

**TENDER DOCUMENT
FOR
Distribution Network for Amba Division of Right Main Canal
(RMC), Bihar Portion under North Koel Reservoir Project,
Jharkhand and Bihar**

Estimated Cost (Rs. 64.12 Crores)

TENDER NO: WAP/NK/RMC/DIST/AMBA/2025

TENDER DRAWINGS

Issued to M/s



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

NORTH KOEL RESERVOIR PROJECT

JANUARY 2025

Completion of Balance
Works of North Koel
Reservoir Project

DRAWING REPORT – AMBA MINOR
(OFFTAKING FROM RIGHT MAIN CANAL AT
55.21. KM)



WAPCOS LIMITED
(GOVT. OF INDIA UNDERTAKING)
76- C SECTOR-18 INDUSTRIAL AREA,
GURUGRAM-122015 (HARYANA)

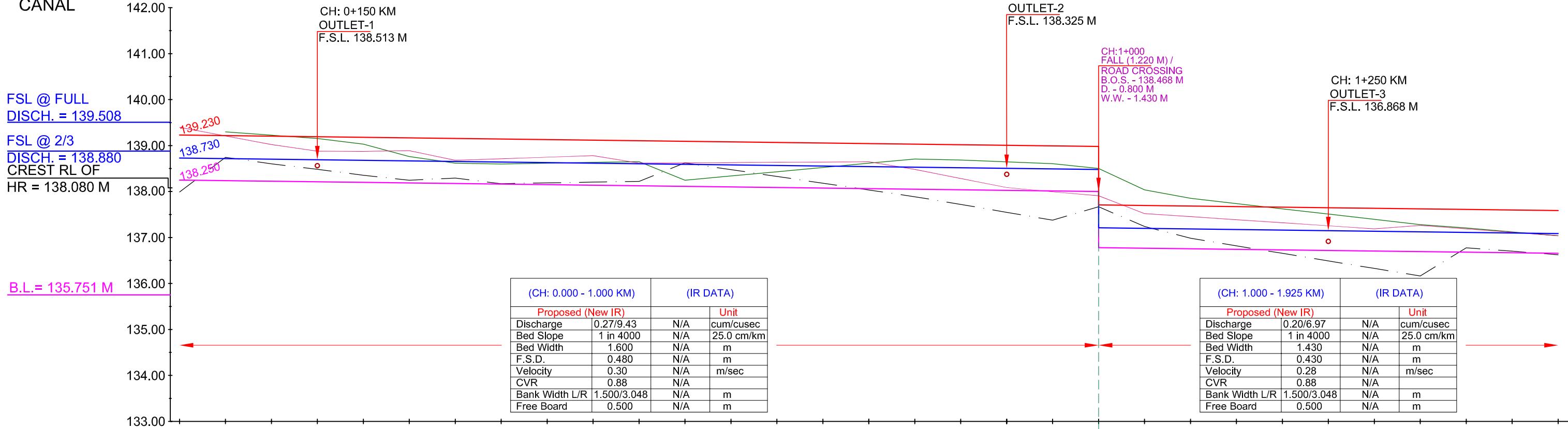


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L-SECTION

L- SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 0+000 TO 1+500

DATA OF
PARENT
CANAL



EXISTING DATA	DESIGN DATA	
	TOP OF BANK LEVEL	F.S.L.
NSL	Proposed Bed Level	Bed Level
Chainage IN KM	TOP OF BANK LEVEL	TOP OF BANK LEVEL
0+000	139.398	137.990
0+050	139.297	139.210
0+100	139.224	138.604
0+150	139.152	138.878
0+200	139.032	138.874
0+250	138.761	138.246
0+300	138.617	138.680
0+350	138.600	138.713
0+400	138.617	138.747
0+450	138.634	138.780
0+500	138.651	138.618
0+550	138.247	138.624
0+600	138.339	138.630
0+650	138.431	138.636
0+700	138.523	138.642
0+750	138.615	138.648
0+800	138.706	138.481
0+850	138.685	138.284
0+900	138.645	138.088
0+950	138.605	137.994
1+000	138.500	137.908
1+050	138.037	137.521
1+100	137.853	137.454
1+150	137.738	137.387
1+200	137.623	137.321
1+250	137.509	137.255
1+300	137.394	137.188
1+350	137.279	137.265
1+400	137.208	137.189
1+450	137.122	137.113
1+500	137.037	137.037

LEGEND

	NSL
	EXISTING TOP OF BANK
	EXISTING BED LEVEL
	PROPOSED BED LEVEL
	PROPOSED FSL
	PROPOSED TOP OF BANK LEVEL
	MODIFIED STRUCTURE
	NEW STRUCTURE

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

L- SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ LSEC-

01 of 03

Drawn By:-

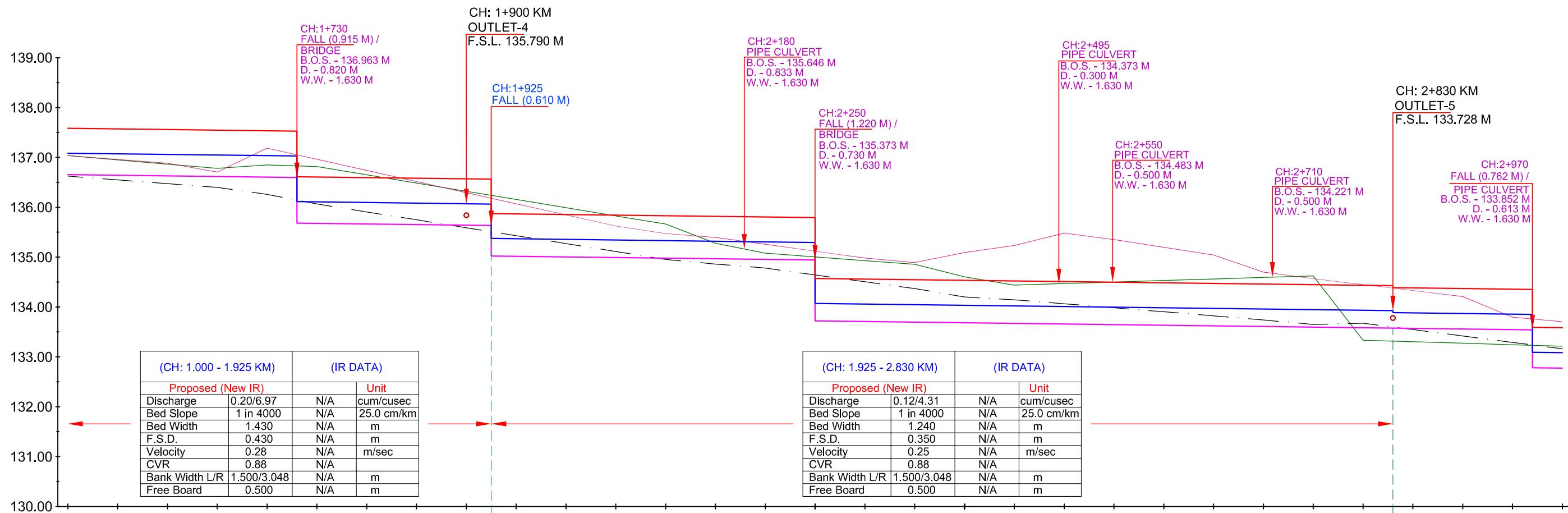
Checked By:-

Approved By:-

L- SECTION OF AMBA MINOR

(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)

FROM CH 1+500 TO 3+000



EXISTING DATA	DESIGN DATA	
	TOP OF BANK LEVEL	F.S.L.
Chainage IN KM	NSL	Proposed Bed Level
1+500	137.037	136.625
1+550	136.951	136.549
1+600	136.865	136.473
1+650	136.779	136.706
1+700	136.849	137.185
1+750	136.816	136.962
1+800	136.651	136.739
1+850	136.486	136.516
1+900	136.321	136.293
1+925	136.157	136.070
1+950	135.992	135.848
2+000	135.827	135.624
2+050	135.662	135.473
2+100	135.279	135.396
2+150	135.079	135.258
2+200	135.004	135.120
2+250	134.930	134.982
2+300	134.856	134.890
2+350	134.603	135.092
2+400	134.439	135.233
2+450	134.273	134.144
2+500	134.470	135.482
2+550	134.501	135.353
2+600	134.531	135.198
2+650	134.562	135.043
2+700	134.593	134.699
2+750	134.623	134.569
2+800	133.333	134.449
2+850	133.303	134.330
2+900	133.273	134.210
2+950	133.243	133.794
3+000	133.214	133.707

LEGEND

	NSL
	EXISTING TOP OF BANK
	EXISTING STRUCTURE
	MODIFIED STRUCTURE
	NEW STRUCTURE

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

L- SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ LSEC-

02 of 03

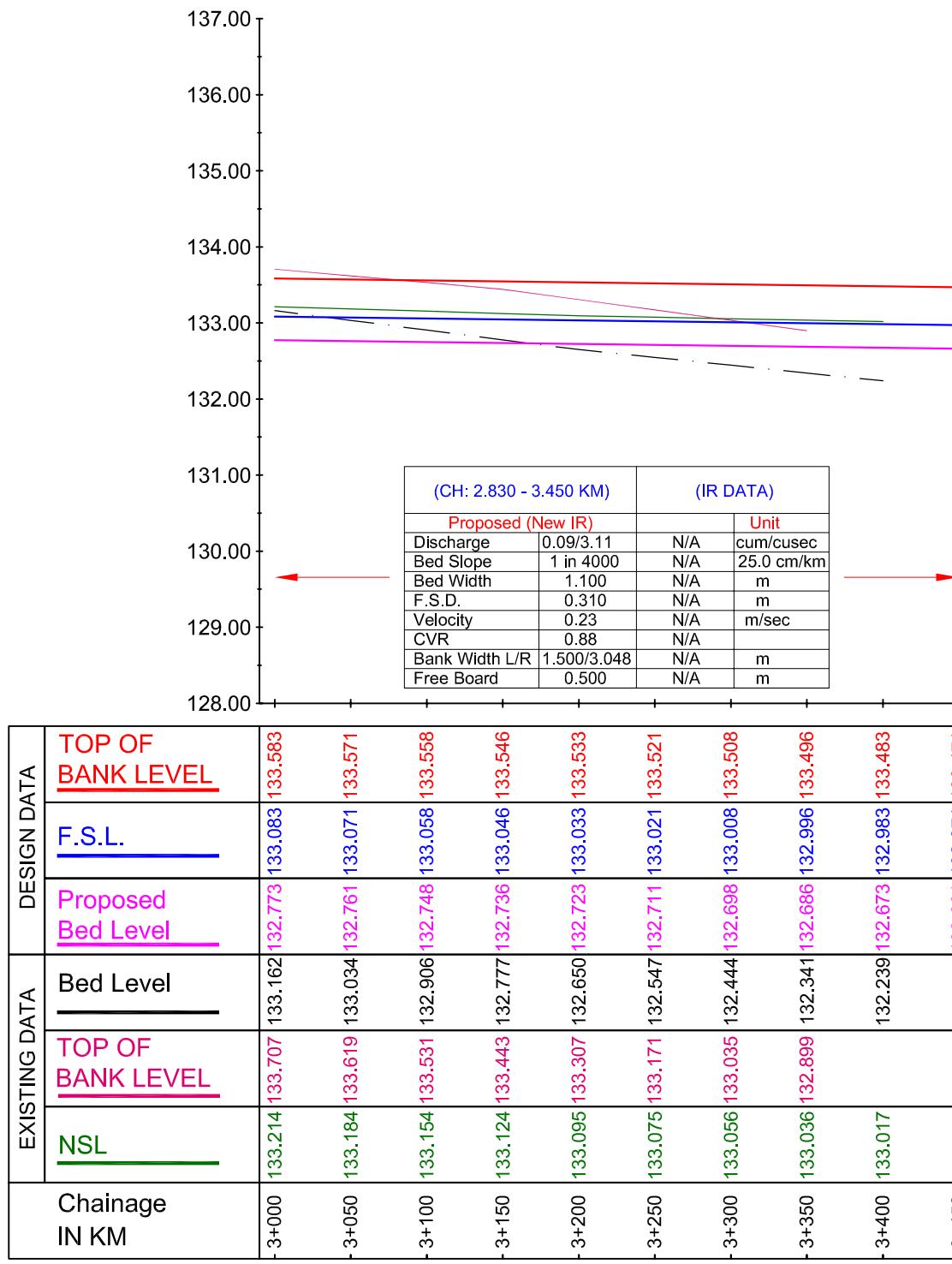
Drawn By:-

Checked By:-

Approved By:-

L- SECTION OF AMBA MINOR

(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 3+450



EXISTING DATA	DESIGN DATA	
	TOP OF BANK LEVEL	F.S.L.
	Proposed Bed Level	
	Bed Level	
	TOP OF BANK LEVEL	
	NSL	
Chainage IN KM		
3+000	133.214	133.707
3+050	133.184	133.619
3+100	133.154	133.531
3+150	133.124	133.443
3+200	133.095	133.307
3+250	133.075	133.171
3+300	133.056	133.035
3+350	133.036	132.899
3+400	133.017	132.239
3+450		132.661

LEGEND

NSL	EXISTING TOP OF BANK	EXISTING BED LEVEL
EXISTING STRUCTURE		PROPOSED BED LEVEL
MODIFIED STRUCTURE		PROPOSED FSL
NEW STRUCTURE		PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

L- SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ LSEC-

03 of 03

Drawn By:-

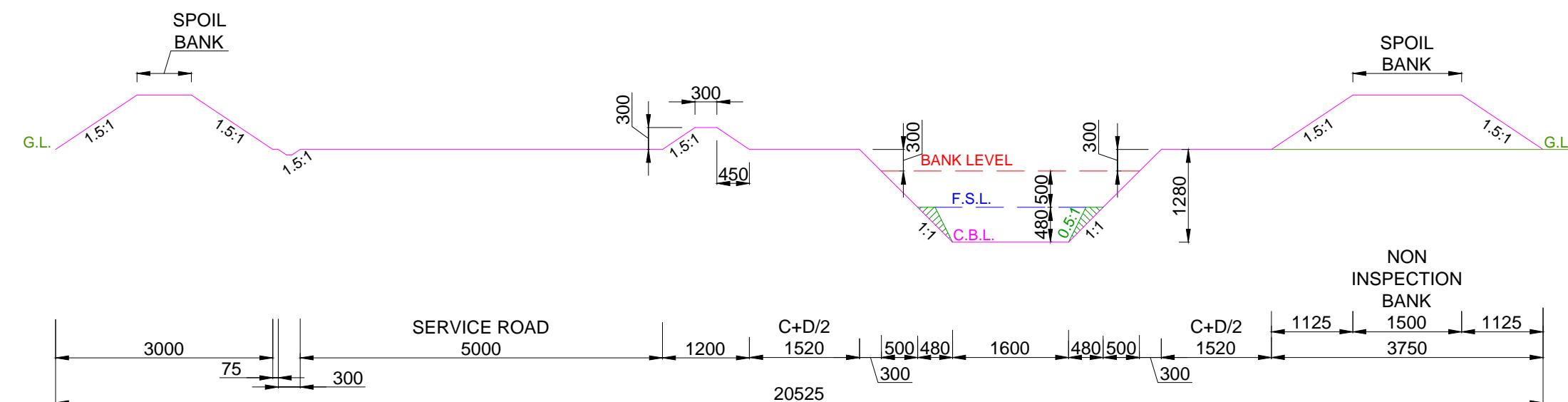
Checked By:-

Approved By:-

TYPICAL X-SECTION

**TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)**

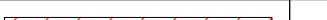
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

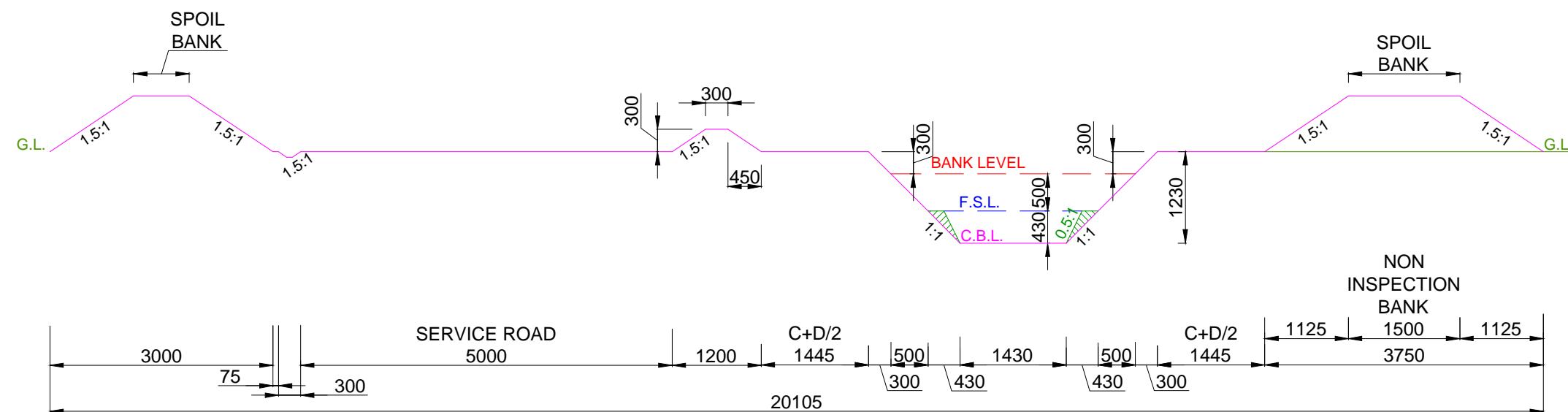
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA	WAPCOS LTD.	Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)
	FILL AREA		Drawing No. :- ⁶	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)
				1 of 4

**TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)**

DESIGN SECTION FOR FULL CUTTING



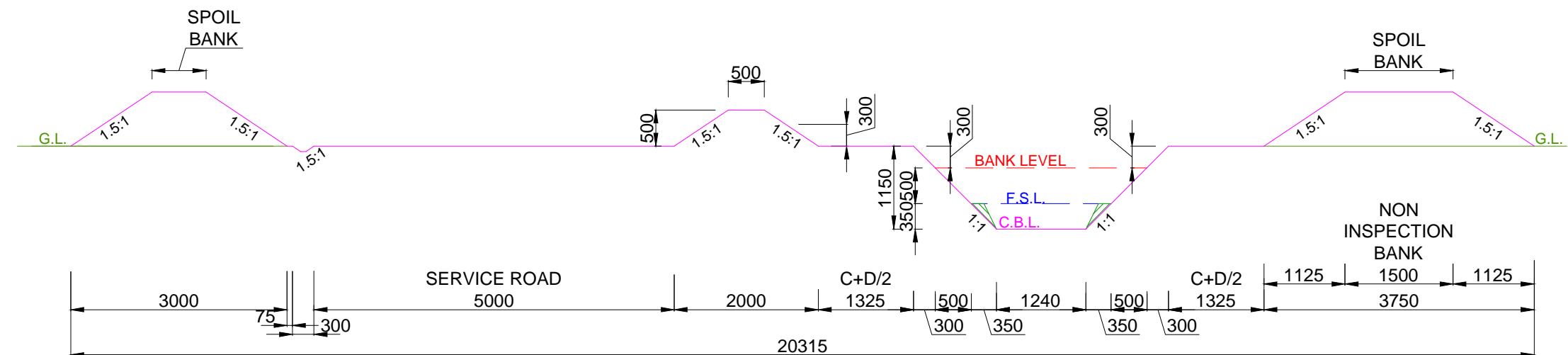
DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.925 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
 CUT AREA			Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)
 FILL AREA			Drawing No. :- ⁷	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

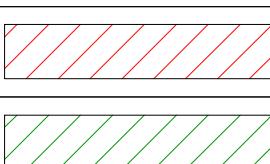


DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

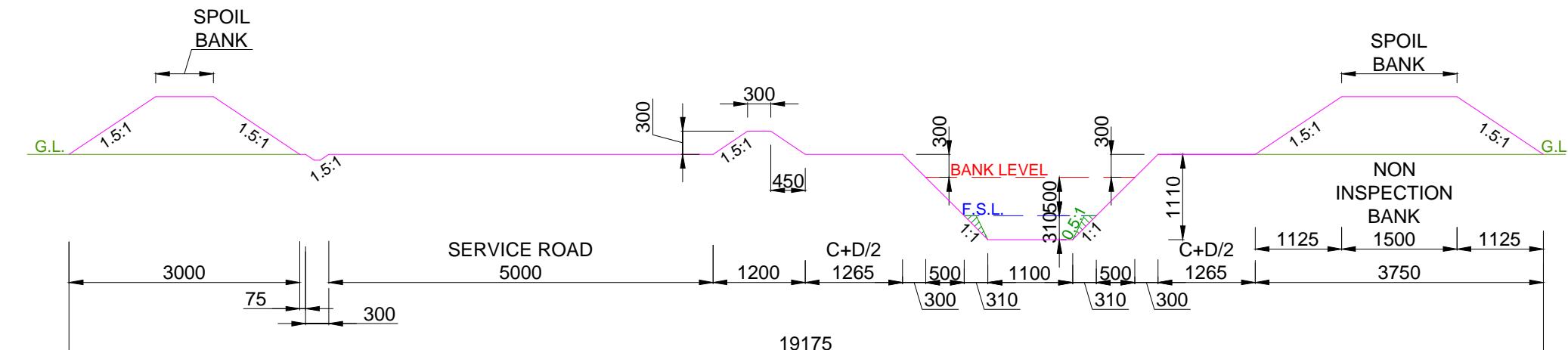
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-⁸

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)

**TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)**

DESIGN SECTION FOR FULL CUTTING



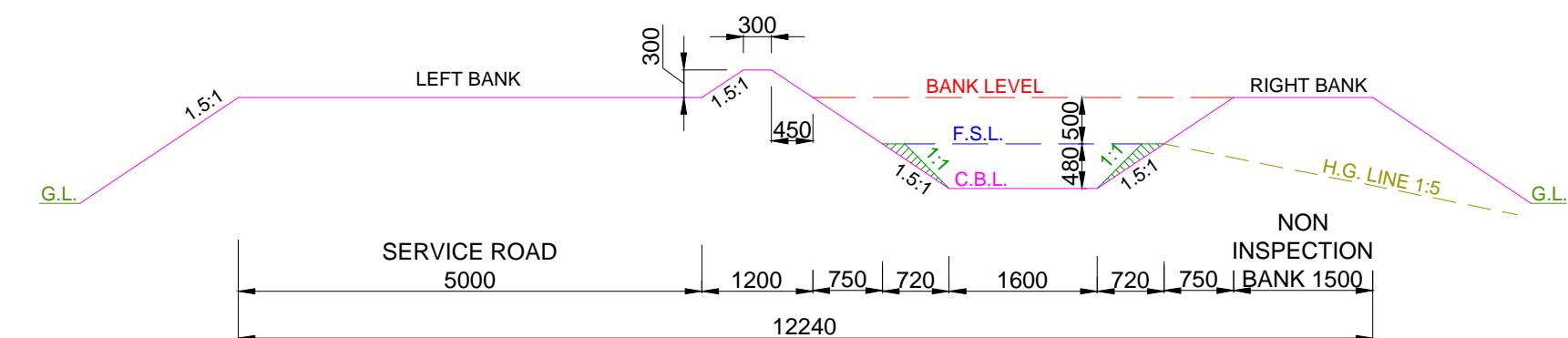
DESIGN SECTION FROM CH: 2.830 KM TO CH: 3.450 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND							
 CUT AREA		WAPCOS LTD.	Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)							
 FILL AREA			Drawing No. :- ⁹	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)							
12	11	10	9	8	7	6	5	4	3	2	1

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

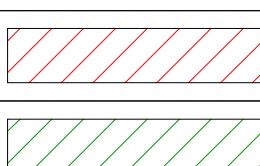


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

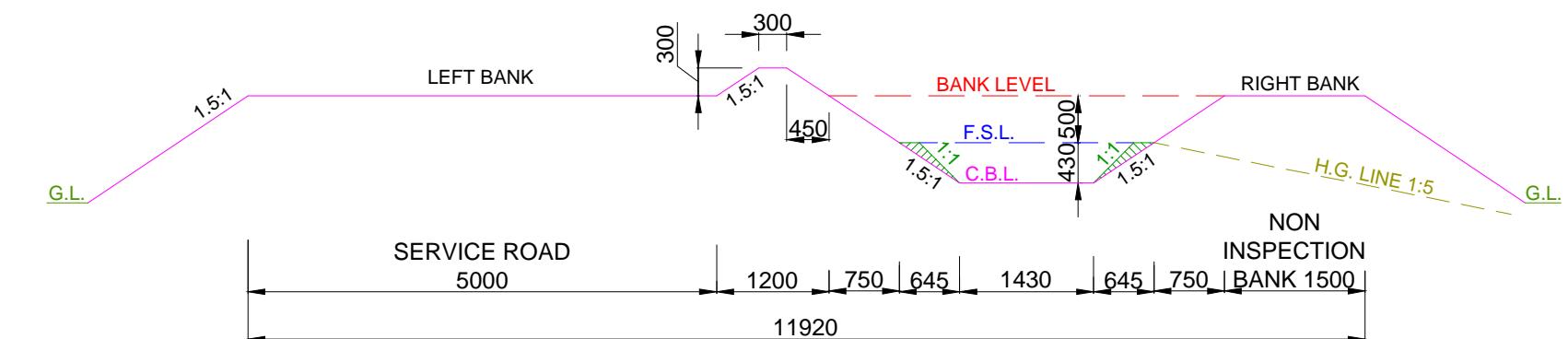
Drawing Title :-

X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-¹⁰

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

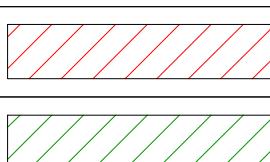


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.925 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.


Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

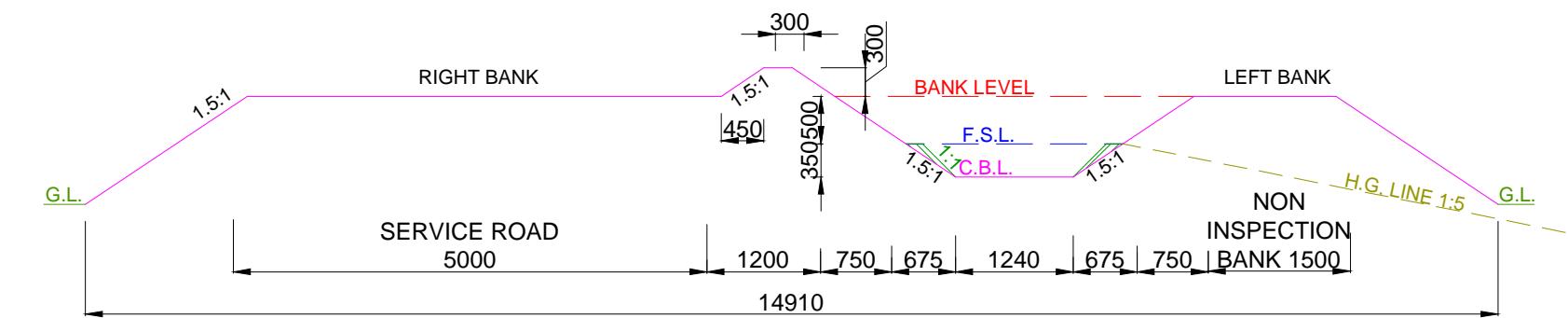
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :¹¹

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)

**TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)**

DESIGN SECTION FOR FULL FILLING



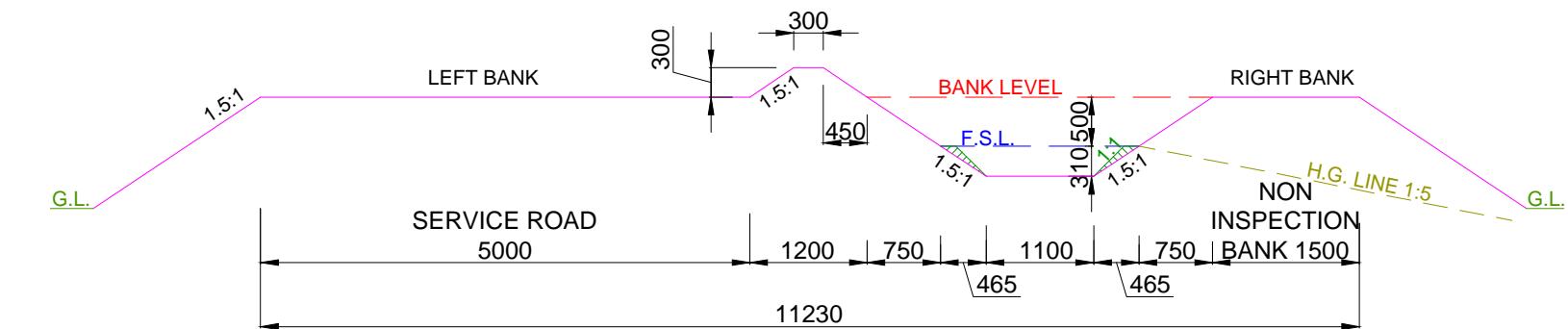
DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA	WAPCOS LTD. 	Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)
	FILL AREA		Drawing No. :- ¹²	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)
				3 of 4

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

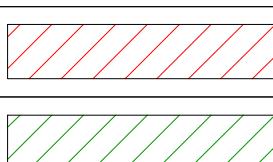


DESIGN SECTION FROM CH: 2.830 KM TO CH: 3.450 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



CUT AREA

FILL AREA

Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

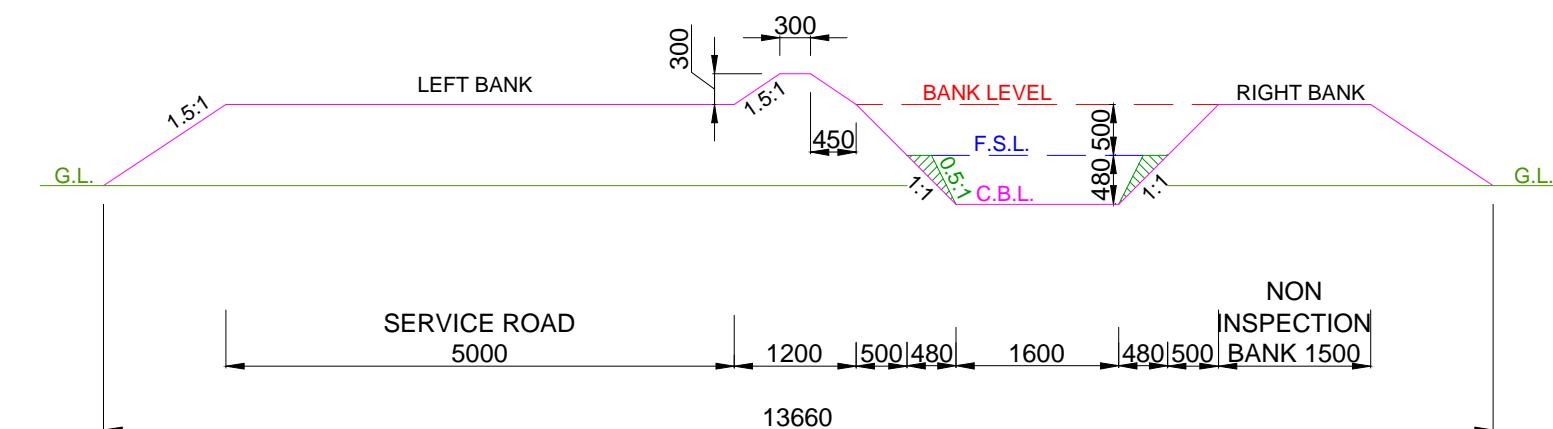
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-¹³

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

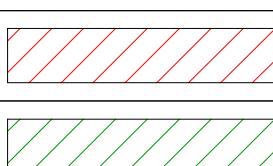


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

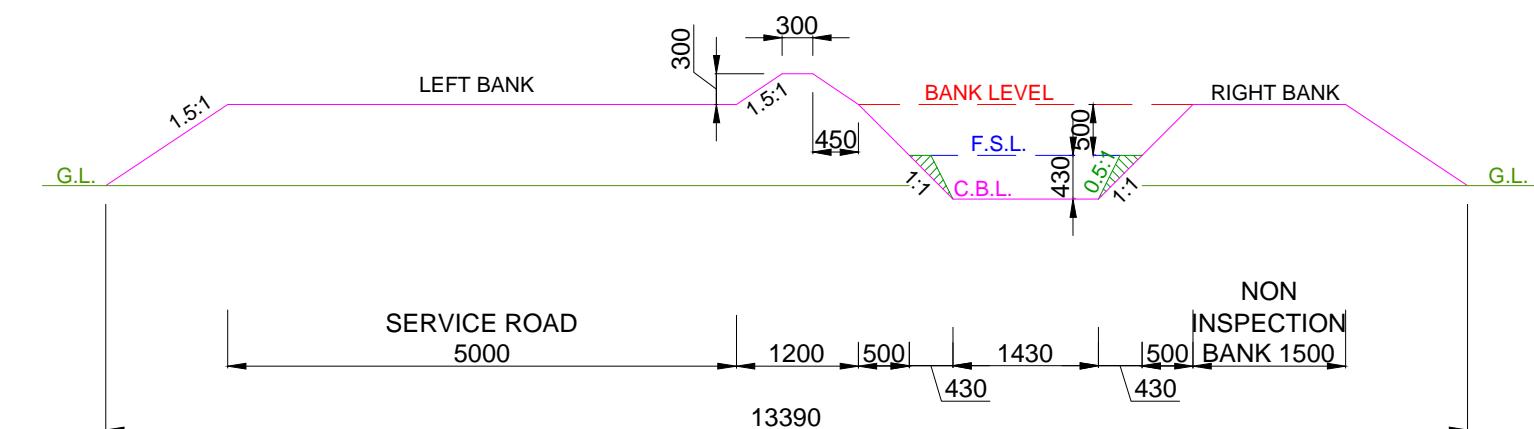
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-¹⁴

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

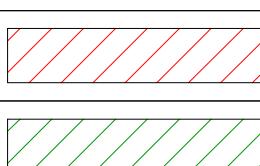


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.925 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

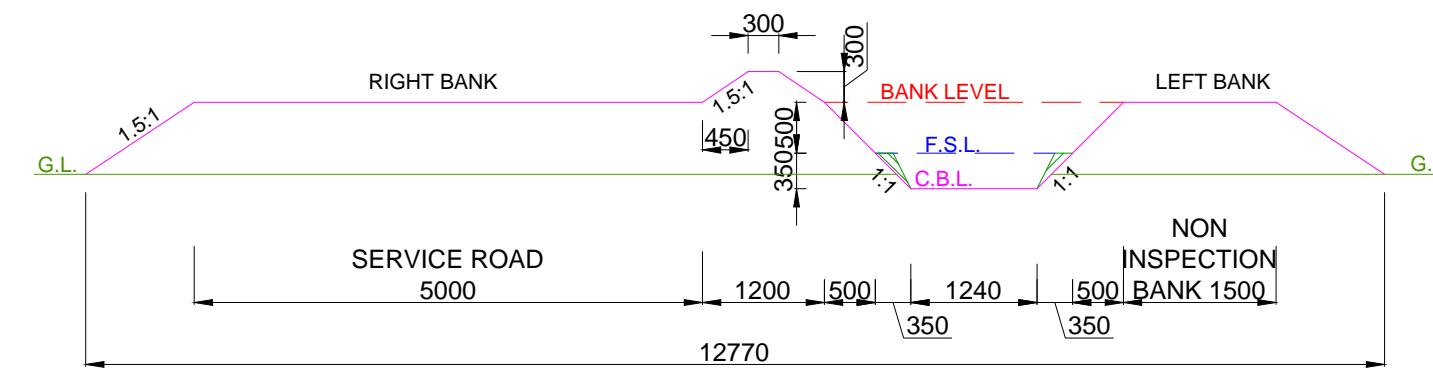
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-¹⁵

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

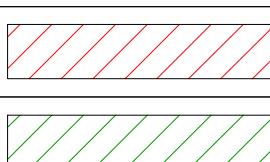


DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



Prepared by :-

WAPCOS LTD.



CUT AREA

FILL AREA

Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

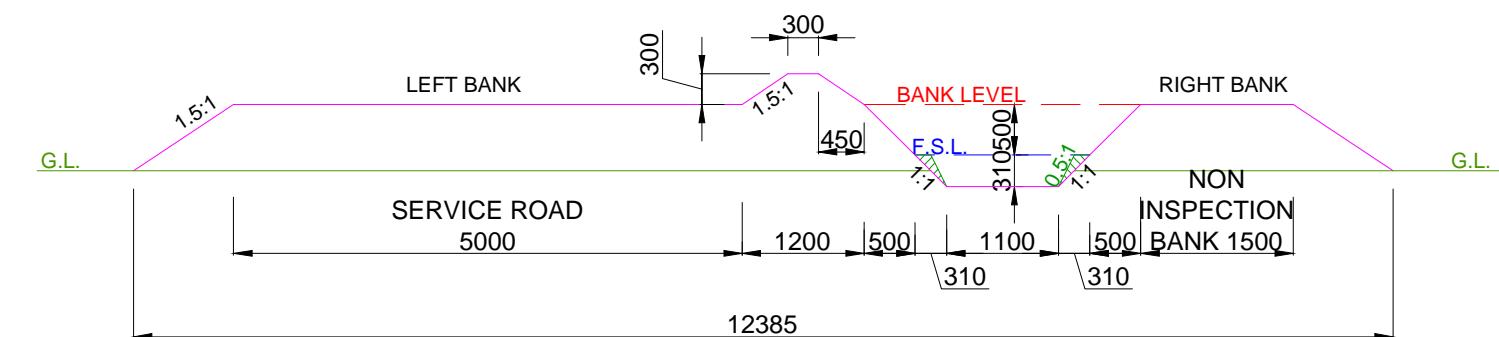
X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-¹⁶

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF AMBA MINOR
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

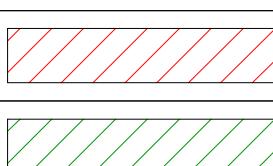


DESIGN SECTION FROM CH: 2.830 KM TO CH: 3.450 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND



CUT AREA

FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

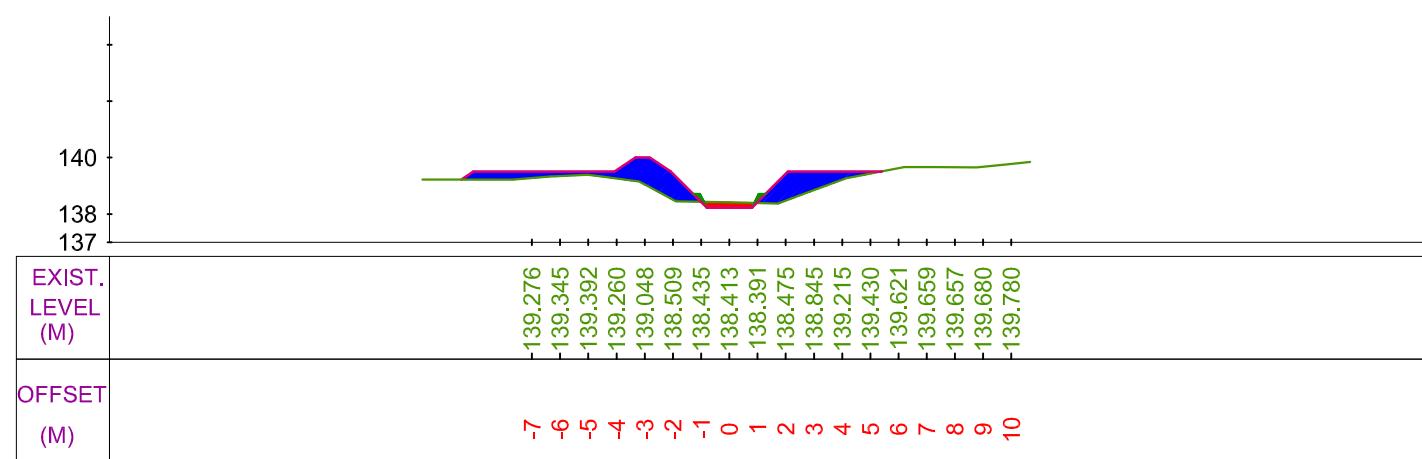
Drawing Title :-

X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L).
NORTH KOEL RIGHT MAIN CANAL)

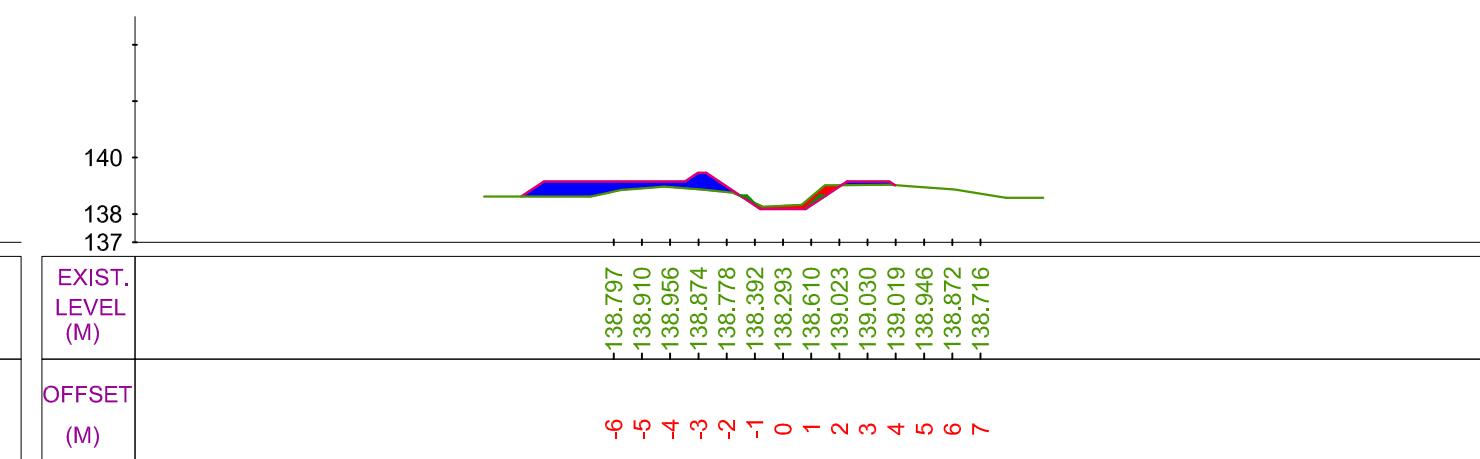
Drawing No. :¹⁷

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)

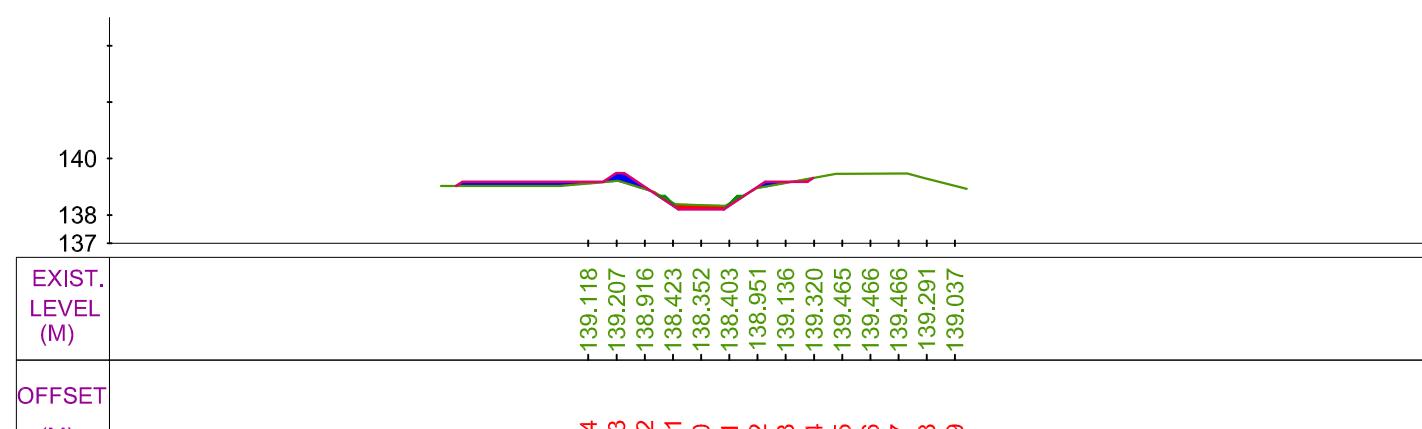
CROSS-SECTION



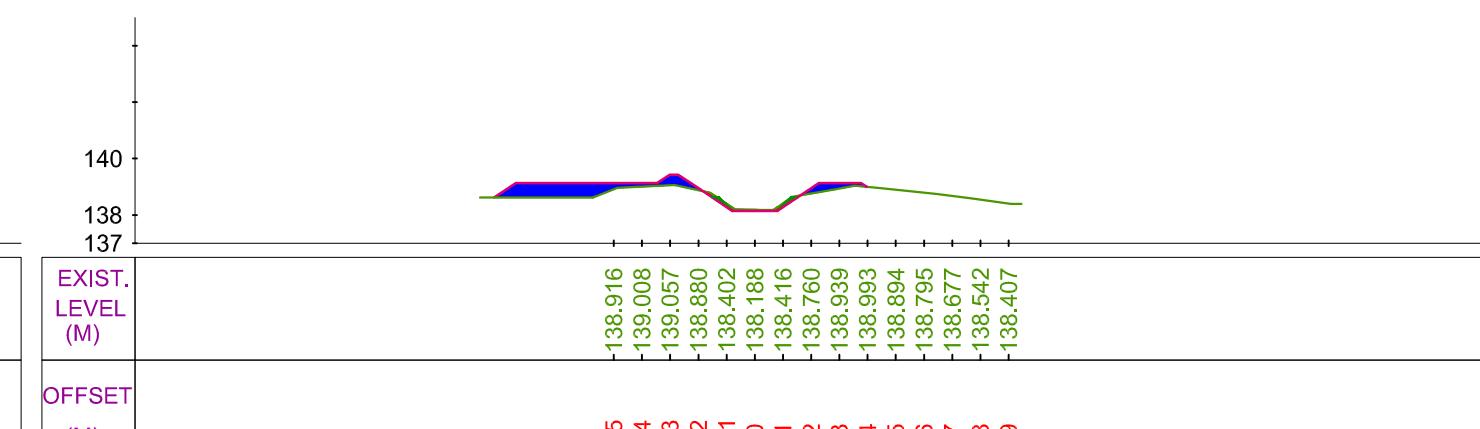
CUTTING AREA (SQ.M) = 0.318 CH. (KM):- 0+100
 FILLING AREA (SQ.M) = 5.322 DESIGNED BED LEVEL = 138.225 M



CUTTING AREA (SQ.M) = 0.492 CH. (KM):- 0+300
 FILLING AREA (SQ.M) = 2.993 DESIGNED BED LEVEL = 138.175 M

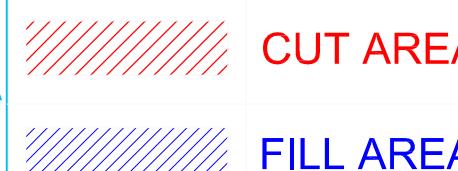


CUTTING AREA (SQ.M) = 0.316 CH. (KM):- 0+200
 FILLING AREA (SQ.M) = 1.095 DESIGNED BED LEVEL = 138.200 M



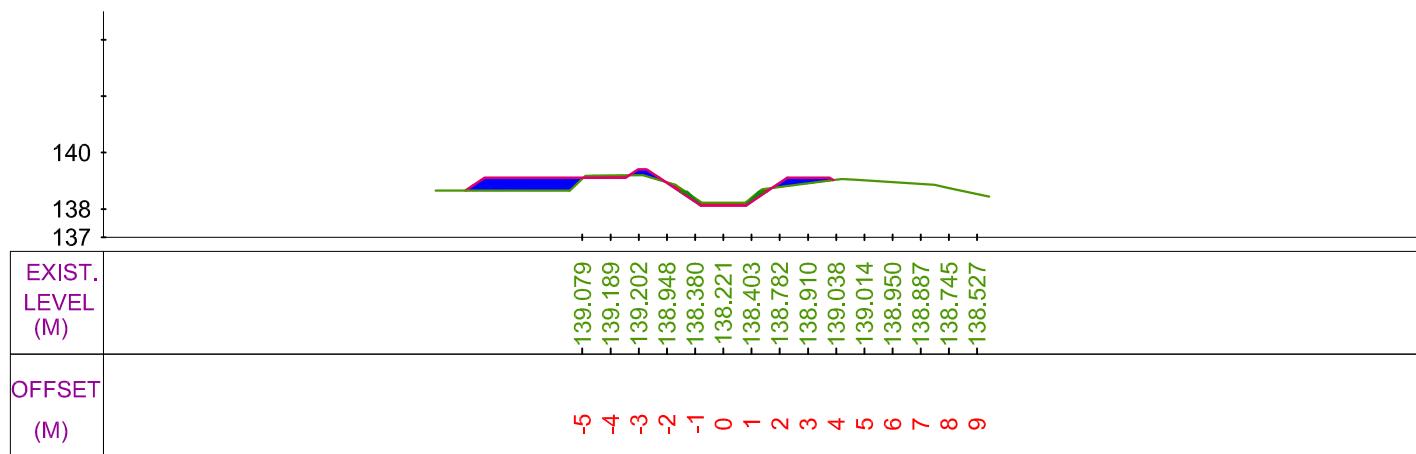
CUTTING AREA (SQ.M) = 0.159 CH. (KM):- 0+400
 FILLING AREA (SQ.M) = 2.868 DESIGNED BED LEVEL = 138.150 M

LEGEND

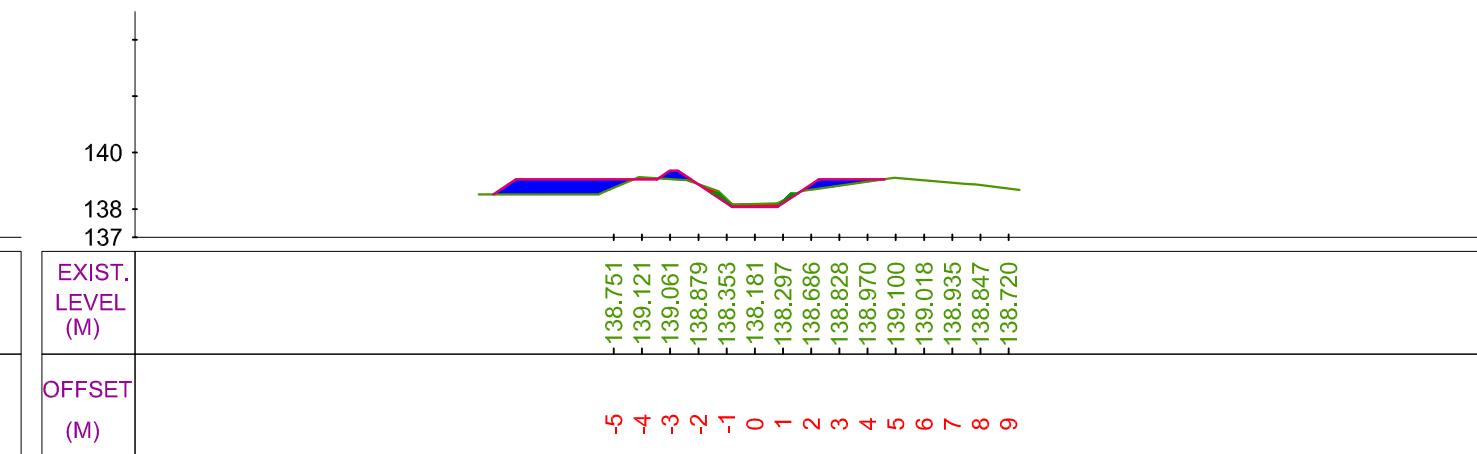


Prepared by :-
WAPCOS LTD.

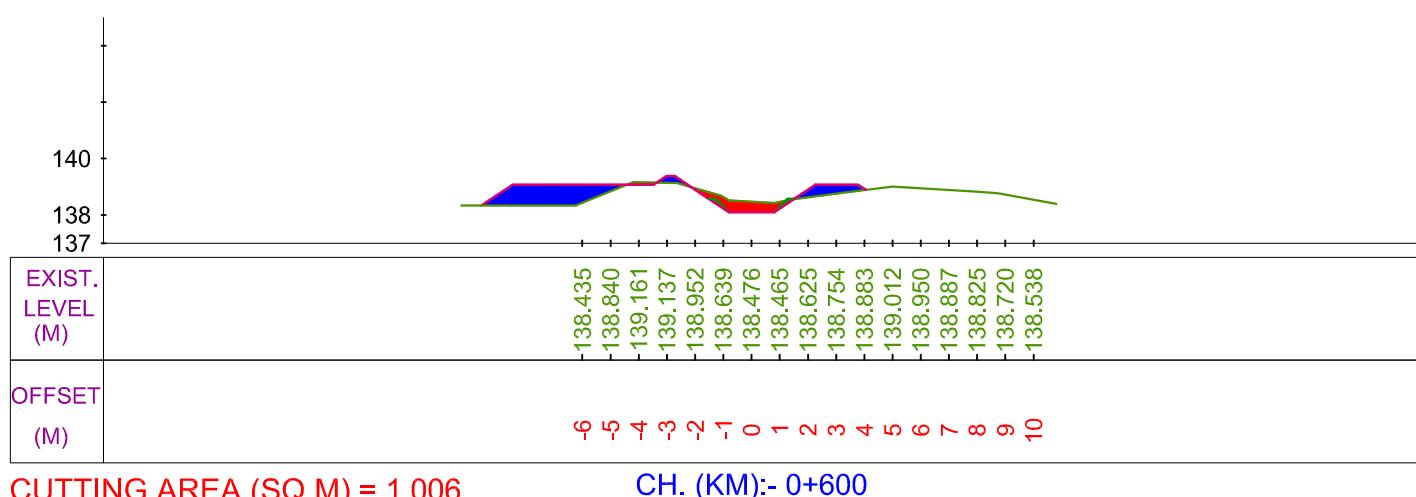
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
 Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
 Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 19 1 of 9



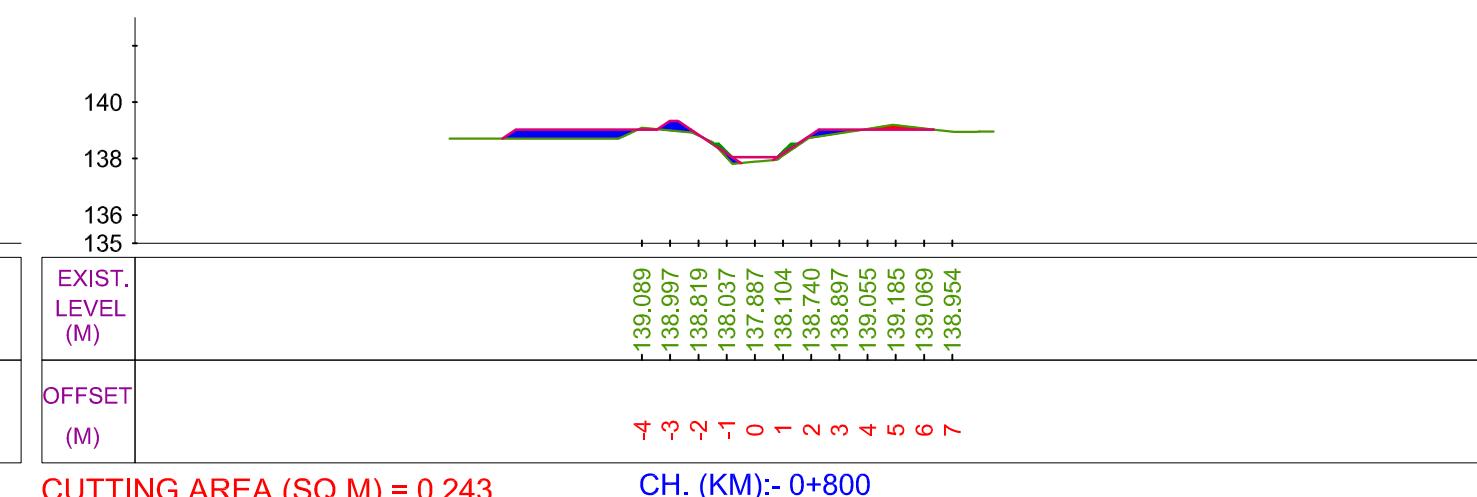
CUTTING AREA (SQ.M) = 0.431 CH. (KM):- 0+500
FILLING AREA (SQ.M) = 2.182 DESIGNED BED LEVEL = 138.125 M



CUTTING AREA (SQ.M) = 0.328 CH. (KM):- 0+700
FILLING AREA (SQ.M) = 2.840 DESIGNED BED LEVEL = 138.075 M

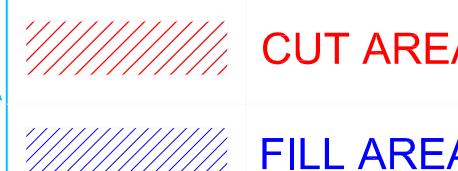


CUTTING AREA (SQ.M) = 1.006 CH. (KM):- 0+600
FILLING AREA (SQ.M) = 3.610 DESIGNED BED LEVEL = 138.100 M



CUTTING AREA (SQ.M) = 0.243 CH. (KM):- 0+800
FILLING AREA (SQ.M) = 2.105 DESIGNED BED LEVEL = 138.050 M

LEGEND

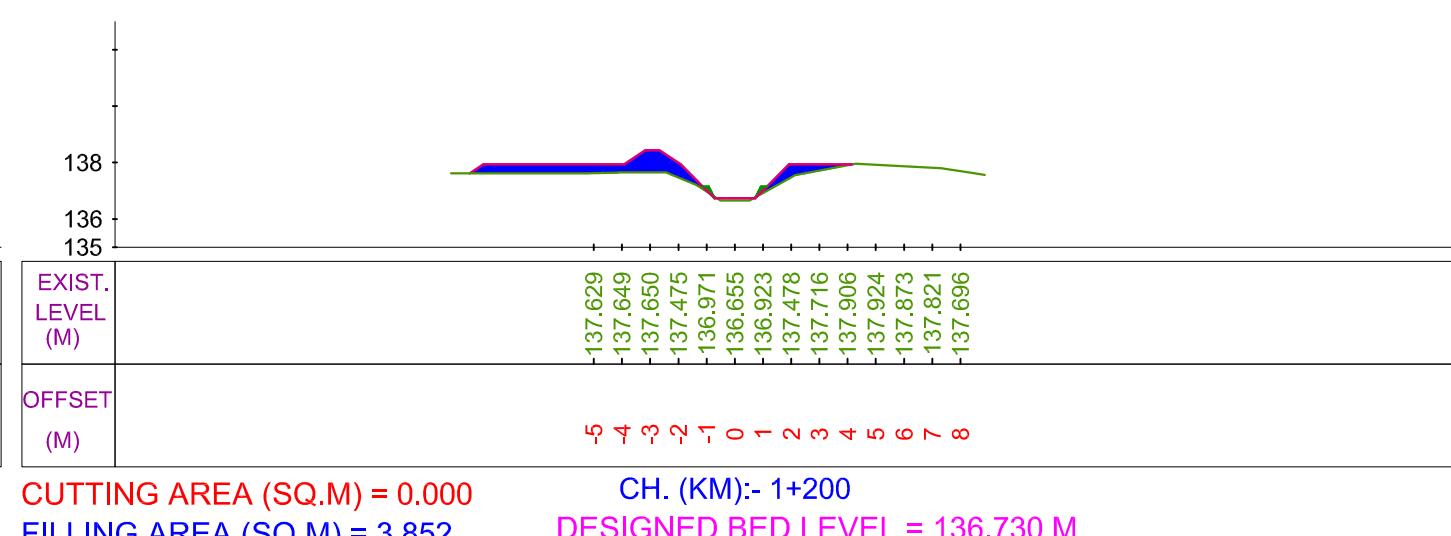
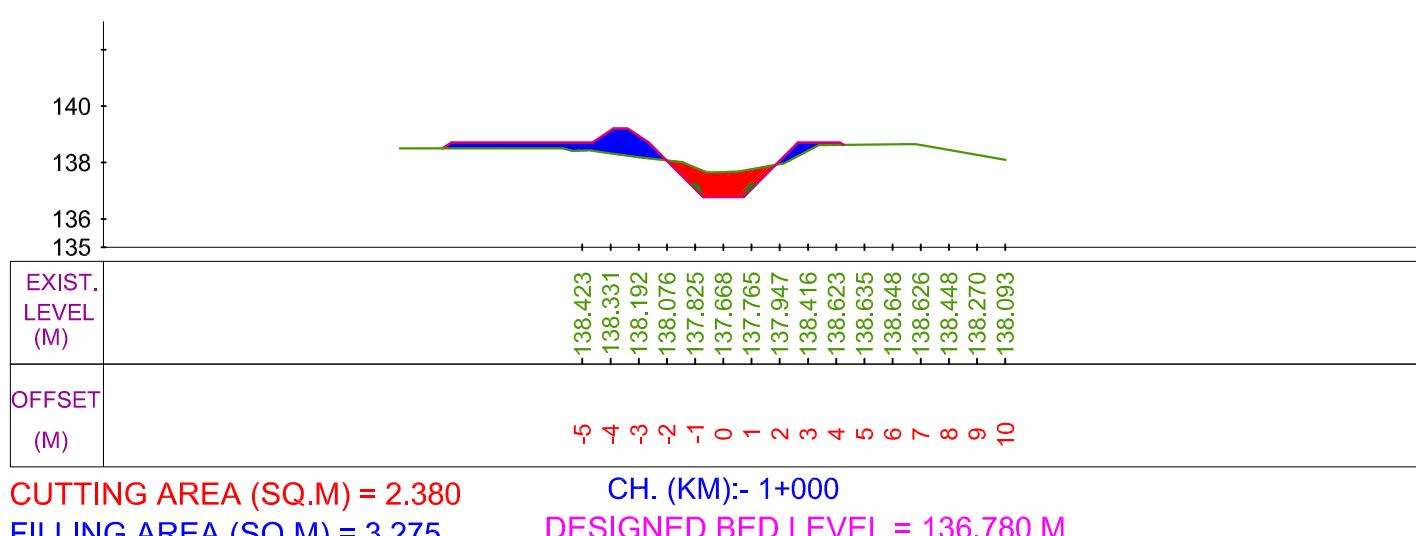
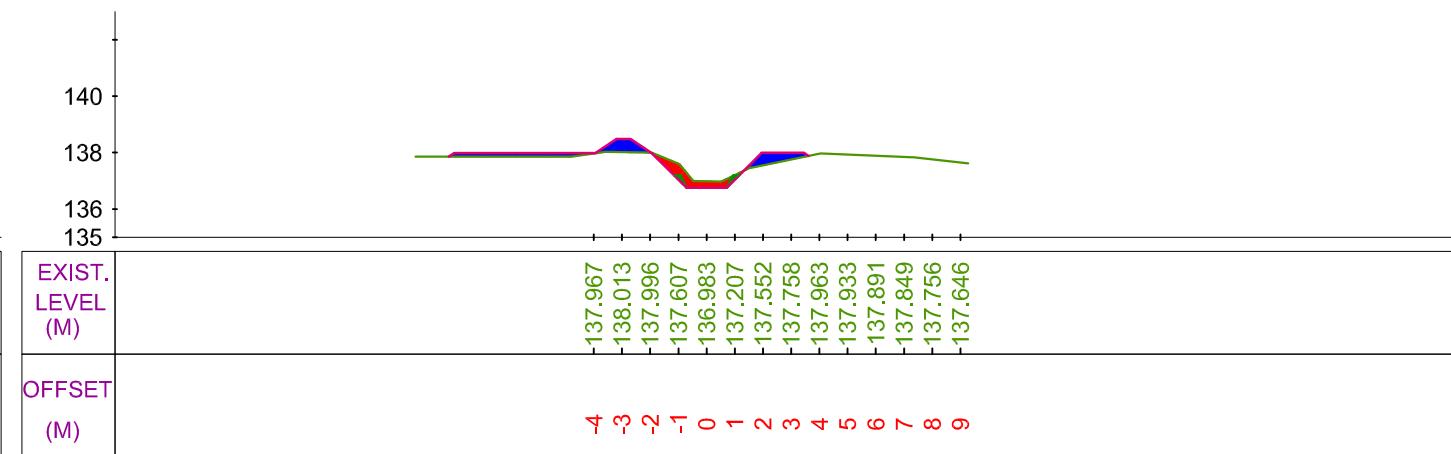
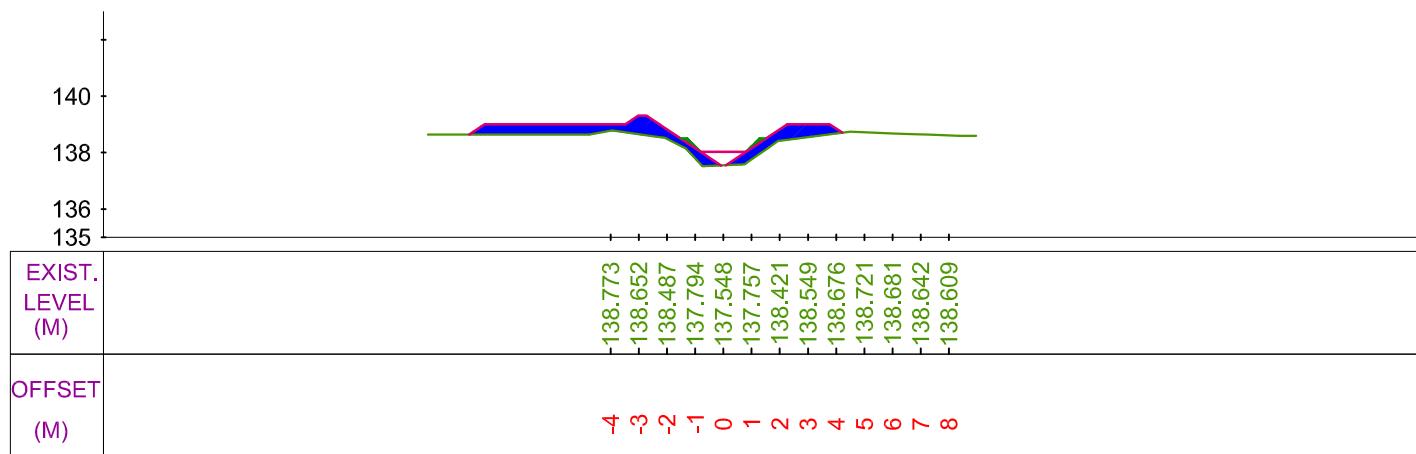


EXISTING BED LINE

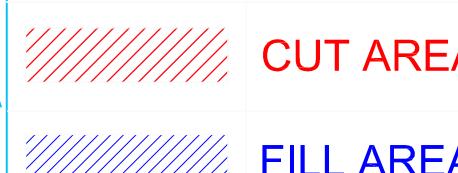
Prepared by :-
WAPCOS LTD.


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 20 2 of 9

X SECTION OF AMBA MINOR



LEGEND



Prepared by :-
WAPCOS LTD.


Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

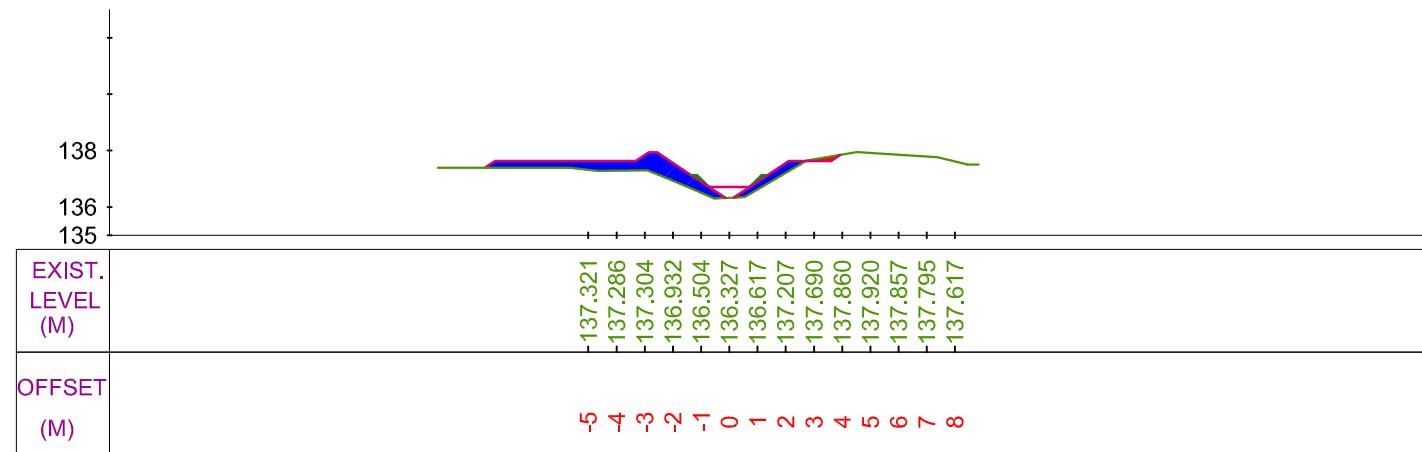
X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC-

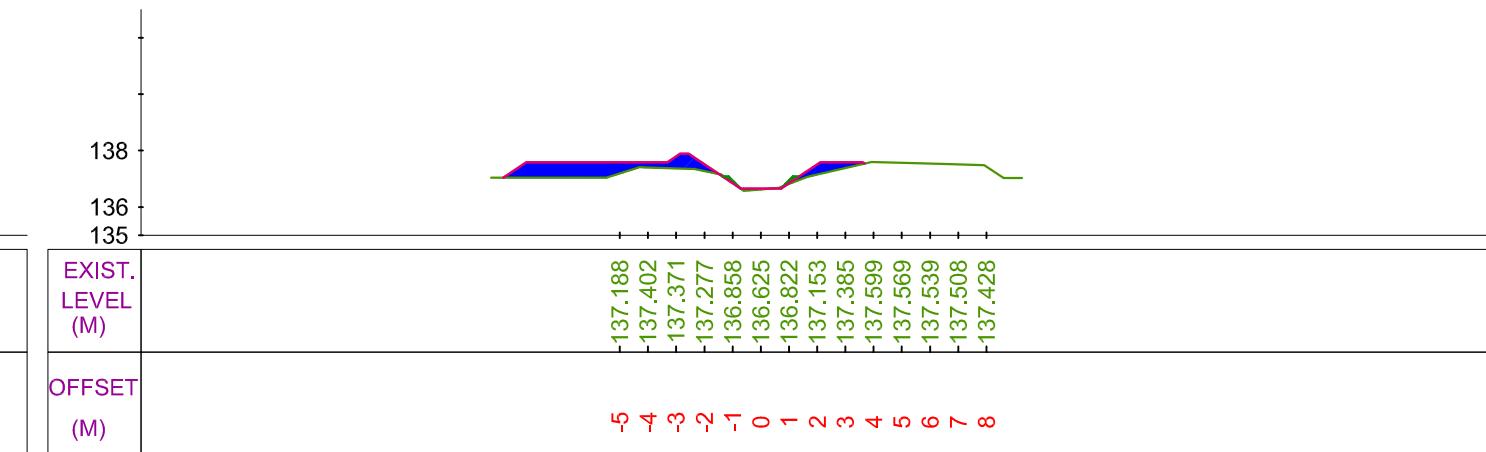
3 of 9

X SECTION OF AMBA MINOR



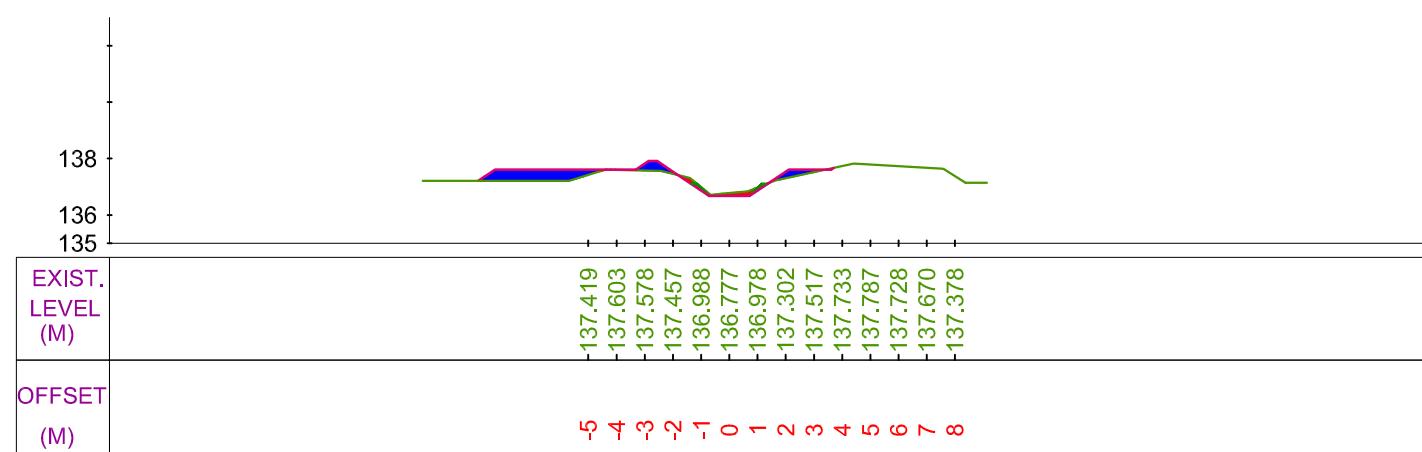
CUTTING AREA (SQ.M) = 0.099
FILLING AREA (SQ.M) = 3.629

CH. (KM):- 1+300
DESIGNED BED LEVEL = 136.705 M



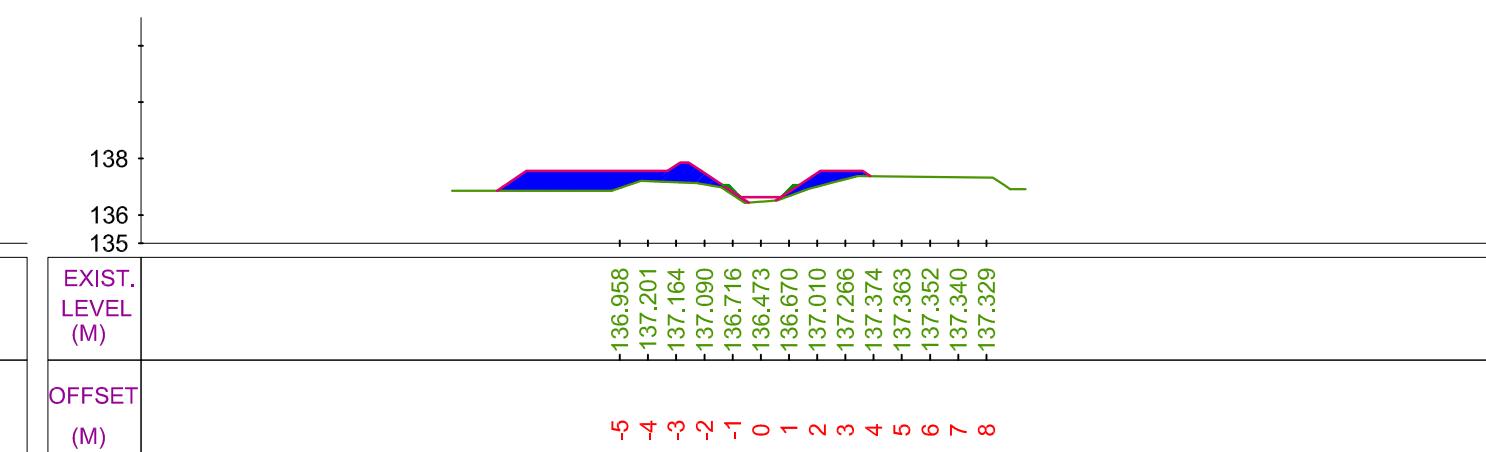
CUTTING AREA (SQ.M) = 0.013
FILLING AREA (SQ.M) = 3.592

CH. (KM):- 1+500
DESIGNED BED LEVEL = 136.655 M



CUTTING AREA (SQ.M) = 0.251
FILLING AREA (SQ.M) = 2.033

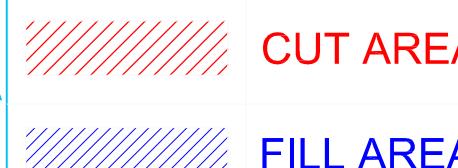
CH. (KM):- 1+400
DESIGNED BED LEVEL = 136.680 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.274

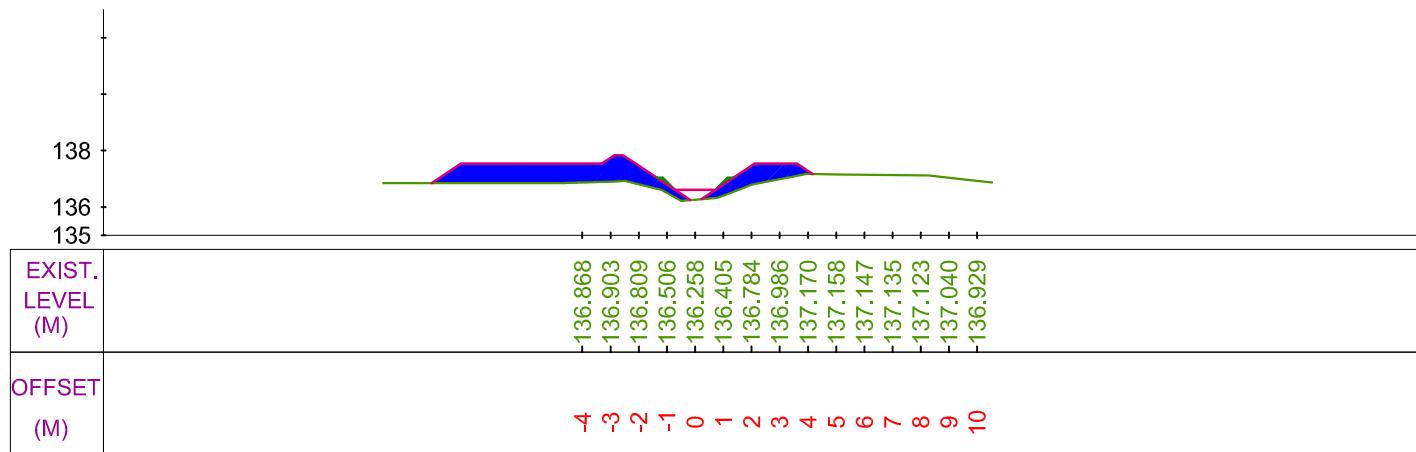
CH. (KM):- 1+600
DESIGNED BED LEVEL = 136.630 M

LEGEND

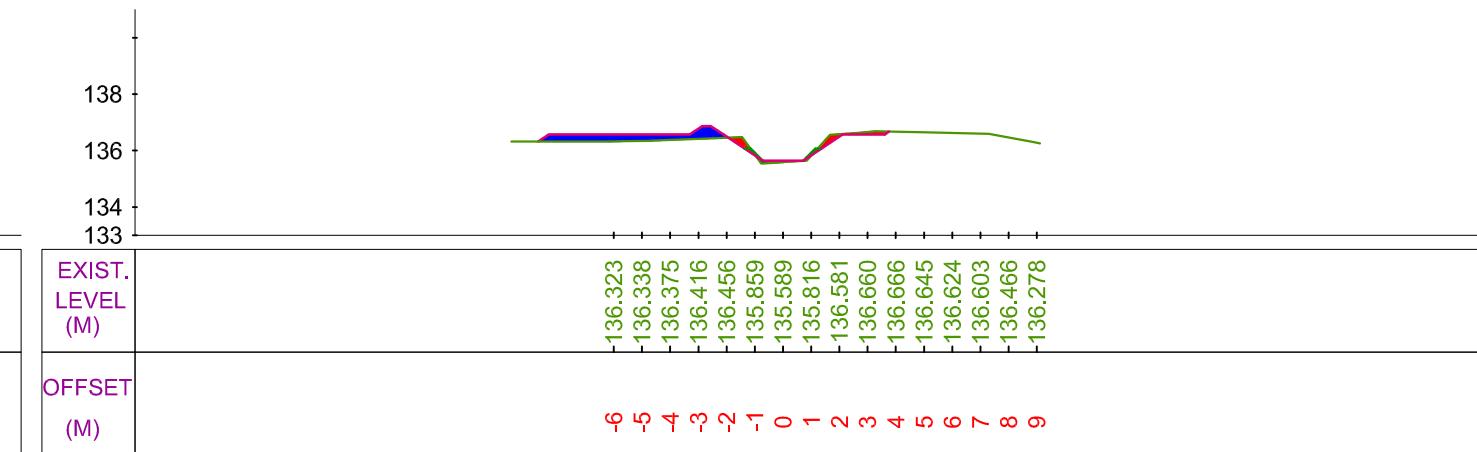


Prepared by :-
WAPCOS LTD.

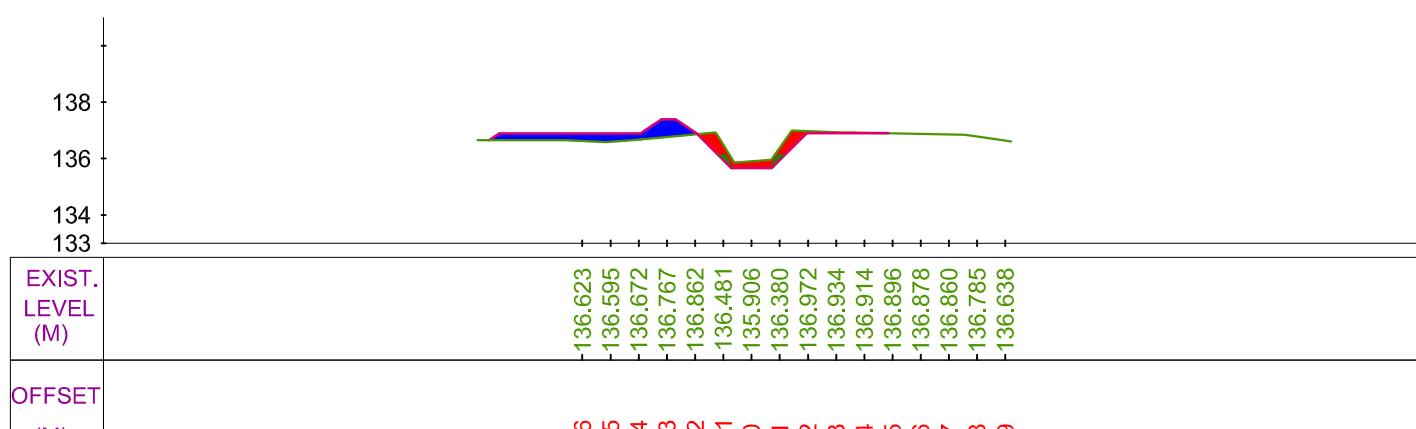

Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 22 4 of 9



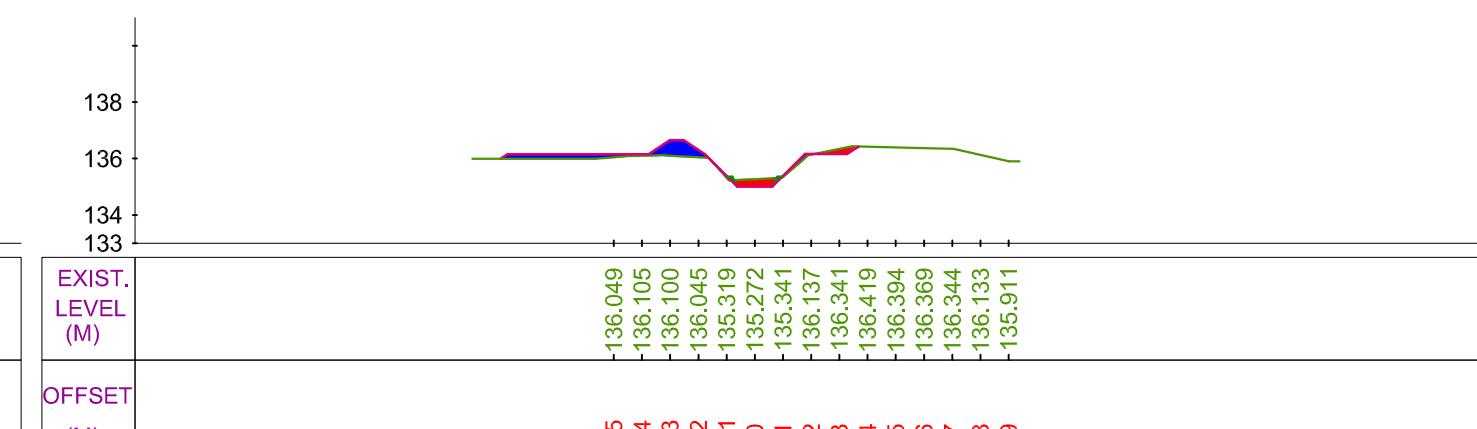
CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 1+700
FILLING AREA (SQ.M) = 7.195 DESIGNED BED LEVEL = 136.605 M



CUTTING AREA (SQ.M) = 0.404 CH. (KM):- 1+900
FILLING AREA (SQ.M) = 1.710 DESIGNED BED LEVEL = 135.640 M

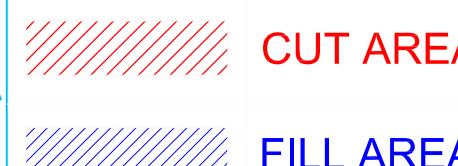


CUTTING AREA (SQ.M) = 1.380 CH. (KM):- 1+800
FILLING AREA (SQ.M) = 2.211 DESIGNED BED LEVEL = 135.665 M



CUTTING AREA (SQ.M) = 0.559 CH. (KM):- 2+000
FILLING AREA (SQ.M) = 1.596 DESIGNED BED LEVEL = 135.005 M

LEGEND



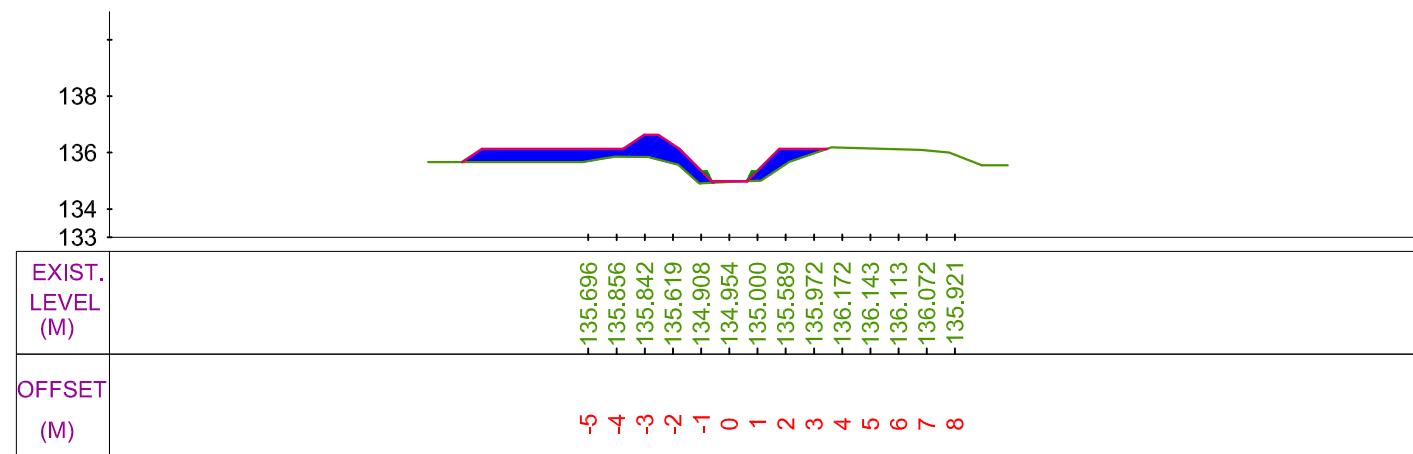
EXISTING BED LINE

DESIGNED BED LINE

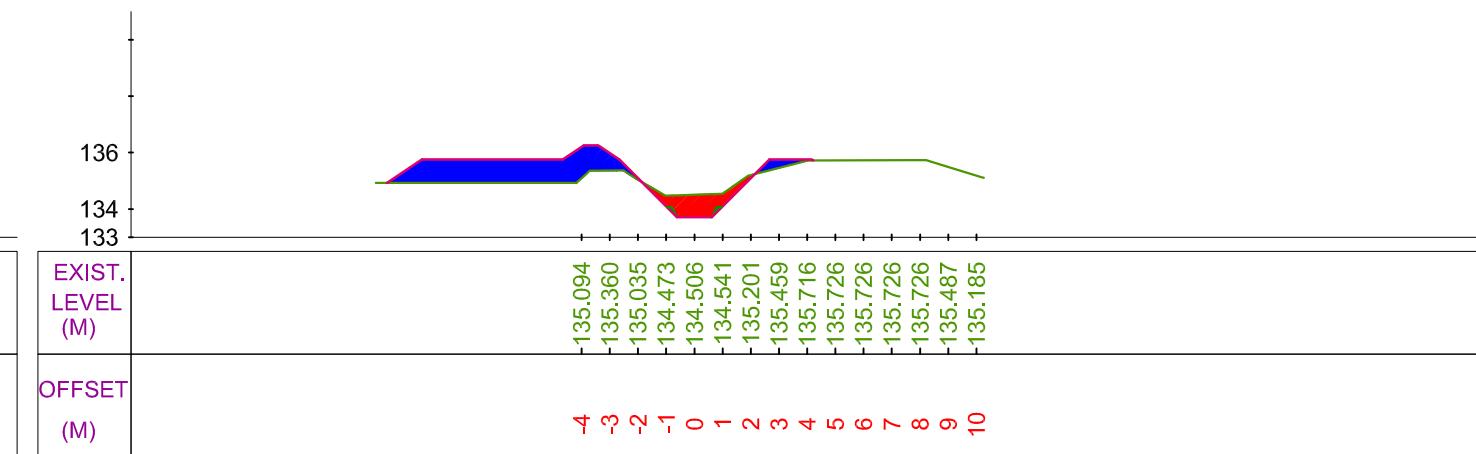
Prepared by :-
WAPCOS LTD.


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 23 5 of 9

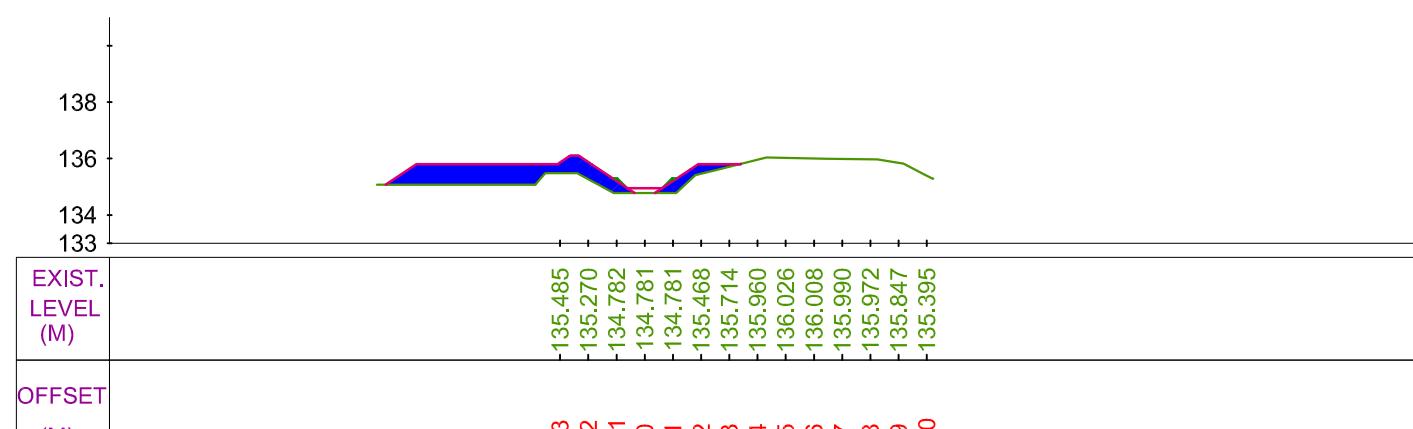
X SECTION OF AMBA MINOR



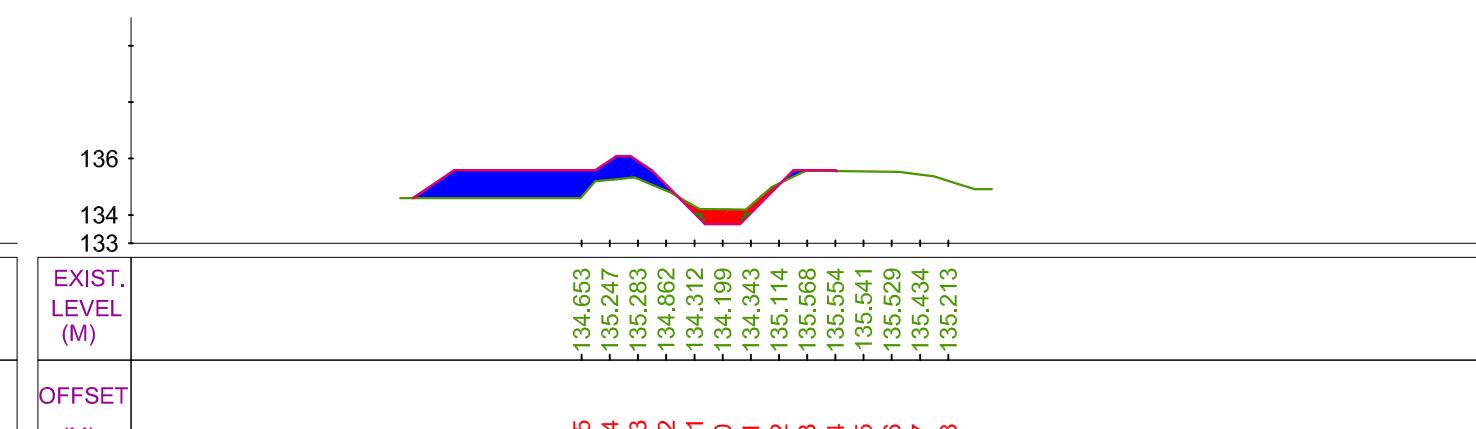
CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+100
 FILLING AREA (SQ.M) = 5.223 DESIGNED BED LEVEL = 134.980 M



CUTTING AREA (SQ.M) = 1.855 CH. (KM):- 2+300
 FILLING AREA (SQ.M) = 6.878 DESIGNED BED LEVEL = 133.710 M

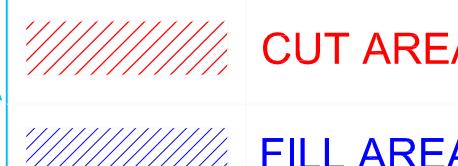


CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+200
 FILLING AREA (SQ.M) = 5.846 DESIGNED BED LEVEL = 134.955 M



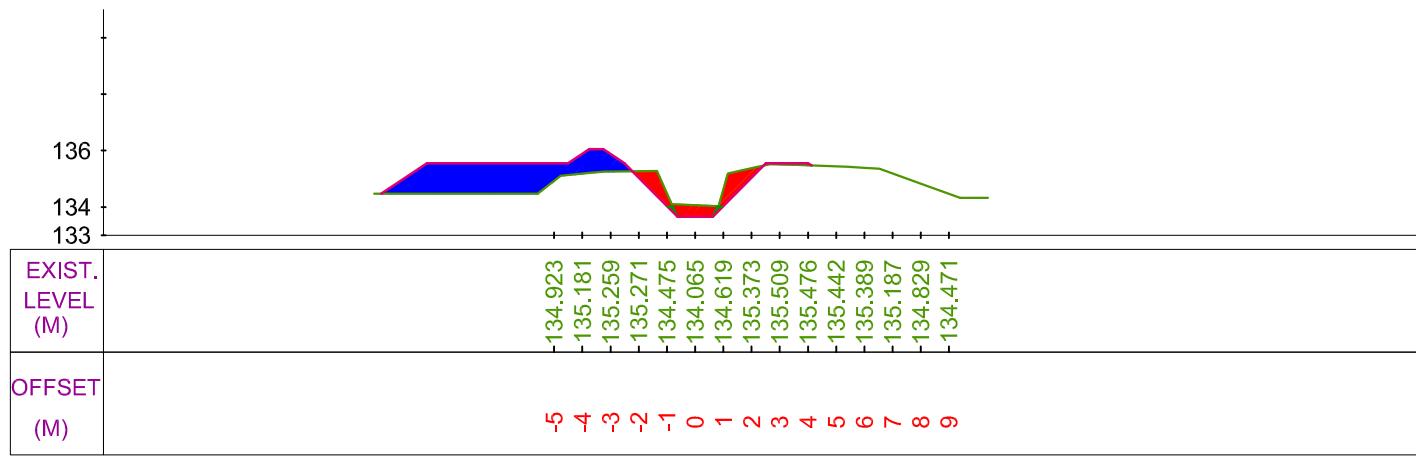
CUTTING AREA (SQ.M) = 1.118 CH. (KM):- 2+400
 FILLING AREA (SQ.M) = 7.087 DESIGNED BED LEVEL = 133.685 M

LEGEND

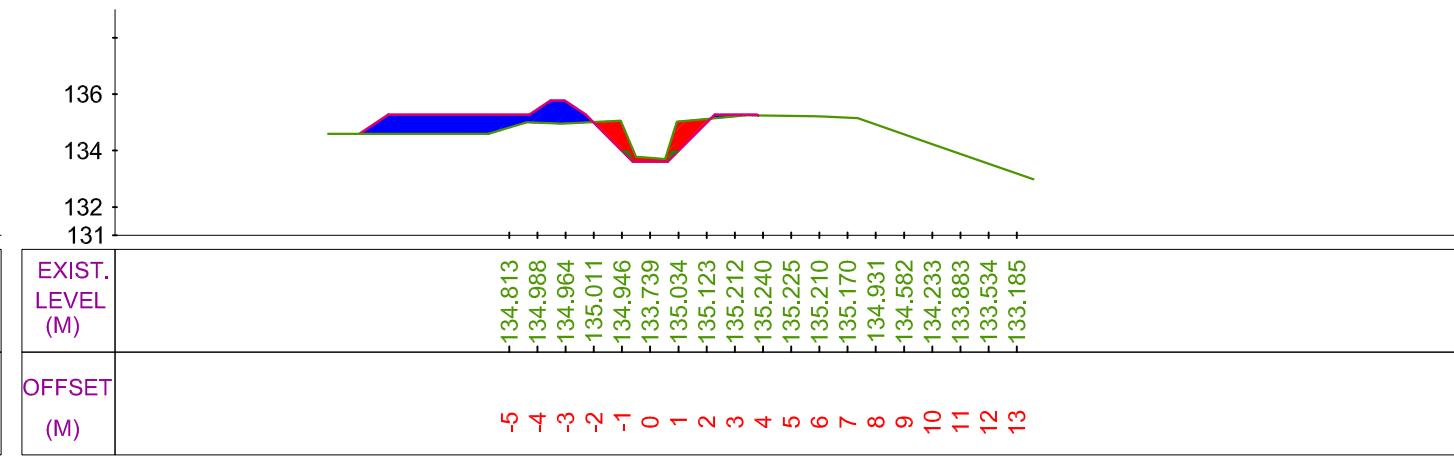


Prepared by :-
WAPCOS LTD.

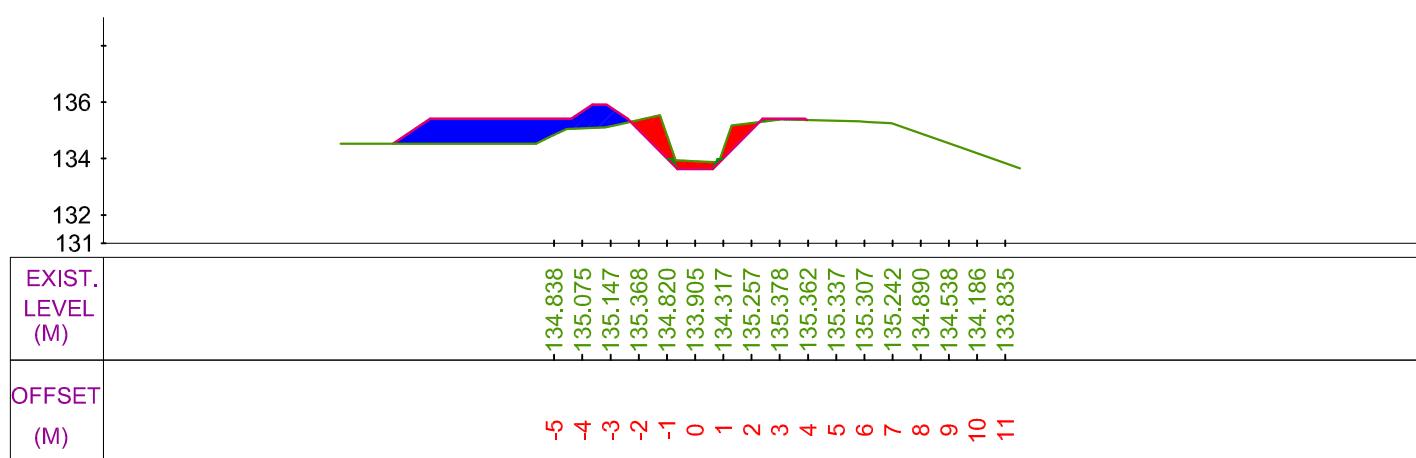

Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
 Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
 Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 24 6 of 9



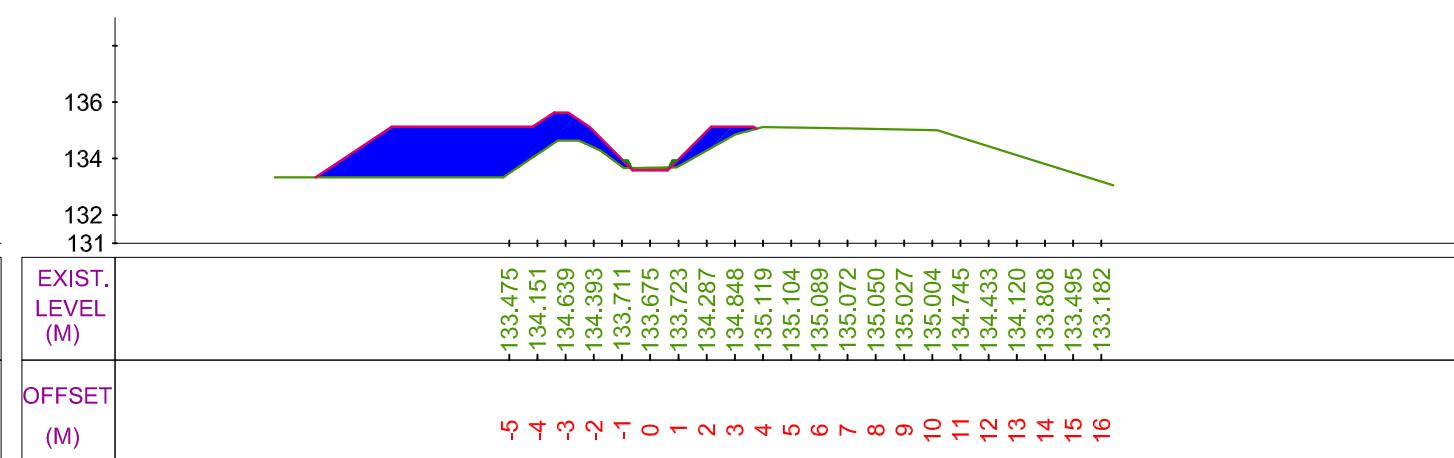
CUTTING AREA (SQ.M) = 2.056 CH. (KM):- 2+500
 FILLING AREA (SQ.M) = 7.251 DESIGNED BED LEVEL = 133.660 M



CUTTING AREA (SQ.M) = 1.884 CH. (KM):- 2+700
 FILLING AREA (SQ.M) = 4.818 DESIGNED BED LEVEL = 133.610 M

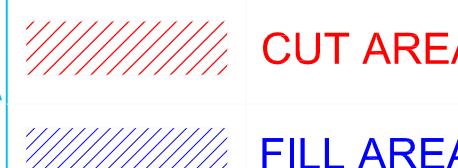


CUTTING AREA (SQ.M) = 2.030 CH. (KM):- 2+600
 FILLING AREA (SQ.M) = 5.872 DESIGNED BED LEVEL = 133.635 M



CUTTING AREA (SQ.M) = 0.116 CH. (KM):- 2+800
 FILLING AREA (SQ.M) = 14.638 DESIGNED BED LEVEL = 133.585 M

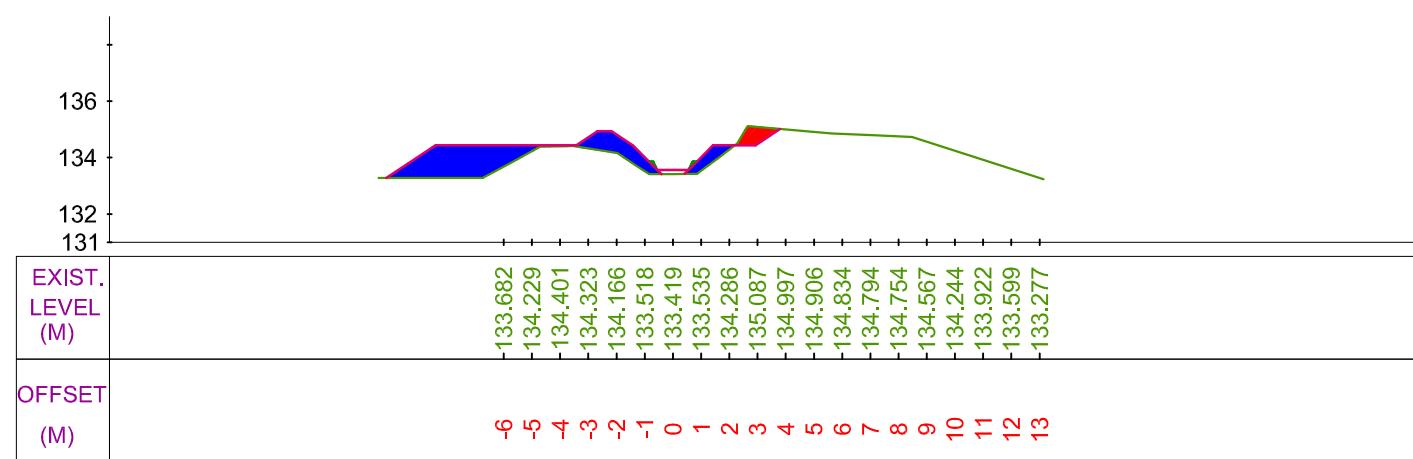
LEGEND



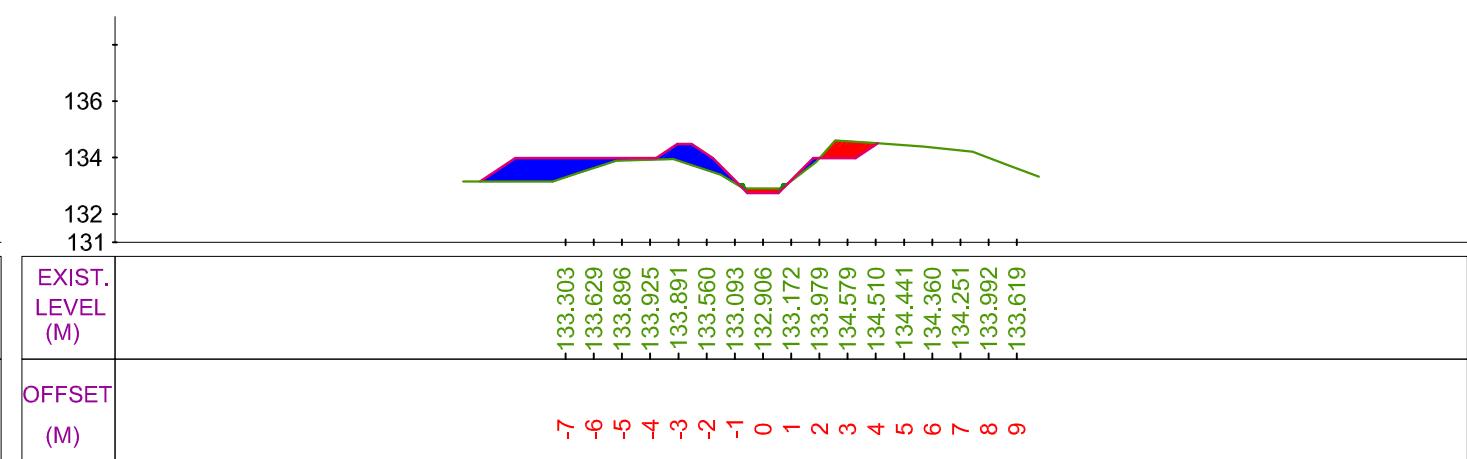
Prepared by :-
WAPCOS LTD.


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
 Drawing Title :- X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
 Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 25 7 of 9

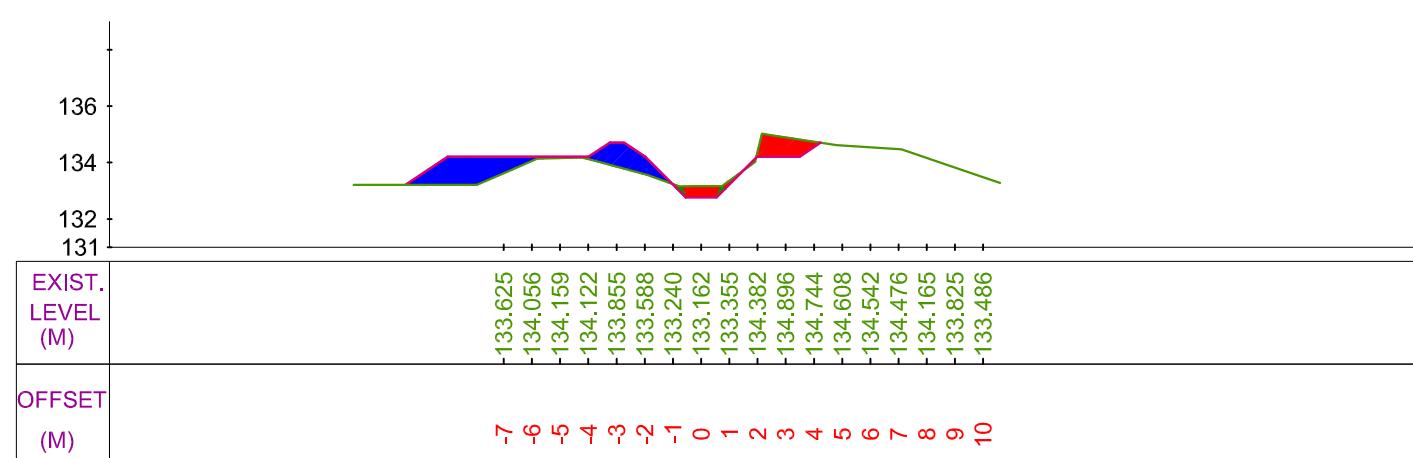
X SECTION OF AMBA MINOR



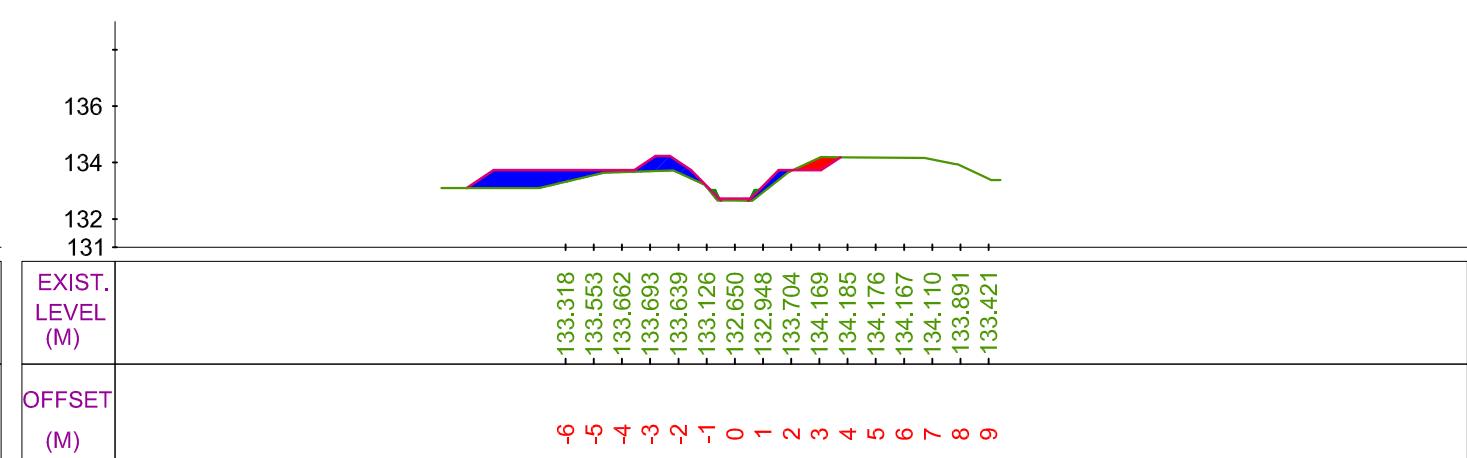
CUTTING AREA (SQ.M) = 0.614 CH. (KM):- 2+900
 FILLING AREA (SQ.M) = 6.352 DESIGNED BED LEVEL = 133.560 M



CUTTING AREA (SQ.M) = 1.021 CH. (KM):- 3+100
 FILLING AREA (SQ.M) = 4.126 DESIGNED BED LEVEL = 132.748 M

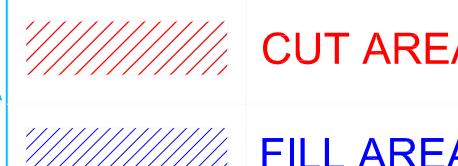


CUTTING AREA (SQ.M) = 1.849 CH. (KM):- 3+000
 FILLING AREA (SQ.M) = 4.701 DESIGNED BED LEVEL = 132.773 M



CUTTING AREA (SQ.M) = 0.393 CH. (KM):- 3+200
 FILLING AREA (SQ.M) = 3.438 DESIGNED BED LEVEL = 132.723 M

LEGEND



EXISTING BED LINE

Prepared by :-
WAPCOS LTD.


Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

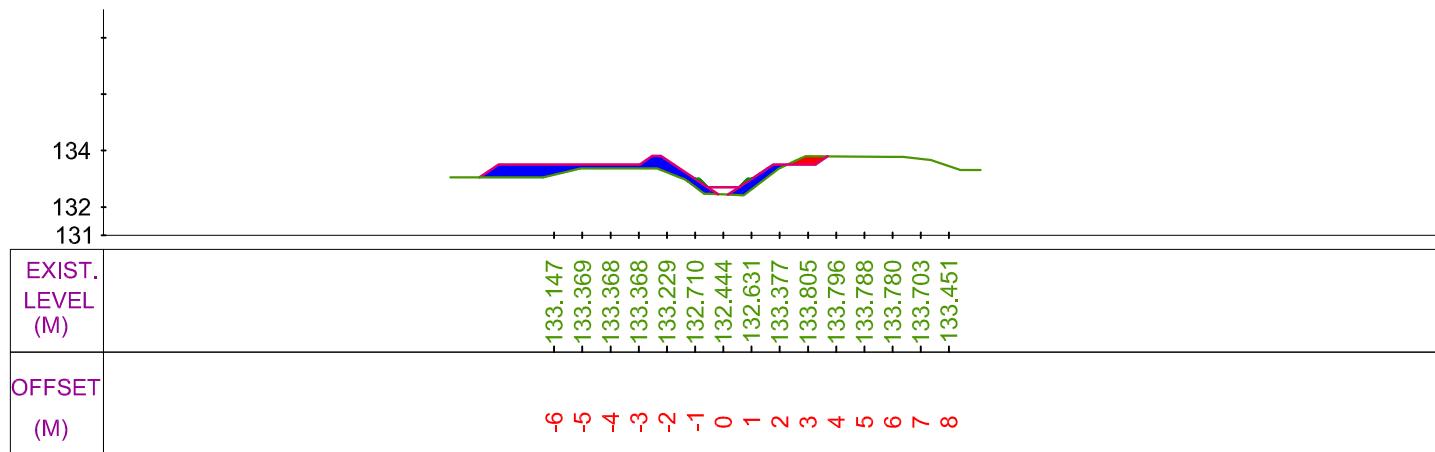
Drawing Title :-

X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L),
 NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC-

8 of 9

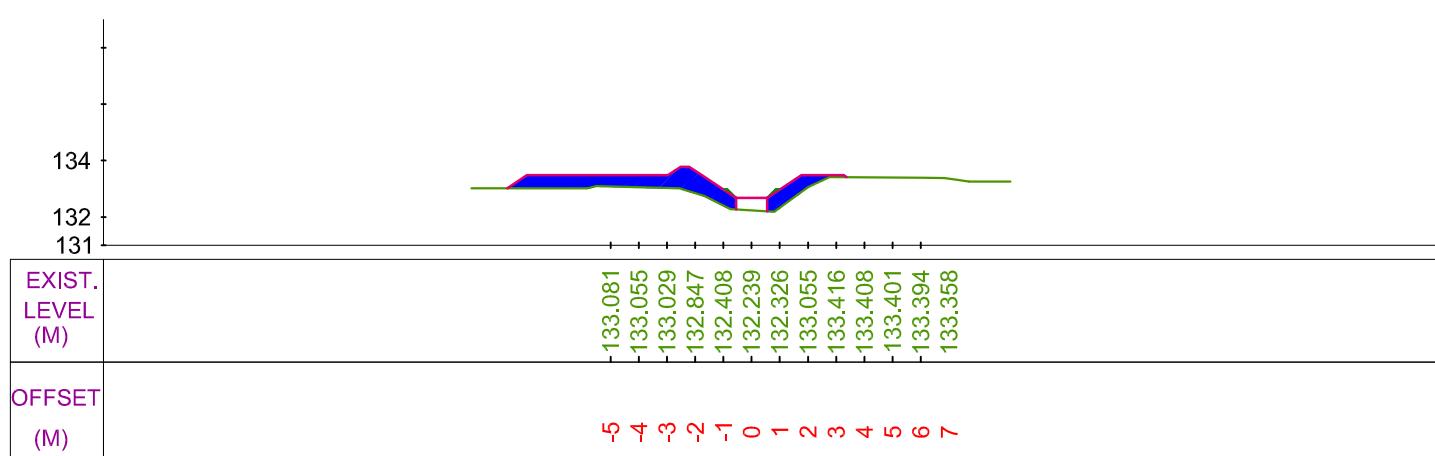


CUTTING AREA (SQ.M) = 0.262

FILLING AREA (SQ.M) = 2.953

CH. (KM):- 3+300

DESIGNED BED LEVEL = 132.698 M



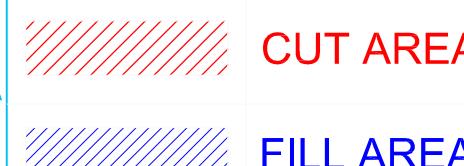
CUTTING AREA (SQ.M) = 0.000

FILLING AREA (SQ.M) = 5.047

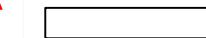
CH. (KM):- 3+400

DESIGNED BED LEVEL = 132.673 M

LEGEND



EXISTING BED LINE



DESIGNED BED LINE



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

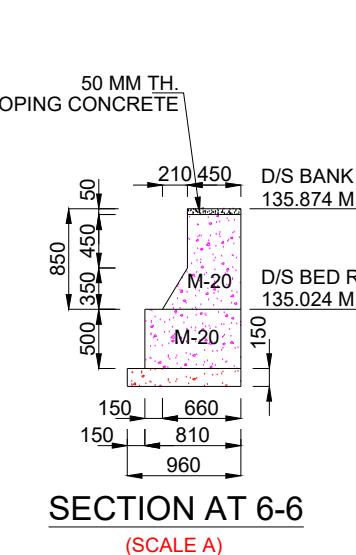
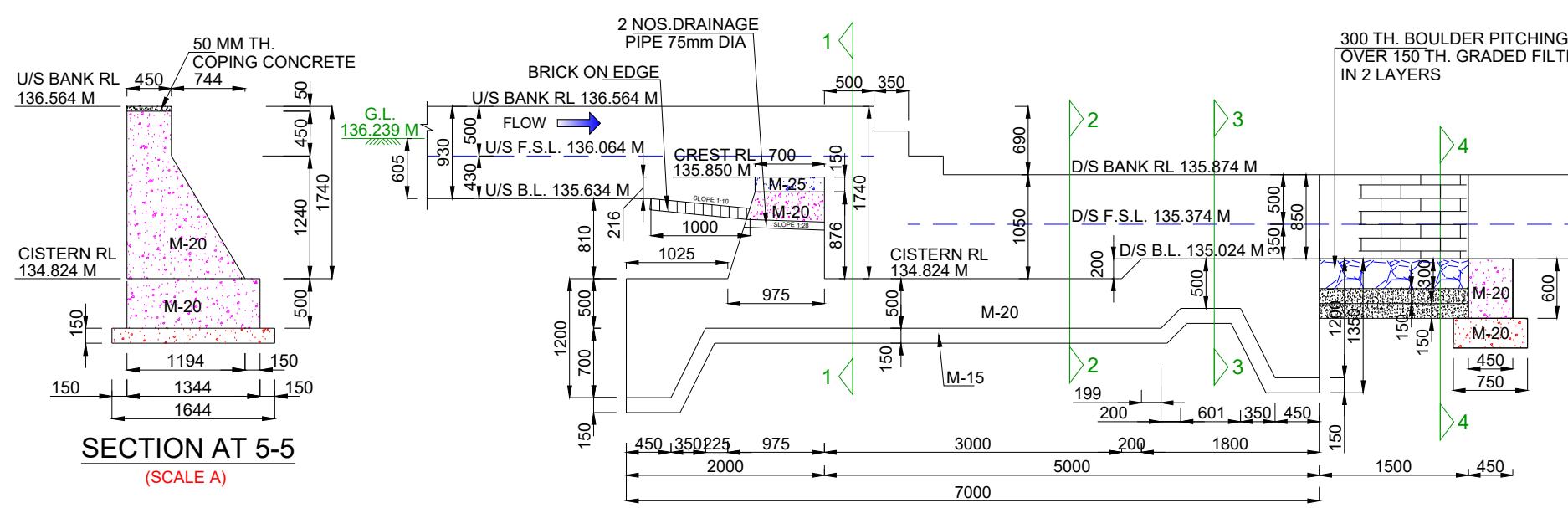
X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC-

9 of 9

DRAWING OF STRUCTURES

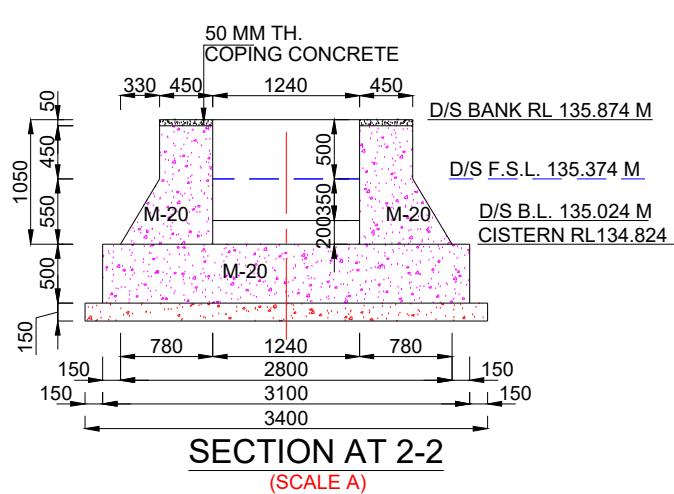
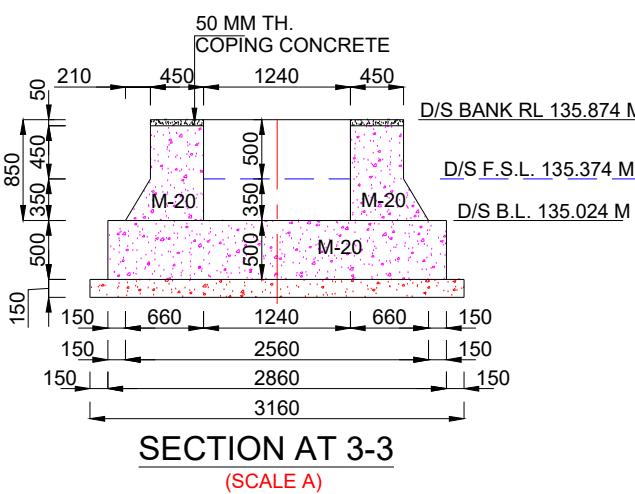
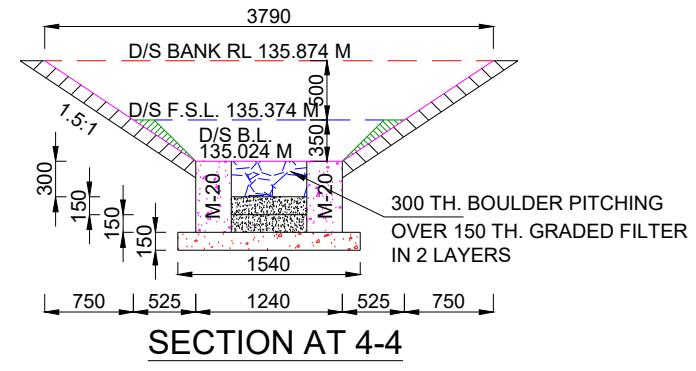
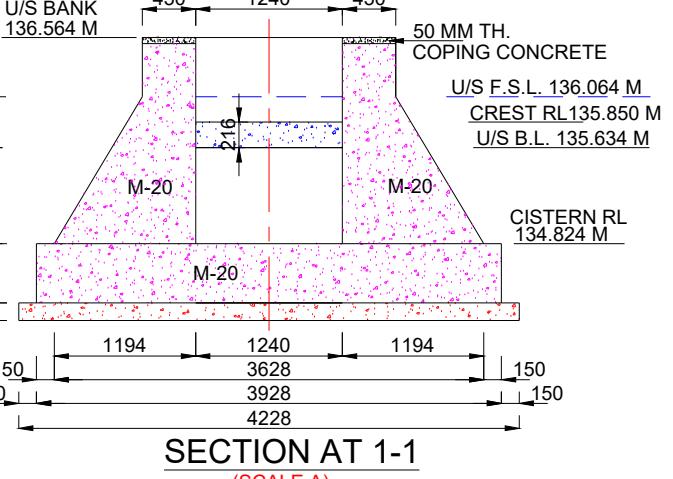
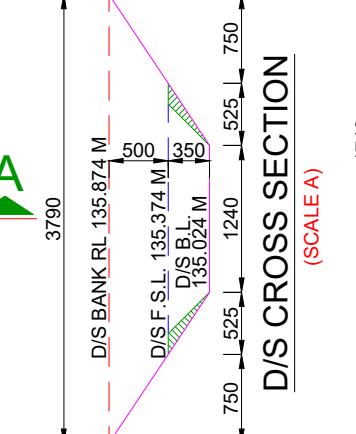
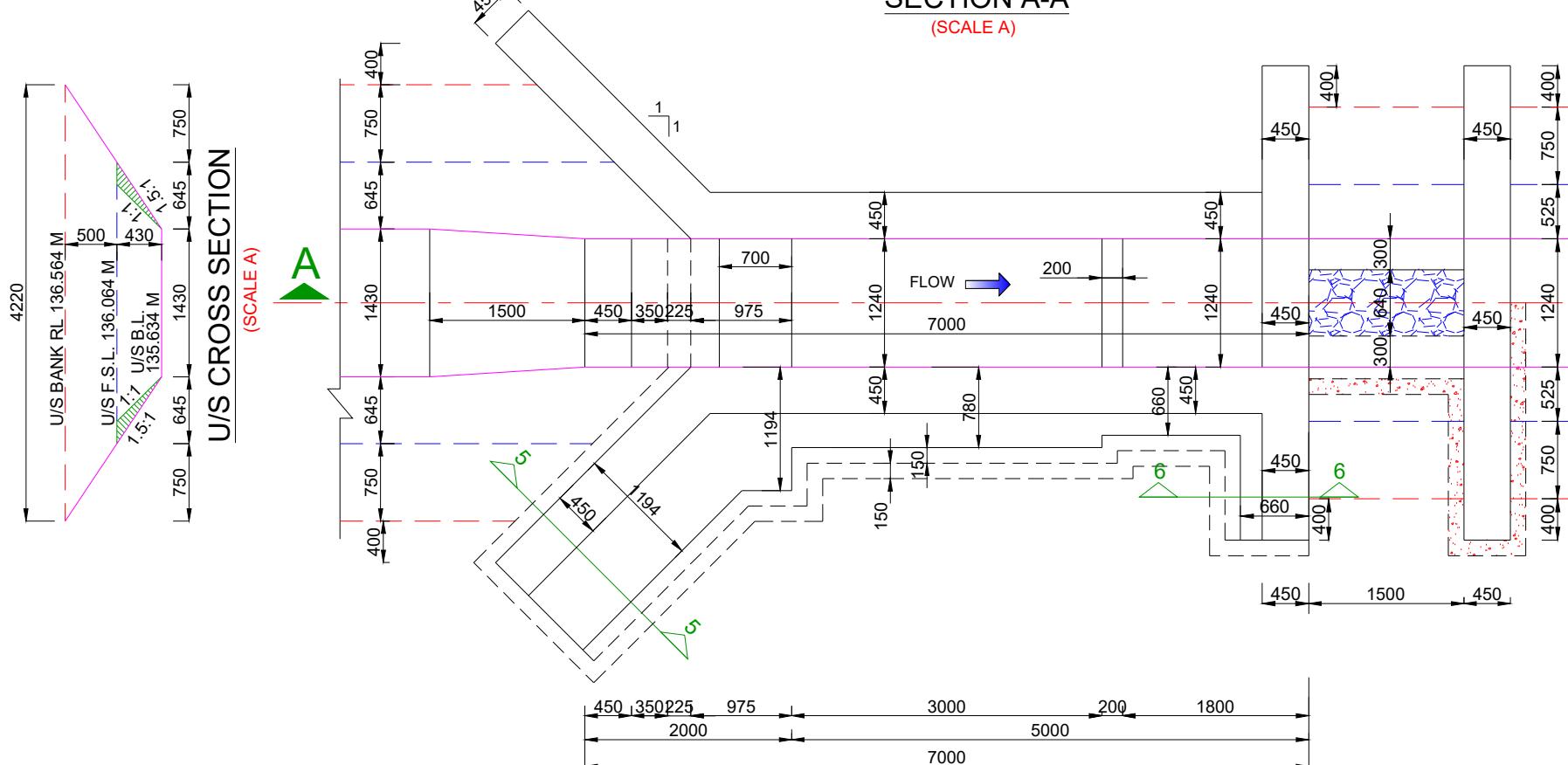


NOTES:-

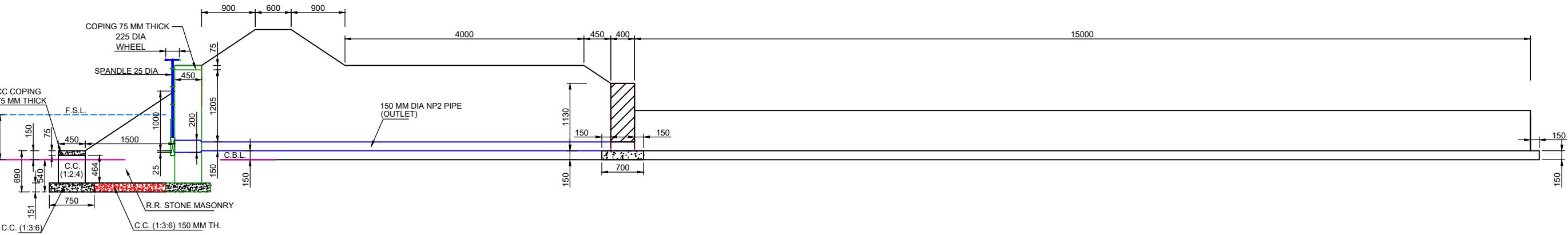
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS, FLOOR M 20 FOUNDATION OF ABUTMENTS & WING WALL M 20 PCC UNDER FLOOR M 15 ABUTMENTS / WING WALLS M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.200	0.200	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.430	0.350	METRE
BED WIDTH	1.430	1.240	METRE
BED SLOPE	1 : 4000	1 : 4000	



Prepared by :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 1.925 OF ABMA MR. (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RMC)	
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ FALL	
Drawn by:-	Checked by:-	1 of 1	
		Approved by:-	

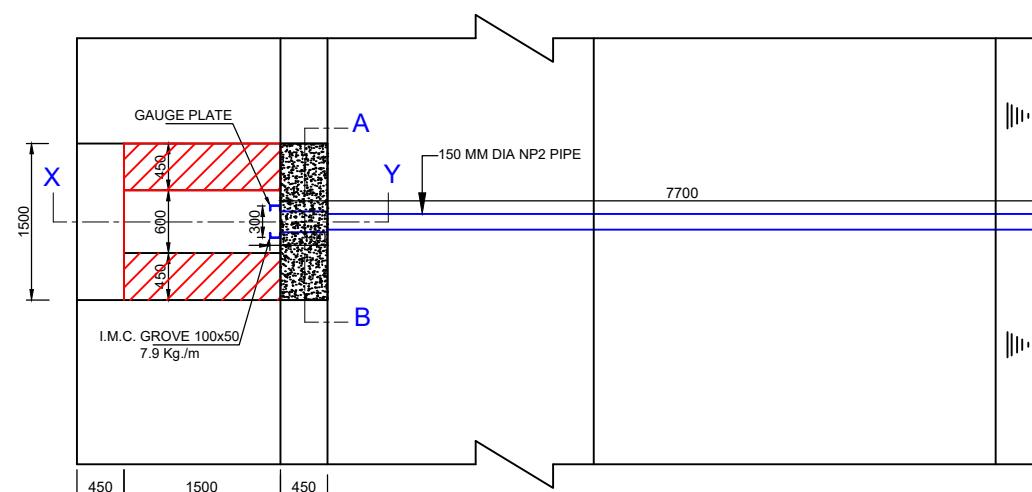


SECTION X-Y

SCALE A

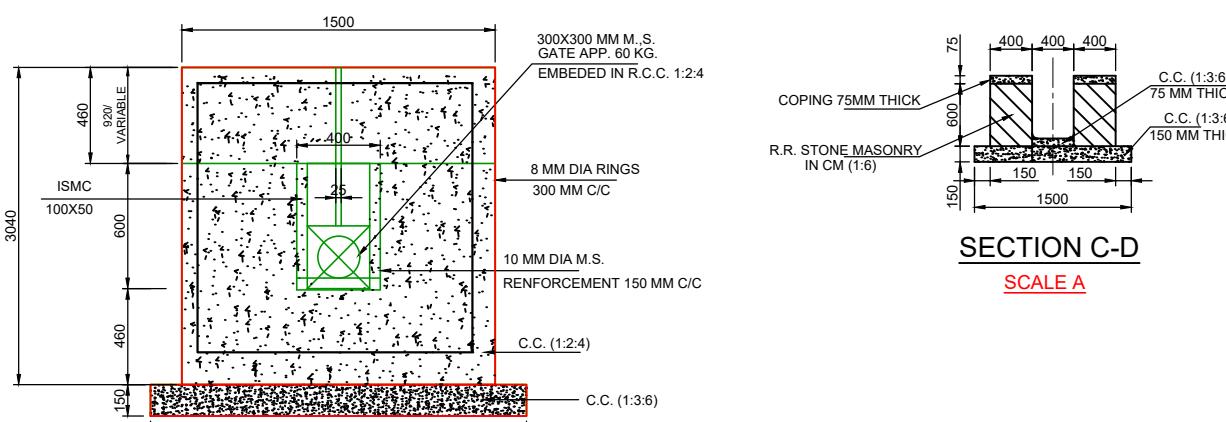
ELEVATION

ELLVIA



NOTES

1. ALL DIMENSIONS ARE IN MM EXCEPT LEVELS IN METRES UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED OFF.
2. ALL MASONRY WORKS SHALL BE DONE AS PER SPECIFICATION OF GOVT. OF JHARKHAND
3. THIS DWG. IS FOR OUTLET PIPE OF 150 MM DIA EMBEDDED IN MASONRY.
4. 300X300 MM SIZE GATE SHALL BE FIXED IN ISMC. 100X50 FRAME.
5. THE GATE SHALL BE LIFTED THROUGH SPANDLE, THIS SPANDLE SHALL BE KEY LOCKED TO AVOID UNNECESSARY OPERATION BY UN-AUTHORIZED PERSON.
6. THE 600 MM DIA DRAIN PIPE SHALL BE PROVIDED BELOW GULE DRAIN IF REQUIRED AT THE LOCATION.



SECTION A-B

SCALE B

SECTION C-D

SCALE .

 वाप्कोस लिमिटेड WAPCOS LIMITED <small>(A Government of India Undertaking - Ministry of Water Resources)</small>	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	Drawing Title :-	TYPICAL OUTLET DRAWING	
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ OUTLET	
	Drawn by:-	Checked by:-	Approved by:-