

TENDER DOCUMENT

FOR

**Distribution Network for Aurangabad Division of Right Main
Canal (RMC), Bihar Portion under North Koel Reservoir
Project, Jharkhand and Bihar
Estimated Cost (Rs. 50.81 Crores)**

TENDER NO: WAP/NK/RMC/DIST/AURANGABAD/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

FEBRUARY 2025

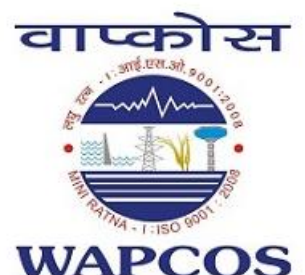
Completion of Balance
Works of North Koel
Reservoir Project

DRAWING REPORT – RASALPUR-I MINOR
(OFFTAKING FROM RIGHT MAIN CANAL AT
75.18 KM)



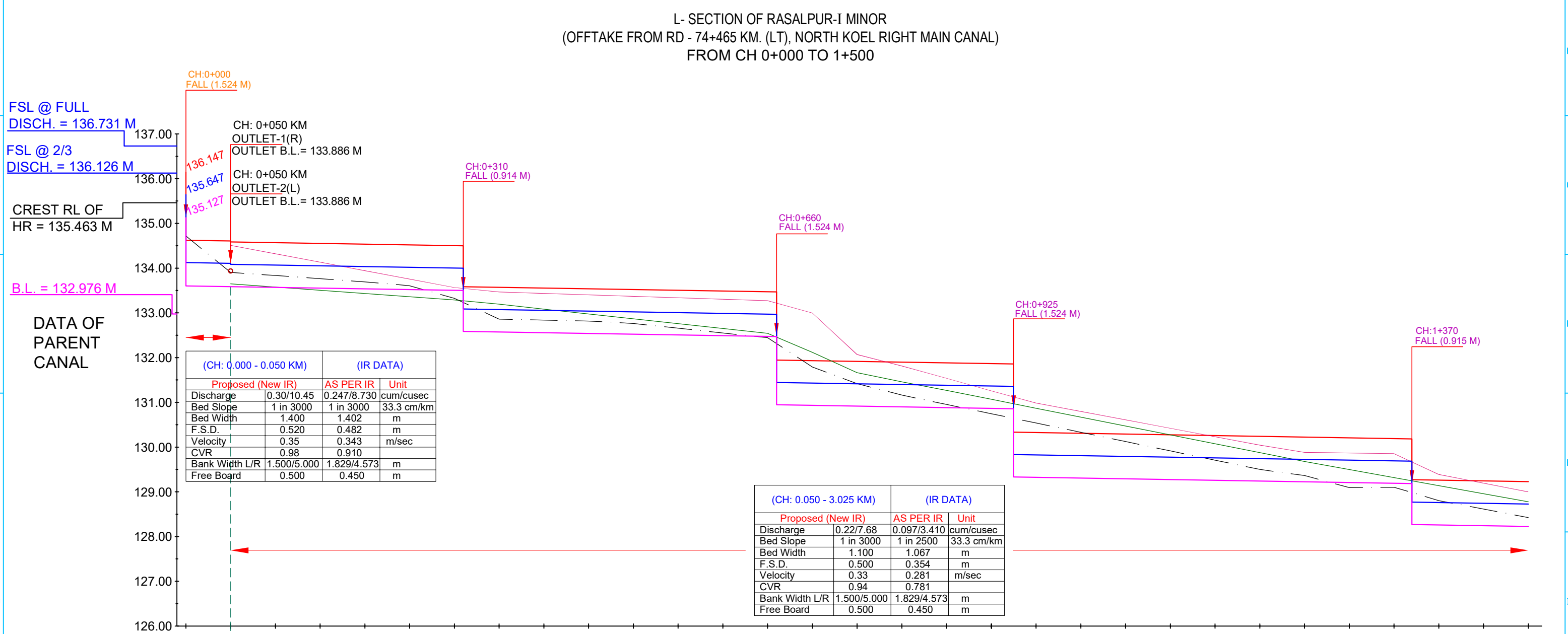
WAPCOS LIMITED

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



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L-SECTION



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
0+000			134.719	135.127 133.603	135.647 134.123	136.147 134.623
0+050	133.650	134.510	133.905	133.586	134.106 134.086	134.606 134.586
0+100	133.578	134.321	133.835	133.570	134.070	134.570
0+150	133.506	134.133	133.764	133.553	134.053	134.553
0+200	133.433	133.944	133.694	133.536	134.036	134.536
0+250	133.361	133.755	133.607	133.520	134.020	134.520
0+300	133.289	133.567	133.326	133.503 133.500 133.500 133.586	134.003 134.000 134.000 133.086	134.503 134.500 134.500 133.586
0+350	133.195	133.468	132.861	132.572	133.072	133.572
0+400	133.085	133.435	132.838	132.556	133.056	133.556
0+450	132.976	133.403	132.817	132.539	133.039	133.539
0+500	132.868	133.370	132.763	132.522	133.022	133.522
0+550	132.759	133.337	132.657	132.506	133.006	133.506
0+600	132.651	133.305	132.550	132.489	132.989	133.489
0+650	132.542	133.272	132.446	132.472 132.469 130.945	132.972 132.969 131.445	133.472 133.469 131.945
0+700	132.118	132.997	131.790	130.932	131.432	131.932
0+750	131.665	132.070	131.419	130.915	131.415	131.915
0+800	131.458	131.814	131.164	130.898	131.398	131.898
0+850	131.266	131.538	130.952	130.862	131.382	131.882
0+900	131.068	131.256	130.746	130.865	131.365	131.865
0+950	130.868	130.986	130.539	130.857 129.333	131.357 129.833	131.857 130.333
1+000	130.670	130.797	130.331	129.308	129.808	130.308
1+050	130.472	130.609	130.124	129.291	129.791	130.291
1+100	130.274	130.420	129.915	129.274	129.774	130.274
1+150	130.076	130.232	129.707	129.258	129.758	130.258
1+200	129.878	130.043	129.501	129.241	129.741	130.241
1+250	129.679	129.881	129.363	129.224	129.724	130.224
1+300	129.499	129.866	129.094	129.208	129.708	130.208
1+350	129.319	129.852	129.103	129.191	129.691	130.191
1+400	129.139	129.388	128.802	128.269 128.259	128.684 128.769	130.184 129.269
1+450	128.959	129.194	128.614	128.243	128.743	129.243
1+500	128.779	128.999	128.426	128.226	128.726	129.226

LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.



The logo for WAPCOS Ltd. features a green globe on the left, with a stylized grey and white building structure in front of it. Below the globe and building are blue wavy lines representing water. To the right of this graphic, the word "WAPCOS" is written in a bold, dark blue, sans-serif font. The letter 'O' in "WAPCOS" is replaced by a white lightning bolt symbol.



WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
DRAWING TITLE :-	L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-		01 of 04

DRAWING TITLE :-	L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC- 01 of 04		

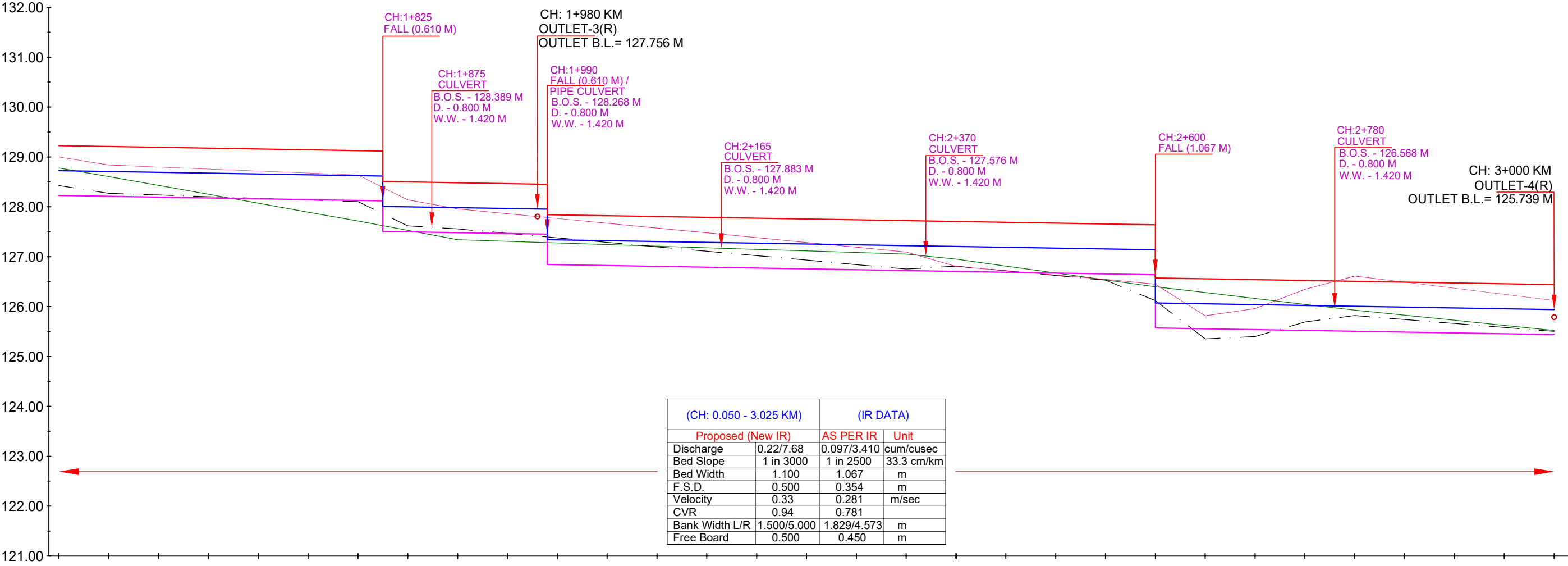
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-		01 of 04

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-

L- SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 1+500 TO 3+000



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
- 1+500	128.779	128.999	128.426	128.226	128.726	129.226
- 1+550	128.607	128.837	128.271	128.209	128.709	129.209
- 1+600	128.429	128.797	128.237	128.193	128.693	129.193
- 1+650	128.251	128.757	128.204	128.176	128.676	129.176
- 1+700	128.072	128.718	128.170	128.159	128.659	129.159
- 1+750	127.894	128.678	128.137	128.143	128.643	129.143
- 1+800	127.715	128.638	128.104	128.126	128.626	129.126
- 1+850	127.530	128.139	127.620	127.499	127.999	128.499
- 1+900	127.342	127.958	127.557	127.483	127.983	128.483
- 1+950	127.308	127.862	127.468	127.466	127.966	128.466
- 2+000	127.276	127.767	127.377	127.453	127.953	128.453
- 2+050	127.244	127.671	127.288	126.823	127.323	127.823
- 2+100	127.212	127.574	127.198	126.806	127.306	127.806
- 2+150	127.180	127.479	127.109	126.789	127.289	127.789
- 2+200	127.148	127.383	127.022	126.773	127.273	127.773
- 2+250	127.116	127.287	126.934	126.756	127.256	127.756
- 2+300	127.084	127.191	126.841	126.739	127.239	127.739
- 2+350	127.053	127.095	126.752	126.723	127.223	127.723
- 2+400	126.952	126.807	126.811	126.706	127.206	127.706
- 2+450	126.813	126.720	126.717	126.689	127.189	127.689
- 2+500	126.673	126.633	126.623	126.673	127.173	127.673
- 2+550	126.534	126.546	126.529	126.656	127.156	127.656
- 2+600	126.396	126.450	126.121	126.639	127.139	127.639
- 2+650	126.282	125.816	125.352	125.556	126.056	126.556
- 2+700	126.161	125.959	125.400	125.539	126.039	126.539
- 2+750	126.043	126.345	125.691	125.522	126.022	126.522
- 2+800	125.929	126.613	125.819	125.506	126.006	126.506
- 2+850	125.827	126.491	125.740	125.489	125.989	126.489
- 2+900	125.725	126.368	125.661	125.472	125.972	126.472
- 2+950	125.622	126.246	125.582	125.456	125.956	126.456
- 3+000	125.520	126.123	125.503	125.439	125.939	126.439

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

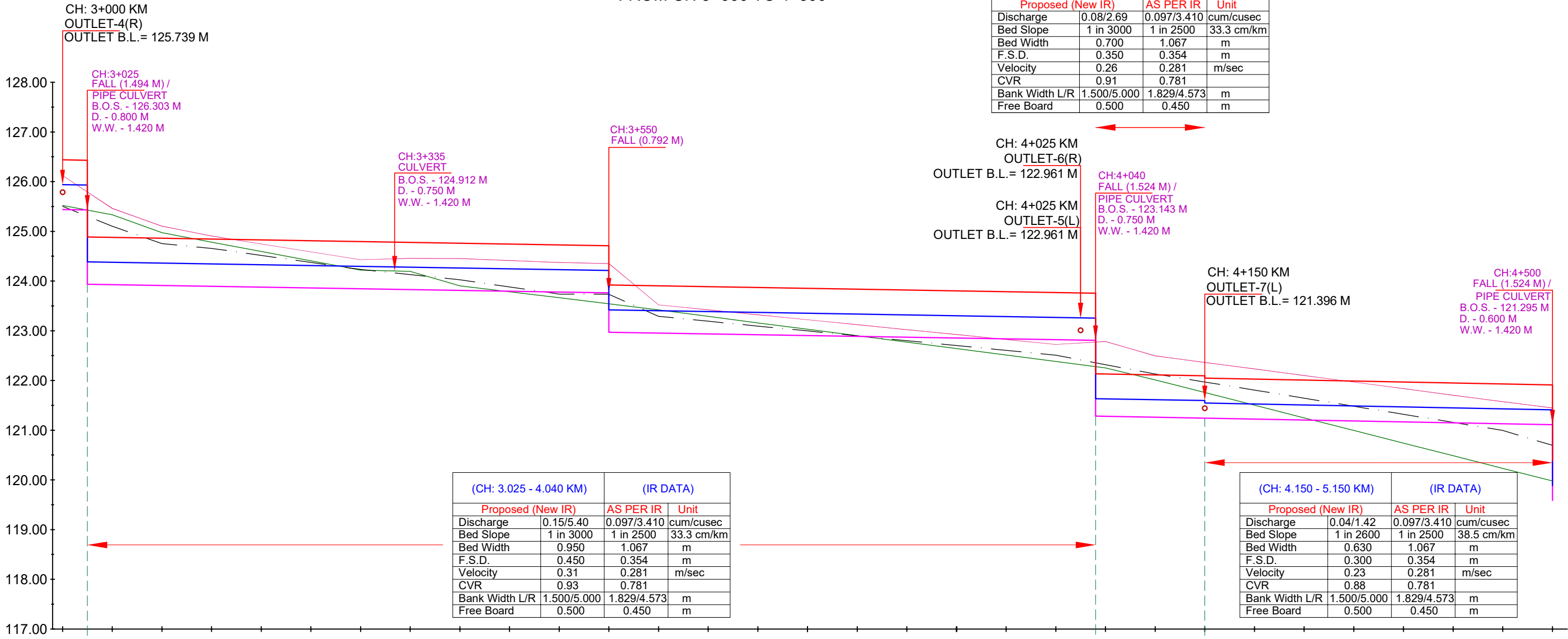
DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-

02 of 04

L- SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 4+500

(CH: 4.040 - 4.150 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.69	0.097/3.410	cum/cusec
Bed Slope	1 in 3000	1 in 2500	33.3 cm/km
Bed Width	0.700	1.067	m
F.S.D.	0.350	0.354	m
Velocity	0.26	0.281	m/sec
CVR	0.91	0.781	
Bank Width L/R	1.500/5.000	1.829/4.573	m
Free Board	0.500	0.450	m



Chainage IN KM	DESIGN DATA		EXISTING DATA	
	TOP OF BANK LEVEL	F.S.L.	Bed Level	TOP OF BANK LEVEL
3+000	126.439	125.939	125.503	126.123
3+025	126.431	125.931	125.503	126.123
3+050	126.431	125.931	125.503	126.123
3+100	126.431	125.931	125.503	126.123
3+150	126.431	125.931	125.503	126.123
3+200	126.431	125.931	125.503	126.123
3+250	126.431	125.931	125.503	126.123
3+300	126.431	125.931	125.503	126.123
3+350	126.431	125.931	125.503	126.123
3+400	126.431	125.931	125.503	126.123
3+450	126.431	125.931	125.503	126.123
3+500	126.431	125.931	125.503	126.123
3+550	126.431	125.931	125.503	126.123
3+600	126.431	125.931	125.503	126.123
3+650	126.431	125.931	125.503	126.123
3+700	126.431	125.931	125.503	126.123
3+750	126.431	125.931	125.503	126.123
3+800	126.431	125.931	125.503	126.123
3+850	126.431	125.931	125.503	126.123
3+900	126.431	125.931	125.503	126.123
3+950	126.431	125.931	125.503	126.123
4+000	126.431	125.931	125.503	126.123
4+040	126.431	125.931	125.503	126.123
4+050	126.431	125.931	125.503	126.123
4+100	126.431	125.931	125.503	126.123
4+150	126.431	125.931	125.503	126.123
4+200	126.431	125.931	125.503	126.123
4+250	126.431	125.931	125.503	126.123
4+300	126.431	125.931	125.503	126.123
4+350	126.431	125.931	125.503	126.123
4+400	126.431	125.931	125.503	126.123
4+450	126.431	125.931	125.503	126.123
4+500	126.431	125.931	125.503	126.123

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

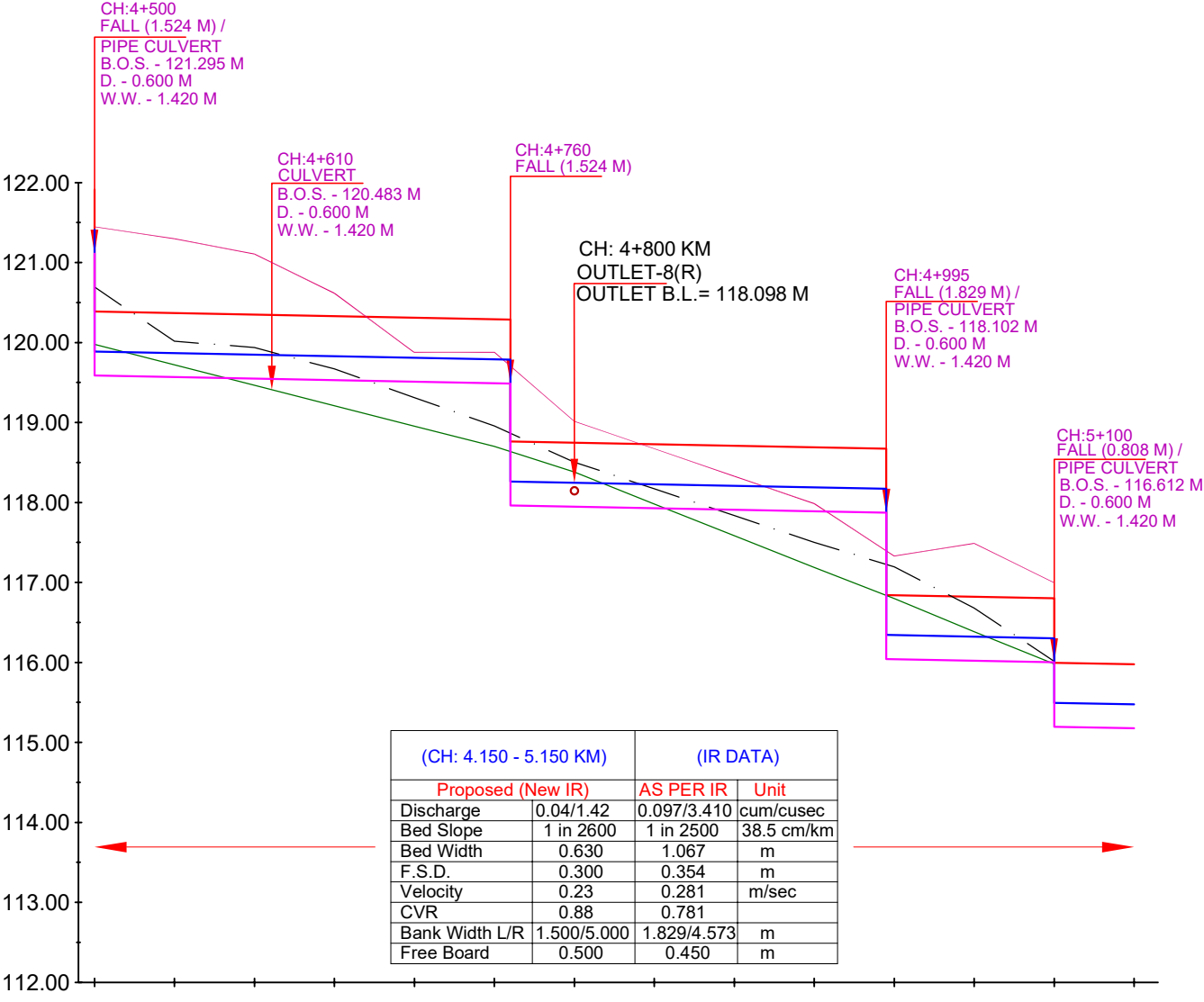
L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-

03 of 04

L- SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 4+500 TO 5+150



DESIGN DATA	TOP OF BANK LEVEL	121.911	120.387	120.368	120.349	120.329	120.310	120.291	120.287	118.763	118.748	118.728	118.709	118.690	118.673	118.603	115.995	115.976
	F.S.L.	121.411	119.887	119.868	119.849	119.829	119.810	119.791	119.787	118.263	118.248	118.228	118.209	118.190	118.173	116.303	115.495	115.476
EXISTING DATA	Proposed Bed Level	121.111	119.587	119.568	119.549	119.529	119.510	119.491	119.487	117.963	117.948	117.928	117.909	117.890	117.873	116.044	115.185	115.176
	Bed Level	120.695	120.017	119.937	119.669	119.669	119.312	118.956	118.956	118.505	118.170	117.836	117.502	117.195	116.680	116.012		
	TOP OF BANK LEVEL	121.447	121.299	121.107	120.617	120.617	120.248	119.879	119.879	119.015	118.672	118.330	117.987	117.330	117.490	116.998		
	NSL	119.978	119.722	119.466	119.209	119.209	118.955	118.702	118.390	117.982	117.585	117.187	116.799	116.383	115.982			
Chainage IN KM		4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150			

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

L- SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

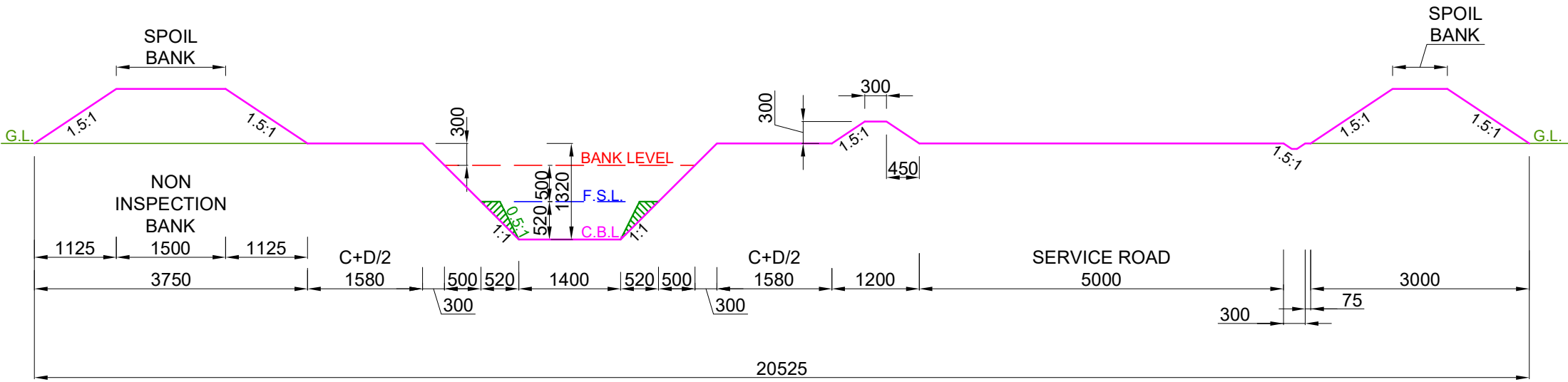
DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ LSEC-

04 of 04

TYPICAL X-SECTION

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.050 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FC)

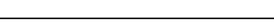
1 of 5

The diagram illustrates the cross-section of a road project with the following components and dimensions:

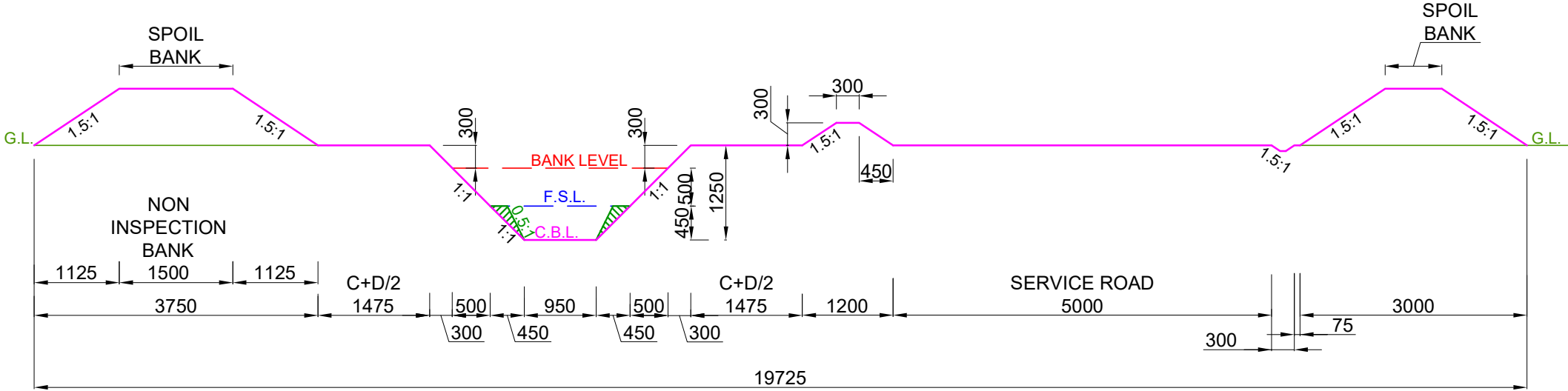
- NON INSPECTION BANK:** A trapezoidal section on the left with a top width of 1500 and side slopes of 1.5:1. The total width of this section is 3750 (1125 + 1500 + 1125).
- C+D/2:** A central section with a width of 1523.
- SERVICE ROAD:** A section on the right with a width of 5000.
- SPOIL BANK:** A trapezoidal section on the far right with a top width of 3000 and side slopes of 1.5:1.
- Dimensions and Slopes:**
 - Vertical dimensions: 300, 500, 1300, 500, 500, 1100, 500, 500, 1200, 300, 75, 3000.
 - Slopes: 1.5:1 for the main banks, 0.5:1 for the central ditch.
 - Labels: G.L. (Ground Level), BANK LEVEL, F.S.L. (Finished Surface Level), C.B.I. (Center of Bottom of Inlet).
- Total Width:** 20071.

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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FC) 2 of 5	

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



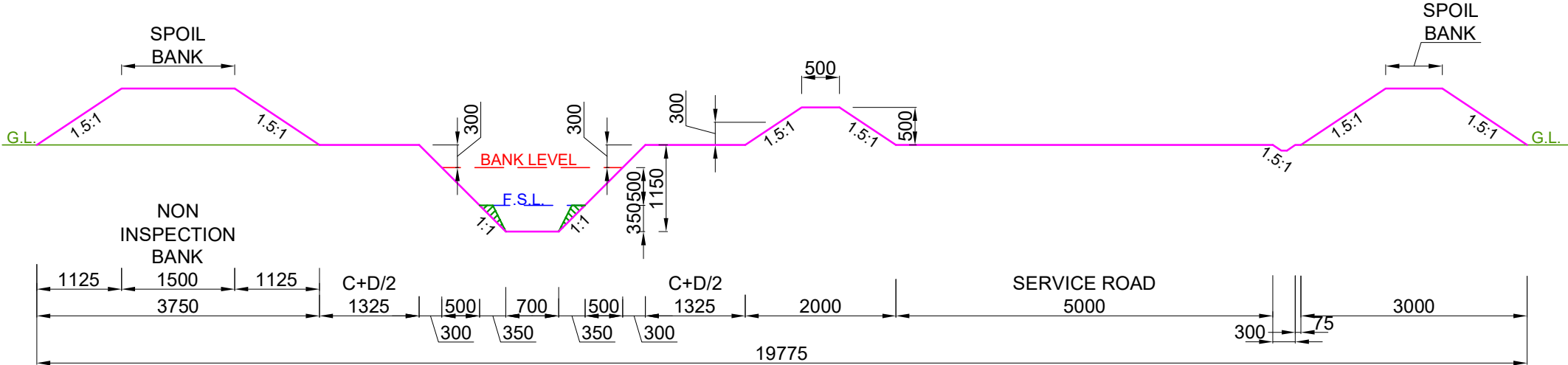
DESIGN SECTION FROM CH: 3.050 KM TO CH: 4.025 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FC)

3 of 5

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



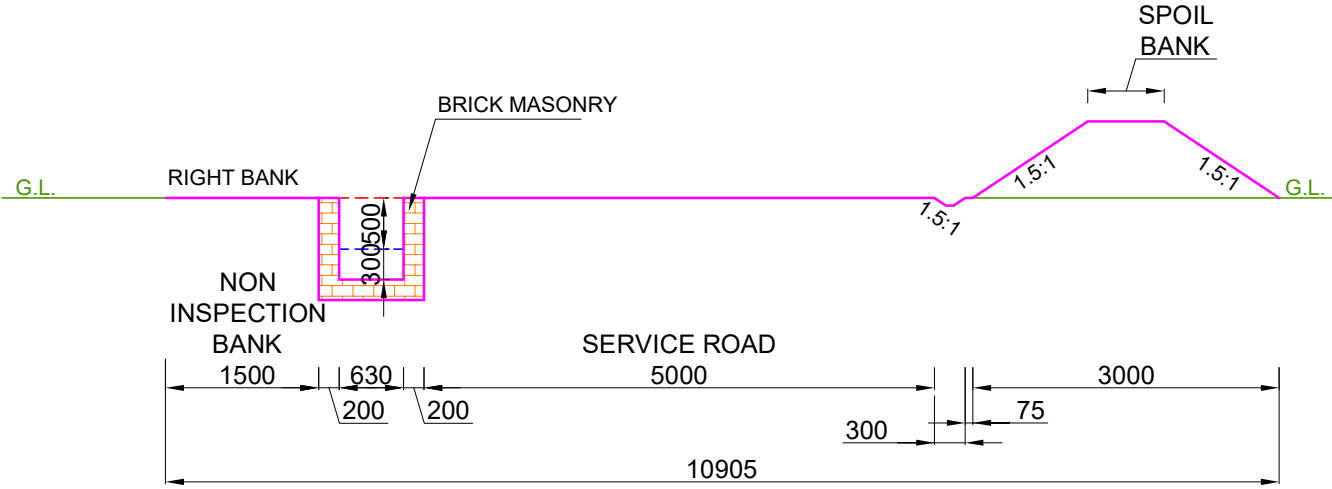
DESIGN SECTION FROM CH: 4.025 KM TO CH: 4.125 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FC)

4 of 5

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



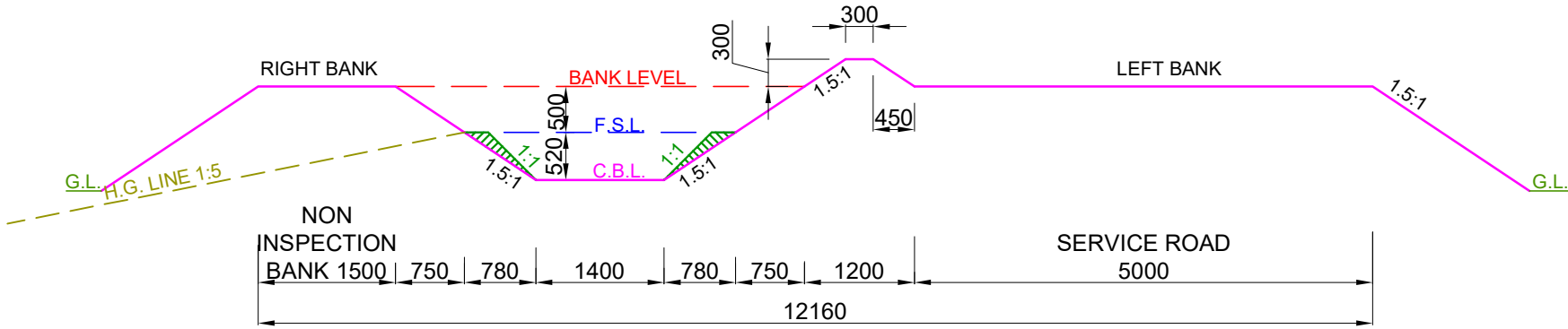
DESIGN SECTION FROM CH: 4.125 KM TO CH: 5.150 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FC)

5 of 5

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

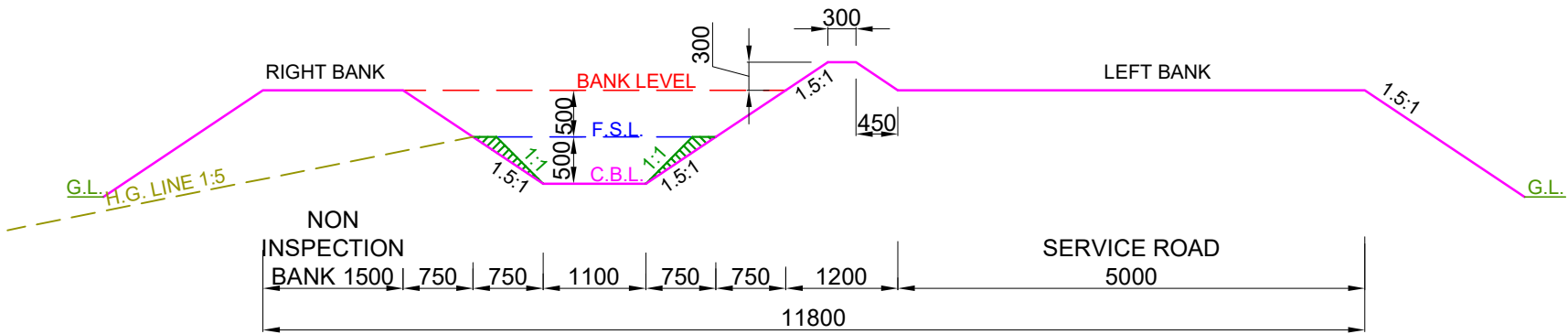


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.050 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FF)				

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

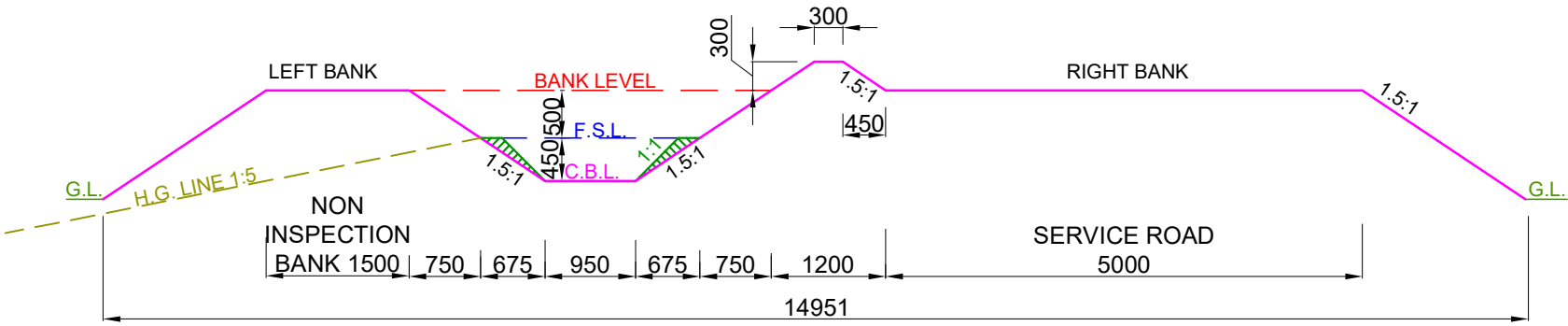


DESIGN SECTION FROM CH: 0.050 KM TO CH: 3.050 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

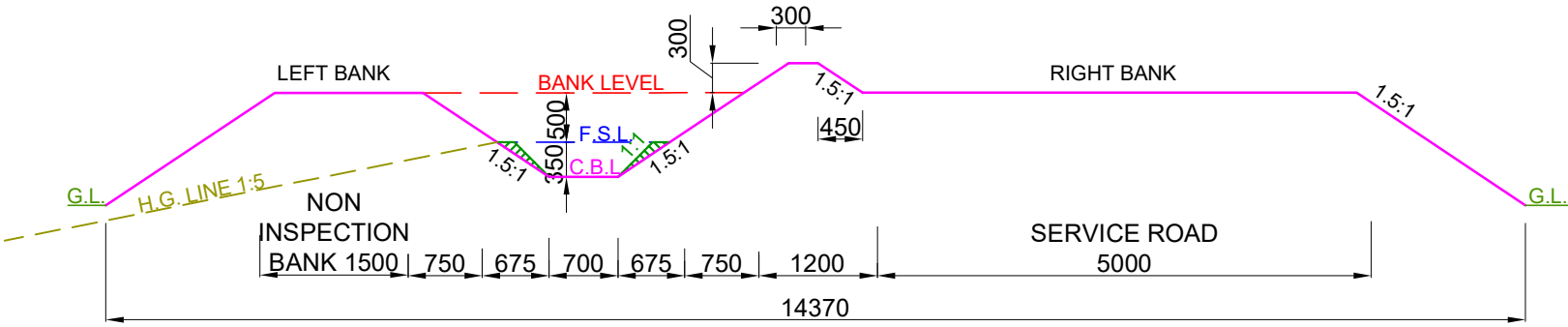


DESIGN SECTION FROM CH: 3.050 KM TO CH: 4.025 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FF) 3 of 5			

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



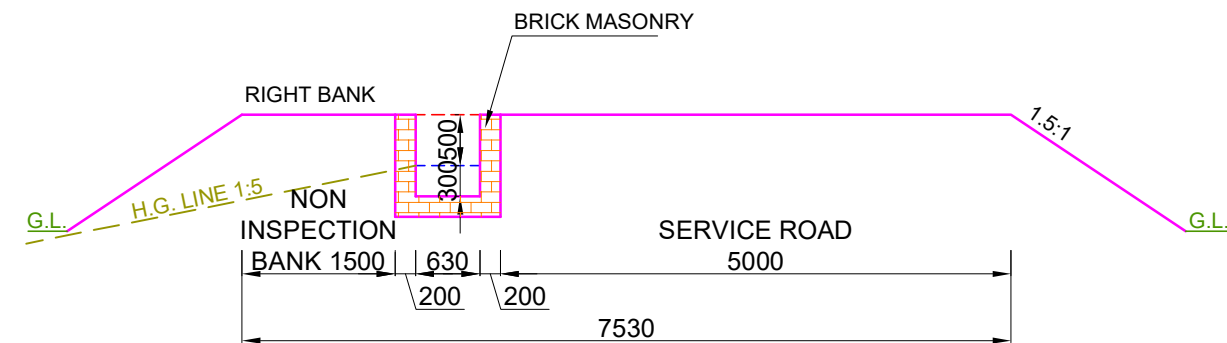
DESIGN SECTION FROM CH: 4.025 KM TO CH: 4.125 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FF)

4 of 5

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

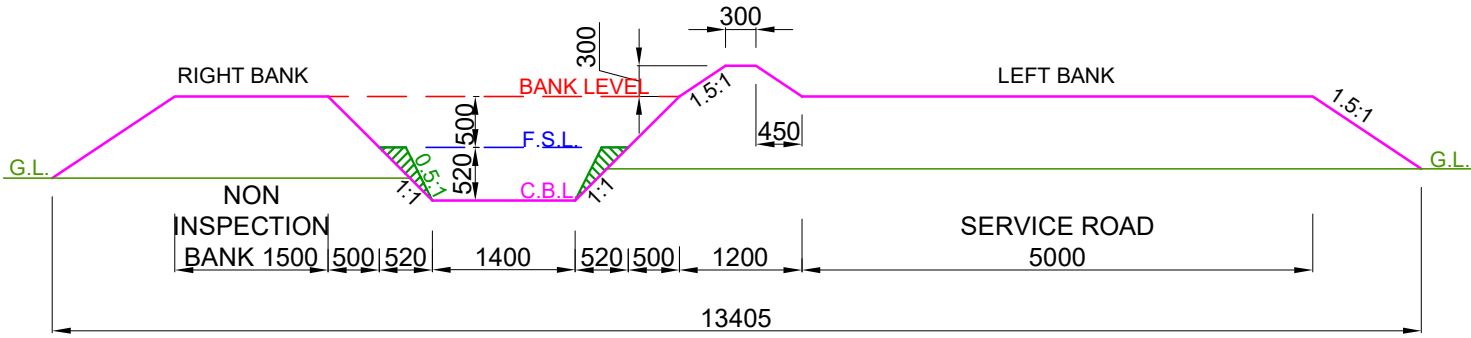


DESIGN SECTION FROM CH: 4.125 KM TO CH: 5.150 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(FF) 5 of 5	

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

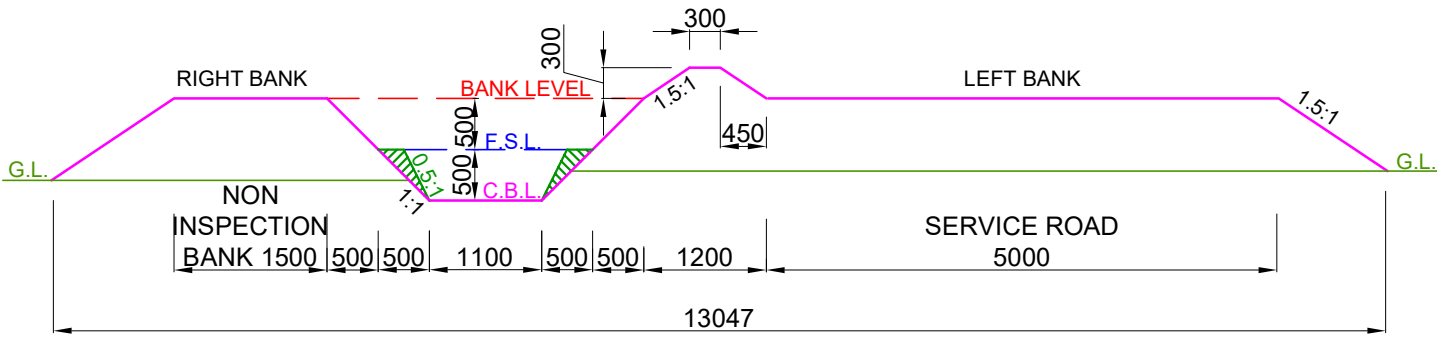


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.050 KM

- 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.

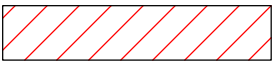
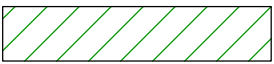
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(PCF) 1 of 5				

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

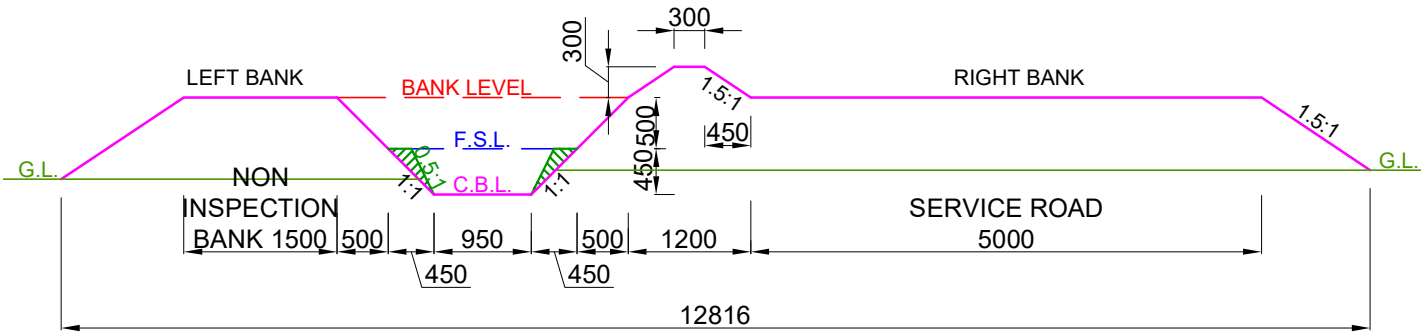


DESIGN SECTION FROM CH: 0.050 KM TO CH: 3.050 KM

- 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.

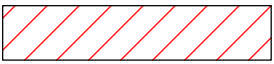
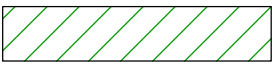
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(PCF) 2 of 5				

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

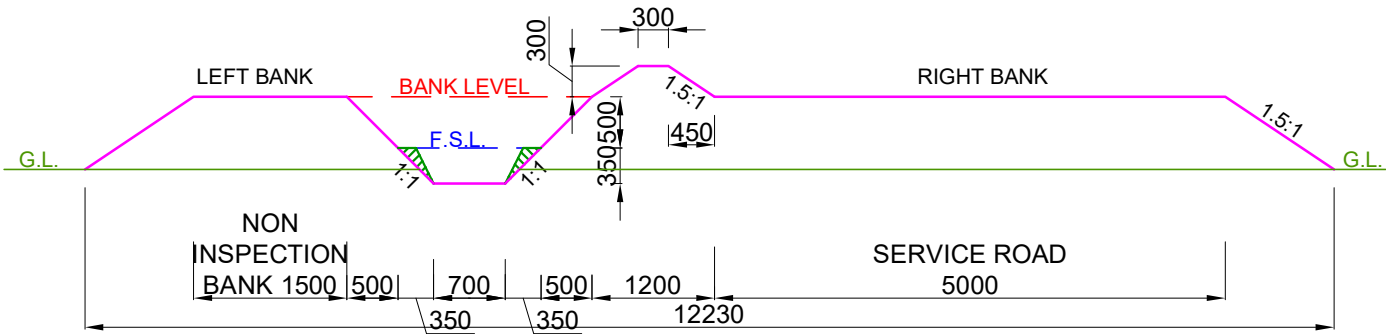


DESIGN SECTION FROM CH: 3.050 KM TO CH: 4.025 KM

- 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 RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(PCF) 3 of 5				

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

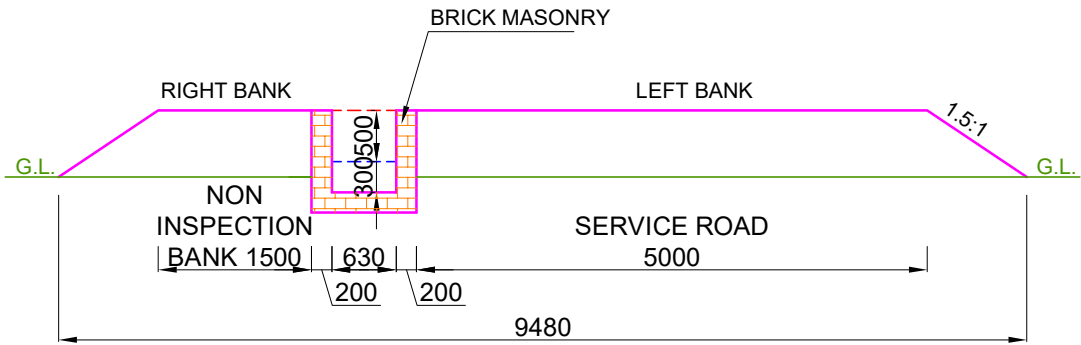


DESIGN SECTION FROM CH: 4.025 KM TO CH: 4.125 KM

- 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.

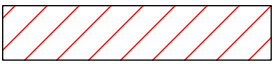
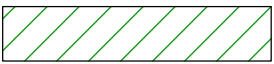
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(PCF) 4 of 5				

TYPICAL X - SECTION OF RASALPUR-I MINOR
(OFFTAKE FROM RD - 74+465 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



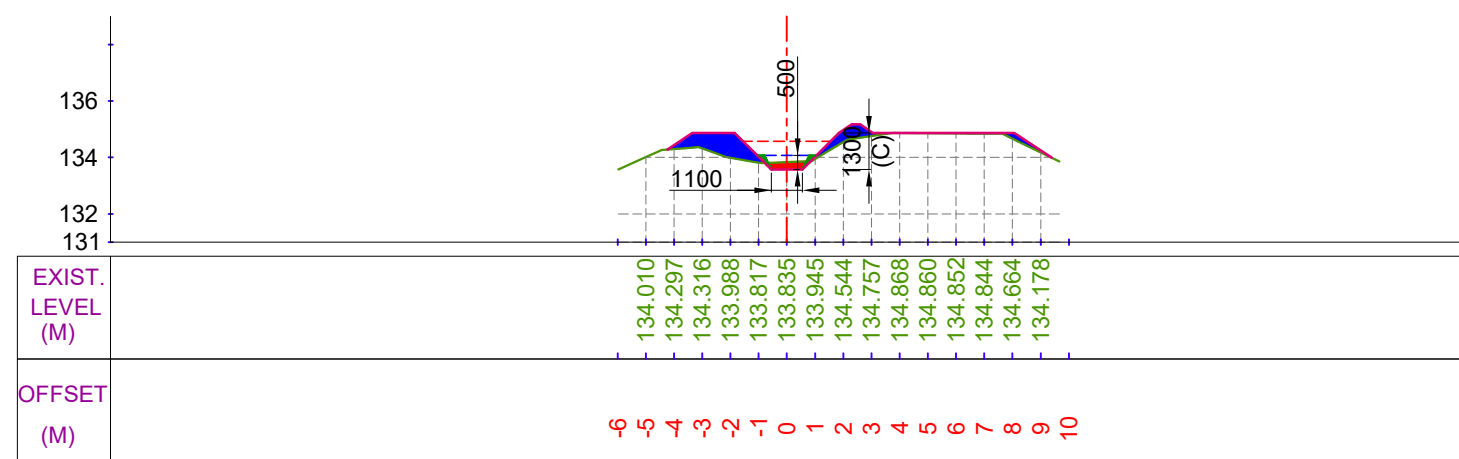
DESIGN SECTION FROM CH: 4.125 KM TO CH: 5.150 KM

- 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.

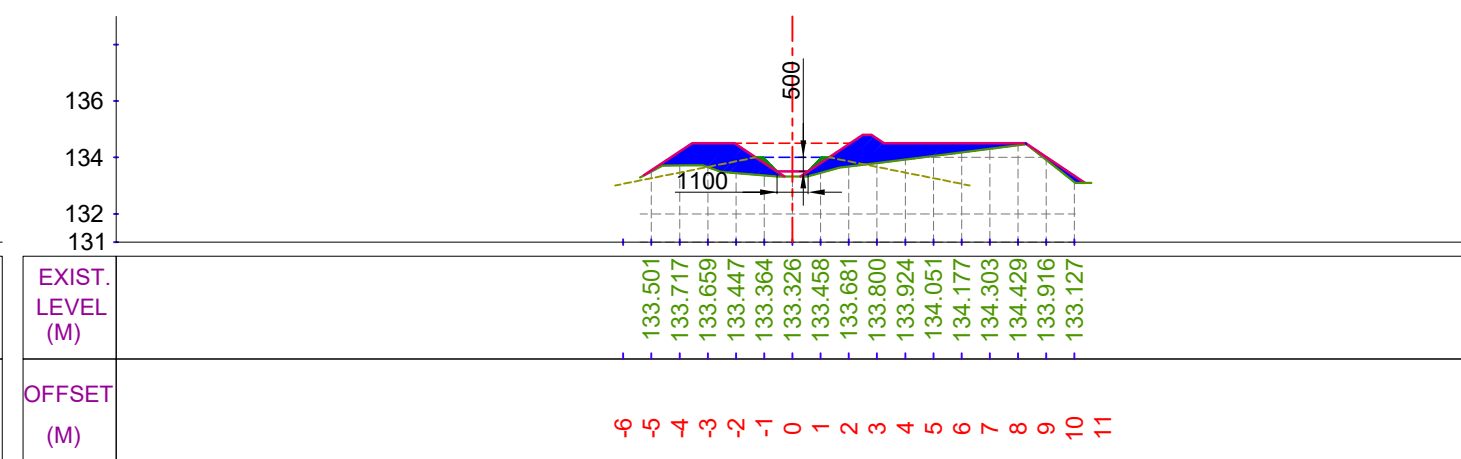
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC /TYP-(PCF) 5 of 5				

CROSS-SECTION

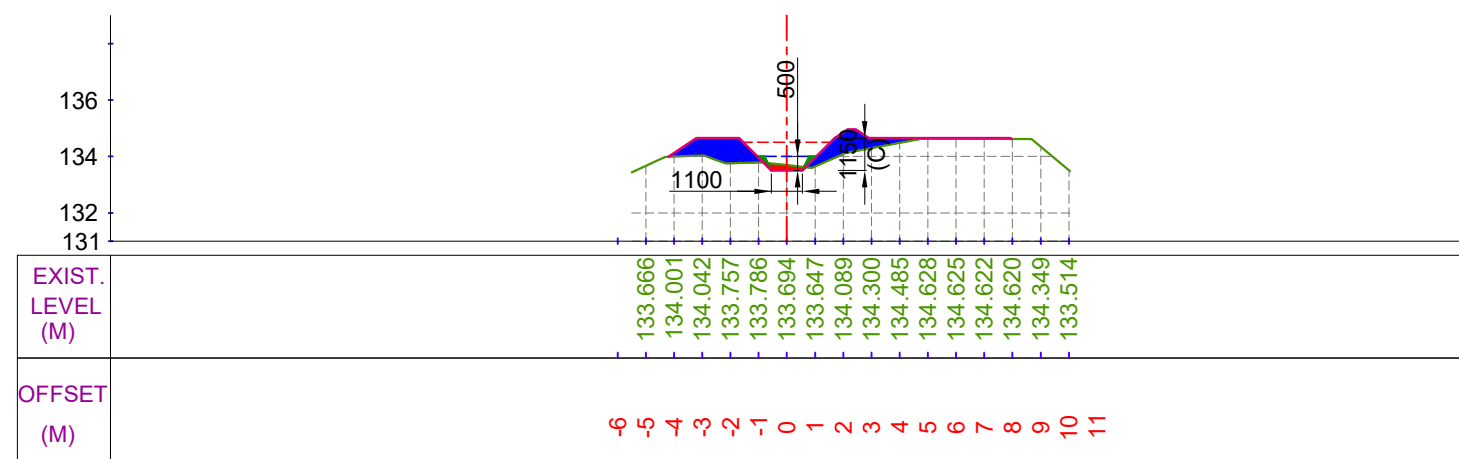
X SECTION OF RASALPUR-I MINOR



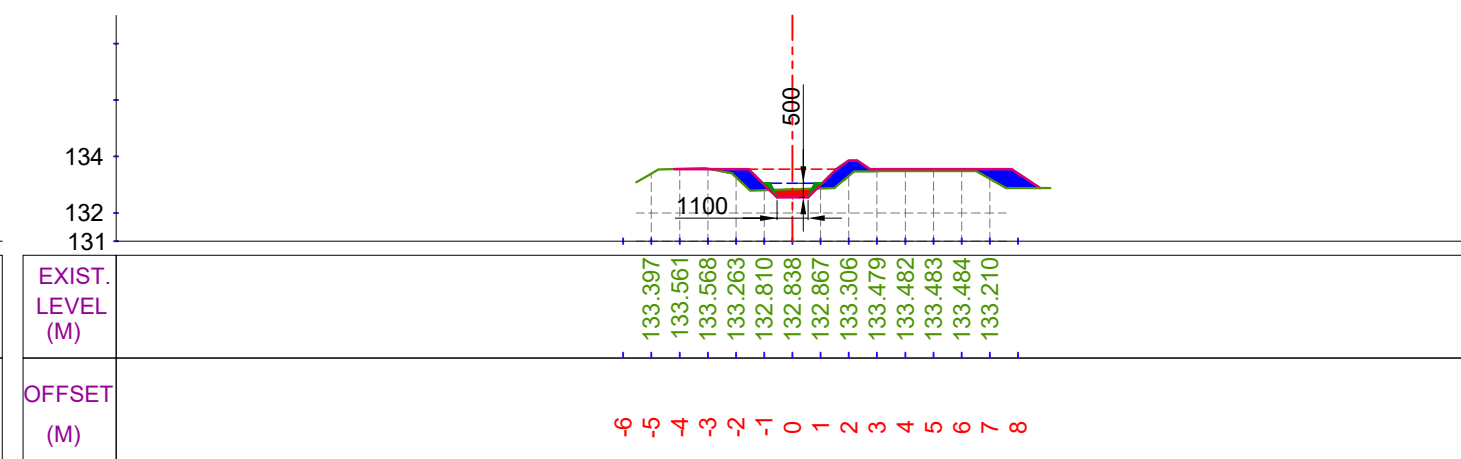
CUTTING AREA (SQ.M) = 0.327
FILLING AREA (SQ.M) = 2.780
CH. (KM):- 0+100
DESIGNED BED LEVEL = 133.570 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.684
CH. (KM):- 0+300
DESIGNED BED LEVEL = 133.503 M



CUTTING AREA (SQ.M) = 0.231
FILLING AREA (SQ.M) = 3.546
CH. (KM):- 0+200
DESIGNED BED LEVEL = 133.536 M



CUTTING AREA (SQ.M) = 0.369
FILLING AREA (SQ.M) = 2.482
CH. (KM):- 0+400
DESIGNED BED LEVEL = 132.556 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			F.S.L.
			H.G. LINE

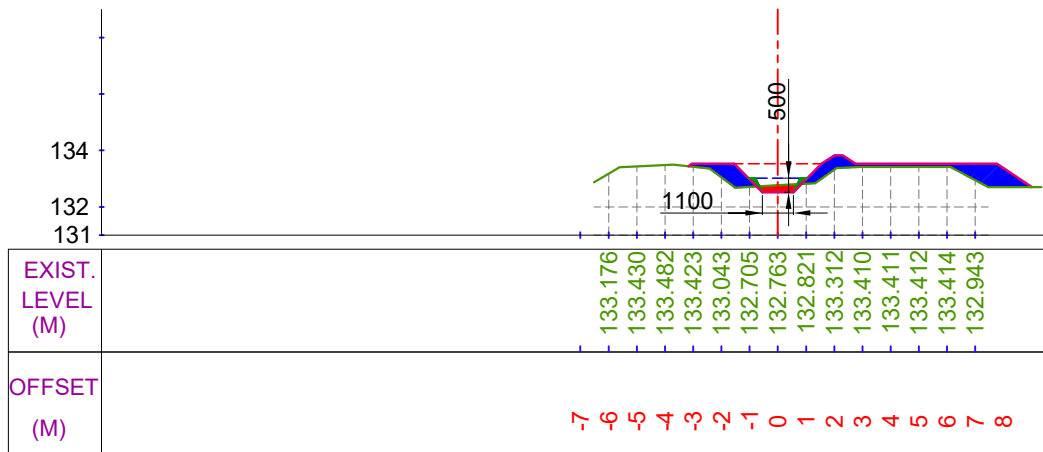
Prepared by :-

WAPCOS LTD.



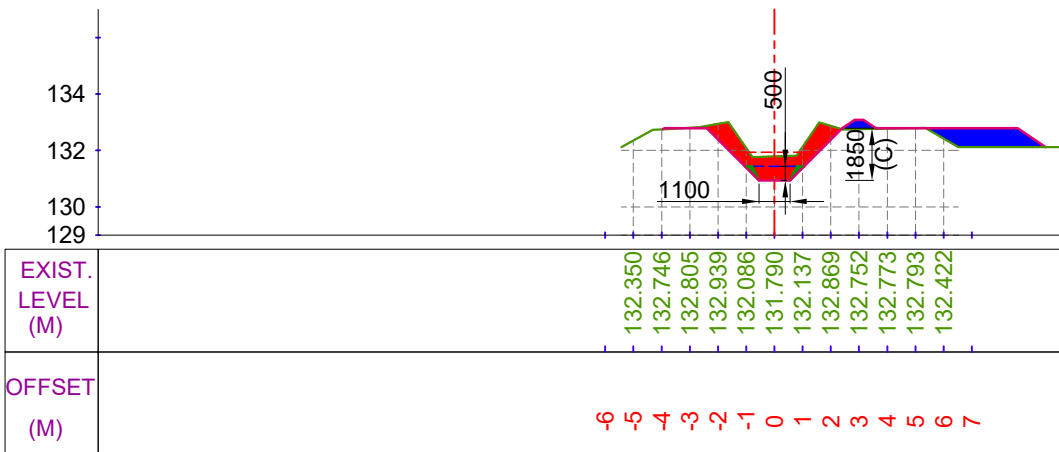
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC- 1 of 13

X SECTION OF RASALPUR-I MINOR



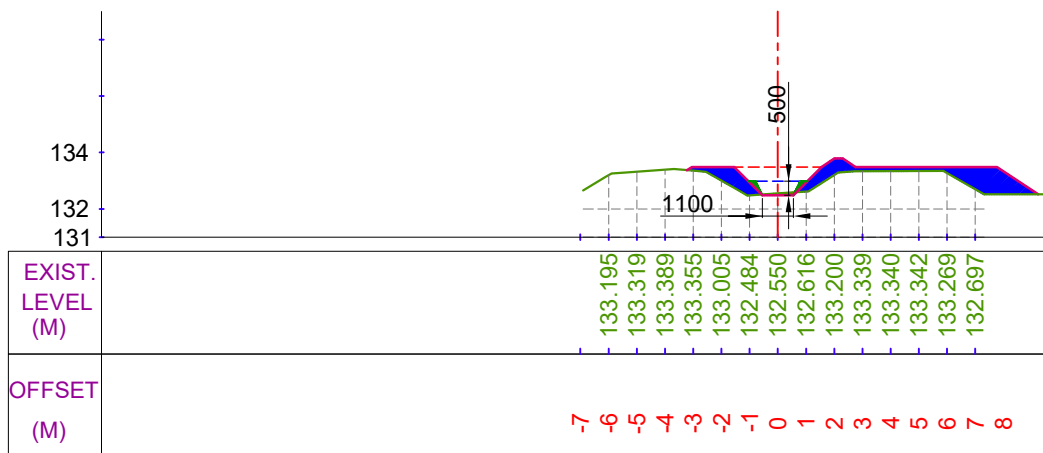
CUTTING AREA (SQ.M) = 0.295
FILLING AREA (SQ.M) = 3.329

CH. (KM):- 0+500
DESIGNED BED LEVEL = 132.522 M



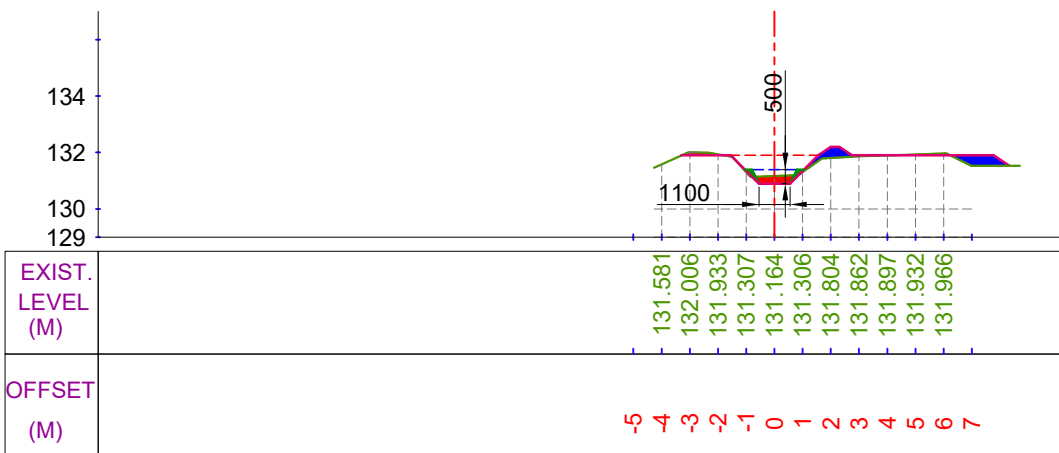
CUTTING AREA (SQ.M) = 3.373
FILLING AREA (SQ.M) = 2.382

CH. (KM):- 0+700
DESIGNED BED LEVEL = 130.932 M



CUTTING AREA (SQ.M) = 0.070
FILLING AREA (SQ.M) = 4.277

CH. (KM):- 0+600
DESIGNED BED LEVEL = 132.489 M



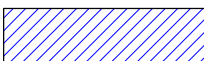
CUTTING AREA (SQ.M) = 0.518
FILLING AREA (SQ.M) = 0.995

CH. (KM):- 0+800
DESIGNED BED LEVEL = 130.898 M

LEGEND



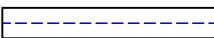
CUT AREA



FILL AREA



EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

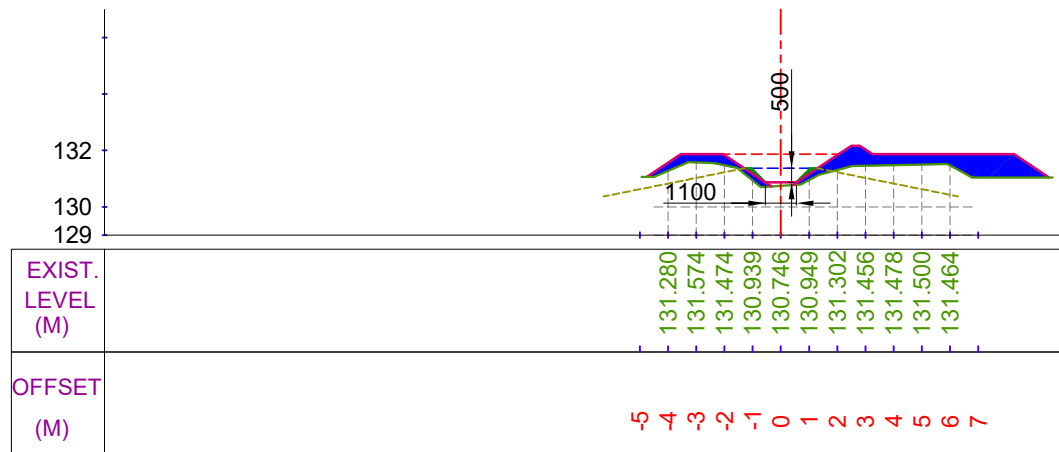
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

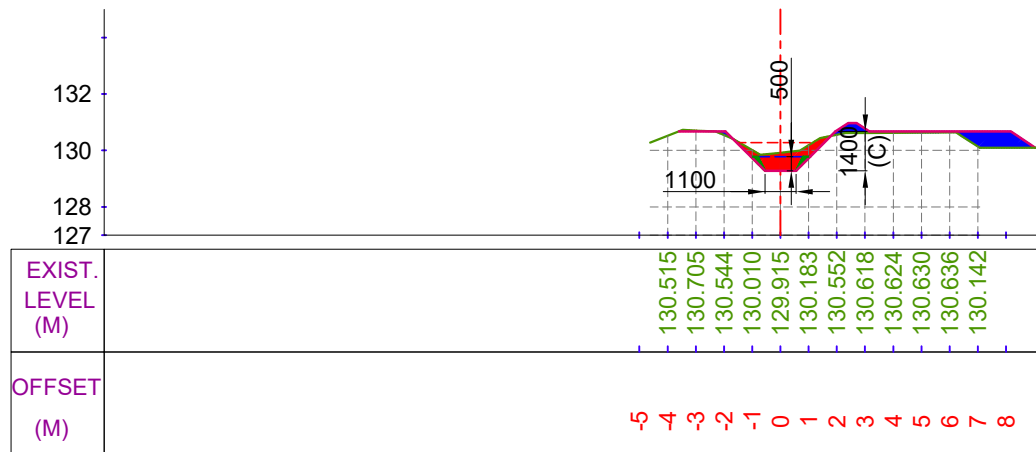
WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

2 of 13

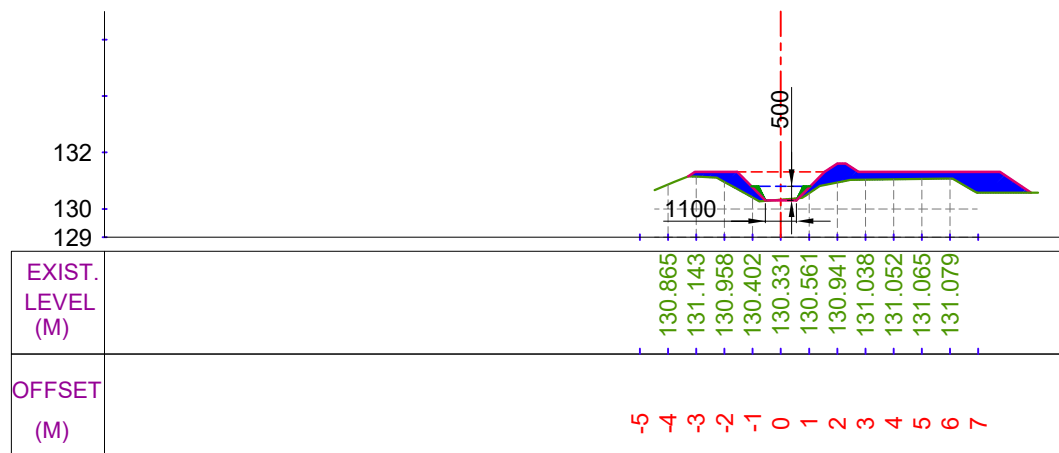
X SECTION OF RASALPUR-I MINOR



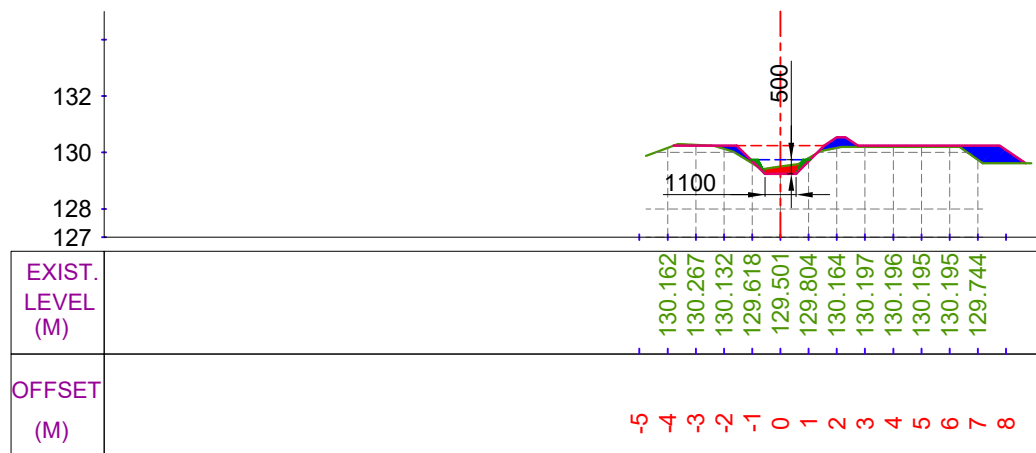
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.558
CH. (KM):- 0+900
DESIGNED BED LEVEL = 130.865 M



CUTTING AREA (SQ.M) = 1.356
FILLING AREA (SQ.M) = 1.648
CH. (KM):- 1+100
DESIGNED BED LEVEL = 129.274 M

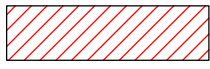
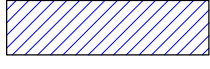


CUTTING AREA (SQ.M) = 0.029
FILLING AREA (SQ.M) = 3.919
CH. (KM):- 1+000
DESIGNED BED LEVEL = 129.308 M



CUTTING AREA (SQ.M) = 0.382
FILLING AREA (SQ.M) = 1.630
CH. (KM):- 1+200
DESIGNED BED LEVEL = 129.241 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

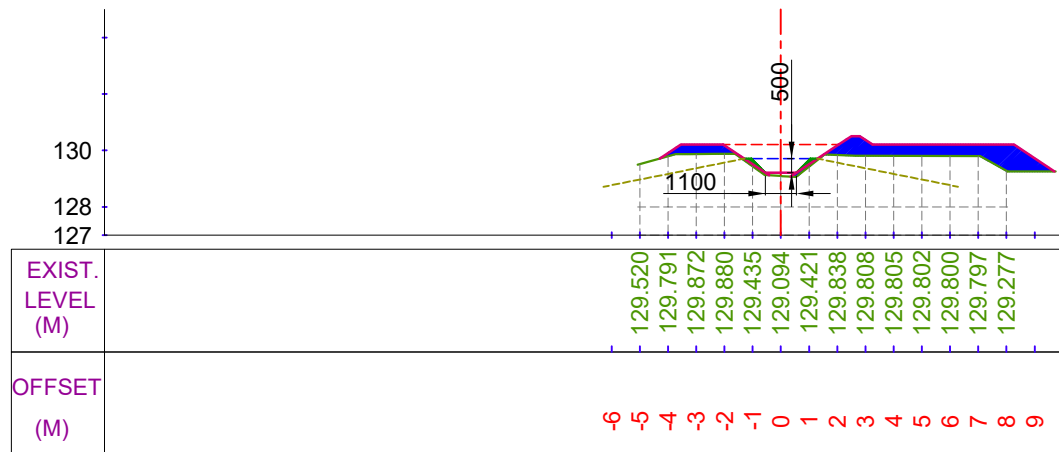
Prepared by :-

WAPCOS LTD.

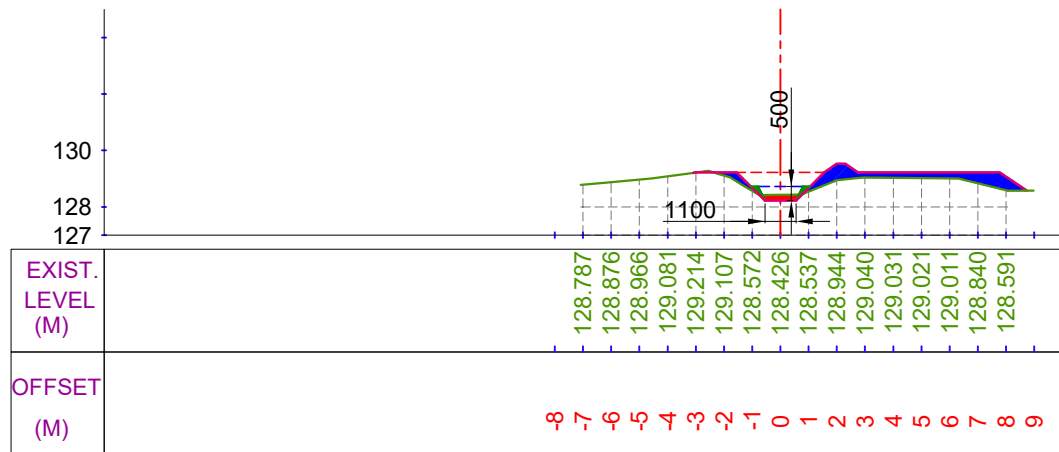


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC- 3 of 13

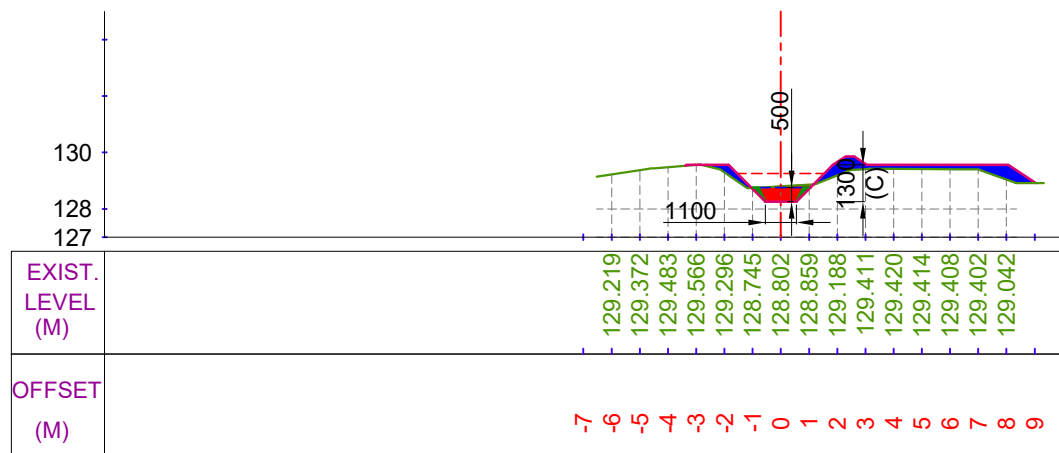
X SECTION OF RASALPUR-I MINOR



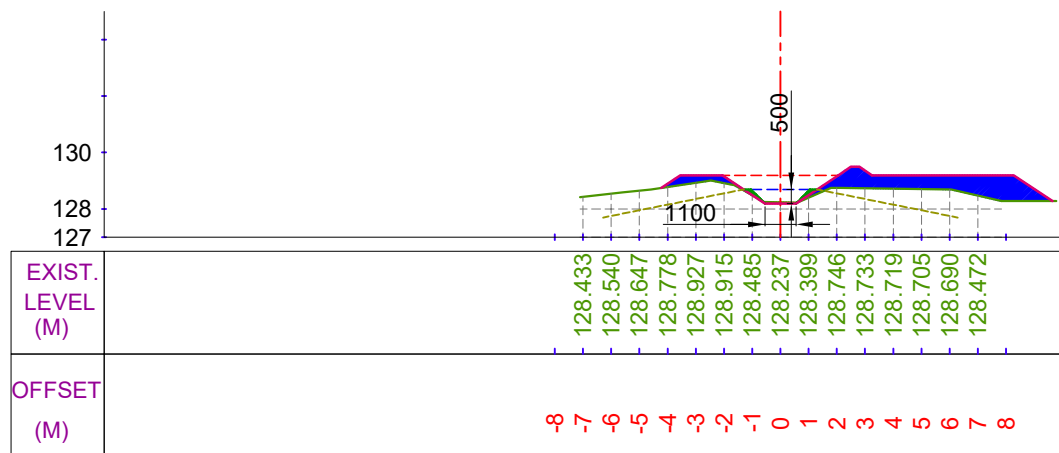
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.780
CH. (KM):- 1+300
DESIGNED BED LEVEL = 129.208 M



CUTTING AREA (SQ.M) = 0.253
FILLING AREA (SQ.M) = 2.604
CH. (KM):- 1+500
DESIGNED BED LEVEL = 128.226 M



CUTTING AREA (SQ.M) = 0.776
FILLING AREA (SQ.M) = 2.226
CH. (KM):- 1+400
DESIGNED BED LEVEL = 128.259 M

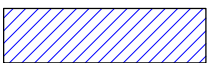


CUTTING AREA (SQ.M) = 0.051
FILLING AREA (SQ.M) = 5.271
CH. (KM):- 1+600
DESIGNED BED LEVEL = 128.193 M

LEGEND



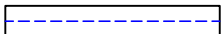
CUT AREA



FILL AREA



EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

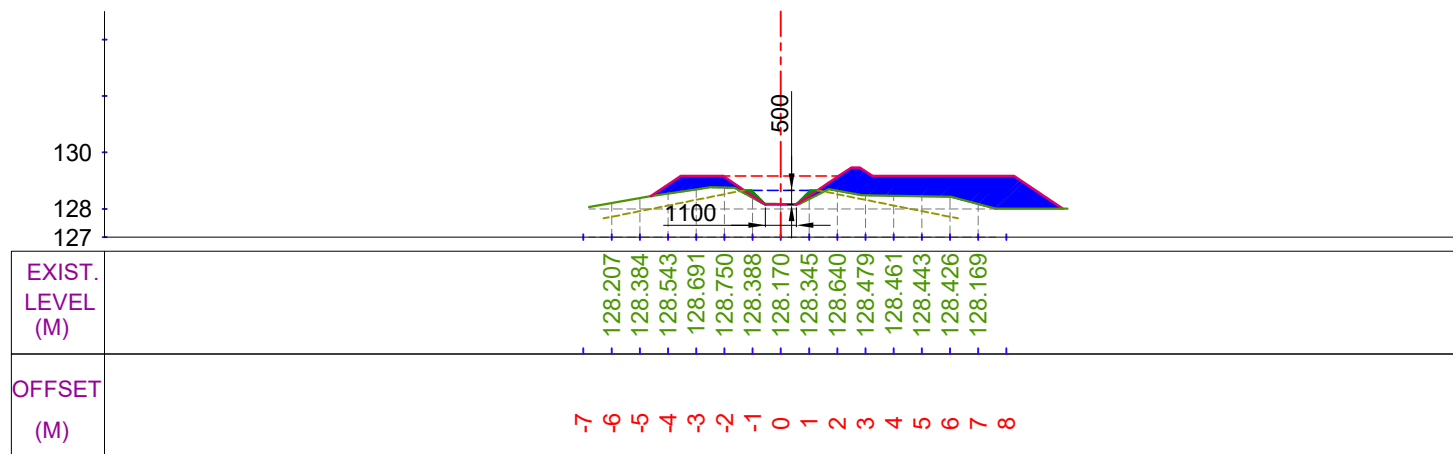
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

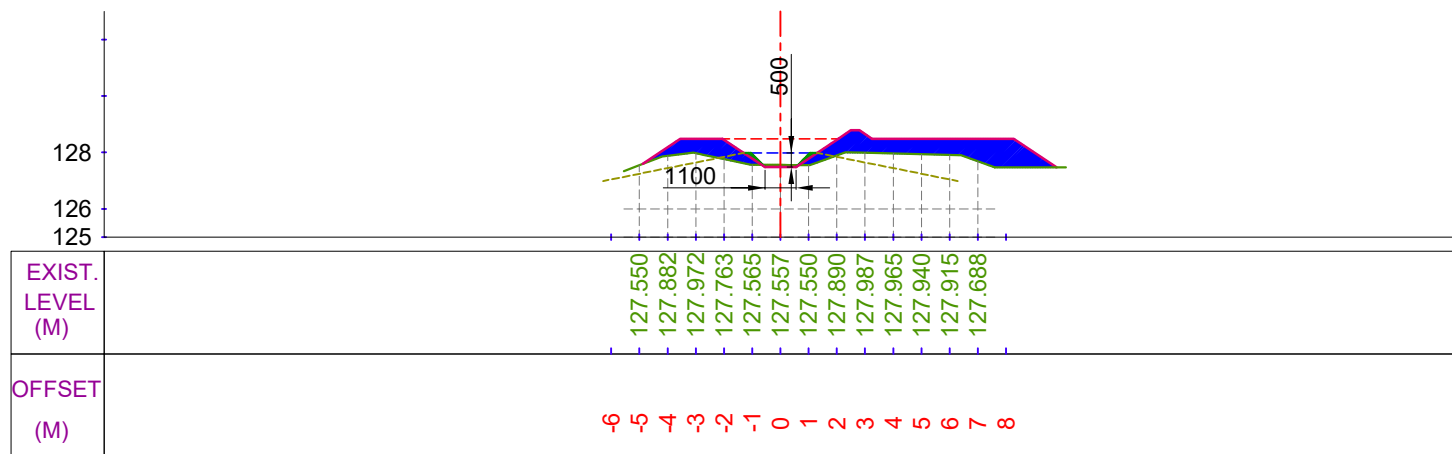
4 of 13

X SECTION OF RASALPUR-I MINOR



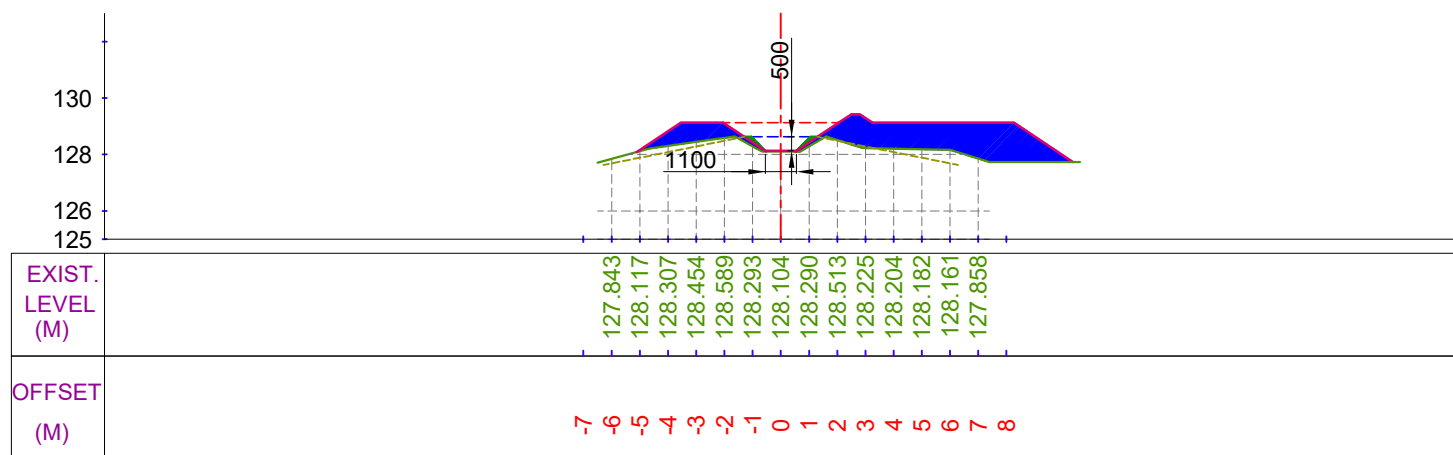
CUTTING AREA (SQ.M) = 0.013
FILLING AREA (SQ.M) = 7.649

CH. (KM):- 1+700
DESIGNED BED LEVEL = 128.159 M



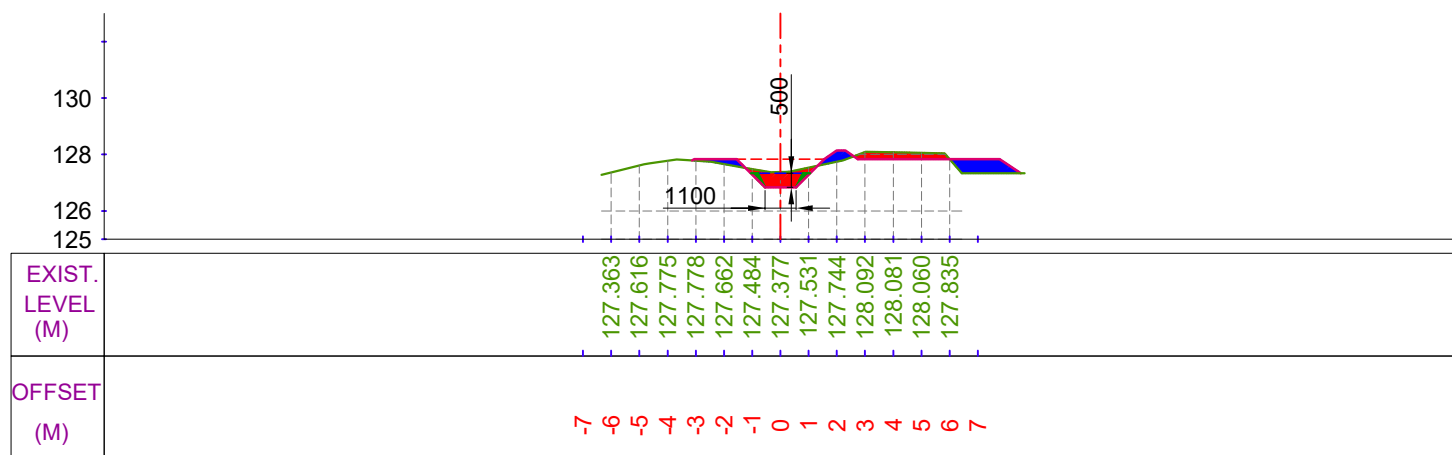
CUTTING AREA (SQ.M) = 0.087
FILLING AREA (SQ.M) = 7.100

CH. (KM):- 1+900
DESIGNED BED LEVEL = 127.483 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.230

CH. (KM):- 1+800
DESIGNED BED LEVEL = 128.126 M



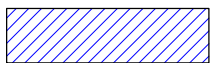
CUTTING AREA (SQ.M) = 1.635
FILLING AREA (SQ.M) = 1.527

CH. (KM):- 2+000
DESIGNED BED LEVEL = 126.839 M

LEGEND



CUT AREA



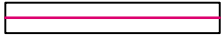
FILL AREA



EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

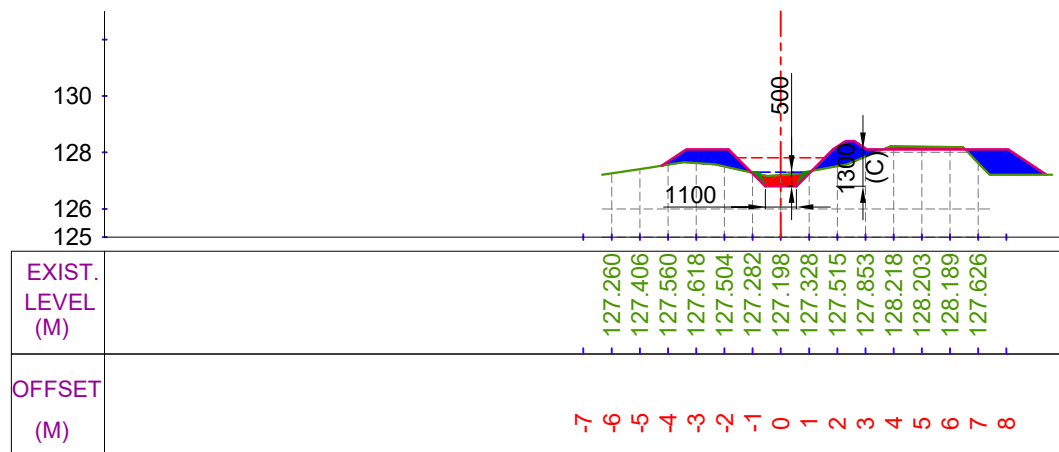
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

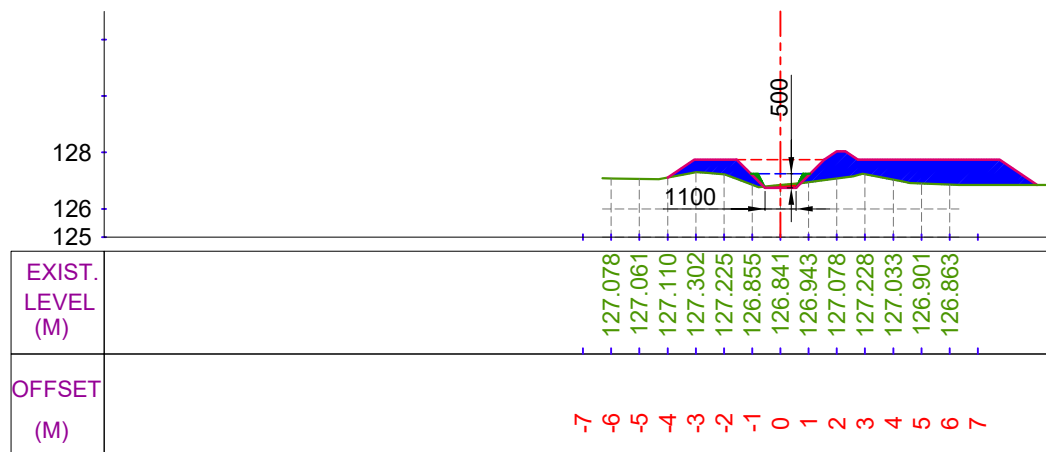
5 of 13

X SECTION OF RASALPUR-I MINOR



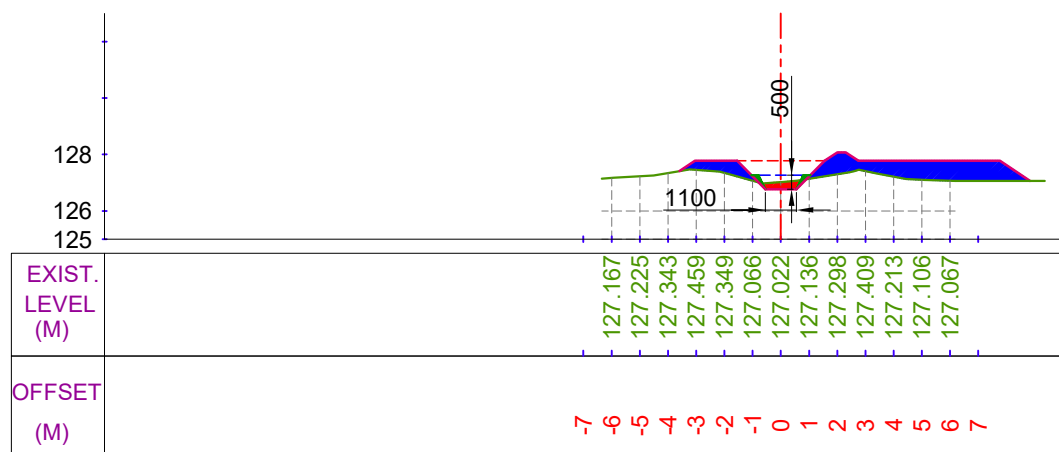
CUTTING AREA (SQ.M) = 0.791
FILLING AREA (SQ.M) = 3.908

CH. (KM):- 2+100
DESIGNED BED LEVEL = 126.806 M



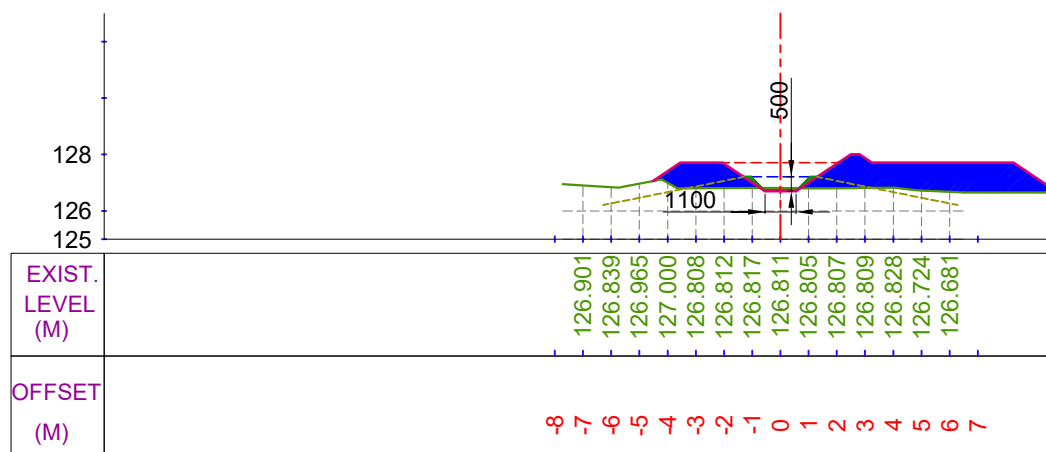
CUTTING AREA (SQ.M) = 0.119
FILLING AREA (SQ.M) = 7.166

CH. (KM):- 2+300
DESIGNED BED LEVEL = 126.739 M



CUTTING AREA (SQ.M) = 0.307
FILLING AREA (SQ.M) = 5.323

CH. (KM):- 2+200
DESIGNED BED LEVEL = 126.773 M



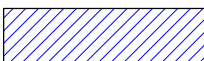
CUTTING AREA (SQ.M) = 0.127
FILLING AREA (SQ.M) = 10.023

CH. (KM):- 2+400
DESIGNED BED LEVEL = 126.706 M

LEGEND



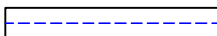
CUT AREA



FILL AREA



EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

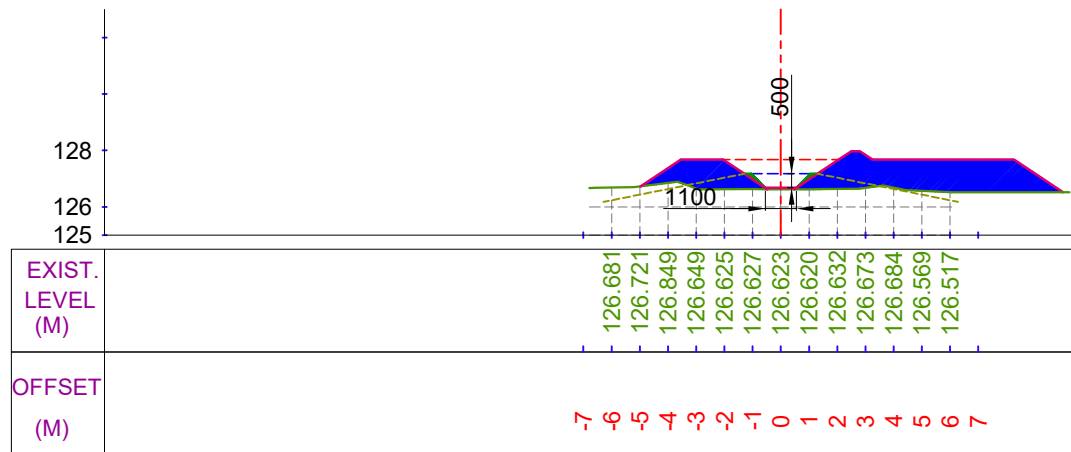
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

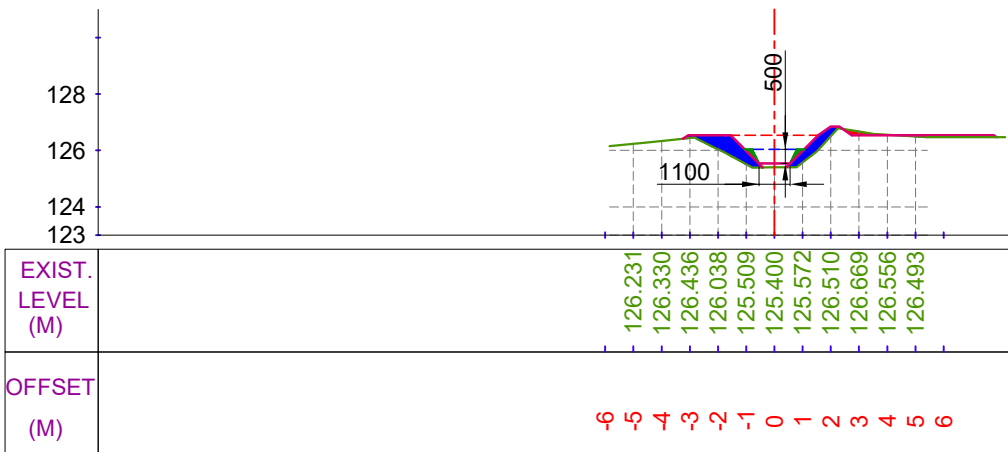
WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

6 of 13

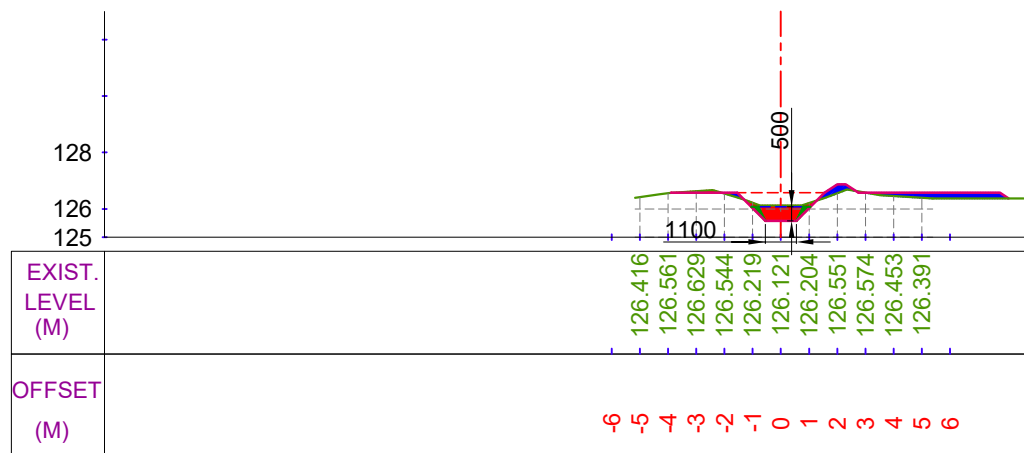
X SECTION OF RASALPUR-I MINOR



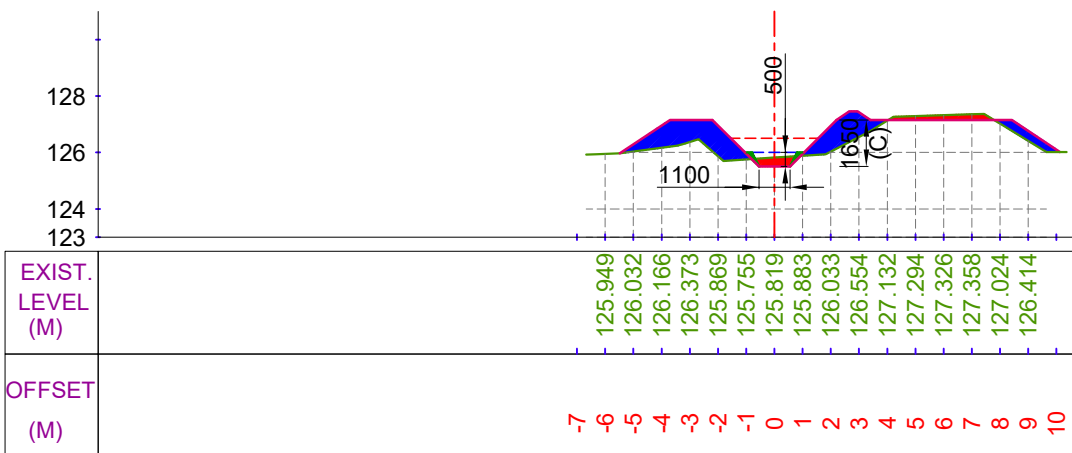
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.691
CH. (KM):- 2+500
DESIGNED BED LEVEL = 126.673 M



CUTTING AREA (SQ.M) = 0.130
FILLING AREA (SQ.M) = 1.929
CH. (KM):- 2+700
DESIGNED BED LEVEL = 125.539 M



CUTTING AREA (SQ.M) = 0.942
FILLING AREA (SQ.M) = 1.135
CH. (KM):- 2+600
DESIGNED BED LEVEL = 125.572 M

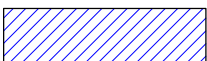


CUTTING AREA (SQ.M) = 0.970
FILLING AREA (SQ.M) = 5.648
CH. (KM):- 2+800
DESIGNED BED LEVEL = 125.506 M

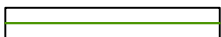
LEGEND



CUT AREA



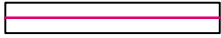
FILL AREA



EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

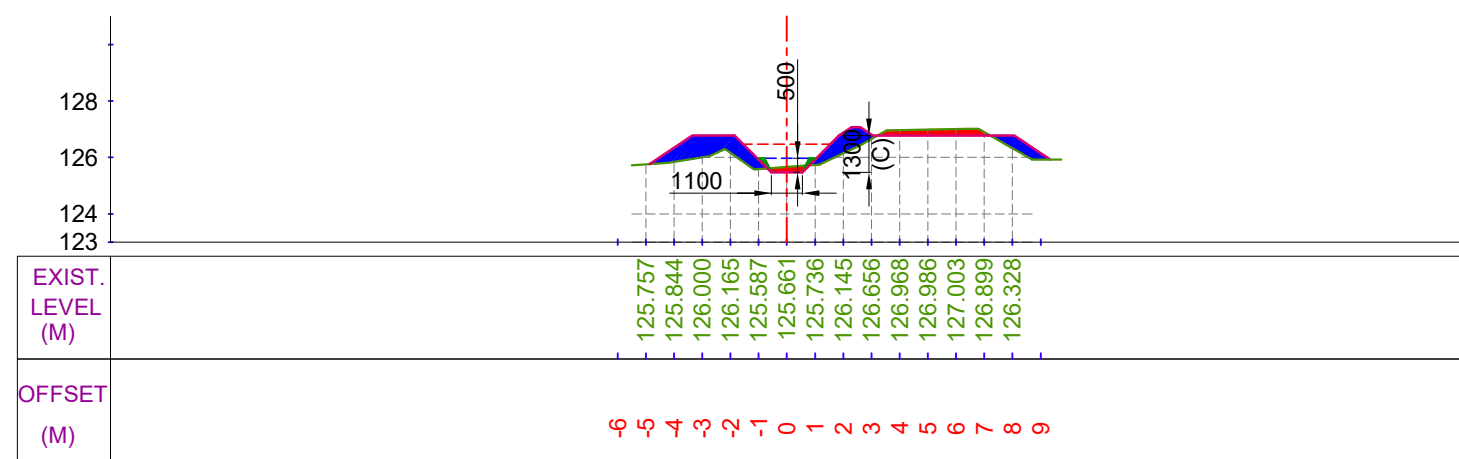
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

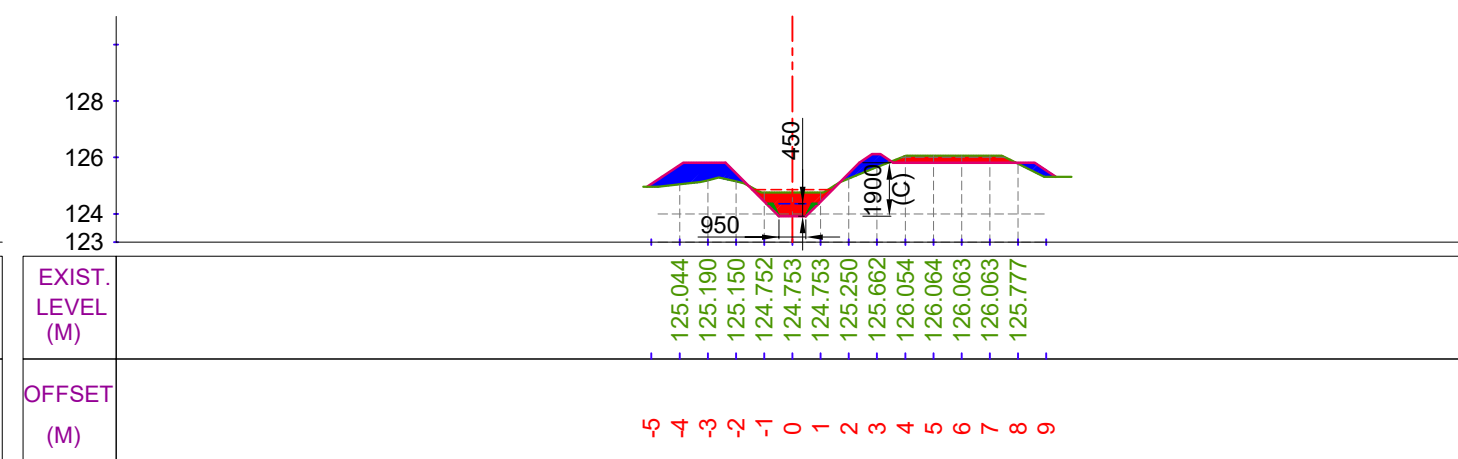
WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

7 of 13

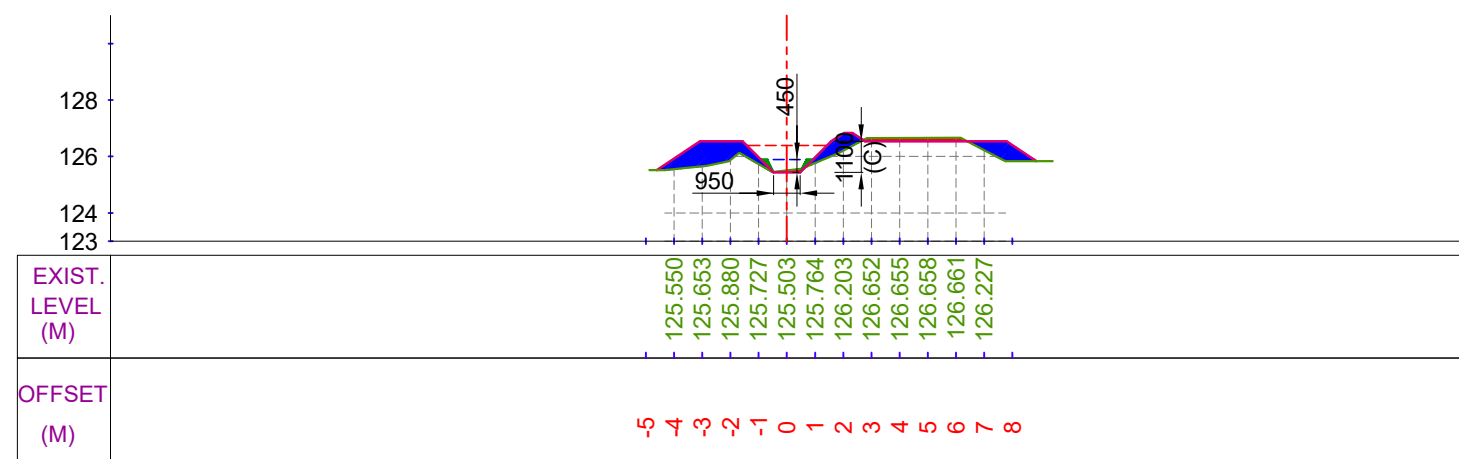
X SECTION OF RASALPUR-I MINOR



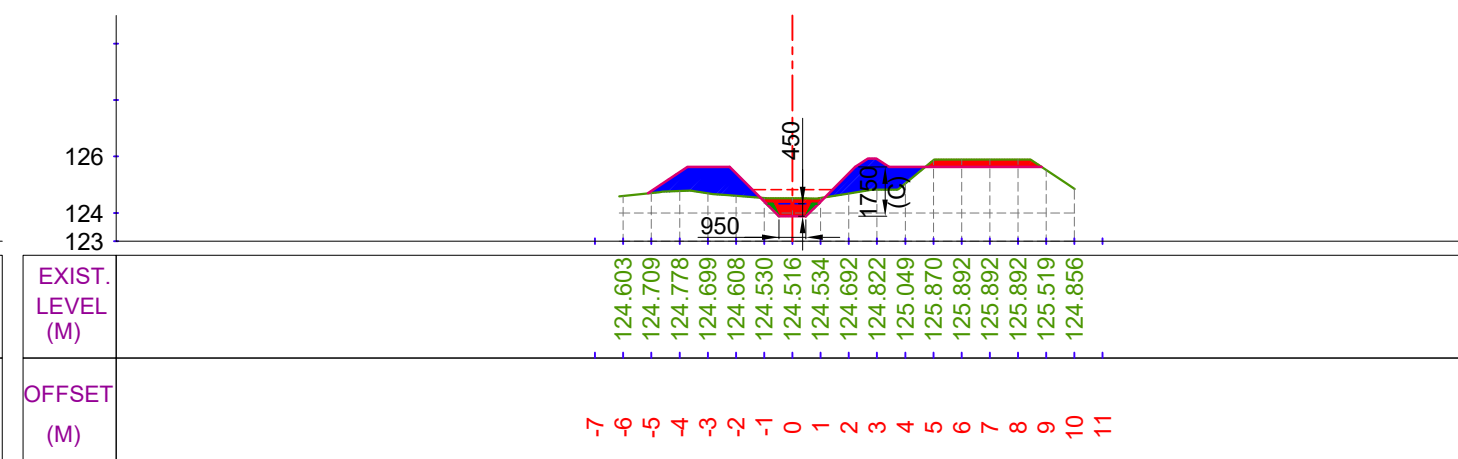
CUTTING AREA (SQ.M) = 1.017
FILLING AREA (SQ.M) = 3.956
CH. (KM):- 2+900
DESIGNED BED LEVEL = 125.472 M



CUTTING AREA (SQ.M) = 2.466
FILLING AREA (SQ.M) = 2.517
CH. (KM):- 3+100
DESIGNED BED LEVEL = 123.912 M



CUTTING AREA (SQ.M) = 0.478
FILLING AREA (SQ.M) = 3.689
CH. (KM):- 3+000
DESIGNED BED LEVEL = 125.439 M



CUTTING AREA (SQ.M) = 1.916
FILLING AREA (SQ.M) = 4.842
CH. (KM):- 3+200
DESIGNED BED LEVEL = 123.878 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			F.S.L.
			H.G. LINE

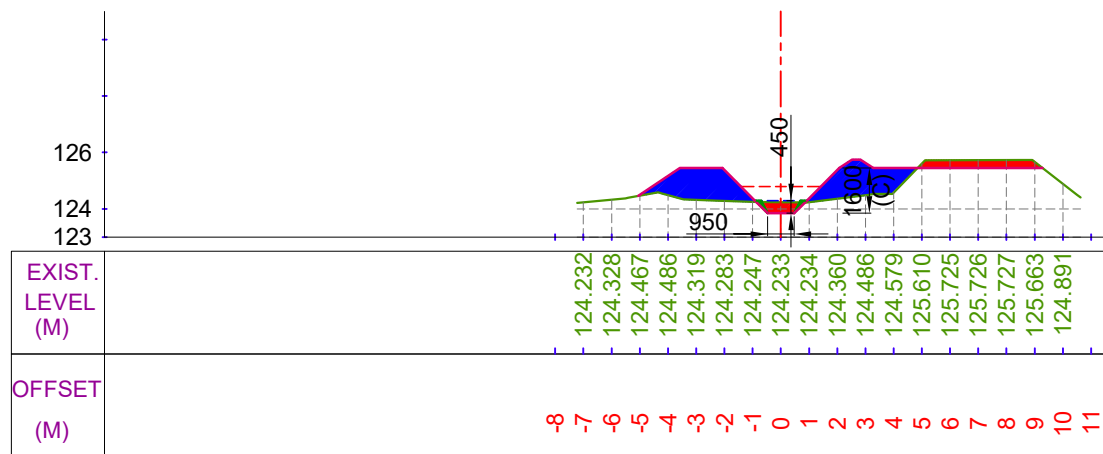
Prepared by :-

WAPCOS LTD.

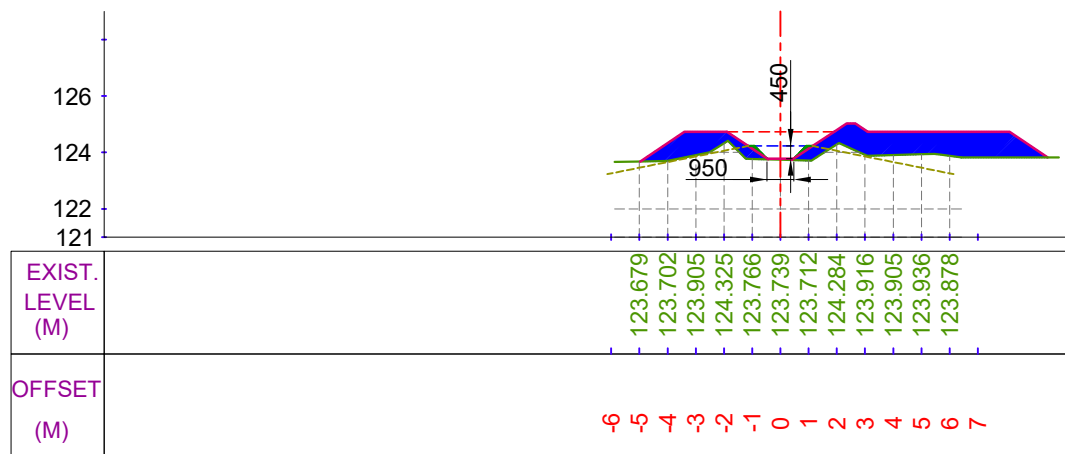


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC- 8 of 13

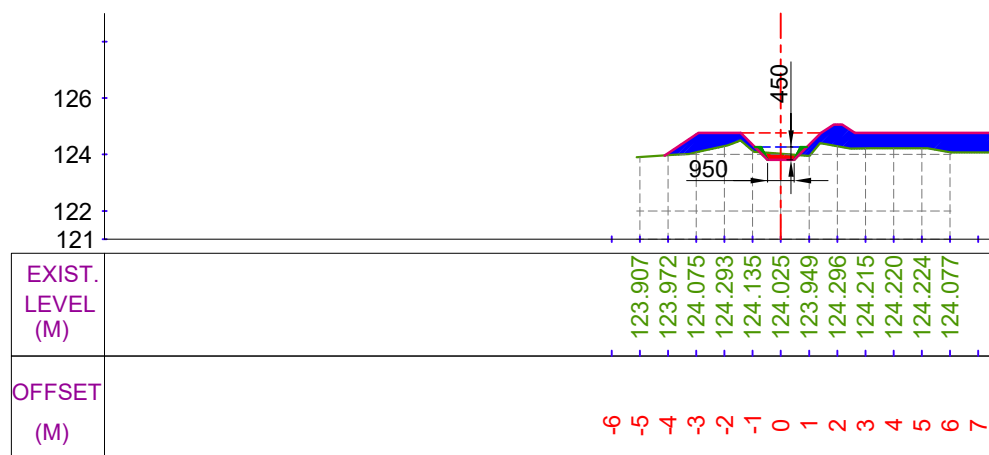
X SECTION OF RASALPUR-I MINOR



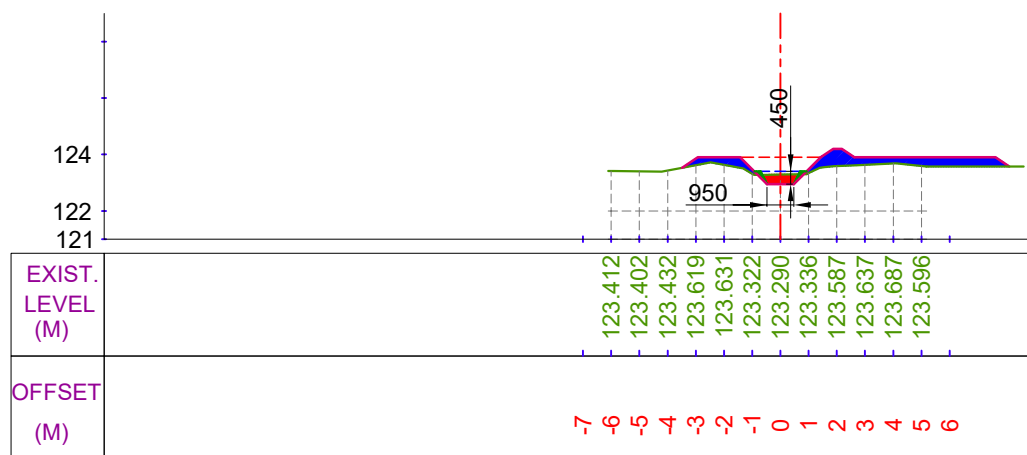
CUTTING AREA (SQ.M) = 1.603
FILLING AREA (SQ.M) = 6.184
CH. (KM):- 3+300
DESIGNED BED LEVEL = 123.845 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.676
CH. (KM):- 3+500
DESIGNED BED LEVEL = 123.778 M



CUTTING AREA (SQ.M) = 0.226
FILLING AREA (SQ.M) = 5.675
CH. (KM):- 3+400
DESIGNED BED LEVEL = 123.812 M



CUTTING AREA (SQ.M) = 0.377
FILLING AREA (SQ.M) = 2.862
CH. (KM):- 3+600
DESIGNED BED LEVEL = 122.953 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



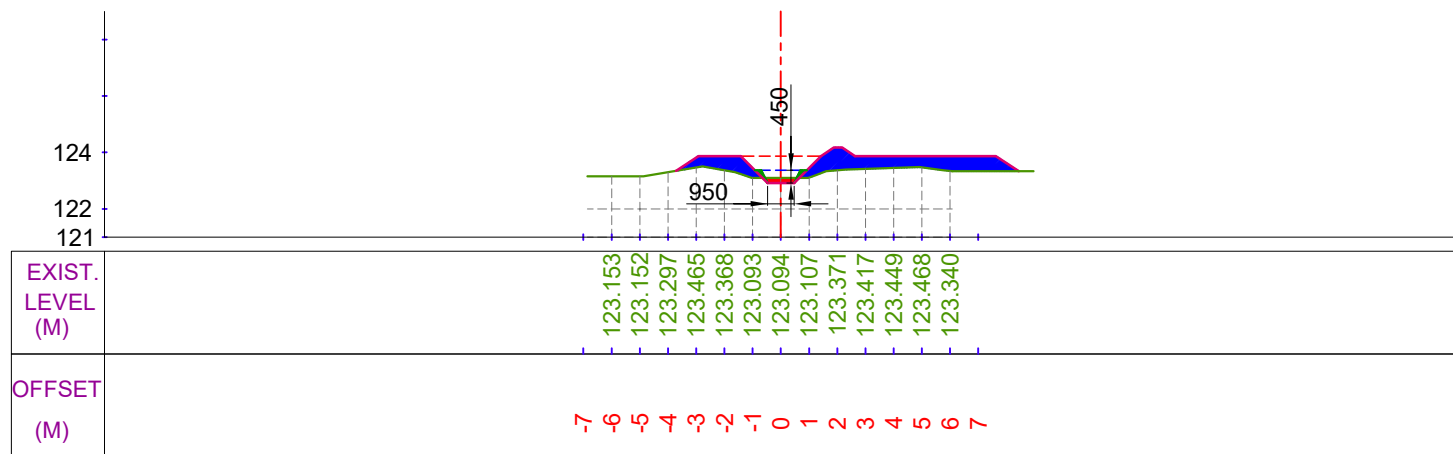
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

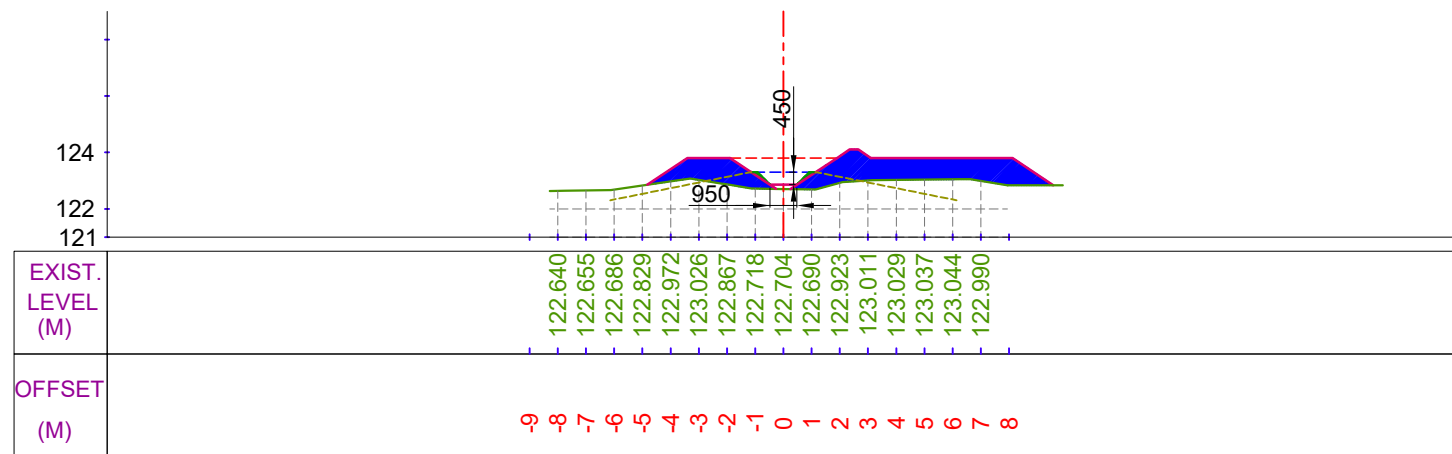
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

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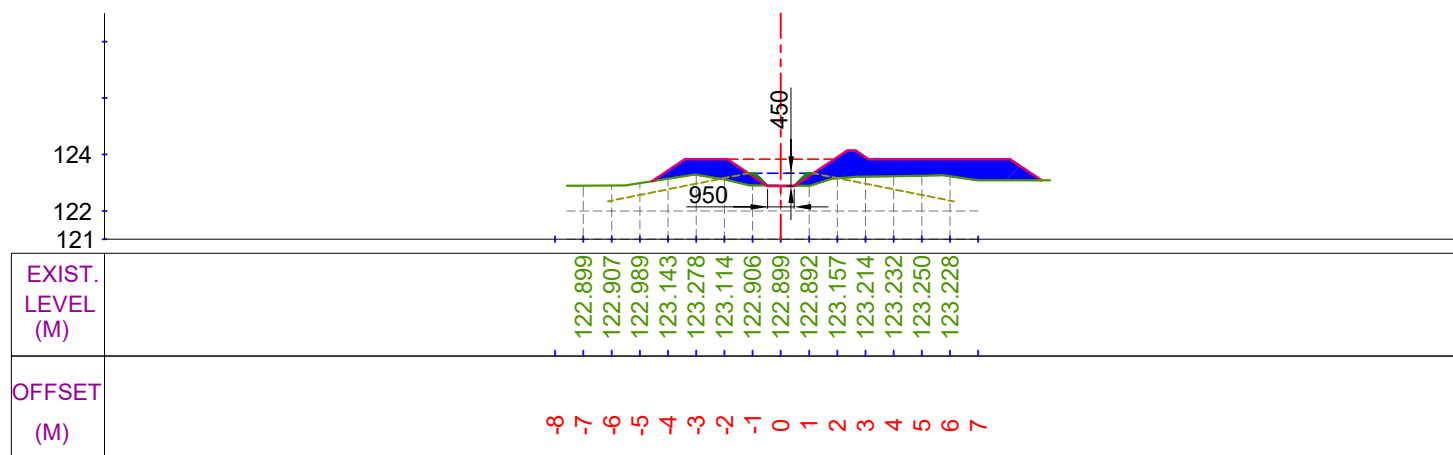
X SECTION OF RASALPUR-I MINOR



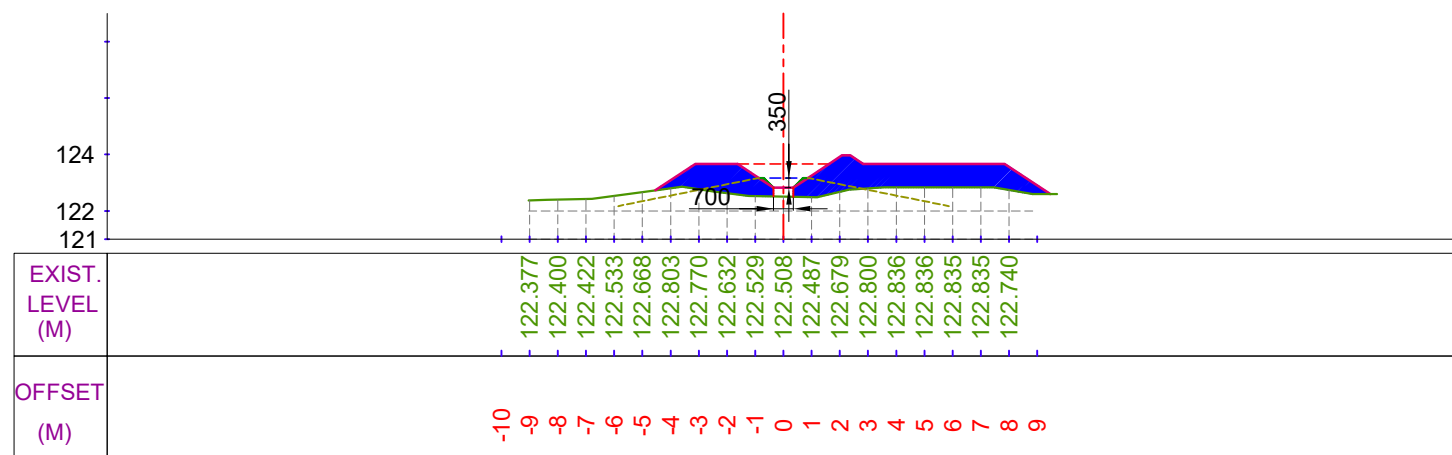
CUTTING AREA (SQ.M) = 0.181
FILLING AREA (SQ.M) = 4.808
CH. (KM):- 3+700
DESIGNED BED LEVEL = 122.920 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.389
CH. (KM):- 3+900
DESIGNED BED LEVEL = 122.853 M



CUTTING AREA (SQ.M) = 0.012
FILLING AREA (SQ.M) = 7.092
CH. (KM):- 3+800
DESIGNED BED LEVEL = 122.886 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.258
CH. (KM):- 4+000
DESIGNED BED LEVEL = 122.820 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



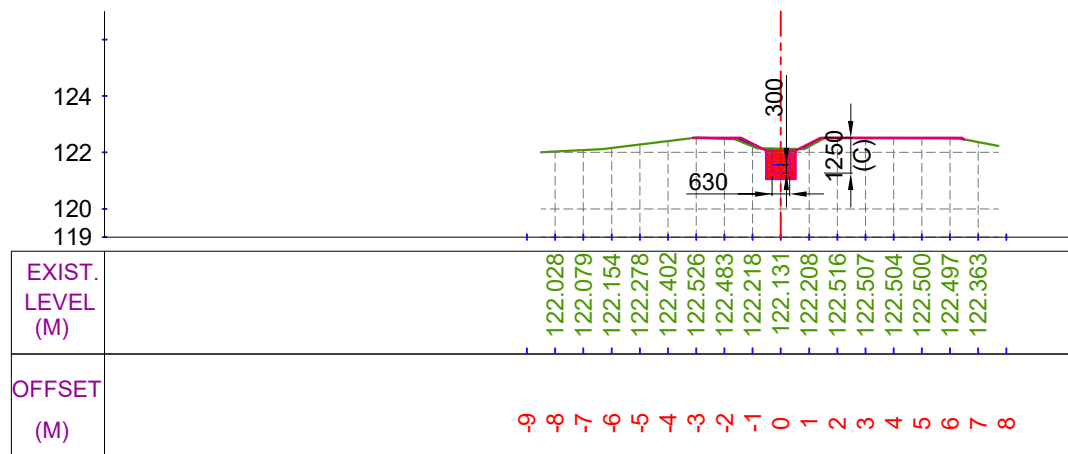
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

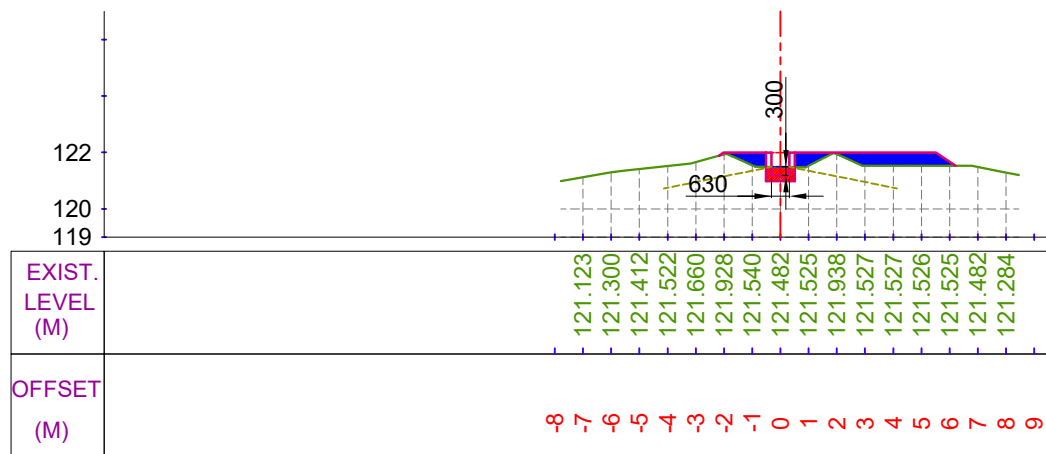
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

10 of 13

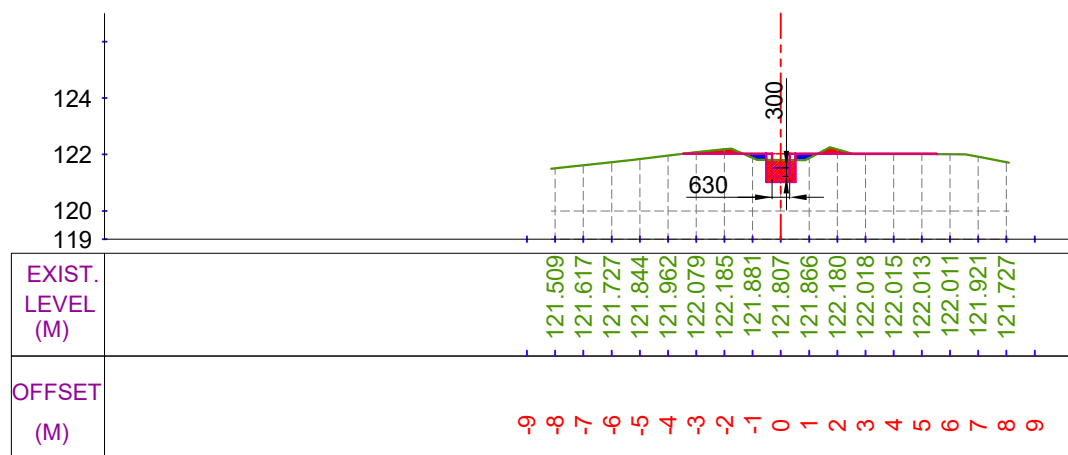
X SECTION OF RASALPUR-I MINOR



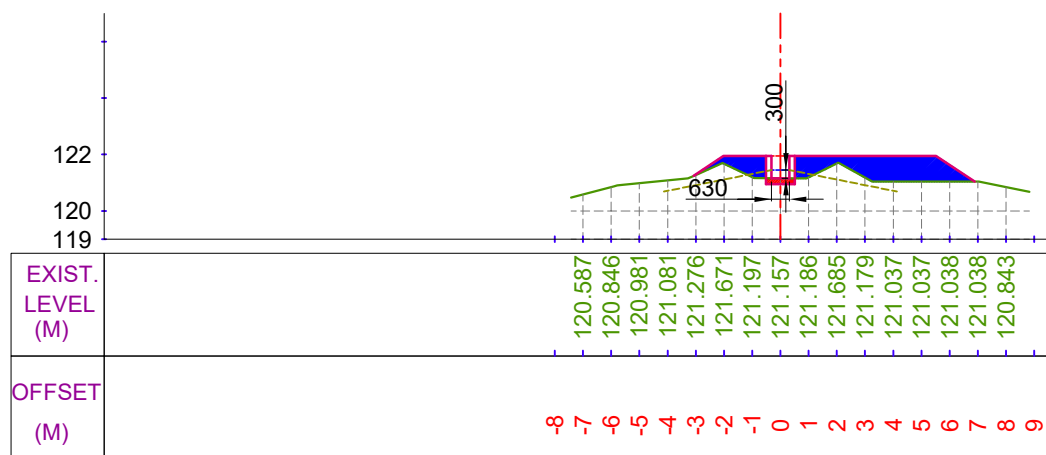
CUTTING AREA (SQ.M) = 1.119
FILLING AREA (SQ.M) = 0.216
CH. (KM):- 4+100
DESIGNED BED LEVEL = 121.262 M



CUTTING AREA (SQ.M) = 0.509
FILLING AREA (SQ.M) = 2.524
CH. (KM):- 4+300
DESIGNED BED LEVEL = 121.188 M



CUTTING AREA (SQ.M) = 1.142
FILLING AREA (SQ.M) = 0.284
CH. (KM):- 4+200
DESIGNED BED LEVEL = 121.226 M



CUTTING AREA (SQ.M) = 0.214
FILLING AREA (SQ.M) = 5.320
CH. (KM):- 4+400
DESIGNED BED LEVEL = 121.150 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

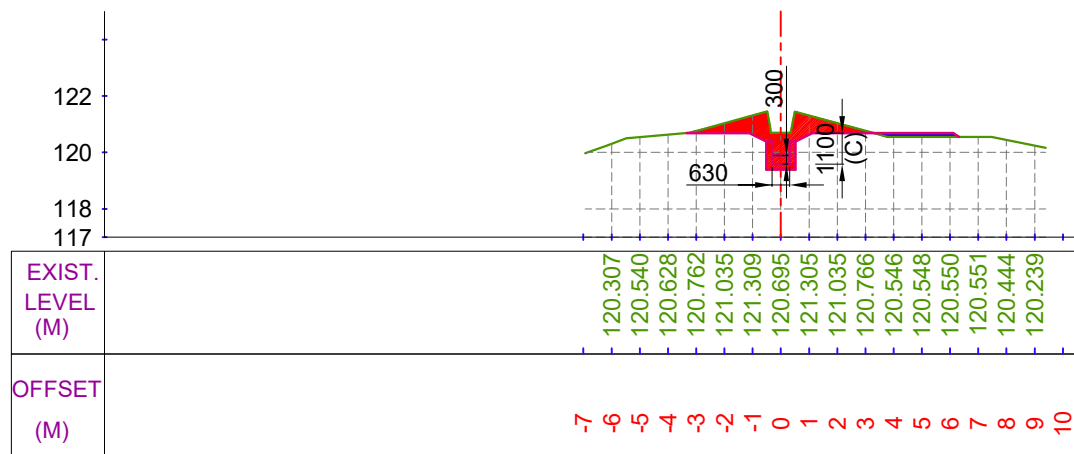
Prepared by :-

WAPCOS LTD.

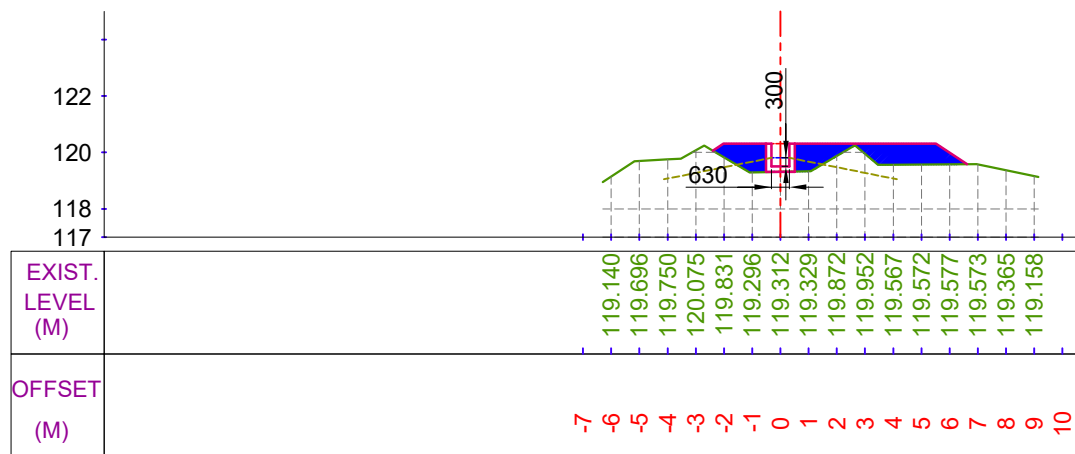


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC- 11 of 13

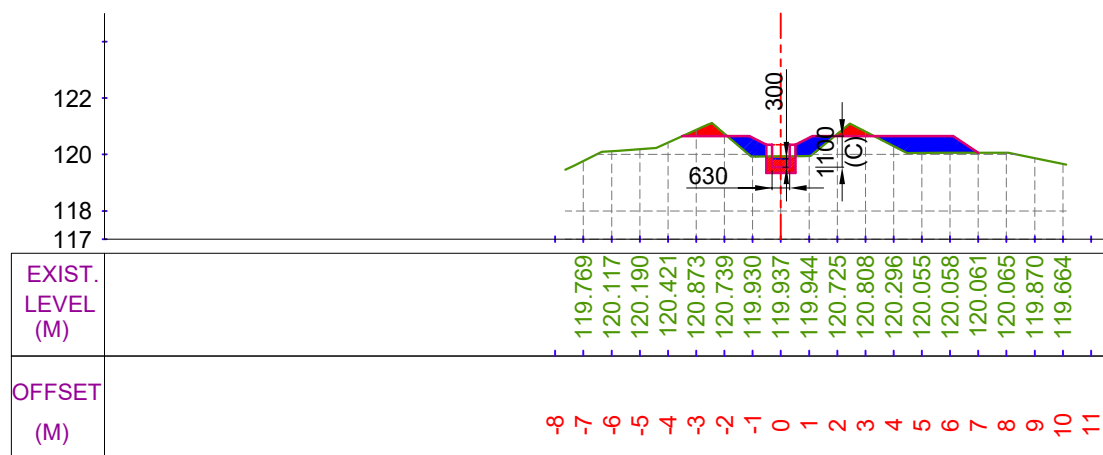
X SECTION OF RASALPUR-I MINOR



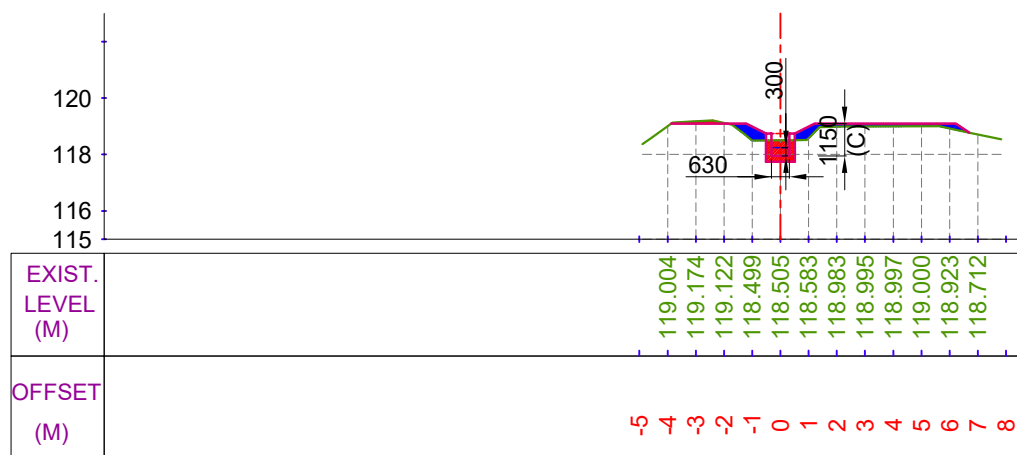
CUTTING AREA (SQ.M) = 3.755
FILLING AREA (SQ.M) = 0.373
CH. (KM):- 4+500
DESIGNED BED LEVEL = 119.587 M



CUTTING AREA (SQ.M) = 0.004
FILLING AREA (SQ.M) = 4.976
CH. (KM):- 4+700
DESIGNED BED LEVEL = 119.510 M



CUTTING AREA (SQ.M) = 1.295
FILLING AREA (SQ.M) = 2.768
CH. (KM):- 4+600
DESIGNED BED LEVEL = 119.549 M



CUTTING AREA (SQ.M) = 0.907
FILLING AREA (SQ.M) = 1.274
CH. (KM):- 4+800
DESIGNED BED LEVEL = 117.948 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

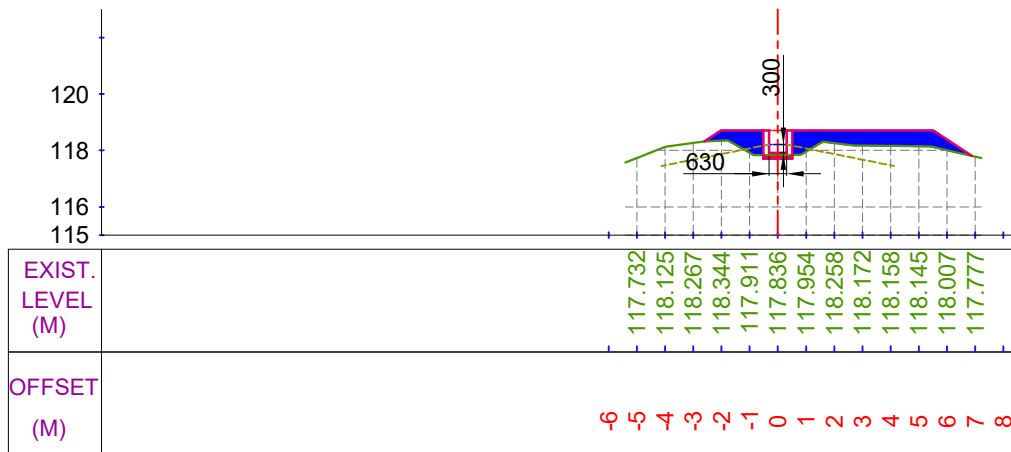
Prepared by :-

WAPCOS LTD.

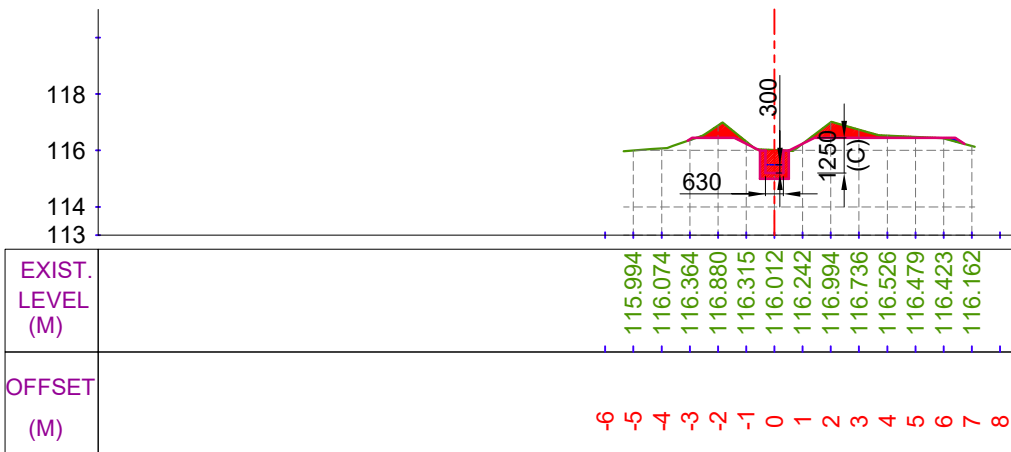


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-		12 of 13

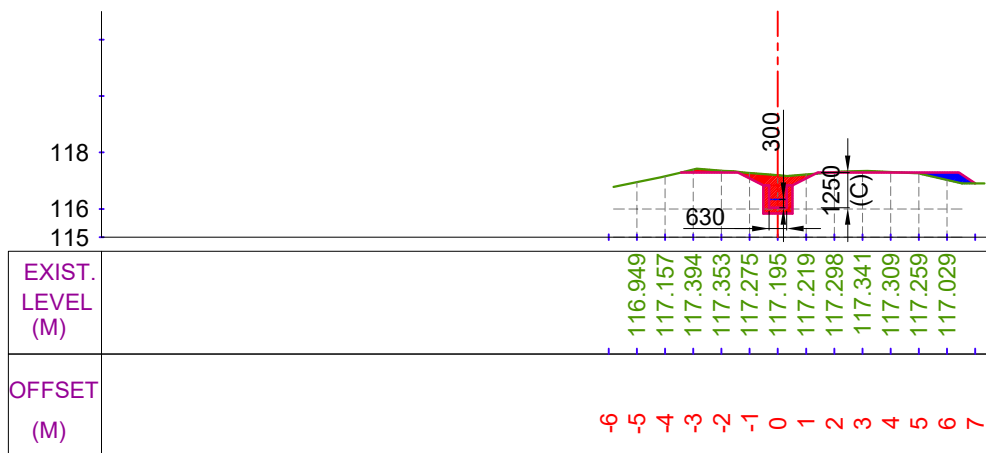
X SECTION OF RASALPUR-I MINOR



CUTTING AREA (SQ.M) = 0.131
FILLING AREA (SQ.M) = 4.290
CH. (KM):- 4+900
DESIGNED BED LEVEL = 117.909 M



CUTTING AREA (SQ.M) = 2.380
FILLING AREA (SQ.M) = 0.082
CH. (KM):- 5+100
DESIGNED BED LEVEL = 115.195 M

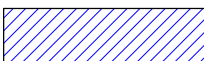


CUTTING AREA (SQ.M) = 1.942
FILLING AREA (SQ.M) = 0.407
CH. (KM):- 5+000
DESIGNED BED LEVEL = 116.042 M

LEGEND



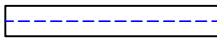
CUT AREA



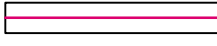
FILL AREA



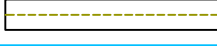
EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

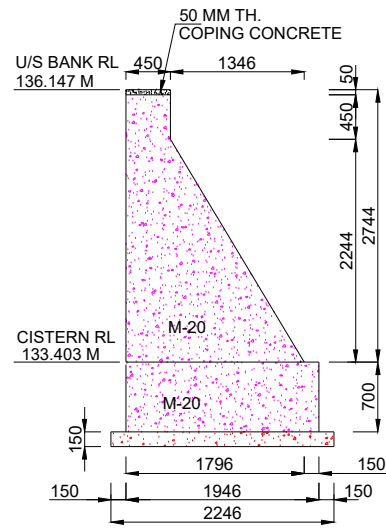
X SEC OF RASALPUR-I MINOR (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

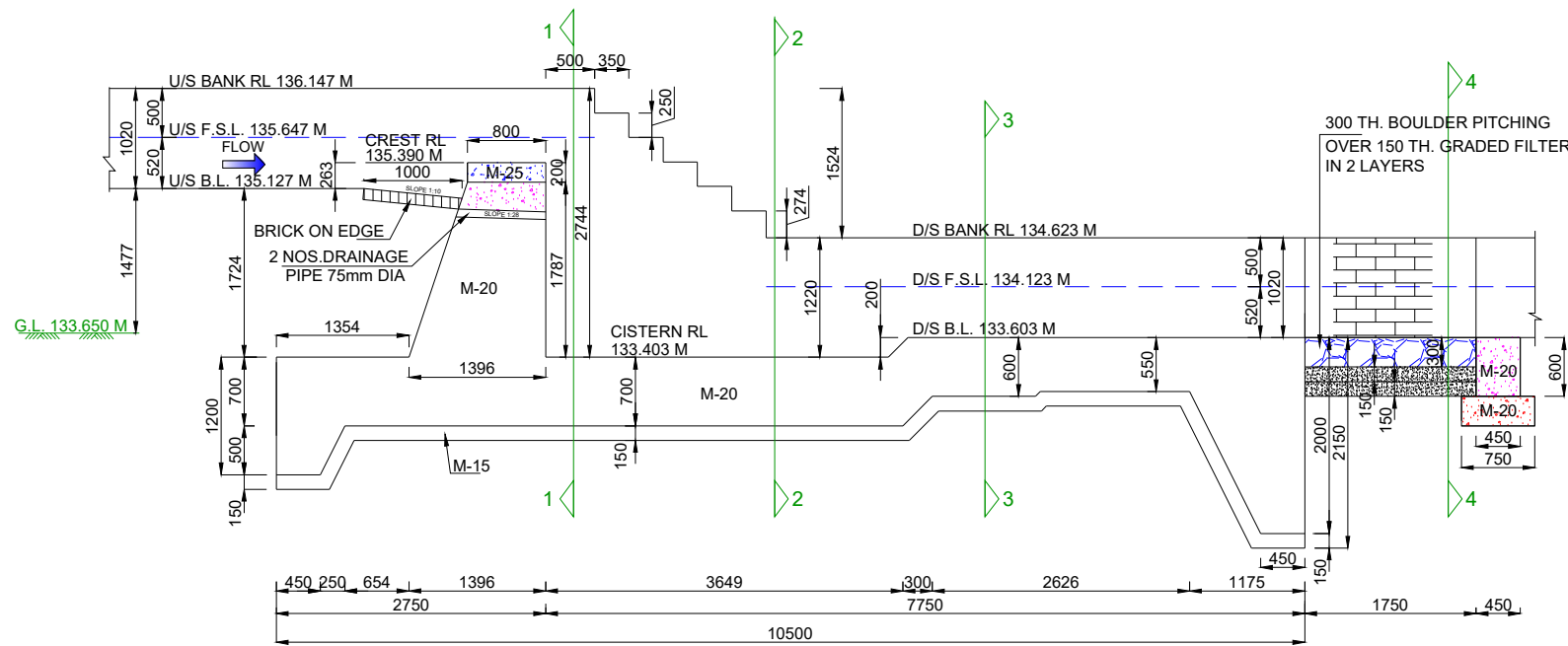
WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ XSEC-

13 of 13

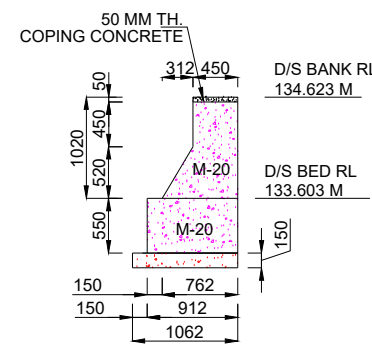
DRAWING OF STRUCTURES



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

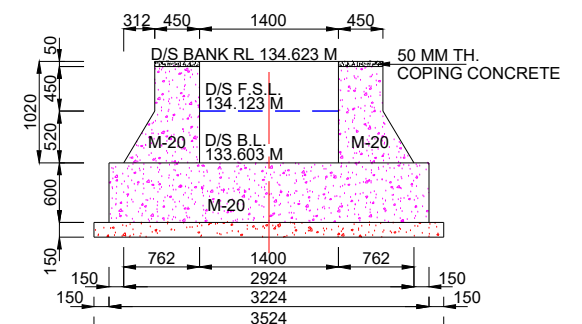
NOTES:-

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,

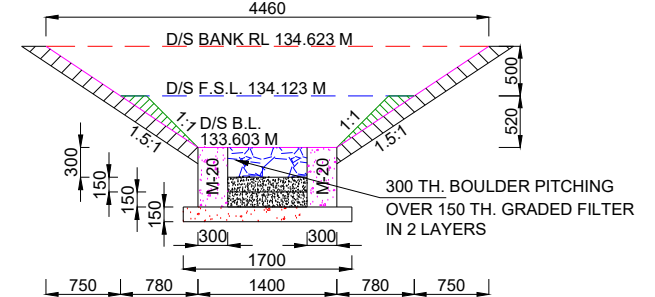
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

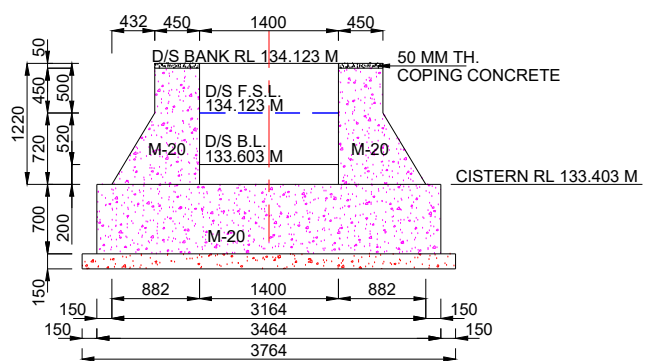
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.300	0.300	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	0.520	0.520	METRE
BED WIDTH	1.400	1.400	METRE
BED SLOPE	1 : 3000	1 : 3000	



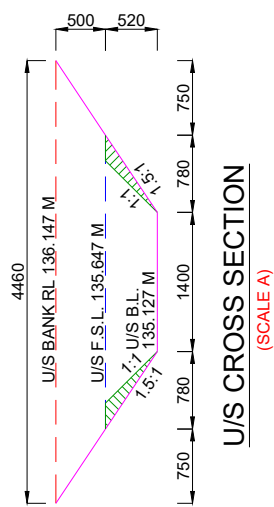
SECTION AT 3-3
(SCALE A)



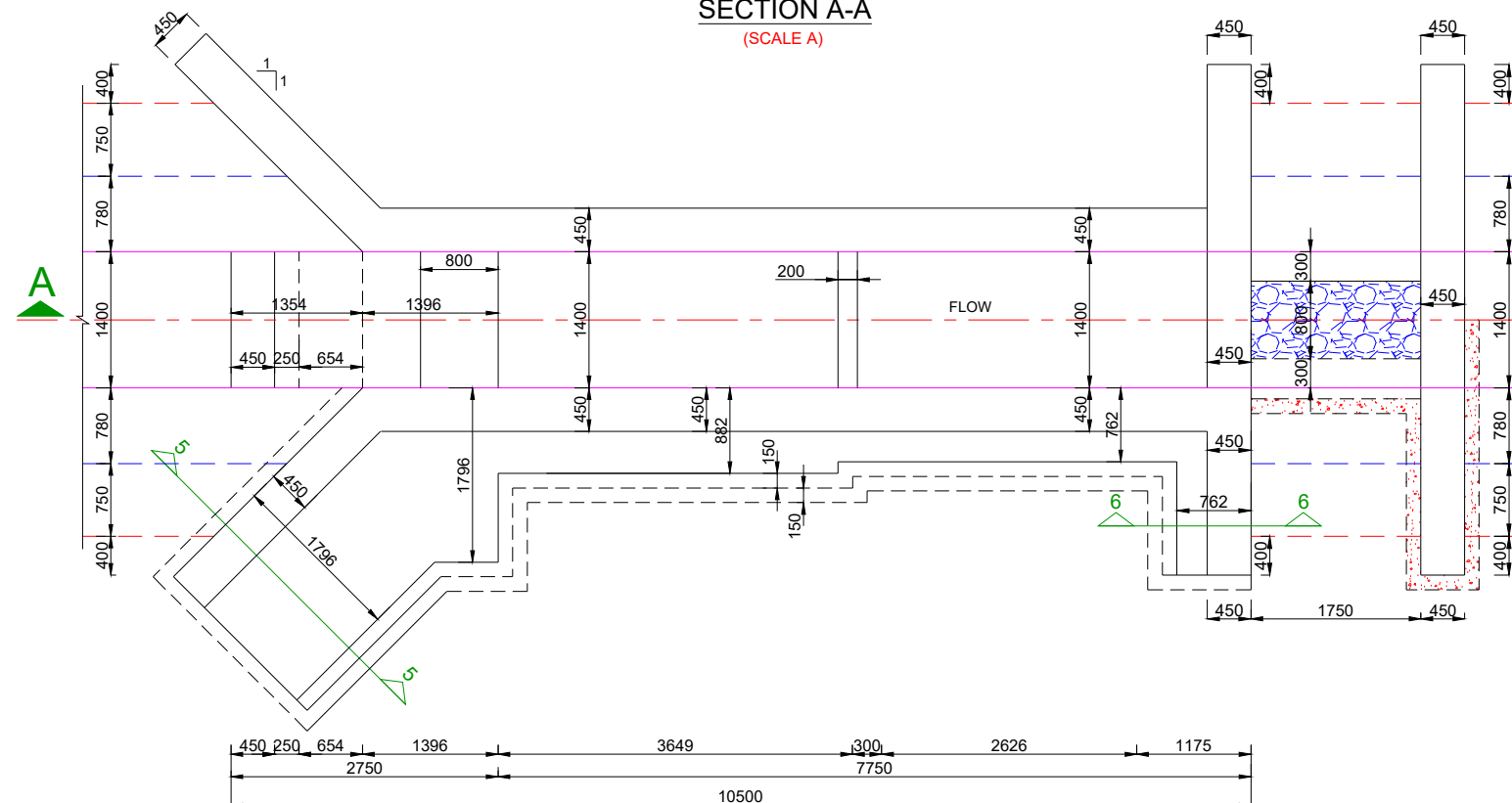
SECTION AT 4-4
(SCALE A)



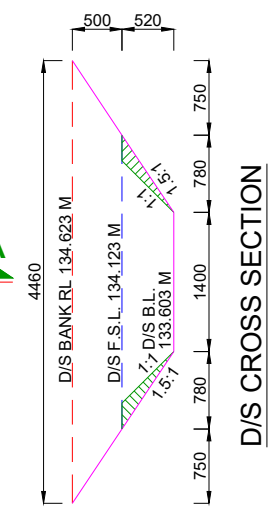
SECTION AT 2-2
(SCALE A)



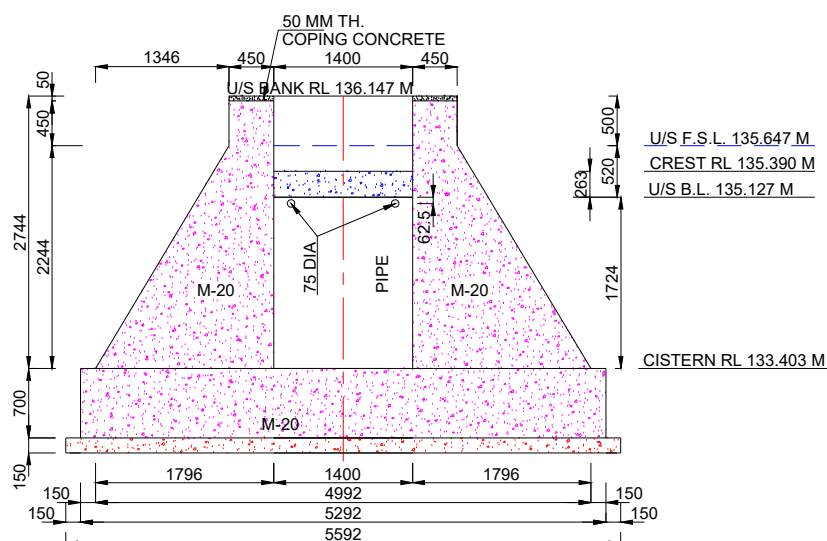
U/S CROSS SECTION
(SCALE A)



HALF TOP / HALF FOUNDATION PLAN
(SCALE A)

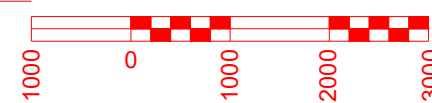


D/S CROSS SECTION
(SCALE A)



SECTION AT 1-1
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 1.524 M HT. FALL AT KM. 0.000 OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ FALL 1 of 1

SECTION AT 5-5

(SCALE A)

SECTION AT 6-6

(SCALE A)

U/S CROSS SECTION

(SCALE A)

D/S CROSS SECTION

(SCALE A)

SECTION AT 3-3

(SCALE A)

SECTION AT 2-2

(SCALE A)

SECTION AT 1-1

(SCALE A)

SECTION AT 4-4

(SCALE A)

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

SHARDA TYPE 1.524 M HT. FALL AT KM. 0.925 OF RASALPUR-I MR.
(OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RMC)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ FALL

1 of 1

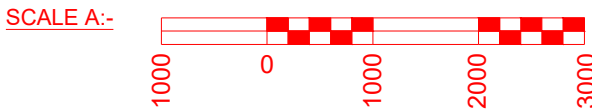
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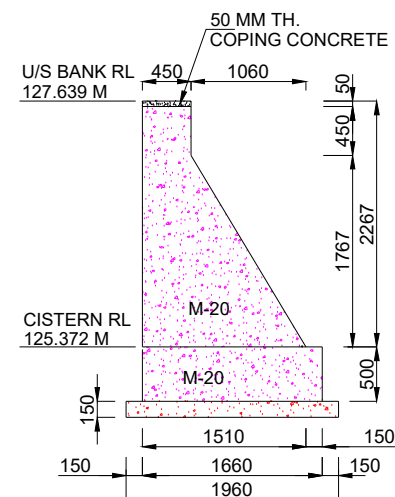
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS.

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.

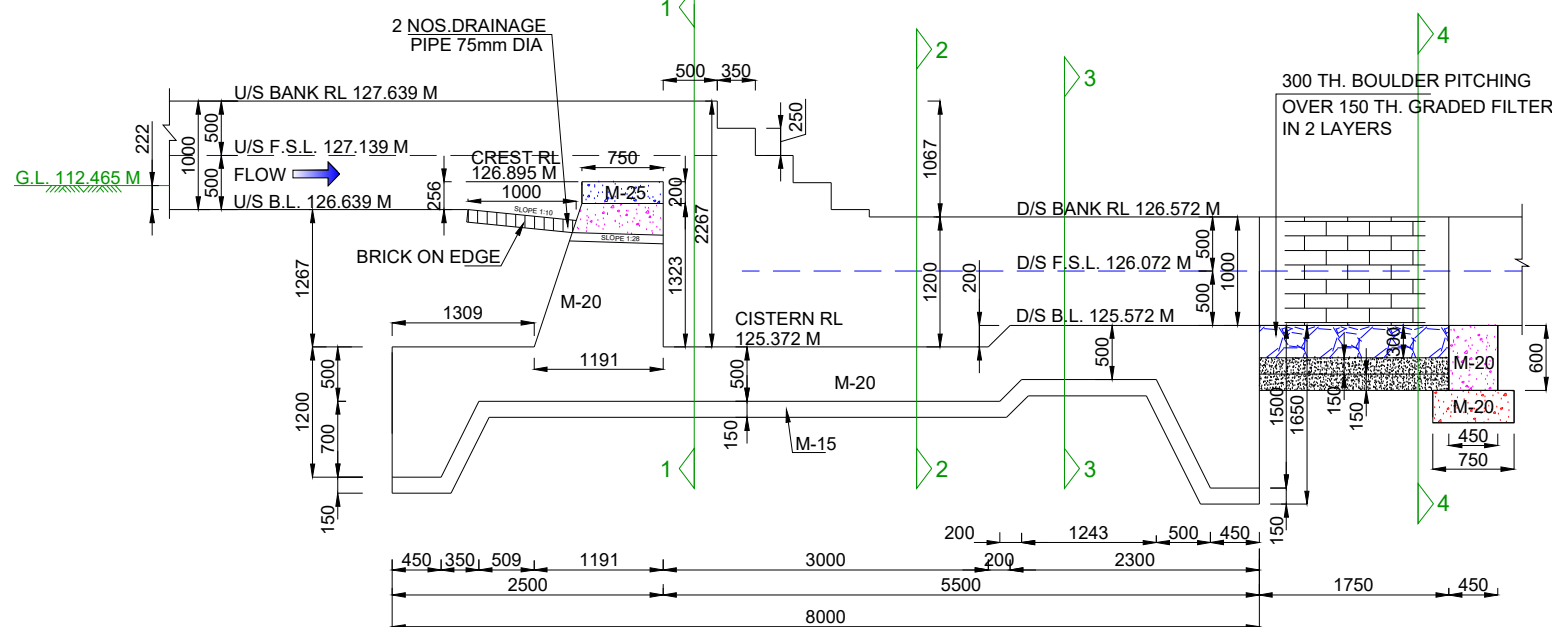
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.220	0.220	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	0.500	0.500	METRE
BED WIDTH	1.100	1.100	METRE
BED SLOPE	1 : 3000	1 : 3000	

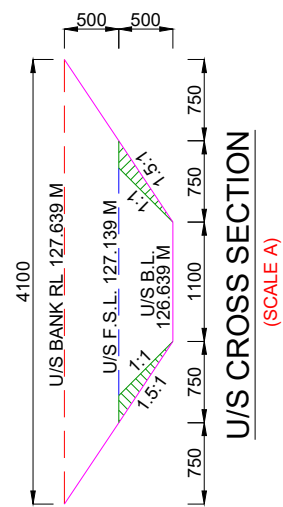




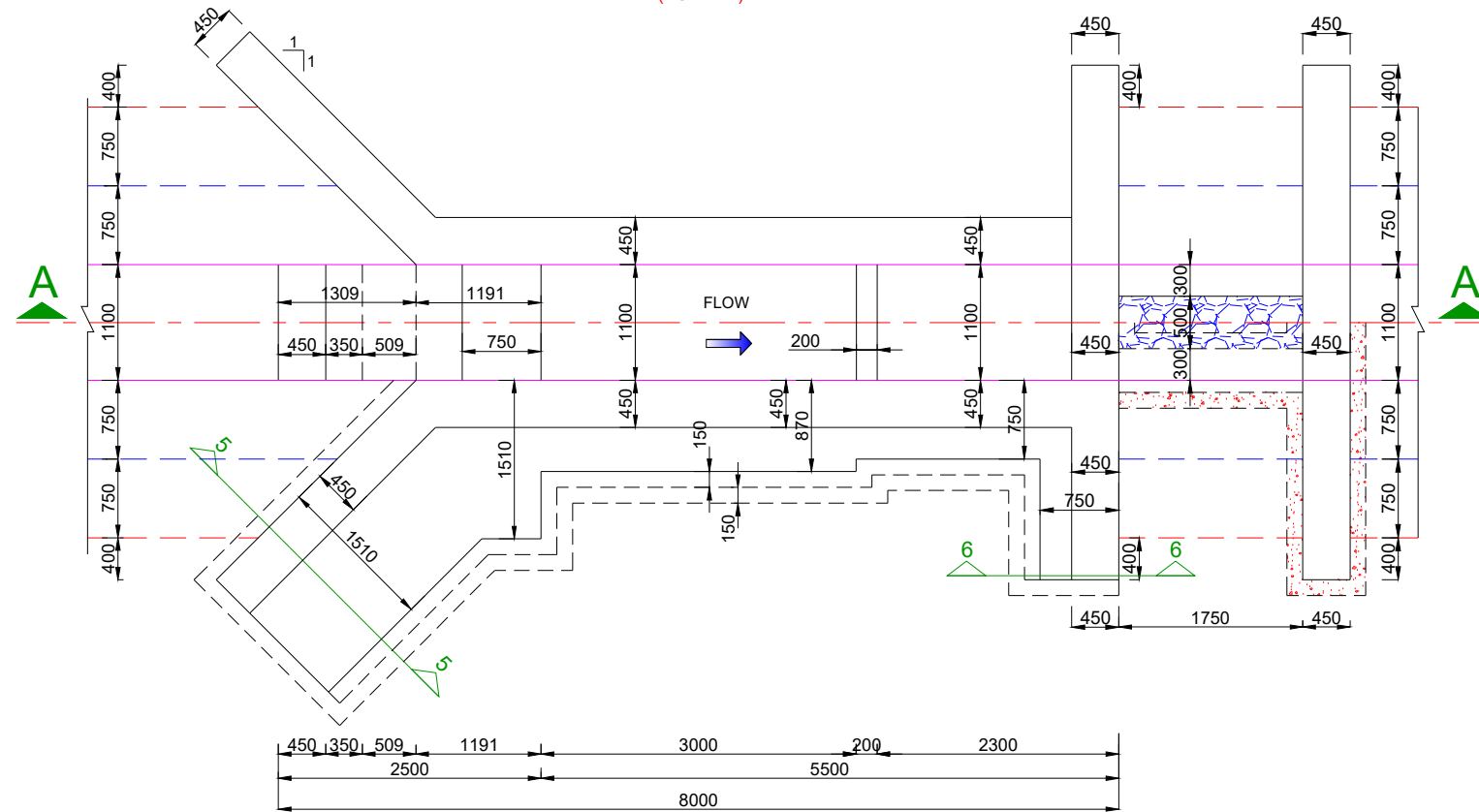
SECTION AT 5-5
(SCALE A)



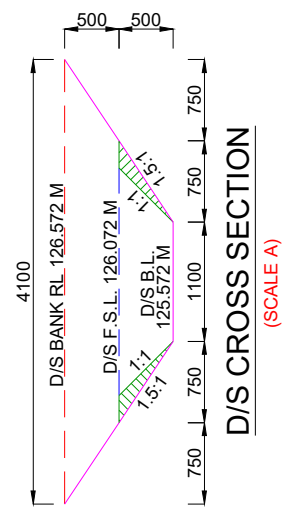
SECTION A-A
(SCALE A)



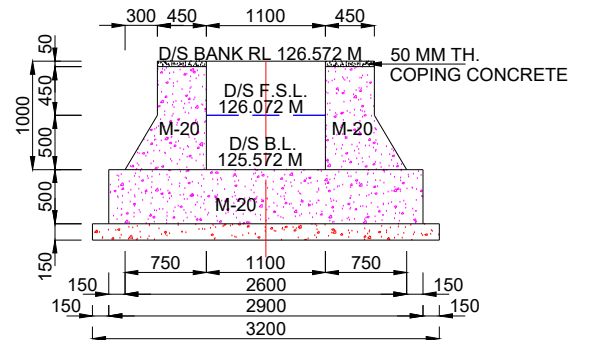
U/S CROSS SECTION
(SCALE A)



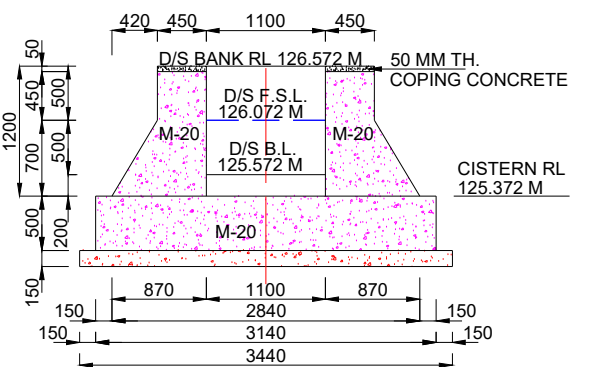
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



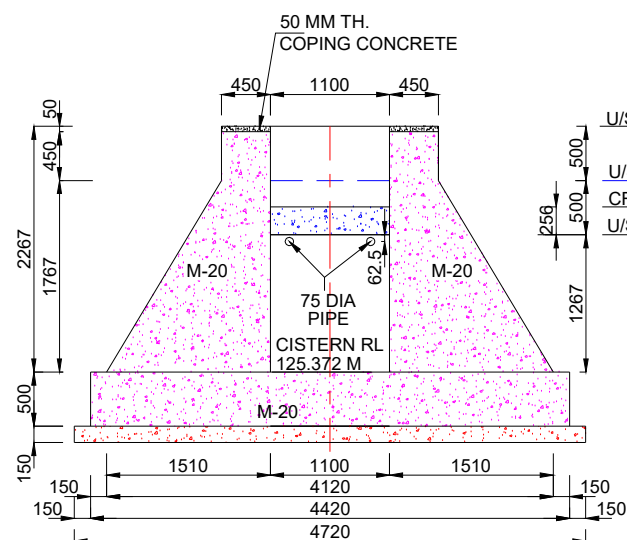
D/S CROSS SECTION
(SCALE A)



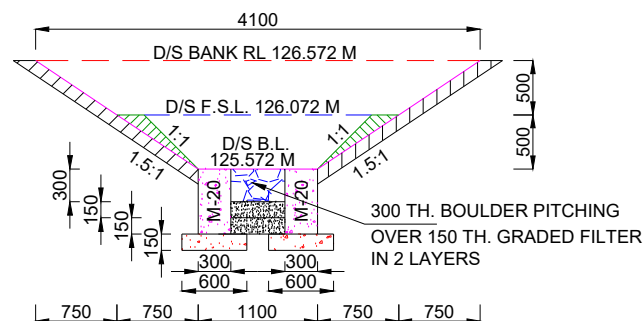
SECTION AT 3-3
(SCALE A)



SECTION AT 2-2
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)

NOTES:-

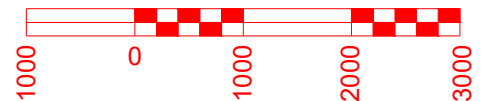
- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
- THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
- ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
- 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	0.220	0.220	CUMEC
VERTICAL DROP	1.067	1.067	METRE
FULL SUPPLY DEPTH	0.500	0.500	METRE
BED WIDTH	1.100	1.100	METRE
BED SLOPE	1 : 3000	1 : 3000	

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

SHARDA TYPE 1.067 M HT. FALL AT KM. 2.600 OF RASALPUR-I MR. (OFFTAKE FROM RD - 74+465 KM. (L), NORTH KOEL RMC)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-25/ FALL

1 of 1

