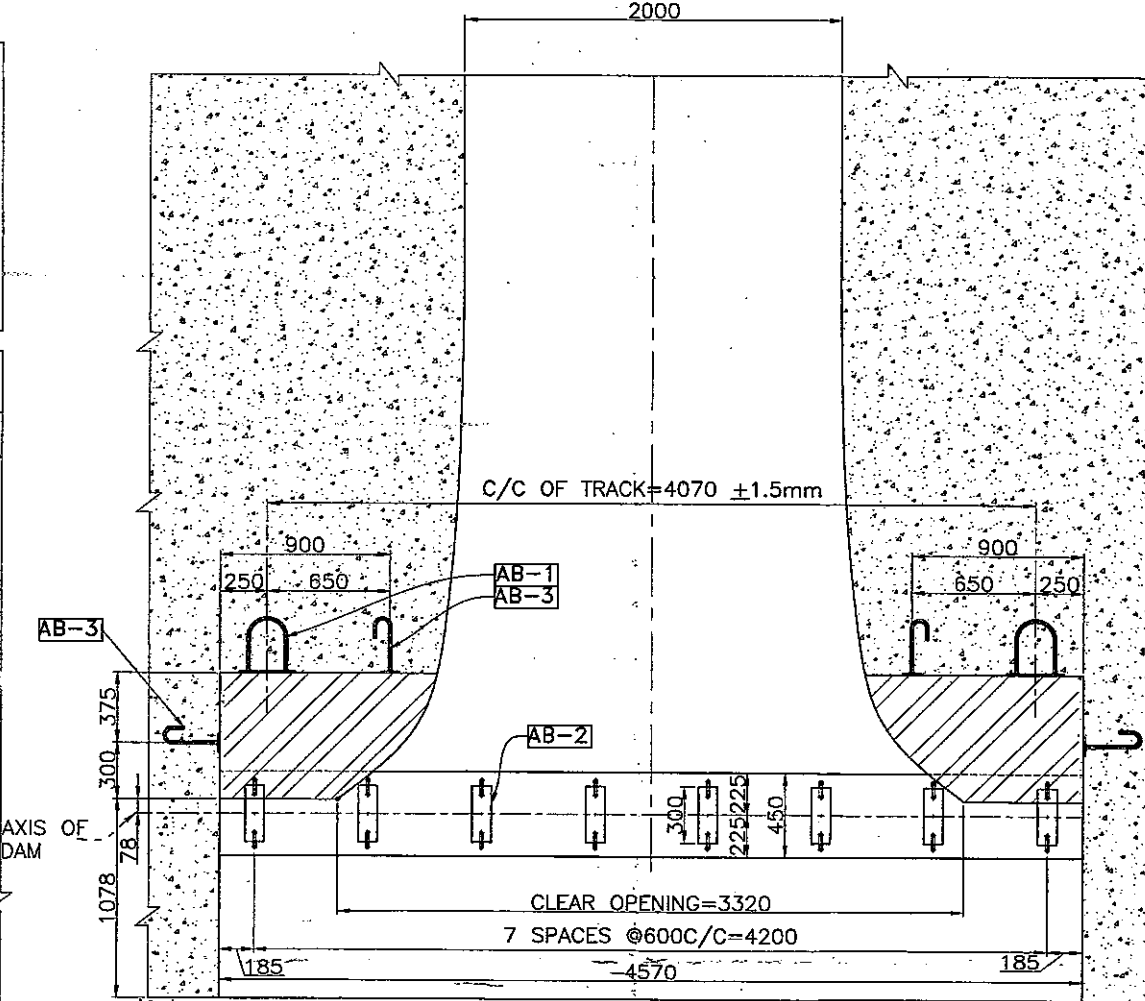
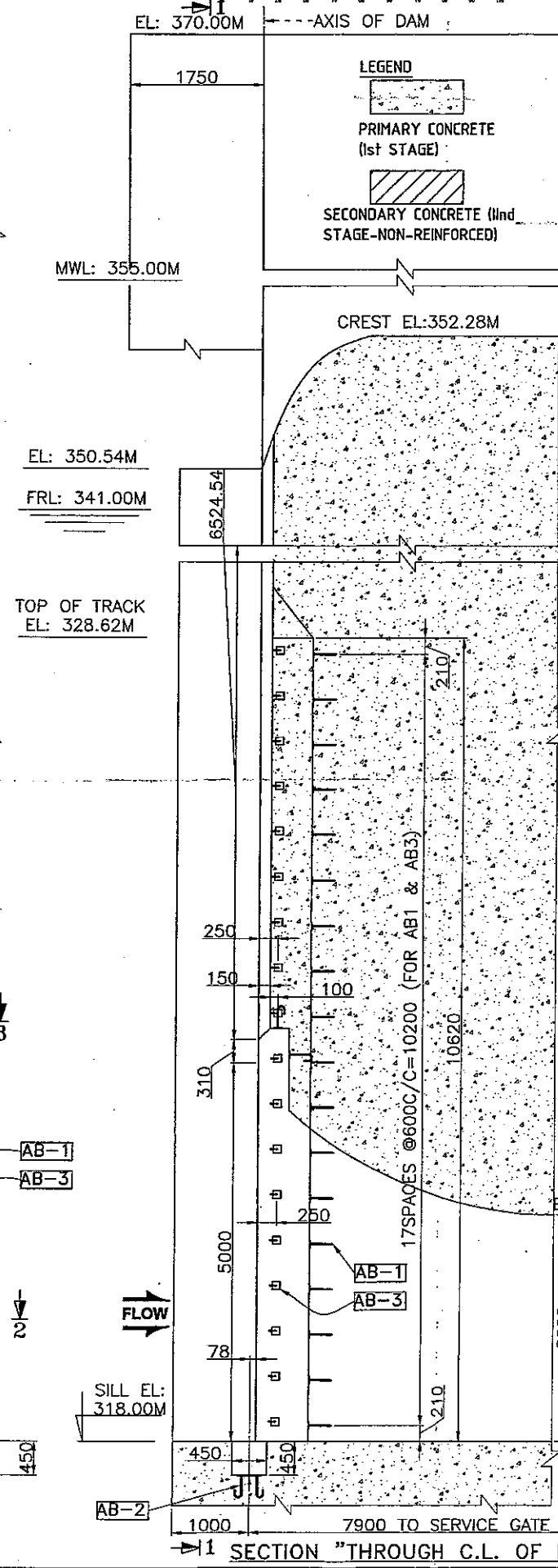
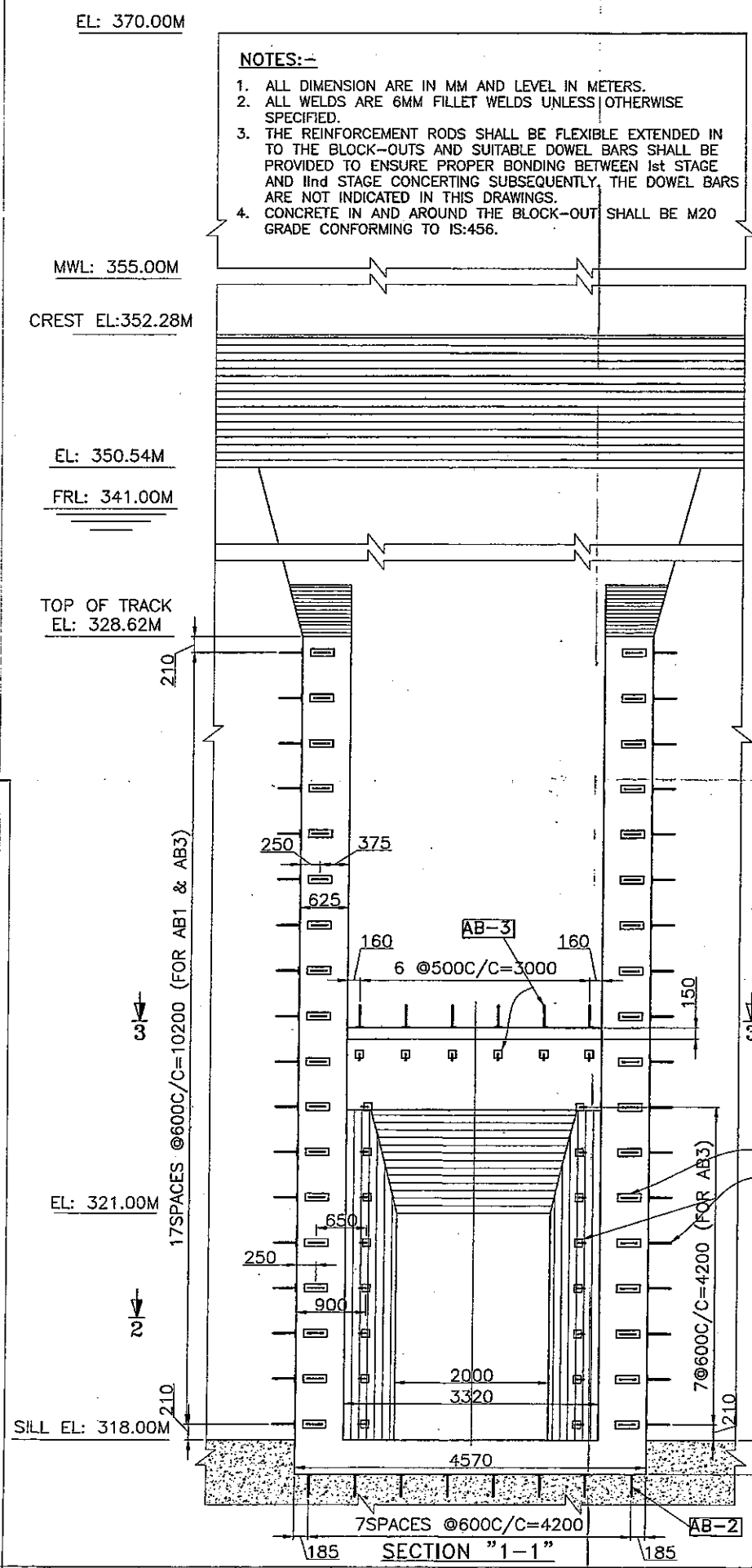
NOTES:-

1. ALL DIMENSION ARE IN MM AND LEVEL IN METERS.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
3. THE REINFORCEMENT RODS SHALL BE FLEXIBLE EXTENDED IN TO THE BLOCK-OUTS AND SUITABLE DOWEL BARS SHALL BE PROVIDED TO ENSURE PROPER BONDING BETWEEN 1st STAGE AND 2nd STAGE CONCERTING SUBSEQUENTLY THE DOWEL BARS ARE NOT INDICATED IN THIS DRAWINGS.
4. CONCRETE IN AND AROUND THE BLOCK-OUT SHALL BE M20 GRADE CONFORMING TO IS:456.

LEGEND

PRIMARY CONCRETE (1st STAGE)

SECONDARY CONCRETE (2nd STAGE-NON-REINFORCED)



BILL OF MATERIAL FOR ONE BAY

E.M.	PART NO.	MATERIAL	REFERENCE	LENGTH (MM)	WIDTH (MM)	THK (MM)	NOS.	UNIT WT. IN KGS.	TOTAL WT. IN KGS.	REMARKS
AB-3	2	Ø16 ROD	IS2062 E250B/ RINL SAE 1018	432			66	1.6	45.62	
	1	STR. ST. PLATE	IS2062 E250B	100	100	10	88	78.50	51.81	
AB-2	2	Ø16 ROD	IS2062 E250B/ RINL SAE 1018	432			16	1.6	11.06	
	1	STR. ST. PLATE	IS2062 E250B	300	100	10	8	78.50	18.84	
AB-1	2	Ø16 ROD	IS2062 E250B/ RINL SAE 1018	680			36	1.6	39.17	
	1	STR. ST. PLATE	IS2062 E250B	300	100	10	36	78.50	84.78	

OM METALS INFRAPROJECTS LTD.

PROJECT NORTH KOEL RESERVOIR PROJECT JHARKHAND

TITLE EMERGENCY SLIDE TYPE GATE 3.32Mx5.0M BLOCK-OUT DETAILS FOR LOW LEVEL SLUICES

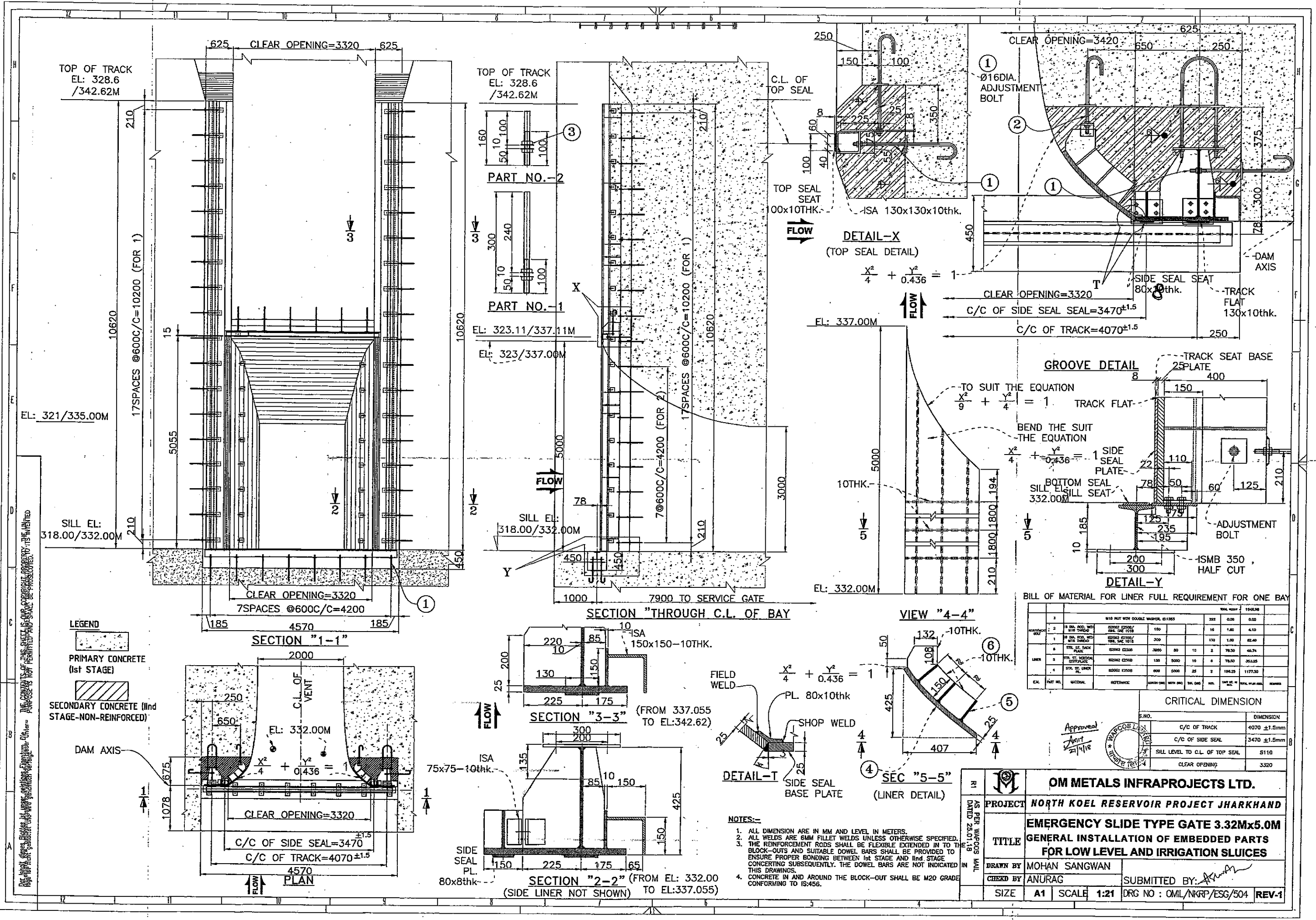
DRAWN BY MOHAN SANGWAN

CHECKED BY ANURAG

SIZE A1 SCALE 1:21

SUBMITTED BY: [Signature]

DRG NO : OMIL/NKRP/ESG/501A REV-1



BILL OF MATERIAL FOR LINER FULL REQUIREMENT FOR ONE BAY

ITEM NO.	DESCRIPTION	UNIT	QTY	PRICE	TOTAL
1	M10 MTS WITH DOUBLE WASHER, 12-180	222	0.20	0.02	
2	M10 MTS WITH DOUBLE WASHER, 12-180	150	1.80	4.50	
3	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
4	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
5	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
6	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
7	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
8	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
9	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
10	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
11	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
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13	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
14	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
15	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
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99	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	
100	M10 MTS WITH DOUBLE WASHER, 12-180	200	1.50	3.00	

CRITICAL DIMENSION

S.NO.	C/C OF TRACK	DIMENSION
1	C/C OF TRACK	4070 ±1.5mm
2	C/C OF SIDE SEAL	3470 ±1.5mm
3	SILL LEVEL TO C.L. OF TOP SEAL	5110
4	CLEAR OPENING	3320

OM METALS INFRAPROJECTS LTD.

PROJECT NORTH KOEL RESERVOIR PROJECT JHARKHAND

TITLE EMERGENCY SLIDE TYPE GATE 3.32Mx5.0M

GENERAL INSTALLATION OF EMBEDDED PARTS FOR LOW LEVEL AND IRRIGATION SLUICES

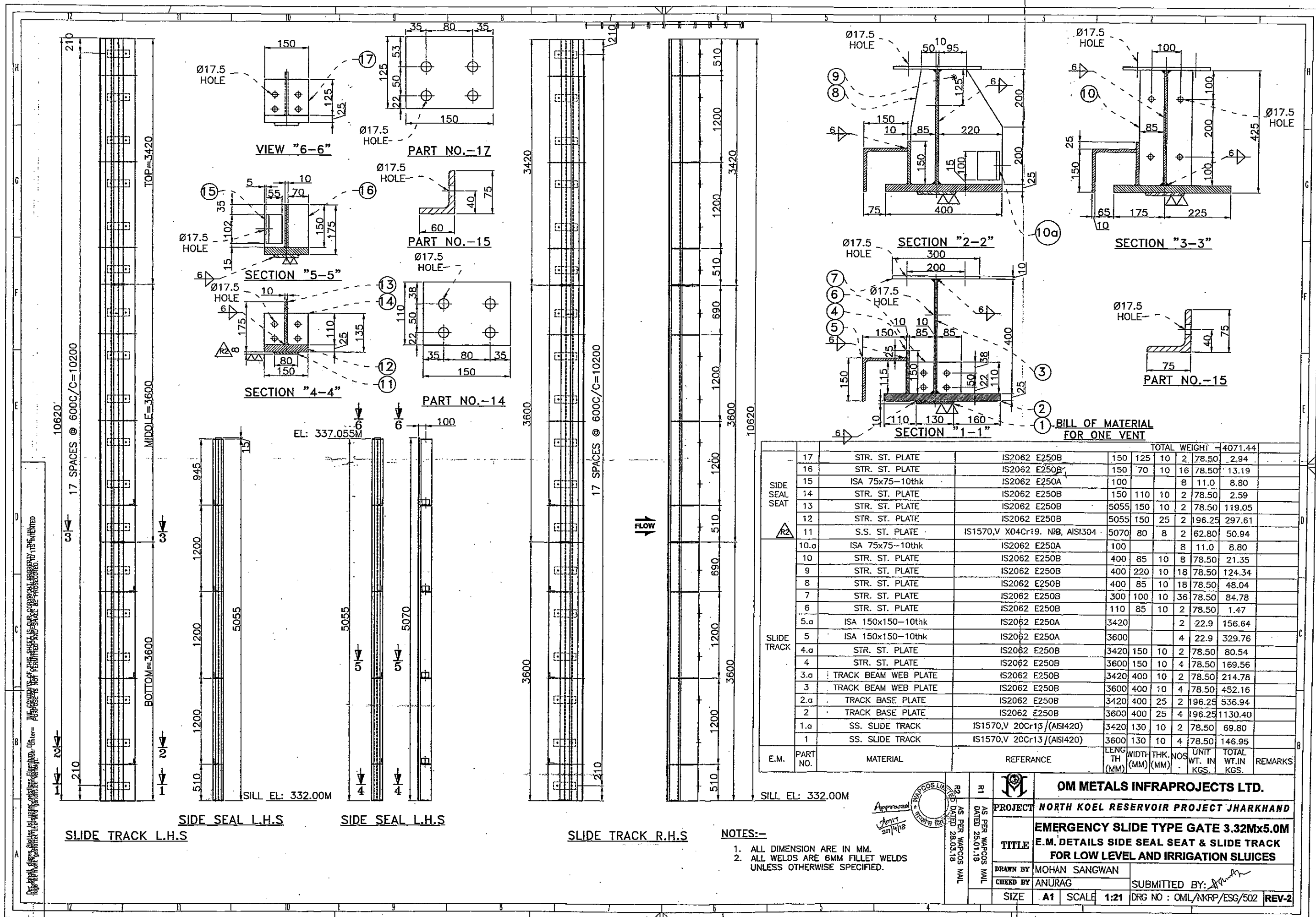
DRAWN BY MOHAN SANGWAN

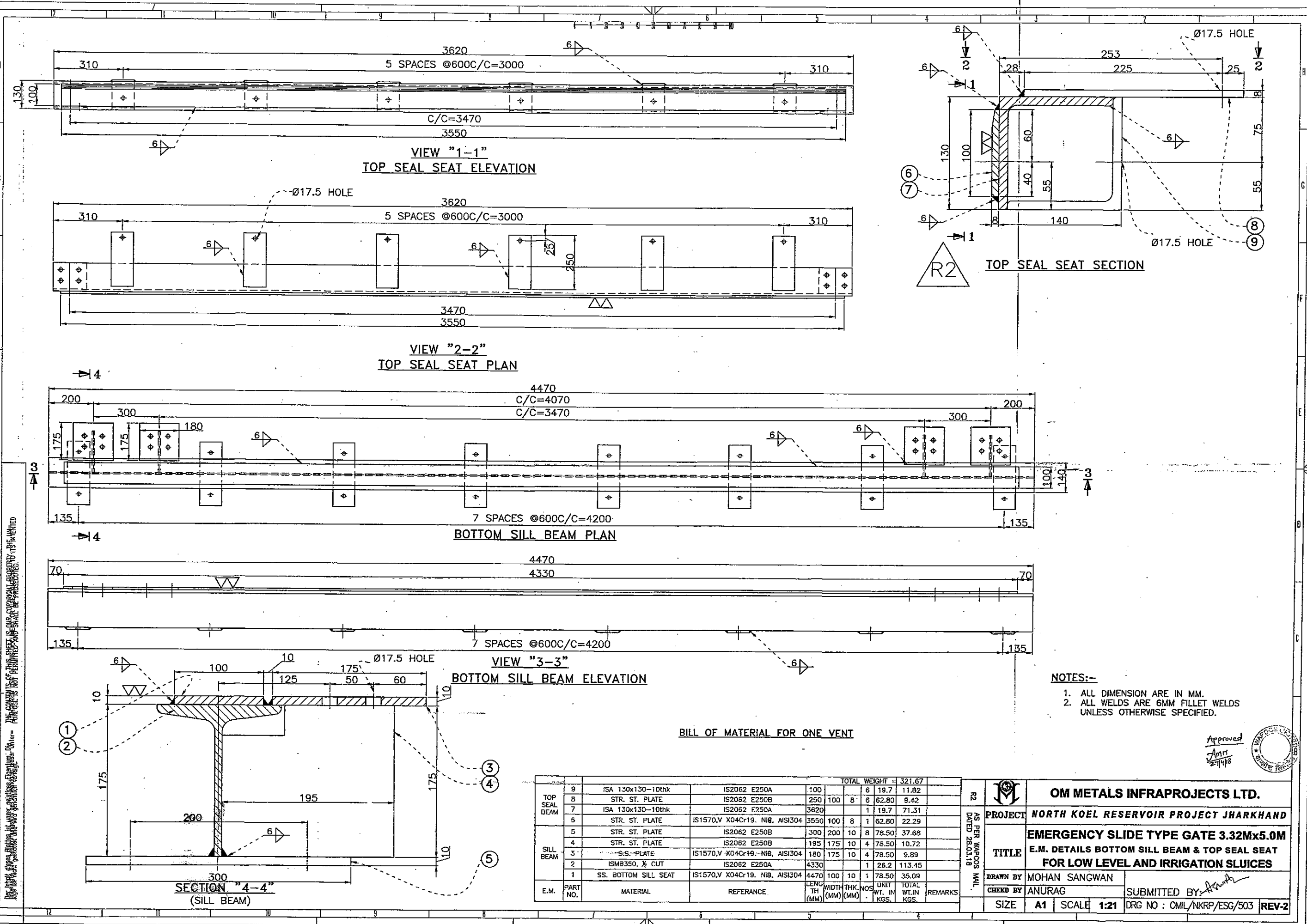
CHECKED BY ANURAG

SUBMITTED BY: [Signature]

SIZE A1 SCALE 1:21 DRG NO : OMIL/NKRP/ESG/504 REV-1

- NOTES:-**
1. ALL DIMENSION ARE IN MM AND LEVEL IN METERS.
 2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
 3. THE REINFORCEMENT RODS SHALL BE FLEXIBLE EXTENDED IN TO THE BLOCK-OUTS AND SUITABLE DOWEL BARS SHALL BE PROVIDED TO ENSURE PROPER BONDING BETWEEN 1st STAGE AND 2nd STAGE CONCERNING SUBSEQUENTLY. THE DOWEL BARS ARE NOT INDICATED IN THIS DRAWINGS.
 4. CONCRETE IN AND AROUND THE BLOCK-OUT SHALL BE M20 GRADE CONFORMING TO IS:456.





NOTES:-

1. ALL DIMENSION ARE IN MM.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.

Approved
27/4/18

OM METALS INFRAPROJECTS LTD.

PROJECT NORTH KOEL RESERVOIR PROJECT JHARKHAND

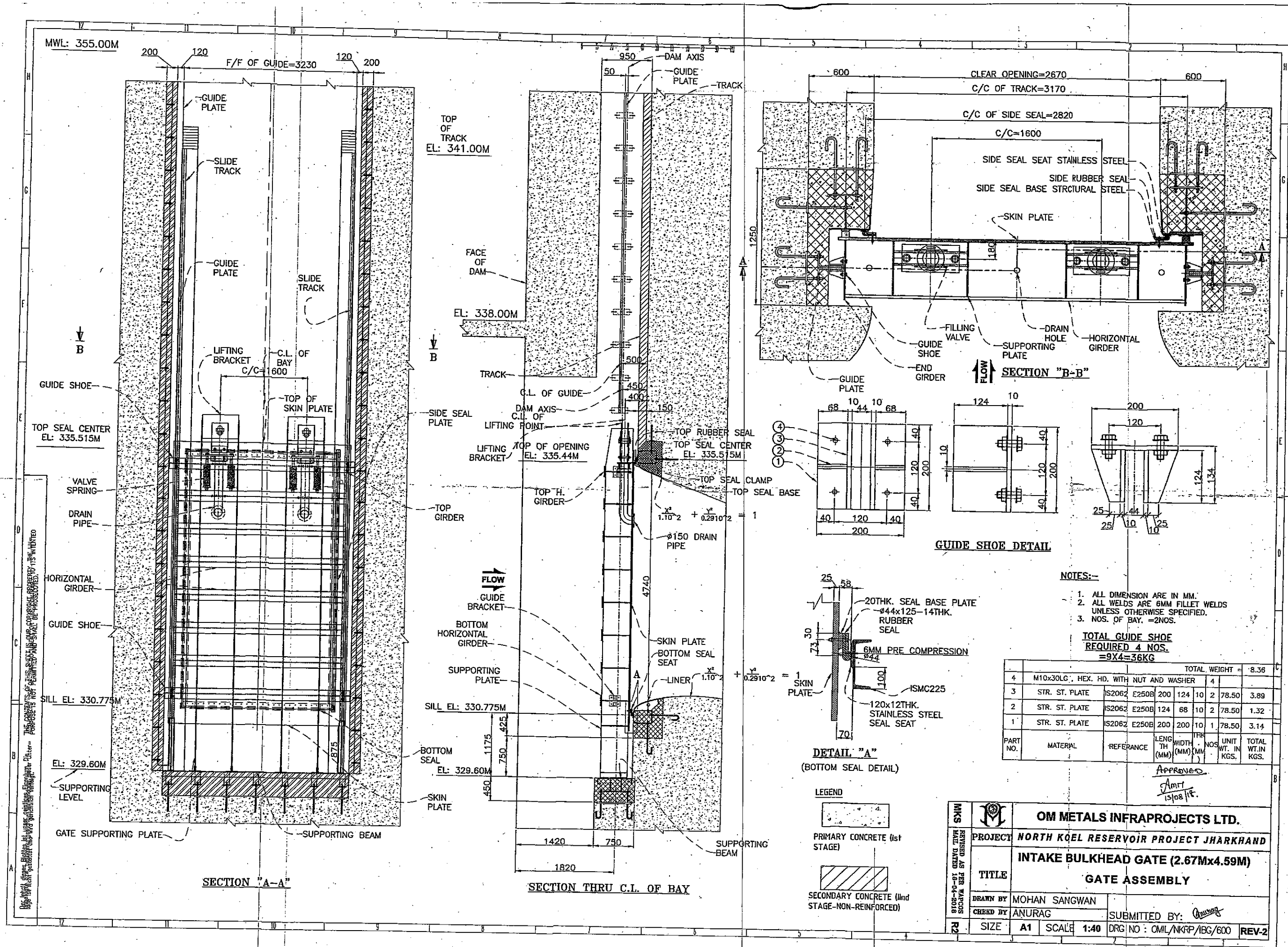
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E.M. DETAILS BOTTOM SILL BEAM & TOP SEAL SEAT
FOR LOW LEVEL AND IRRIGATION SLUICES

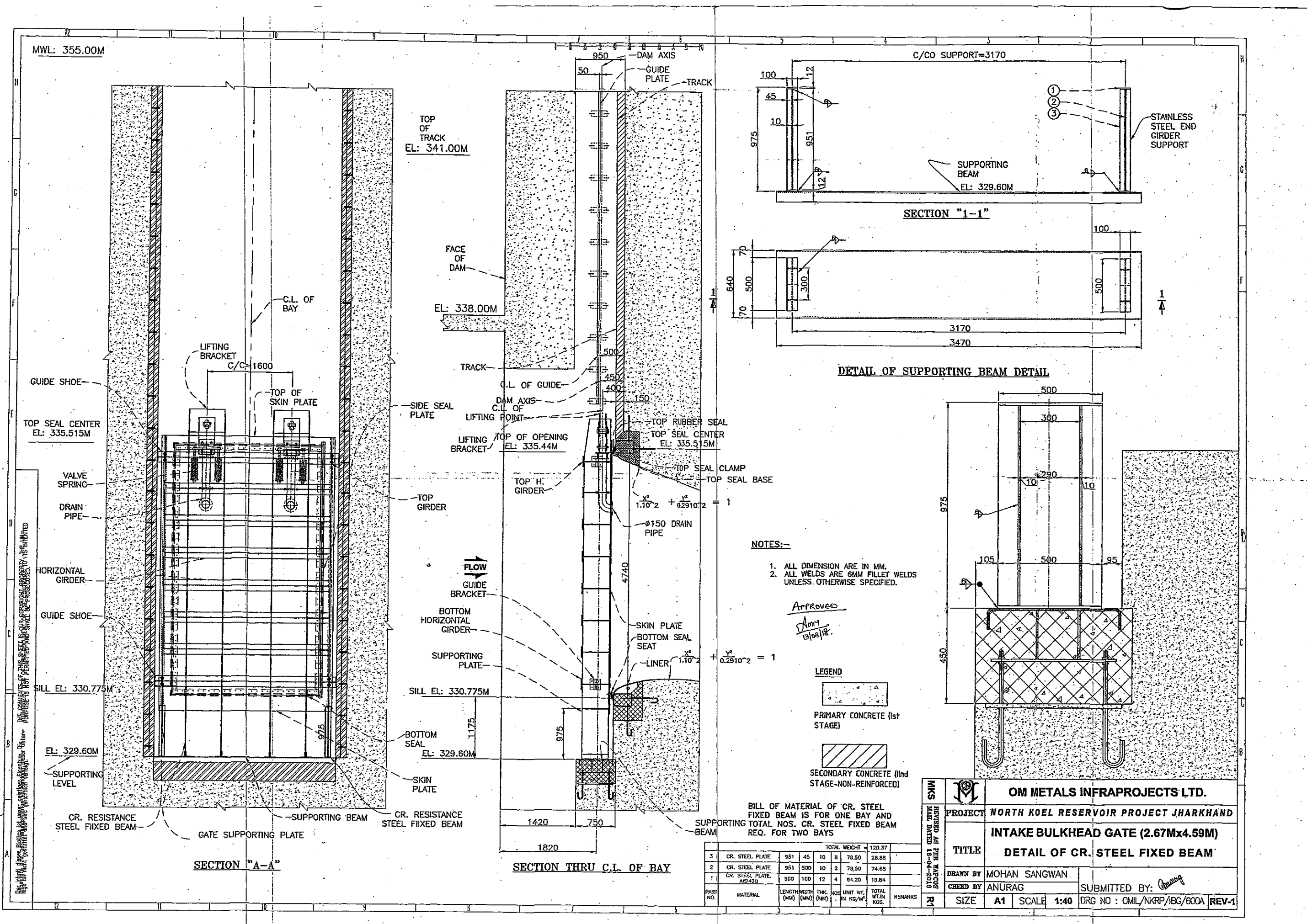
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CHECKED BY ANURAG

SUBMITTED BY [Signature]

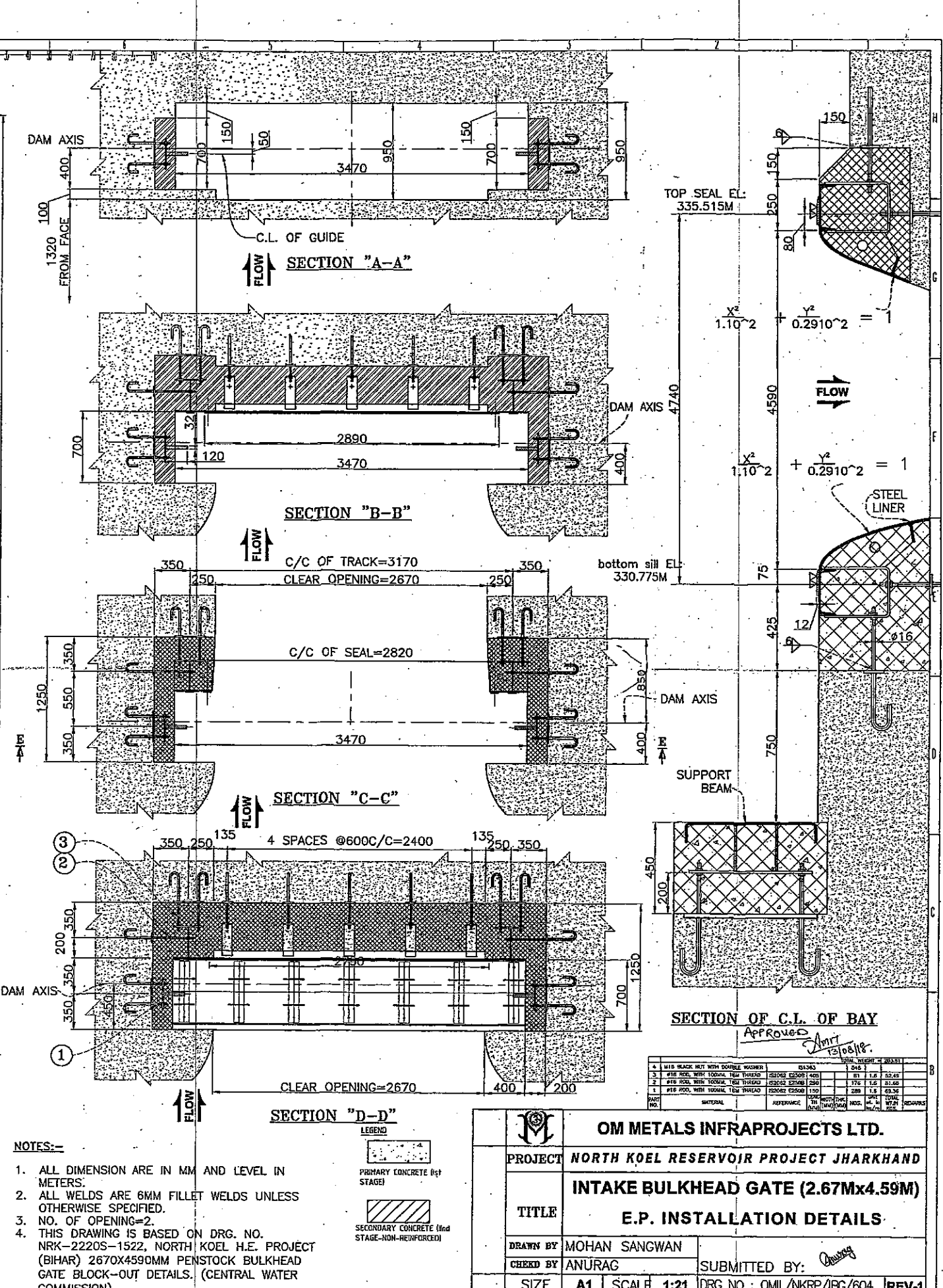
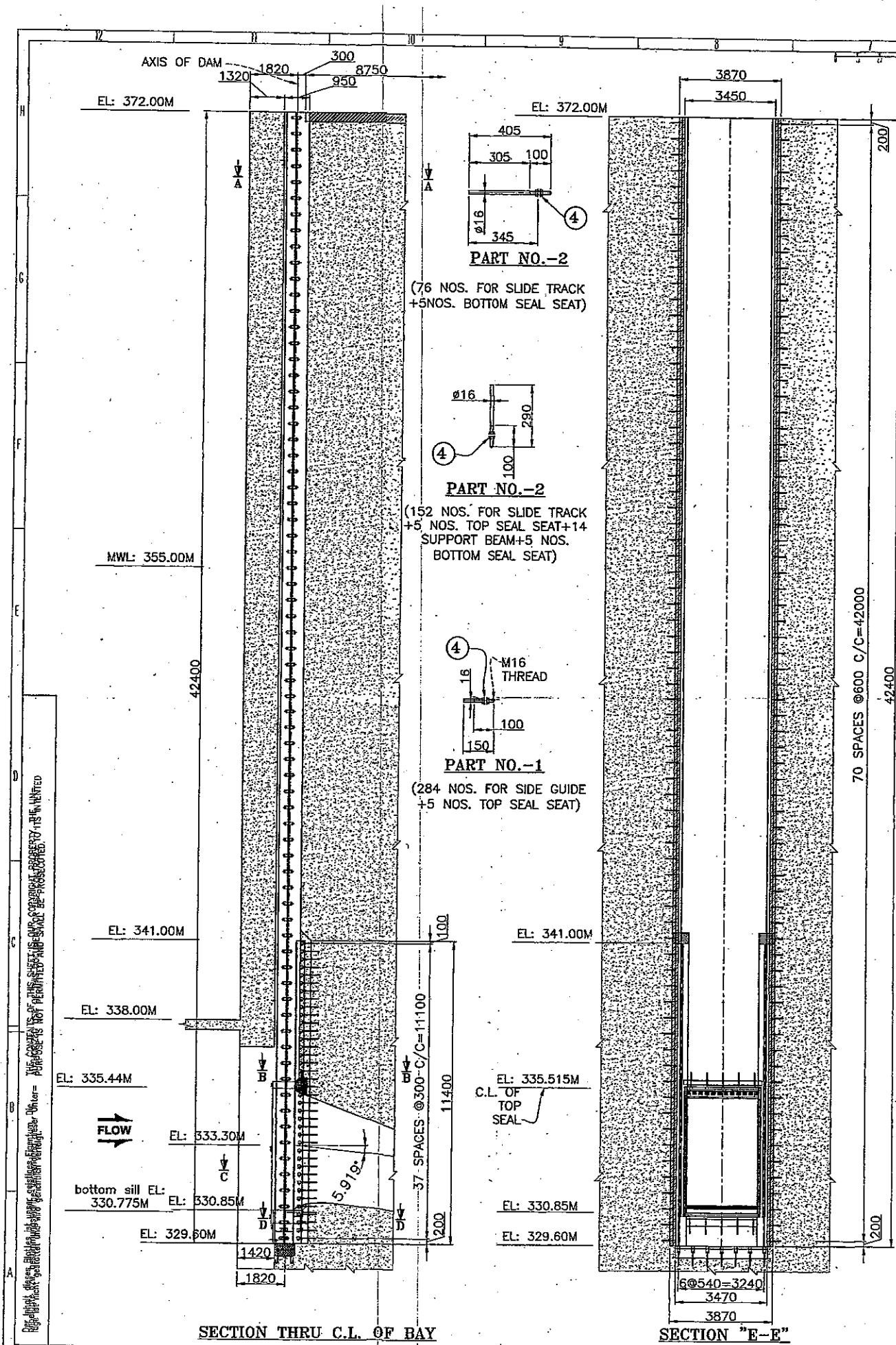
SIZE A1 **SCALE** 1:21 **DRG NO** : OMIL/NKRP/ESG/503 **REV-2**

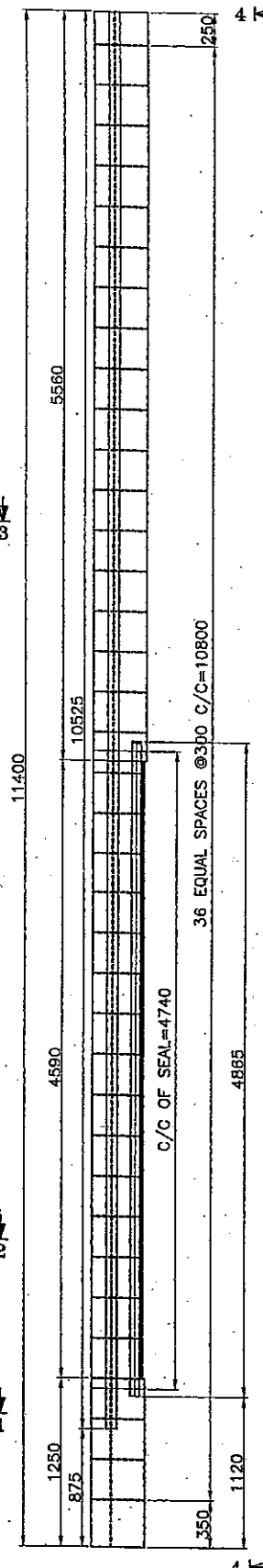




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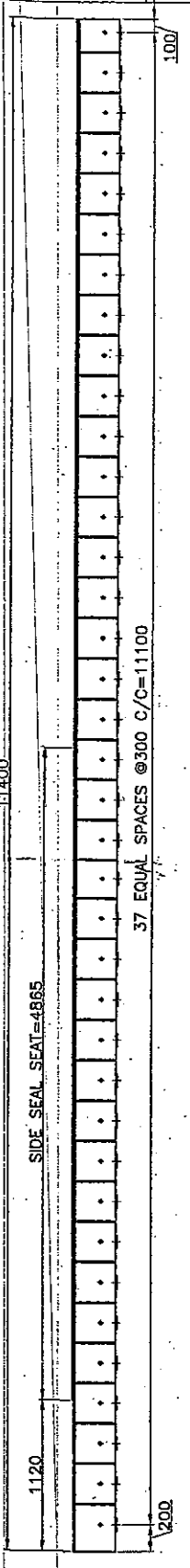
OM METALS INFRAPROJECTS LTD.	
PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND
TITLE	INTAKE BULKHEAD GATE (2.67Mx4.59M)
DRAWN BY	MOHAN SANGWAN
CHECKED BY	ANURAG
SUBMITTED BY:	Chandrag
SIZE	A1
SCALE	1:40
DRG NO	OMIL/NKRP/IBG/600A
REV-1	



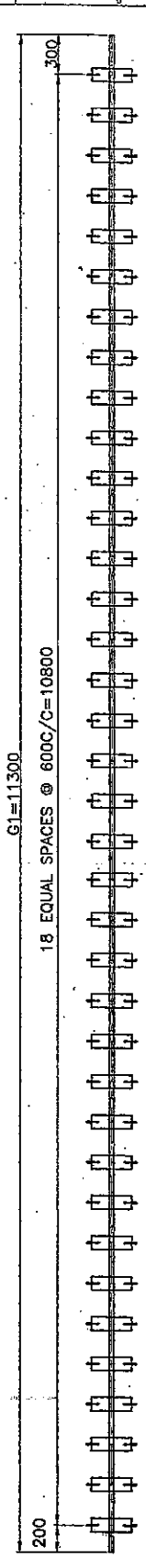


SLIDE TRACK & SIDE SEAL SEAT

(REQ. 2NOS. ONE AS SHOWN & ONE AS OPPOSITE HAND)

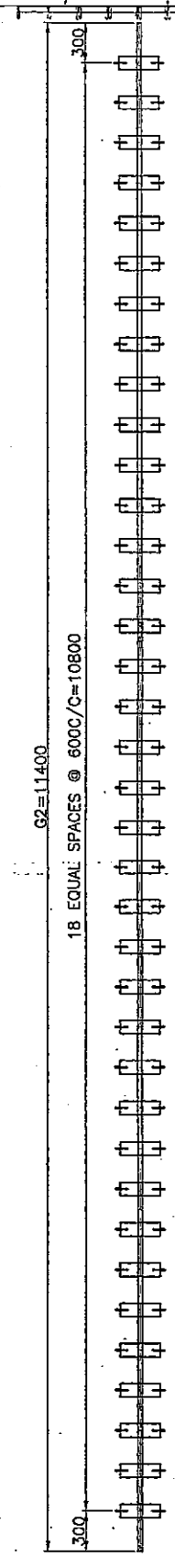


SECTION "4-4"



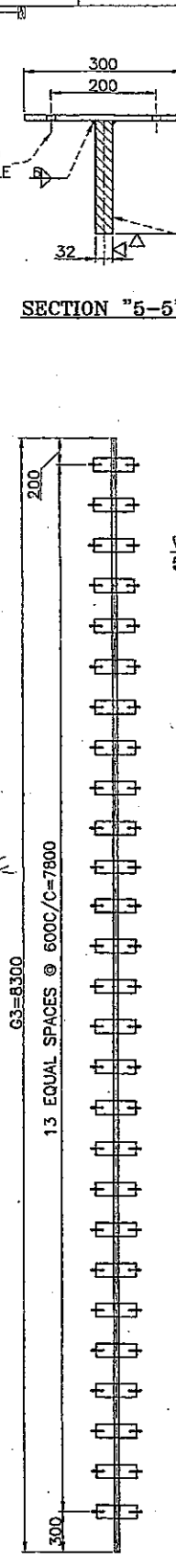
GUIDE PLATE-G1

(REQ. 2NOS. ONE AS SHOWN & ONE AS OPPOSITE HAND)



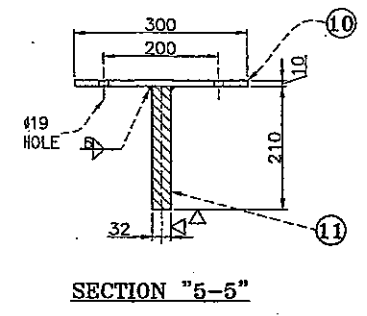
GUIDE PLATE-G2

(REQ. 4NOS. TWO AS SHOWN & TWO AS OPPOSITE HAND)

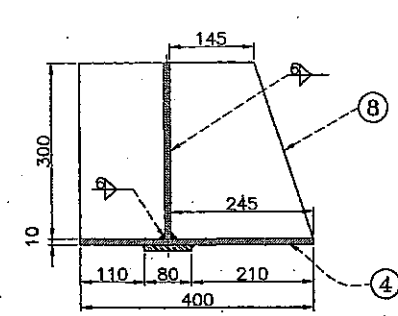


GUIDE PLATE-G3

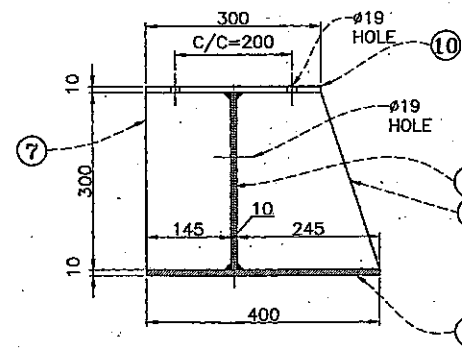
(REQ. 2NOS. ONE AS SHOWN & ONE AS OPPOSITE HAND)



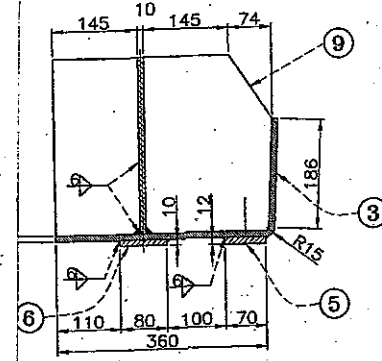
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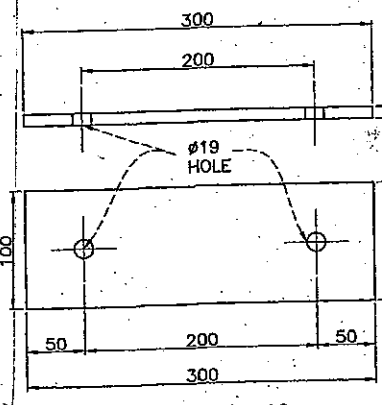
SECTION "3-3"



SECTION "1-1"



SECTION "2-2"



PART NO.-10

NOTES:-

1. ALL DIMENSION ARE IN MM.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.

BILL OF MATERIAL FOR ONE VENT

SIDE GUIDE	STR. ST. PLATE	REFERENCE	LENGTH (MM)	WIDTH (MM)	THK (MM)	NOS.	unit wt. in kg/m ²	TOTAL WT. IN KGS.
11	STR. ST. PLATE	IS2062 E250B	42400	210	32	2	251.20	4473.37
10	STR. ST. PLATE	IS2062 E250B	300	100	10	142	78.50	334.41
10	STR. ST. PLATE	IS2062 E250B	300	100	10	76	78.50	178.98
9	STR. ST. PLATE	IS2062 E250B	300	219	10	32	78.50	165.04
8	STR. ST. PLATE	IS2062 E250B	300	245	10	42	78.50	242.33
7	STR. ST. PLATE	IS2062 E250B	300	145	10	74	78.50	252.69
6	CR. STEEL PLATE	ISI420	10525	80	10	2	78.50	132.19
5	STAINLESS STEEL PLATE	ISI304	4885	70	12	2	94.20	61.79
4	STR. ST. PLATE	IS2062 E250B	5560	400	10	2	78.50	349.17
3	STR. ST. PLATE	IS2062 E250B	4590	580	10	2	78.50	403.55
2	STR. ST. PLATE	IS2062 E250B	11400	300	10	2	78.50	536.94
1	STR. ST. PLATE	IS2062 E250B	1175	400	10	2	78.50	73.79

OM METALS INFRAPROJECTS LTD.			
PROJECT NORTH KOEL RESERVOIR PROJECT JHARKHAND			
TITLE INTAKE BULKHEAD GATE (2.67Mx4.59M)			
DRAWN BY MOHAN SANGWAN		SUBMITTED BY: [Signature]	
CHECKED BY ANURAG		DRG NO : OML/NKRP/IBG/603	
SIZE A1	SCALE 1:20	REV-0	

FLOW

SECTION "A-A"

TOP OF SKIN PLATE

ELEVATION

VIEW "C-C"

VIEW "B-B"

SEAL COVER PLATE

NOTES:-

1. ALL DIMENSION ARE IN MM.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
3. NOS. OF OPENING=2NOS. AND NOS. OF GATE IS ONE.
4. FABRICATION AND ERECTION TOLERANCE TO BE AS IS:4622.

BILL OF MATERIAL FOR ONE FILLING VALVE ASSEMBLY
TOTAL MATERIAL REQ. = 2x215=430kgs.

		TOTAL WEIGHT in kgs		214.01				
19	STR. ST. PL. O.D.250, I.D. 150-20THK.	S2062 E250E	1	5.00				
18	Ø150-3mm thk. PIPE-1200MM LG.	S2062 E250E	1	22.00				
17	STR. ST. PL. O.D.250, I.D. 150-10THK.	S2062 E250E	4	4.99				
16	STR. ST. PL. O.D.150, I.D. 40-10THK.	S2062 E250E	2	1.29				
15	O.D.120, I.D.60, 20DIA. COIL SPRING-500LG	SPRING STEEL, IS:1570	IV	2				
14	M40-450N DIA. HEX. HD BOLT	IS1383	2	4.40				
13	STR. ST. RUBBER SEAT PL. O.D.250, I.D. 150-10THK.	S2062 E250E	1	1.87				
12	RUBBER SEAL	IS11855	470 100 16	1				
11	STR. STEEL SEAL COVER	S2062 E250E	705 90 12	1				
10	CR. RES. STEEL PIN Ø10-50LG.	STD.	2					
9	STR. STEEL WASHER O.D.150, I.D. 83-3THK.	S2062 E250E	2	.29				
8	STR. ST. KEEPER PL.	S2062 E250E	140 50 10	2				
7	CR. RES. STEEL PIN Ø40-210LG.	IS1570, V, 20Cr. 13	2	2.07				
6	CR. RES. STEEL PIN Ø80-220LG.	IS1570, V, 20Cr. 13	1	9.15				
5	STR. STEEL WASHER O.D.83, I.D. 43-3THK.	S2062 E250E	2	.09				
4	STR. ST. PLATE	S2062 E250E	530 250 20	1				
3	STR. ST. PLATE	S2062 E250E	276 160 16	2				
2	STR. ST. PLATE	S2062 E250E	540 300 12	2				
1	STR. ST. PLATE	S2062 E250E	680 430 16	2				
PART NO.	MATERIAL	REFERENCE	LENGTH (mm)	WIDTH THK. (mm)	NOS.	unit wt. in kg/m ²	TOTAL WT. IN KGS	REMARKS



OM METALS INFRAPROJECTS LTD.

PROJECT NORTH KOEL RESERVOIR PROJECT JHARKHAND

TITLE INTAKE BULKHEAD GATE (2.67Mx4.59M)

DRAWN BY MOHAN SANGWAN

CHECK BY ANURAG

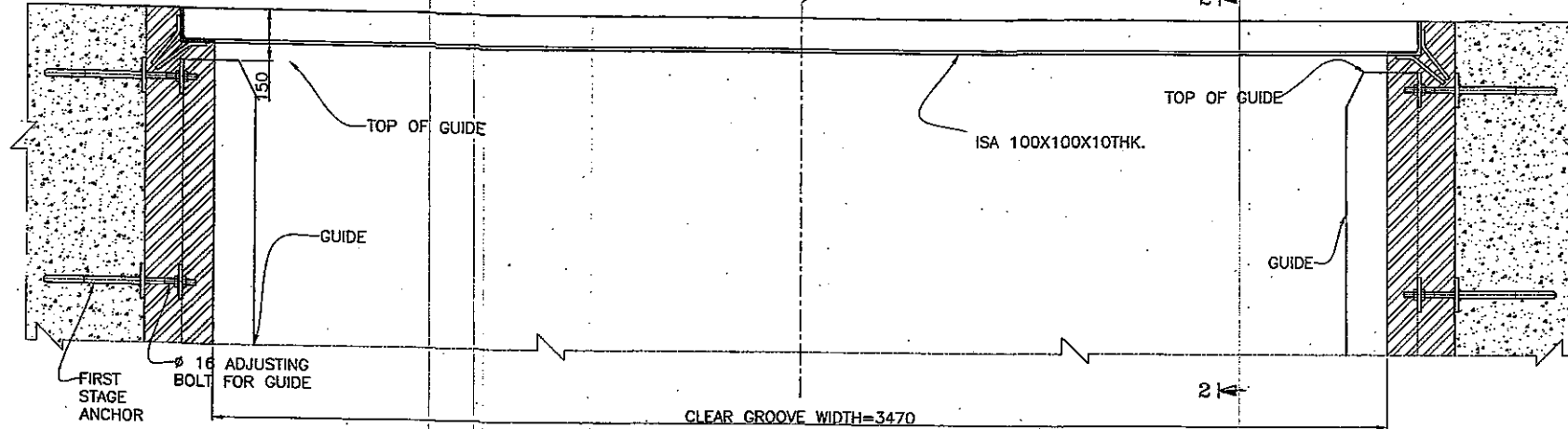
SIZE A1 SCALE 1:20

SUBMITTED BY: *Anurag*

DRG NO : OML/NKRP/IBG/607

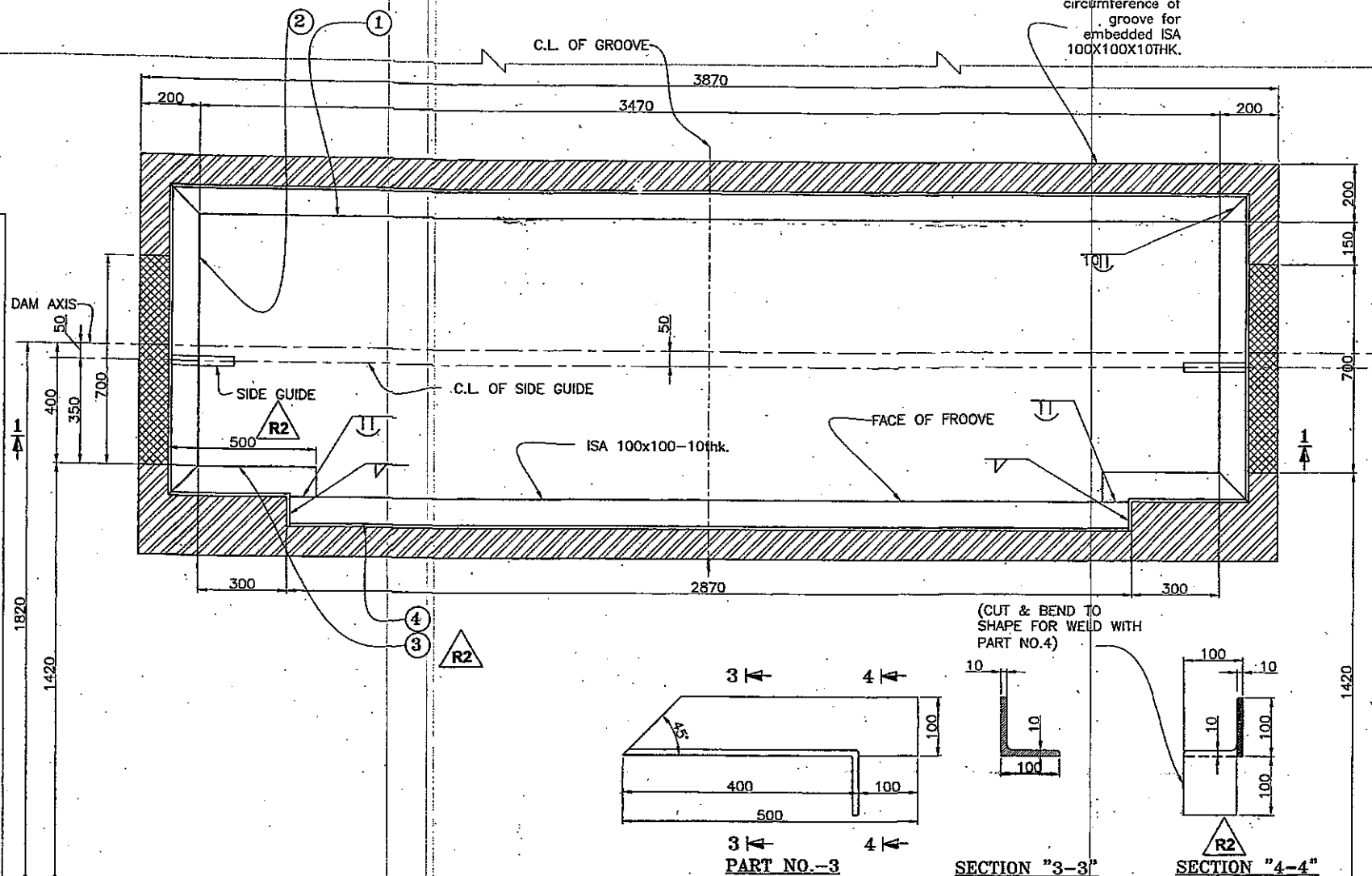
REV-1

TOP OF DECK EL: 372.00M



SECTION "1-1"

200x200 chipping whole circumference of groove for embedded ISA 100X100X10THK.



PART NO.-3

SECTION "3-3"

SECTION "4-4"

NOTES:-

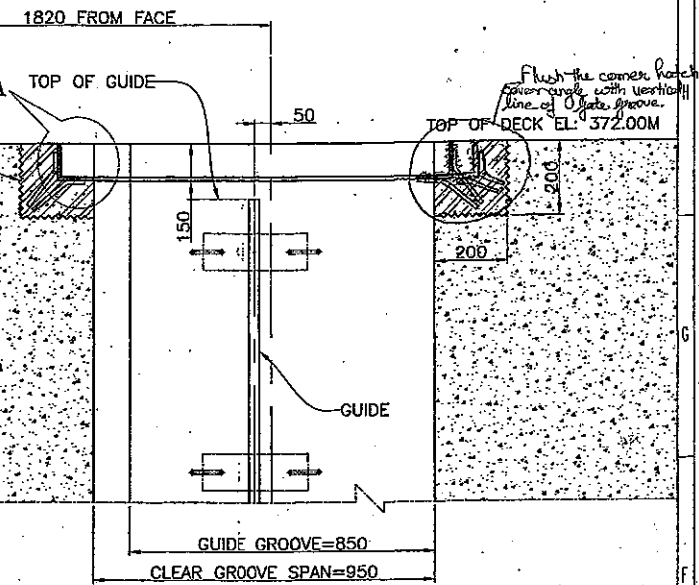
1. ALL DIMENSION ARE IN MM AND LEVEL IN METERS.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
3. NO. OF OPENING=2.

FLOW

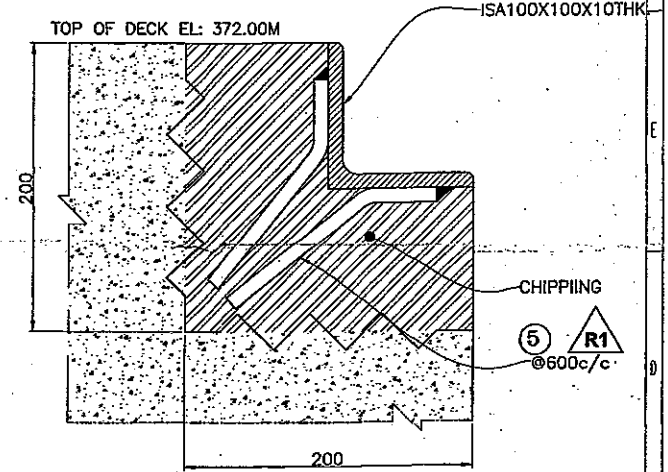
PLAN AT EL:372.00M

200x200 chipping whole circumference of groove for embedded ISA 100X100X10THK.

FLOW



SECTION "2-2"

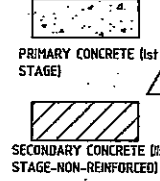


DETAIL OF CHIPPING WORK

APPROVED AS NOTED

AMIT 13/04/18

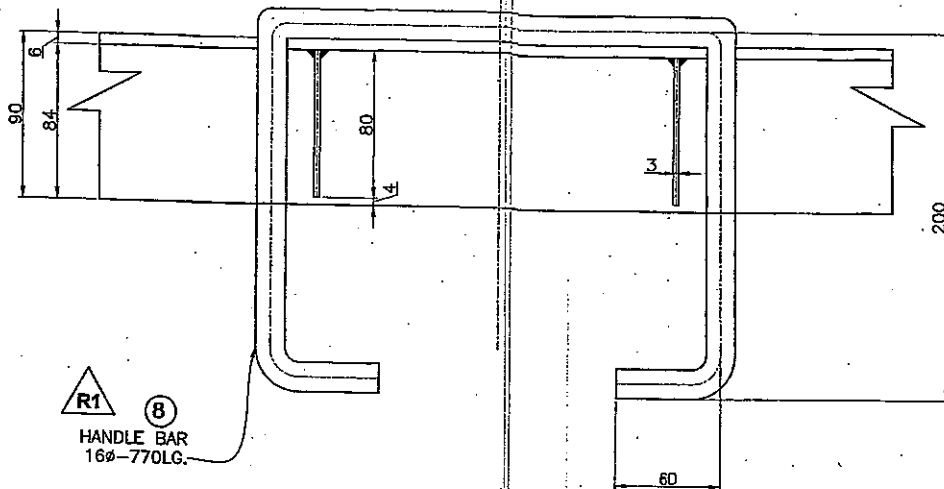
LEGEND



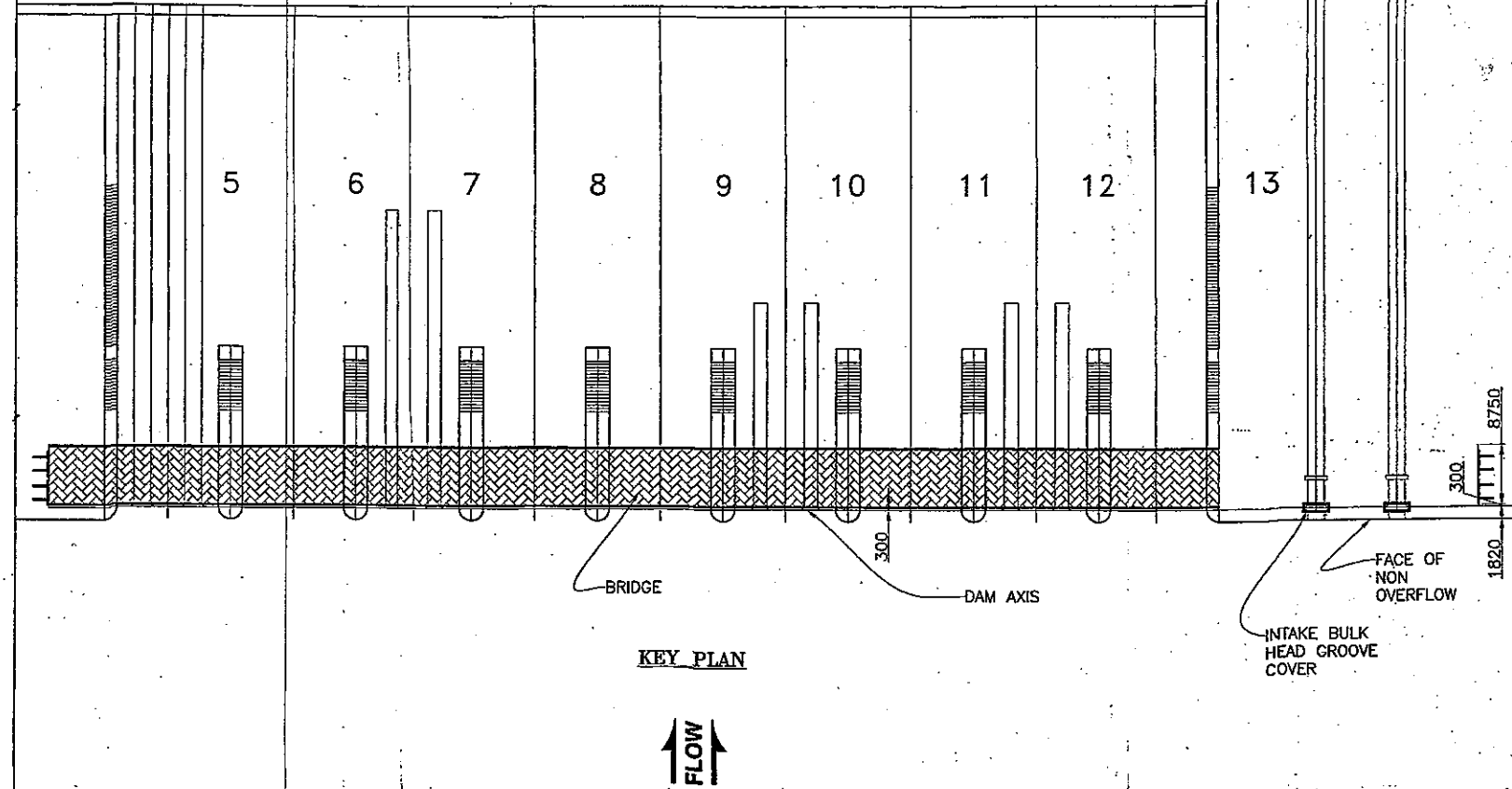
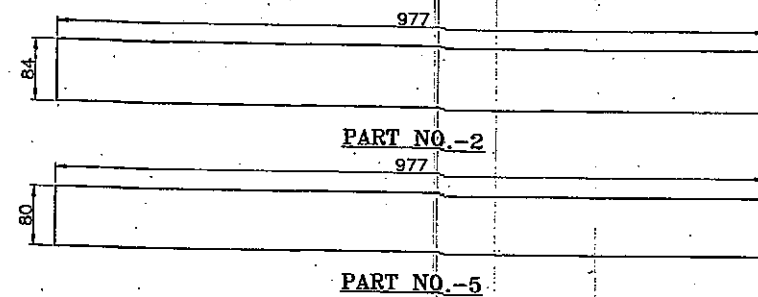
R1 BILL OF MATERIAL FOR ONE OPENING TOTAL NOS. REQ. TWO.

						TOTAL WEIGHT = 204.07	
5	STR. PL.50x200x10thk.	IS2062 E250B	32			25.12	
4	ISA 100X100X10THK.	IS2062 E250A	2870	2	14.9	85.53	
3	ISA 100X100X10THK.	IS2062 E250A	500	1	14.9	7.45	
2	ISA 100X100X10THK.	IS2062 E250A	1050	2	14.9	31.29	
1	ISA 100X100X10THK.	IS2062 E250A	3670	1	14.9	54.68	
PART NO.	MATERIAL	REFERENCE	LENGTH (MM)	NOS.	UNIT WT. IN KG/M	TOTAL WT. IN KGS.	REMARKS

MKS			OM METALS INFRAPROJECTS LTD.					
MKS			PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND				
REVISIONS AS PER VARIOUS MAIL DATED 25-06-2018			TITLE	INTAKE BULKHEAD GATE (2.67Mx4.59M)				
				DETAIL OF GATE GROOVE ANGLE FRAME				
			DRAWN BY	MOHAN SANGWAN		SUBMITTED BY: 		
		CHECK BY	ANURAG					
R2	R1	SIZE	A1	SCALE	1:20	DRG NO : OMIL/NKRP/IBG/608		REV-2

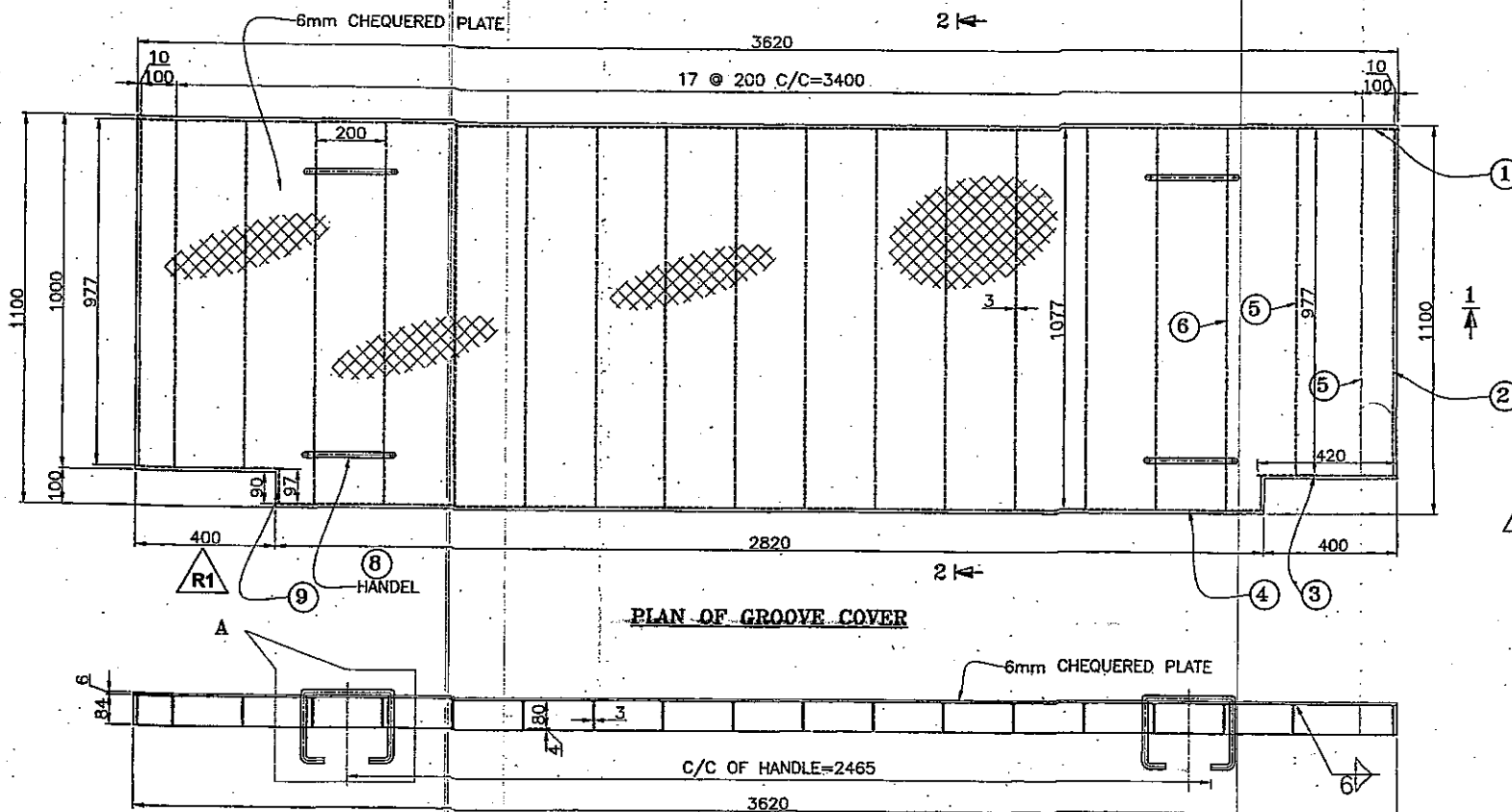


DETAIL "A"



KEY PLAN

FLOW



PLAN OF GROOVE COVER

SECTION "1-1"

BILL OF MATERIAL FOR ONE OPENING TOTAL NOS. REQ. TWO.

TOTAL WEIGHT = 153.12									
9	STR. PL.	IS2062 E250B	97	84	3	2	23.55	0.38	
8	Ø16 DIA. ROD	RINL SAL 1018	770			4	1.6	4.93	
7	CHQ. PL.	IS2062 E250B	3620	1100	3	1	23.55	93.78	C/S
6	STR. PL.	IS2062 E250B	1077	80	3	14	23.55	28.41	
5	STR. PL.	IS2062 E250B	977	80	3	4	23.55	7.36	
4	STR. PL.	IS2062 E250B	2820	84	3	1	23.55	5.58	
3	STR. PL.	IS2062 E250B	420	84	3	2	23.55	1.66	
2	STR. PL.	IS2062 E250B	977	84	3	2	23.55	3.87	
1	STR. PL.	IS2062 E250B	3620	84	3	1	23.55	7.16	
PART NO.	MATERIAL	REFERENCE	LENGTH (MM)	WIDTH (MM)	THK (MM)	NOS.	unit wt. in kg/m & kg/m ²	TOTAL WT. IN KGS.	REMARKS

NOTES:-

1. ALL DIMENSION ARE IN MM AND LEVEL IN METERS.
2. ALL WELDS ARE 6MM FILLET WELDS UNLESS OTHERWISE SPECIFIED.
3. NO. OF OPENING=2.

APPROVED

13/08/18

MKS REVISAS PER MARCOS DATE 18-04-2018	OM METALS INFRAPROJECTS LTD.	
	PROJECT	NORTH KOEL RESERVOIR PROJECT JHARKHAND
	TITLE	INTAKE BULKHEAD GATE (2.67Mx4.59M) GROOVE COVER DETAILS
	DRAWN BY	MOHAN SANGWAN
R1	CHECKED BY	ANURAG
	SUBMITTED BY:	13/08/18
SIZE A1		SCALE 1:20
DRG NO : OML/NKRP/IBG/609		REV-1

Photographs of Fabricated Gates

(A) Intake Service Gate (2.4 m x 3.066 m)



(B) Low Level Sluice Gate (2 m x 3 m)



(C) Irrigation Sluice Gate (2 m x 3 m)



(D) Irrigation Emergency Slide Type (3.32 m x 5 m)



(E) Intake Bulk Head (2.67 m x 4.59 m)



