

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

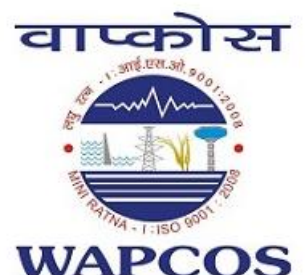
Completion of Balance
Works of North Koel
Reservoir Project

DRAWING REPORT – SONDIH-III SUB DY.
(OFFTAKING FROM RIGHT MAIN CANAL AT
81.457 KM)



WAPCOS LIMITED

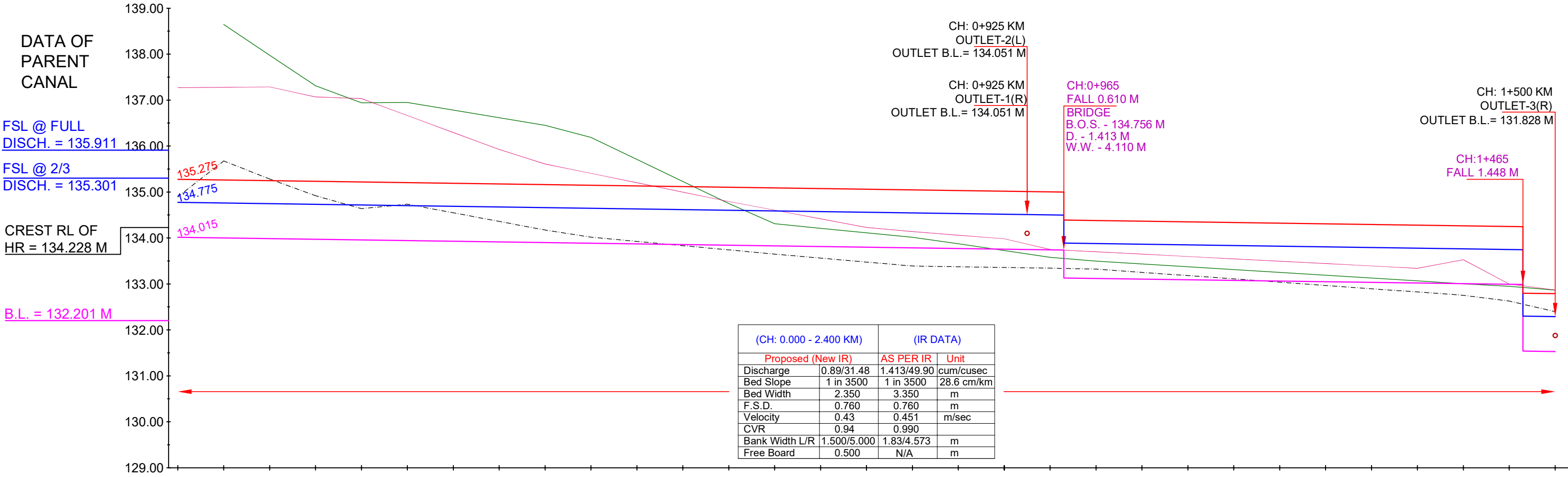
(GOVT. OF INDIA UNDERTAKING)
76- C SECTOR-18 INDUSTRIAL AREA,
GURUGRAM-122015 (HARYANA)



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L-SECTION

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 0+000 TO 1+500



EXISTING DATA	DESIGN DATA	
	TOP OF BANK LEVEL	F.S.L.
Bed Level	134.894	134.775
TOP OF BANK LEVEL	137.270	134.015
NSL	138.644	134.001
Chainage IN KM	0+000	0+050
	0+100	0+150
	0+200	0+250
	0+300	0+350
	0+400	0+450
	0+500	0+550
	0+600	0+650
	0+700	0+750
	0+800	0+850
	0+900	0+950
	1+000	1+050
	1+100	1+150
	1+200	1+250
	1+300	1+350
	1+400	1+450
	1+500	

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING FALL

MODIFIED FALL

NEW FALL

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-

DRAWING TITLE :-

DRAWING NO. :-

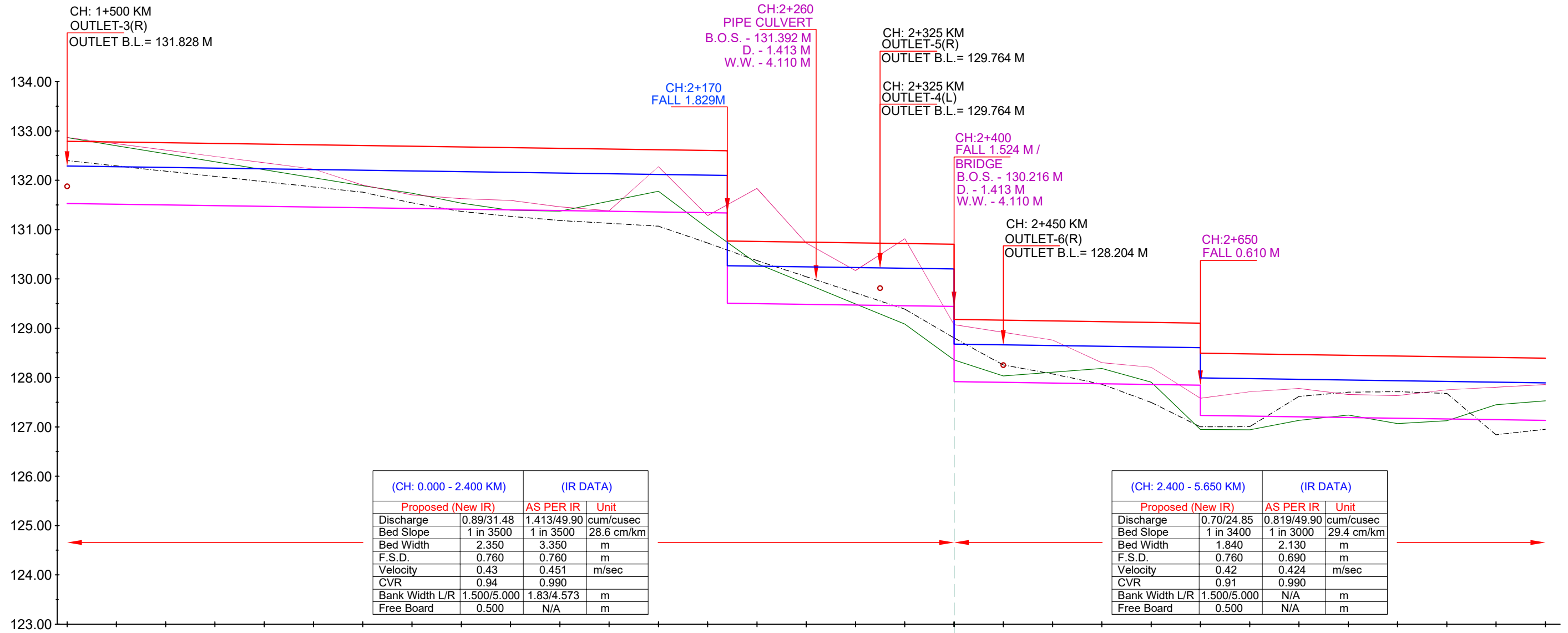
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

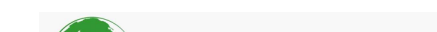
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC-

01 of 07

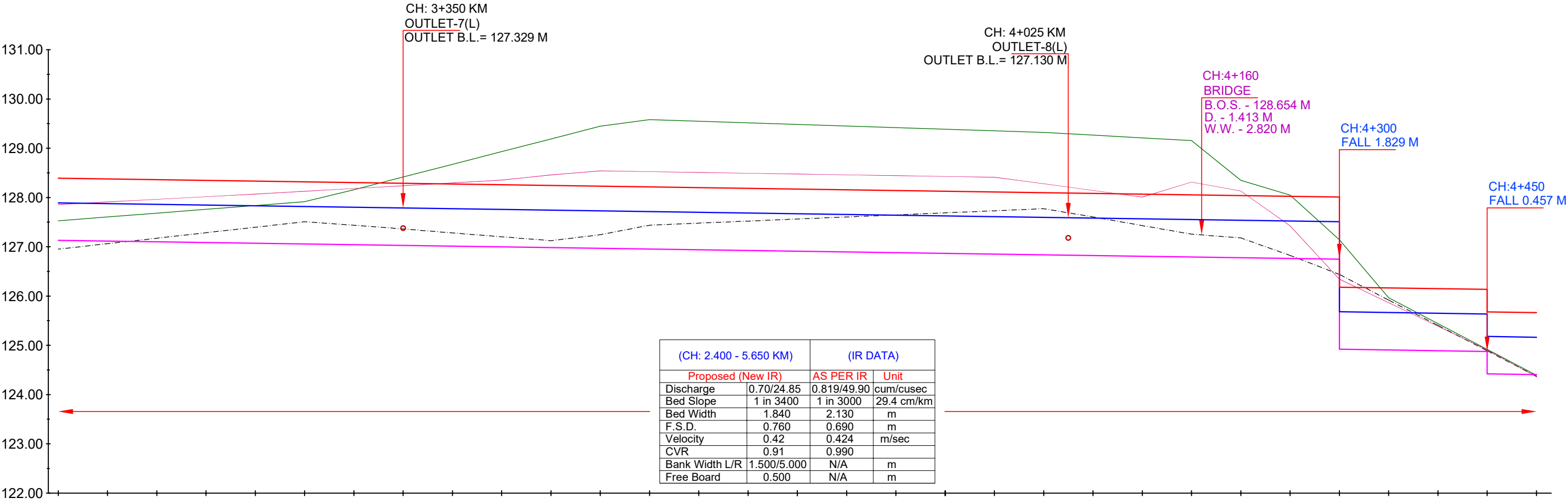
L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 1+500 TO 3+000



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	132.864	132.869	132.398	131.528	132.288	132.788
- 1+550	132.701	132.740	132.291	131.514	132.274	132.774
- 1+600	132.539	132.612	132.184	131.500	132.260	132.760
- 1+650	132.376	132.484	132.078	131.486	132.246	132.746
- 1+700	132.213	132.356	131.971	131.471	132.231	132.731
- 1+750	132.050	132.227	131.864	131.457	132.217	132.717
- 1+768						
- 1+800	131.887	131.901	131.758	131.443	132.203	132.703
- 1+850	131.737	131.704	131.541	131.428	132.188	132.688
- 1+900	131.537	131.627	131.368	131.414	132.174	132.674
- 1+950	131.391	131.591	131.268	131.400	132.160	132.660
- 2+000	131.373	131.462	131.184	131.386	132.146	132.646
- 2+050	131.574	131.383	131.127	131.371	132.131	132.631
- 2+100	131.776	132.276	131.069	131.357	132.117	132.617
- 2+150	131.028	131.283	130.727	131.343	132.103	132.603
- 2+200	130.311	131.834	130.372	131.337 132.087 132.597 129.508 130.268 130.768	132.092 130.262 129.178 128.678 129.178	130.759
- 2+250	129.903	130.728	130.045	129.485	130.245	130.745
- 2+300	129.492	130.170	129.716	129.471	130.231	130.731
- 2+350	129.084	130.815	129.388	129.457	130.217	130.717
- 2+400	128.356	129.073	128.803	129.442 127.918 128.678	130.202 128.678 129.178	130.702
- 2+450	128.032	128.917	128.256	127.904	128.664	129.164
- 2+500	128.108	128.761	128.074	127.889	128.649	129.149
- 2+550	128.185	128.301	127.864	127.874	128.634	129.134
- 2+600	127.908	128.210	127.497	127.859	128.619	129.119
- 2+650	126.949	127.580	127.001	127.845 127.235	128.605 127.995	129.105 128.495
- 2+700	126.941	127.712	127.005	127.220	127.980	128.480
- 2+750	127.132	127.780	127.106	127.205	127.965	128.465
- 2+800	127.239	127.658	127.120	127.191	127.951	128.451
- 2+850	127.069	127.636	126.916	127.176	127.936	128.436
- 2+900	127.126	127.752	126.809	127.161	127.921	128.421
- 2+950	127.450	127.805	126.840	127.147	127.907	128.407
- 3+000	127.527	127.858	126.952	127.132	127.892	128.392

LEGEND				IMPLEMENTING AGENCY :- WAPCOS LTD. 	PROJECT TITLE :-		NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
 NSL		 EXISTING BED LEVEL			DRAWING TITLE :-		L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
 EXISTING TOP OF BANK		 PROPOSED BED LEVEL			DRAWING NO. :-		WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC- 02 of 07	
 EXISTING FALL		 PROPOSED FSL						
 MODIFIED FALL		 PROPOSED TOP OF BANK LEVEL						
 NEW FALL								

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 4+500



EXISTING DATA	DESIGN DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level
Bed Level	126.952	127.892	127.132
TOP OF BANK LEVEL	127.858	127.910	127.117
NSL	127.527	127.605	127.682
Chainage IN KM	3+000	3+050	3+100
	3+150	3+200	3+250
	3+300	3+350	3+400
	3+450	3+500	3+550
	3+600	3+650	3+700
	3+750	3+800	3+850
	3+900	3+950	4+000
	4+050	4+100	4+150
	4+200	4+250	4+300
	4+350	4+400	4+450
	4+500		

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING FALL

MODIFIED FALL

NEW FALL

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

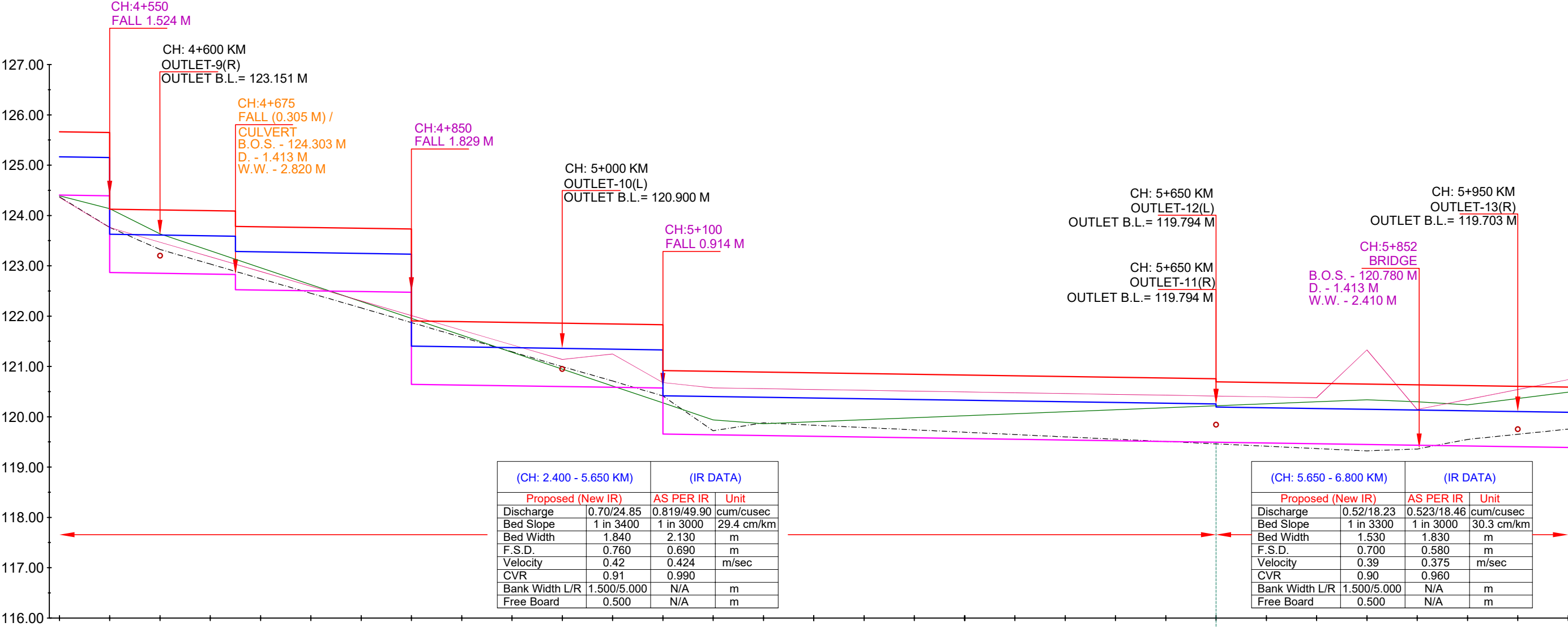
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC-03 of 07

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 4+500 TO 6+000



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
NSL	124.393	124.371	4+500
NSL	124.137	123.764	4+550
NSL	123.634	123.325	4+600
NSL	123.298	123.035	4+650
NSL	122.962	122.744	4+700
NSL	122.626	122.454	4+750
NSL	122.291	122.163	4+800
NSL	121.955	121.872	4+850
NSL	121.619	121.580	4+900
NSL	121.283	121.292	4+950
NSL	120.948	120.996	5+000
NSL	120.612	120.712	5+050
NSL	120.277	120.413	5+100
NSL	119.939	119.722	5+150
NSL	119.862	119.879	5+200
NSL	119.902	119.832	5+250
NSL	119.942	119.786	5+300
NSL	119.981	119.740	5+350
NSL	120.021	119.693	5+400
NSL	120.061	119.647	5+450
NSL	120.100	119.600	5+500
NSL	120.140	119.554	5+550
NSL	120.180	119.508	5+600
NSL	120.219	119.461	5+650
NSL	120.259	119.415	5+700
NSL	120.299	119.368	5+750
NSL	120.338	119.322	5+800
NSL	120.299	119.359	5+850
NSL	120.235	119.550	5+900
NSL	120.362	119.652	5+950
NSL	120.489	119.754	6+000

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

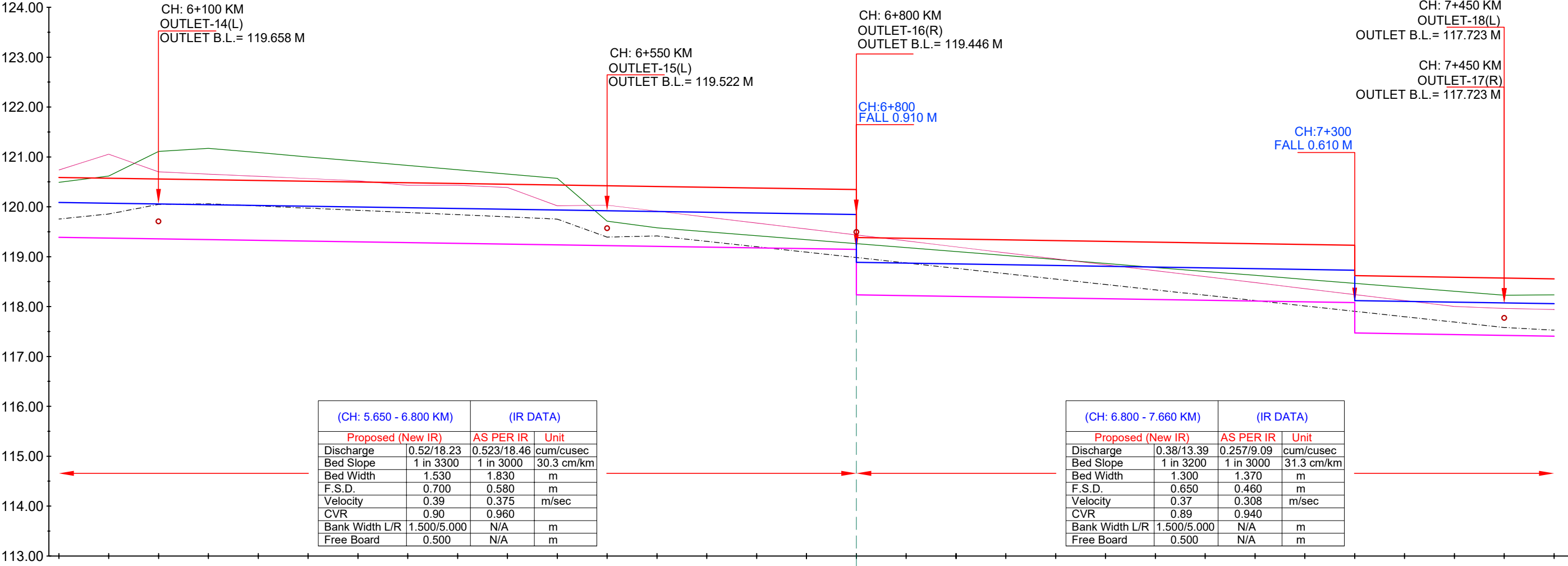
DRAWING TITLE :-

L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC-

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 6+000 TO 7+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	119.754	120.088	6+000
TOP OF BANK LEVEL	120.738	120.088	6+050
NSL	120.489	120.073	6+100
	121.056	120.058	6+150
	120.701	120.043	6+200
	120.656	120.028	6+250
	120.611	120.013	6+300
	120.566	119.997	6+350
	120.522	119.982	6+400
	120.477	119.967	6+450
	120.432	119.952	6+500
	120.387	119.937	6+550
	120.343	119.922	6+600
	120.298	119.907	6+650
	120.254	119.891	6+700
	120.210	119.876	6+750
	120.166	119.861	6+800
	120.122	119.846	6+850
	120.078	119.831	6+900
	120.034	119.816	6+950
	119.990	119.801	7+000
	119.946	119.786	7+050
	119.902	119.771	7+100
	119.858	119.756	7+150
	119.814	119.741	7+200
	119.770	119.726	7+250
	119.726	119.711	7+300
	119.682	119.696	7+350
	119.638	119.681	7+400
	119.594	119.666	7+450
	119.550	119.651	7+500

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

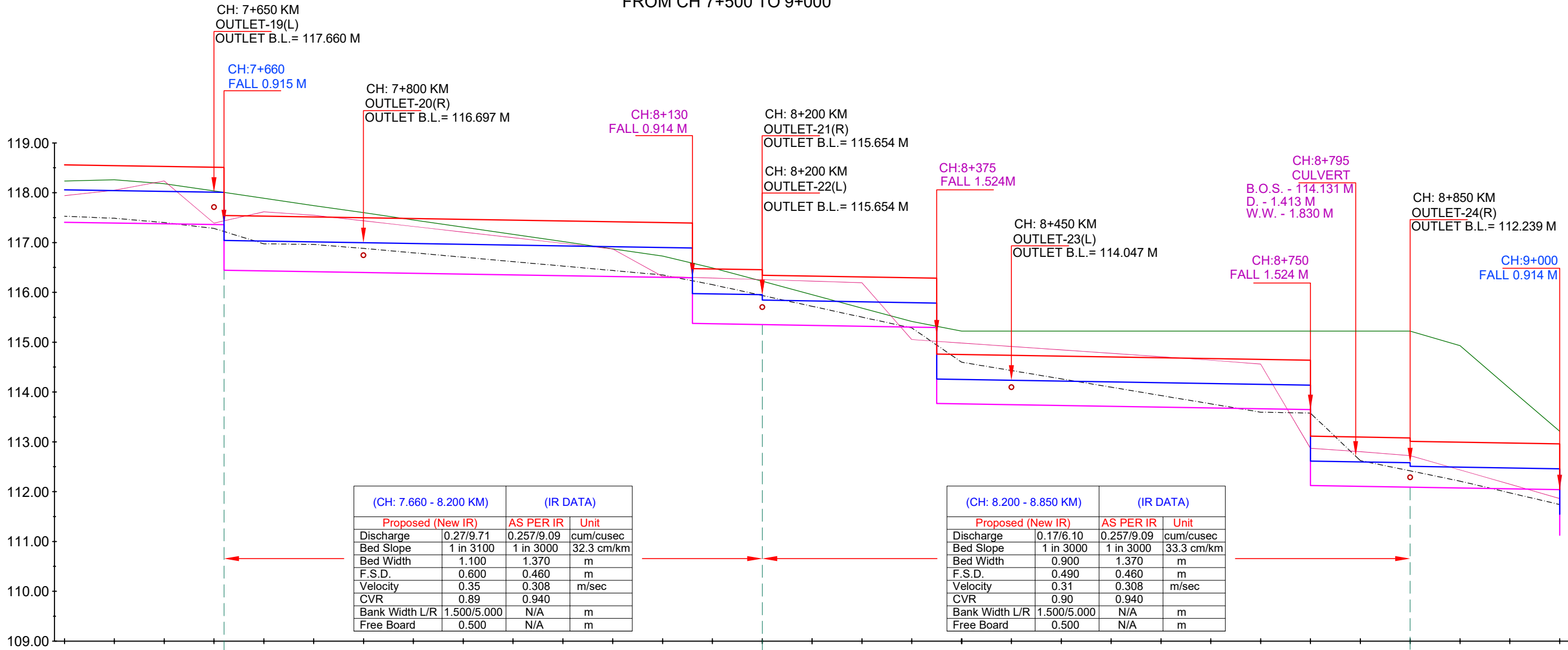
DRAWING TITLE :-

L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC-

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 7+500 TO 9+000



Chainage IN KM	DESIGN DATA			EXISTING DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL	NSL
7+500	118.557	118.057	117.407	117.527	117.941	118.234
7+550	118.542	118.042	117.392	117.487	118.050	118.261
7+600	118.526	118.026	117.376	117.401	118.237	118.182
7+650	118.510	118.010	117.360	117.283	117.388	118.036
7+660	118.507	118.007	117.357			
7+700	117.529	117.029	116.429	116.975	117.618	117.888
7+750	117.513	117.013	116.413	116.962	117.549	117.742
7+800	117.497	116.997	116.397	116.882	117.436	117.599
7+850	117.481	116.981	116.381	116.794	117.323	117.454
7+900	117.465	116.965	116.365	116.706	117.210	117.309
7+950	117.449	116.949	116.349	116.616	117.097	117.164
8+000	117.432	116.932	116.332	116.528	116.984	117.019
8+050	117.416	116.916	116.316	116.439	116.871	116.874
8+100	117.400	116.900	116.300	116.349	116.320	116.729
8+150	117.391	116.891	116.291	116.155	116.288	116.492
8+200	116.454	115.954	115.354	115.937	116.257	116.223
8+250	116.327	115.827	115.337	115.720	116.226	115.954
8+300	116.311	115.811	115.321	115.503	116.195	115.685
8+350	116.294	115.794	115.304	115.287	115.053	115.415
8+400	116.286	115.786	115.296	114.598	114.984	115.221
8+450	114.737	114.237	113.747	114.431	114.914	115.221
8+500	114.720	114.220	113.730	114.264	114.846	115.221
8+550	114.703	114.203	113.713	114.097	114.777	115.221
8+600	114.687	114.187	113.697	113.929	114.708	115.221
8+650	114.670	114.170	113.680	113.763	114.639	115.221
8+700	114.653	114.153	113.663	113.595	114.562	115.221
8+750	114.637	114.137	113.647	113.577	112.872	115.221
8+800	113.096	112.596	112.106	112.623	112.803	115.221
8+850	113.079	112.579	112.089	112.418	112.725	115.221
8+900	112.993	112.493	112.073	112.211	112.437	114.929
8+950	112.976	112.476	112.056	111.976	112.150	114.069
9+000	112.959	112.459	112.039	111.742	111.863	113.210

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 :-

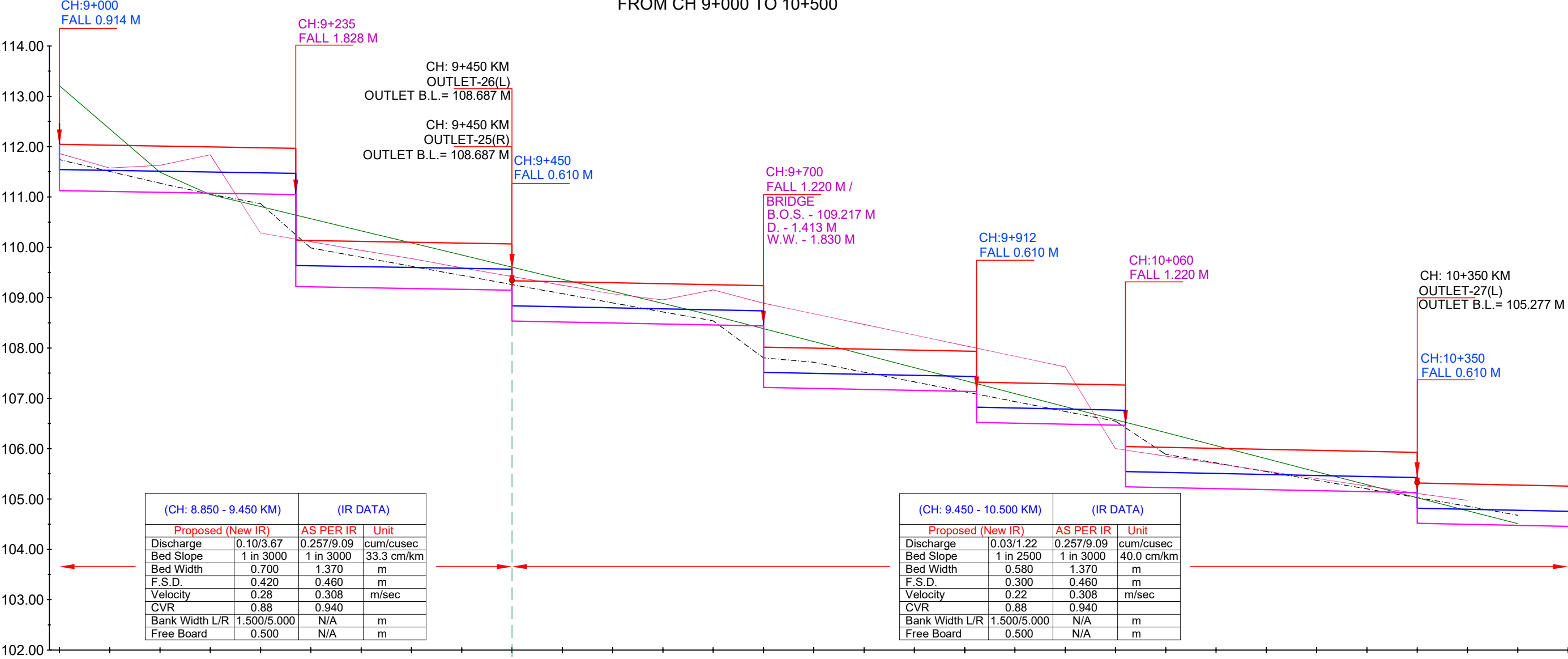
L- SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ LSEC-

06 of 07

L- SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 9+000 TO 10+500



Chainage IN KM	DESIGN DATA			EXISTING DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL	NSL
9+000	112.959 112.045	112.459 111.545	112.039 111.125	111.742	111.863	113.210
9+050	112.029	111.529	111.109	111.507	111.576	112.351
9+100	112.012	111.512	111.092	111.273	111.630	111.492
9+150	111.995	111.495	111.075	111.057	111.840	111.048
9+200	111.979	111.479	111.059	110.867	110.284	110.808
9+250	111.967 110.139	111.467 109.639	111.047 109.219			110.569
9+300	110.117	109.617	109.197	109.805	109.939	110.328
9+350	110.101	109.601	109.181	109.623	109.777	110.088
9+400	110.084	109.584	109.164	109.442	109.594	109.847
9+450	110.067 109.337	109.567 108.837	109.147 108.537	109.260	109.421	109.607
9+500	109.317	108.817	108.517	109.079	109.249	109.366
9+550	109.297	108.797	108.497	108.897	109.077	109.126
9+600	109.277	108.777	108.477	108.716	108.956	108.885
9+650	109.257	108.757	108.457	108.540	109.155	108.644
9+700	109.237 108.017	108.737 107.517	108.437 107.217	107.804	108.891	108.383
9+750	107.997	107.497	107.197	107.716	108.680	108.127
9+800	107.977	107.477	107.177	107.519	108.469	107.869
9+850	107.957	107.457	107.157	107.327	108.258	107.610
9+900	107.937 107.933 107.323	107.437 107.433 106.823	107.137 107.133 106.523	107.131	108.048	107.352
9+950	107.307	106.807	106.507	106.937	107.837	107.093
10+000	107.287	106.787	106.487	106.739	107.626	106.835
10+050	107.267 107.263 106.043	106.767 106.763 106.543	106.467 106.463 106.243	106.547	106.002	106.576
10+100	106.027	105.527	105.227	105.888	105.853	106.318
10+150	106.007	105.507	105.207	105.717	105.705	106.060
10+200	105.987	105.487	105.187	105.544	105.556	105.801
10+250	105.967	105.467	105.167	105.372	105.408	105.543
10+300	105.947	105.447	105.147	105.201	105.259	105.284
10+350	105.927 105.317	105.427 104.817	105.127 104.517	105.028	105.110	105.026
10+400	105.297	104.797	104.497	104.857	104.973	104.767
10+450	105.277	104.777	104.477	104.678		104.509
10+500	105.257	104.757	104.457			

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

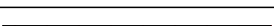
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TYPICAL X-SECTION

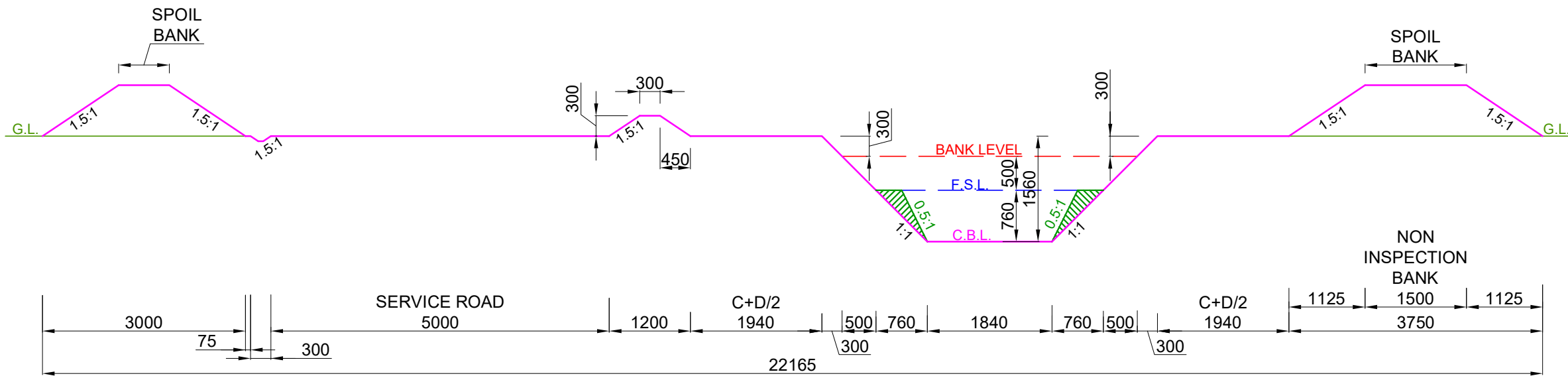
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NOTE:-

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC) 1 of 8	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

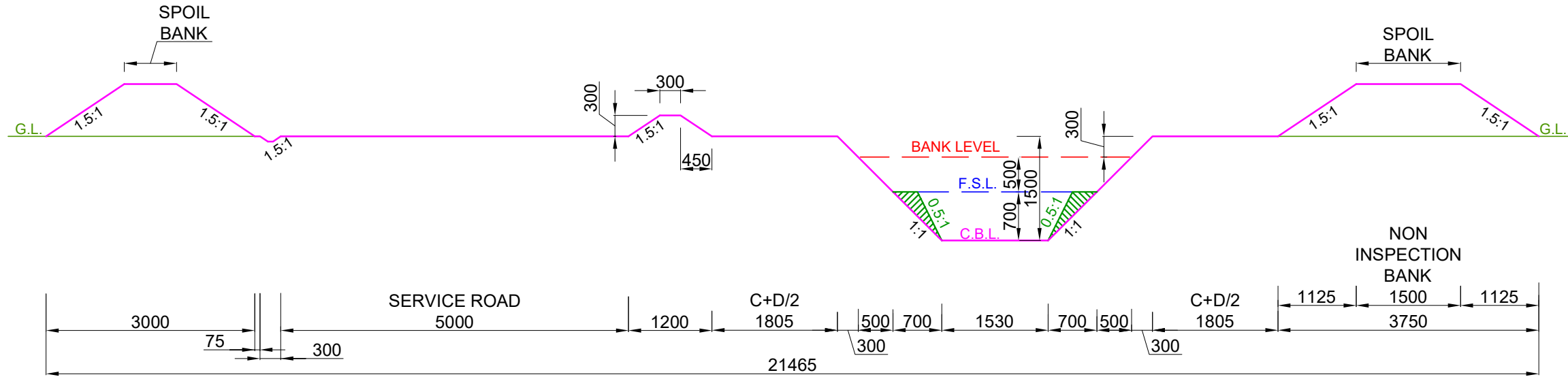


DESIGN SECTION FROM CH: 2.450 KM TO CH: 5.650 KM

- 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC) 2 of 8				

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 5.650 KM TO CH: 6.800 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC)

3 of 8

[illegible]

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.

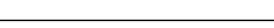
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC) 4 of 8	

The diagram illustrates a cross-section of a road project with the following details:

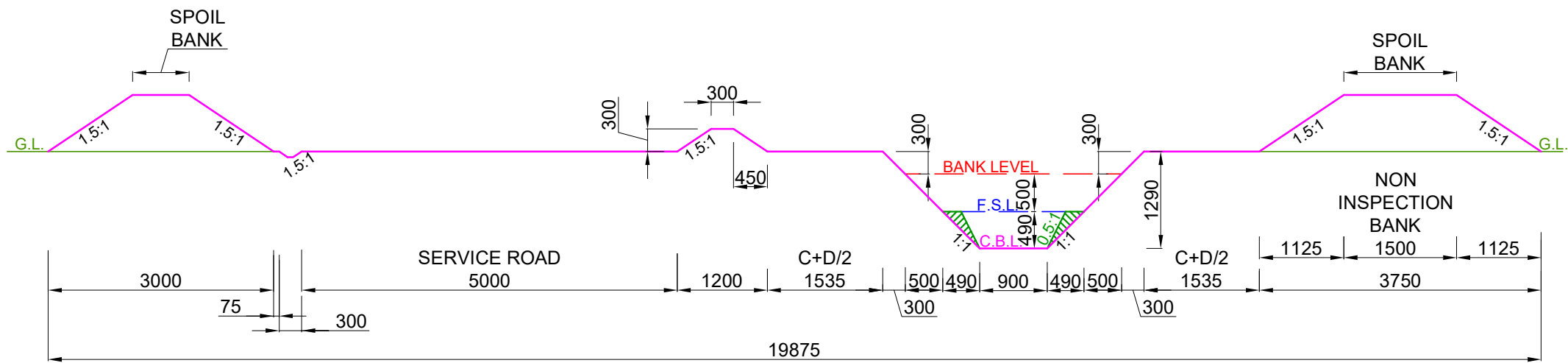
- Ground Level (G.L.):** Represented by a green line.
- Bank Level:** Represented by a red line.
- Finished Surface Level (F.S.L.):** Represented by a blue line.
- Centerline (C.B.L.):** Represented by a magenta line.
- Spoil Bank:** Located on the left side of the road.
- Service Road:** 5000 units wide, located between the Spoil Bank and the central ditch.
- Central Ditch:** Features a 1:1 slope and a depth of 1400 units.
- Non Inspection Bank:** Located on the right side of the road.
- Dimensions:**
 - Slopes: 1.5:1 for the Spoil Bank and 1:1 for the central ditch.
 - Heights: 300, 450, 1400, 500, 600.
 - Horizontal Distances: 3000, 75, 300, 1200, 1700, 500, 600, 1100, 600, 500, 300, 1125, 1500, 1125.
 - Total Width: 20625 units.

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC) 5 of 8	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 8.200 KM TO CH: 8.850 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.

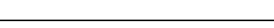
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC)

6 of 8

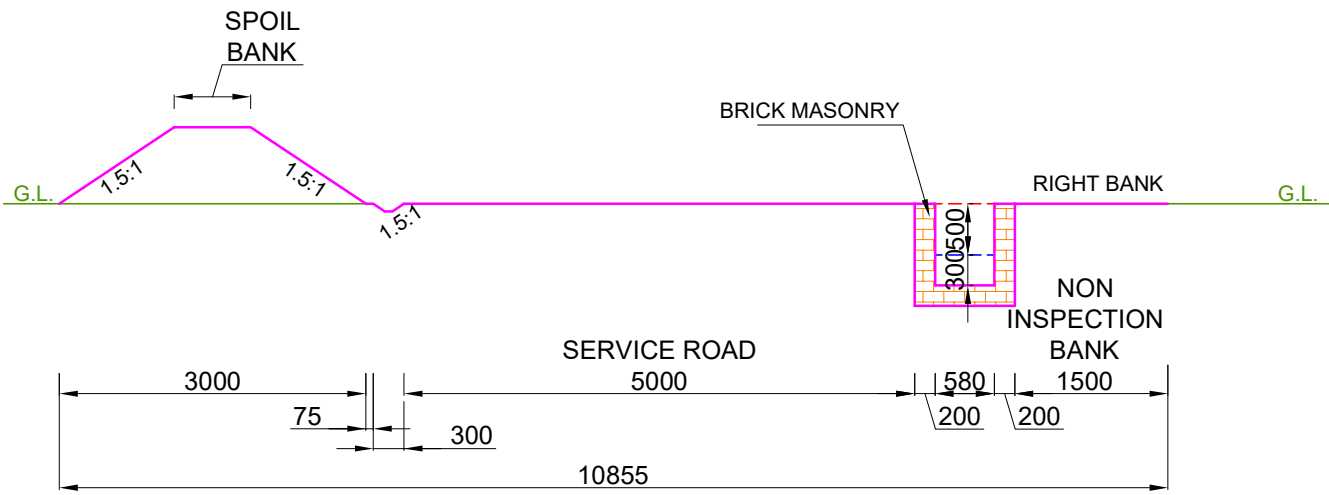
The diagram illustrates a cross-section of a road with a central service road and inspection banks. The total width is 19325 units. The central service road is 5000 units wide. The inspection banks are 1500 units wide. The diagram shows various slopes (1.5:1, 0.5:1, 1:1) and dimensions for the banks and service road. Key dimensions include a total width of 19325 units, a central depth of 1430 units (C+D/2), and various slopes (1.5:1, 0.5:1, 1:1). The diagram also indicates 'BANK LEVEL' and 'E.S.L.' (Existing Surface Level) lines.

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC) 7 of 8	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



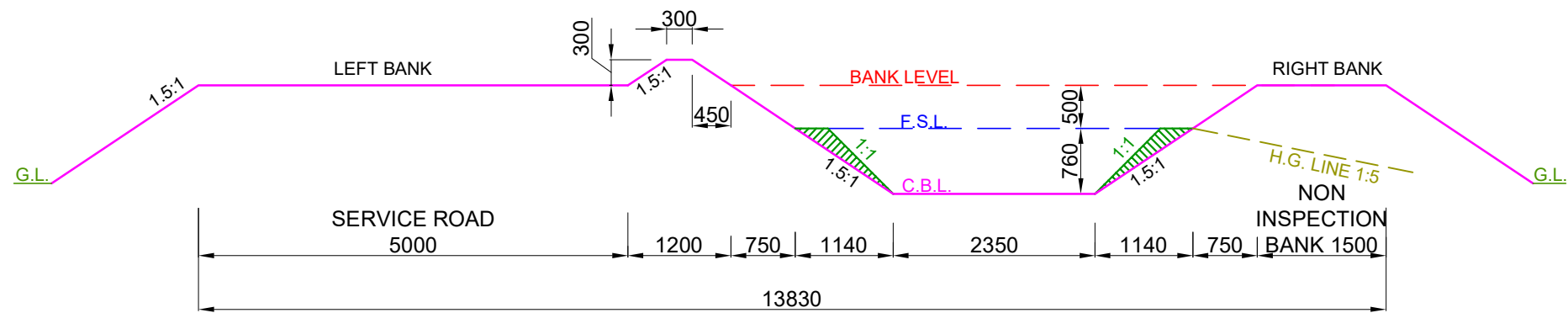
DESIGN SECTION FROM CH: 9.450 KM TO CH: 10.500 KM

- 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FC)

8 of 8

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



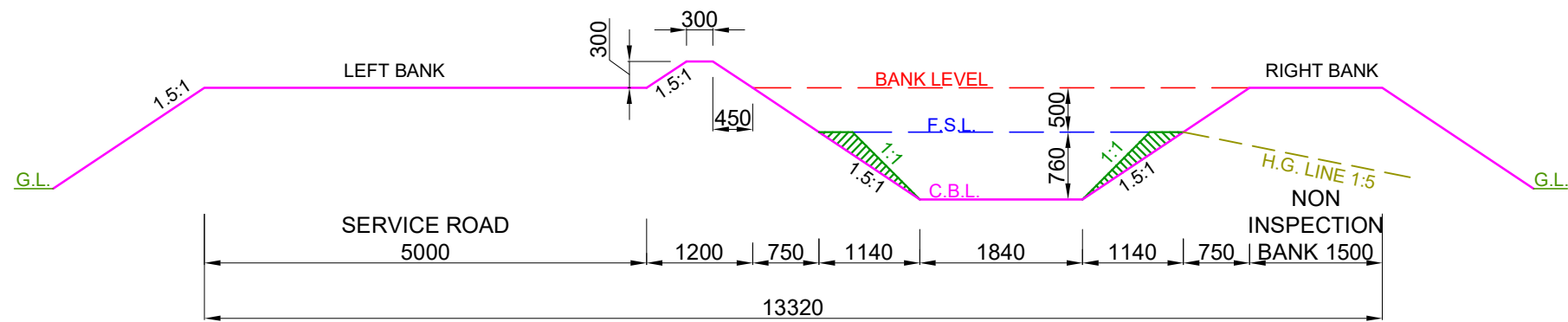
DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.450 KM

- 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)

1 of 8

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.450 KM TO CH: 5.650 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.

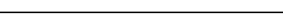
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)

The diagram illustrates the cross-section of a road with a 12m wide service road and a 15m wide inspection bank. The total width is 27m. The left bank has a 1.5:1 slope. The ditch has 1:1 slopes on both sides. The right bank has a 1.5:1 slope. The ground level (G.L.) is shown on the left and right. The bank level is indicated by a dashed red line. The finished surface level (F.S.L.) is indicated by a dashed blue line. The centerline (C.B.L.) is indicated by a dashed pink line. The diagram also shows the ground level (G.L.), bank level, finished surface level (F.S.L.), and centerline (C.B.L.).

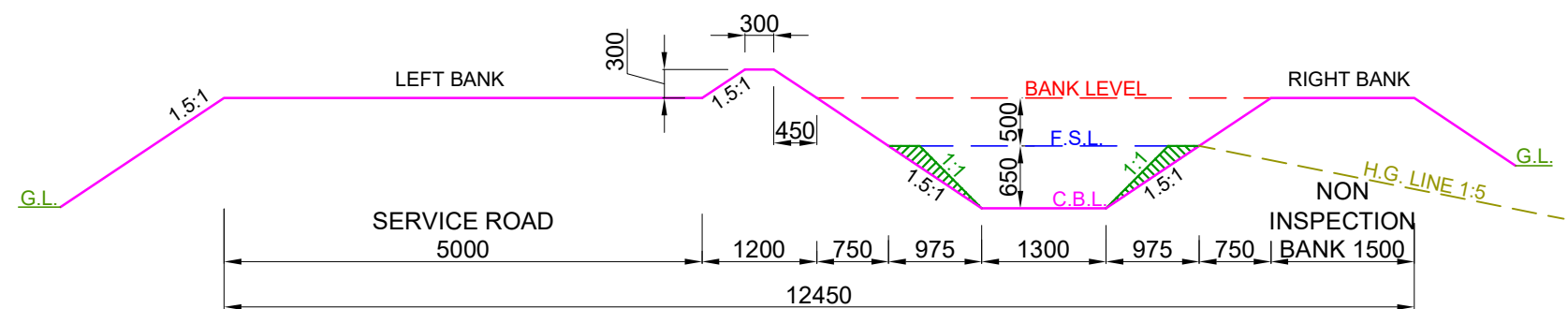
Component	Width (mm)
Service Road	4999
Ditch (12m)	1200
Inspection Bank (15m)	1500
Total Width	12739

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)3 of 8	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 6.800 KM TO CH: 7.650 KM

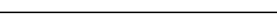
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF) 4 of 8			

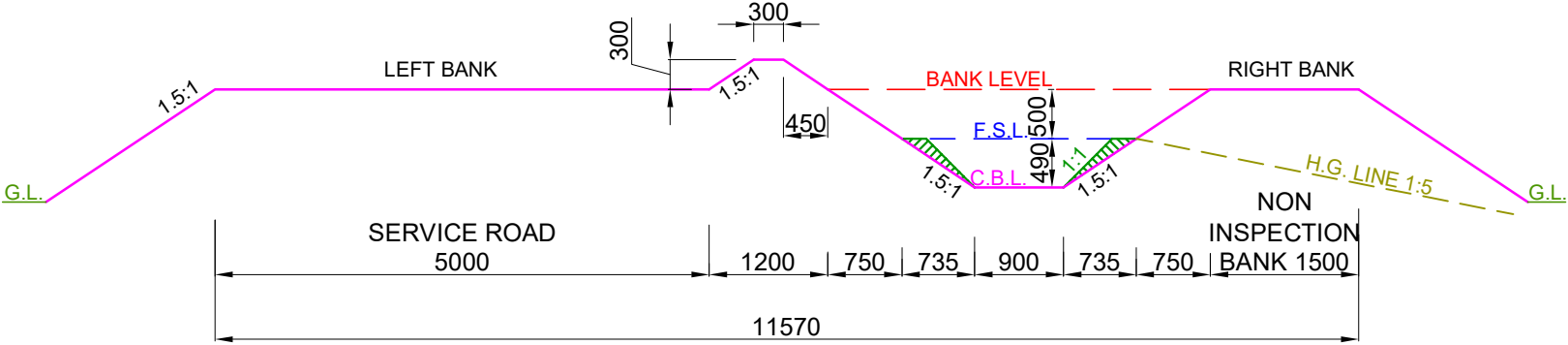
The diagram illustrates a cross-section of a road with a central 12m wide section and 5000mm wide service roads on both sides. The central section is divided into a 1200mm wide top section and a 750mm wide bottom section. The 1200mm section has a 1.5:1 slope on both sides, with a 300mm top width and a 450mm height. The 750mm section has a 1.5:1 slope on both sides. The right bank has a 1.5:1 slope. The diagram also shows the ground level (G.L.), bank level, and a 1.5:1 slope. The total width is 12100mm.

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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)5 of 8	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

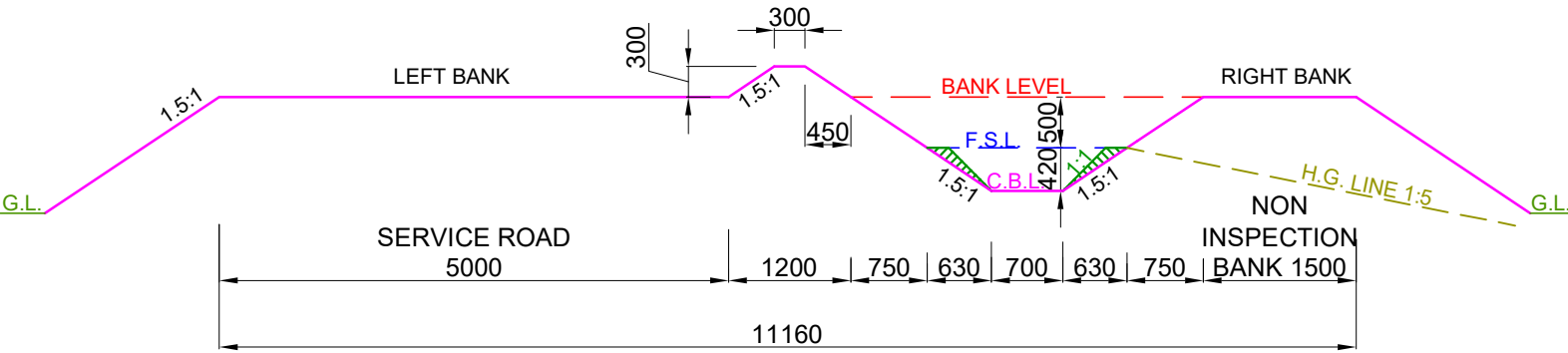


DESIGN SECTION FROM CH: 8.200 KM TO CH: 8.850 KM

- 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.

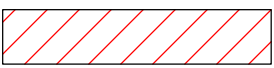
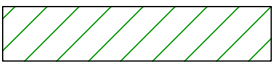
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
			Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)	

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

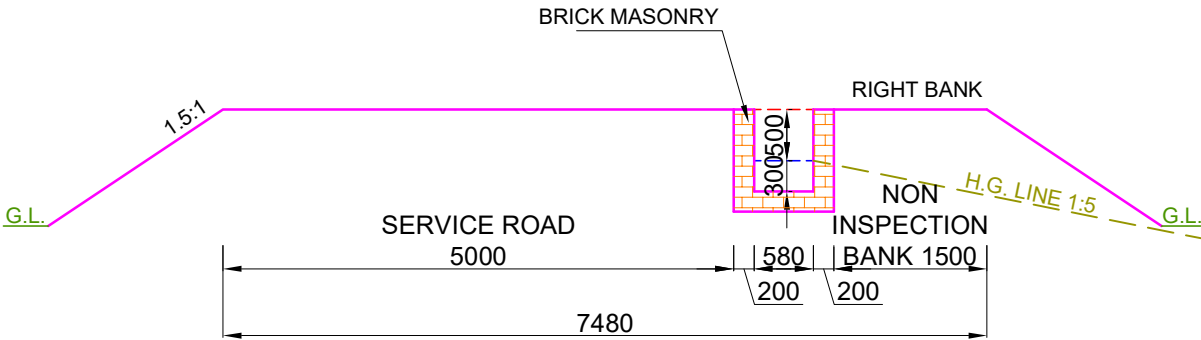


DESIGN SECTION FROM CH: 8.850 KM TO CH: 9.450 KM

- 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.

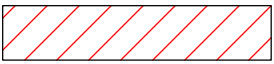
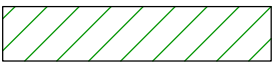
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF)			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

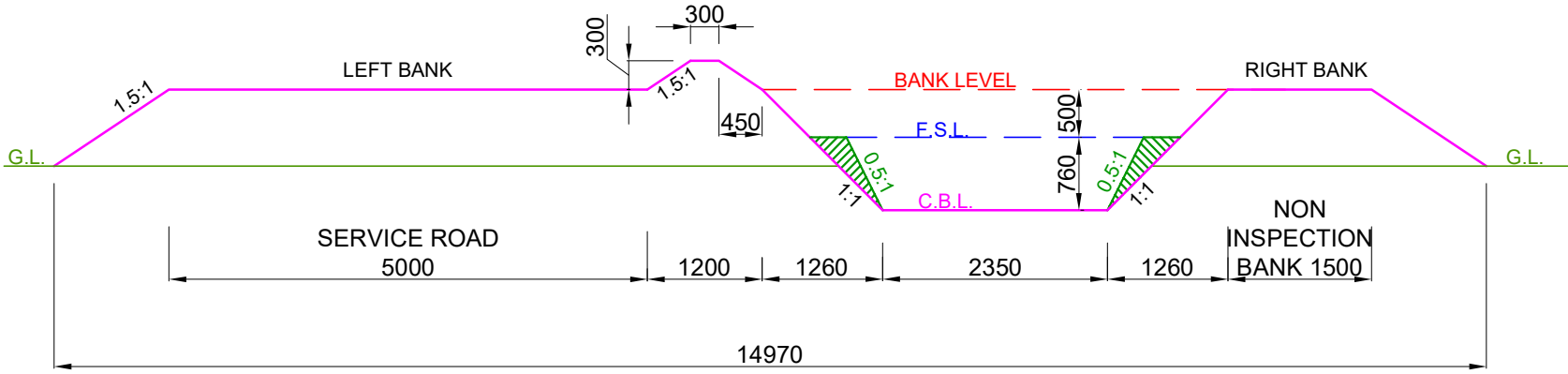


DESIGN SECTION FROM CH: 9.450 KM TO CH: 10.500 KM

- 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.

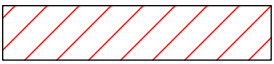
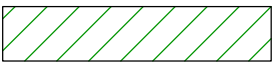
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(FF) 8 of 8			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

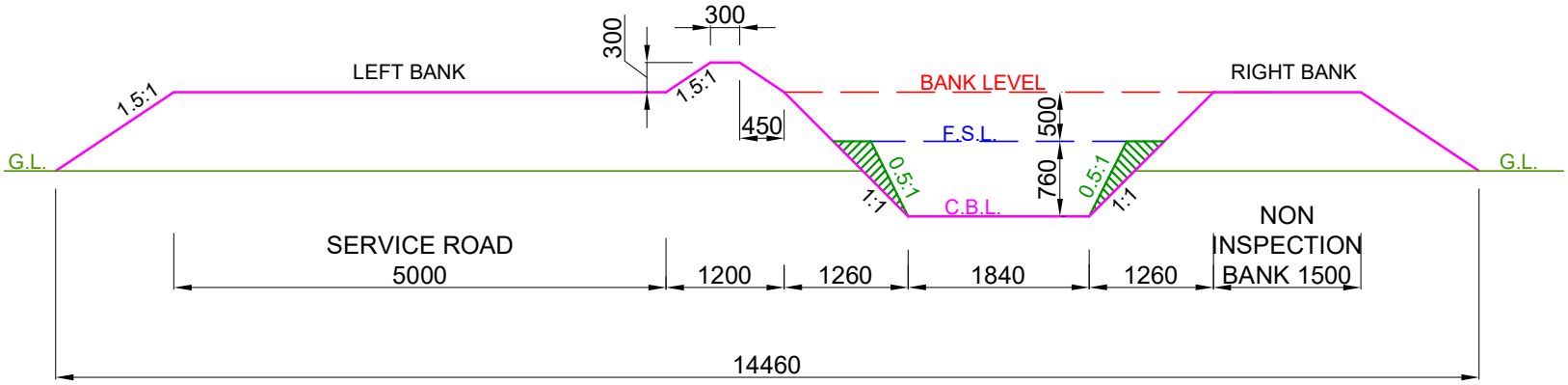


DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.450 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)			
	CUT AREA						
	FILL AREA						

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



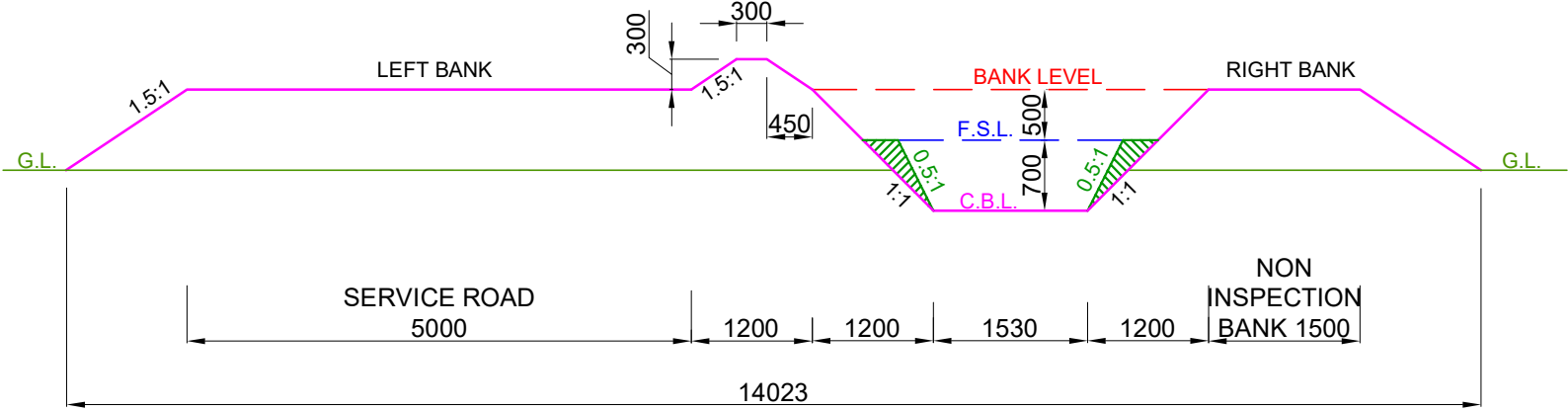
DESIGN SECTION FROM CH: 2.450 KM TO CH: 5.650 KM

- 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)

2 of 8

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

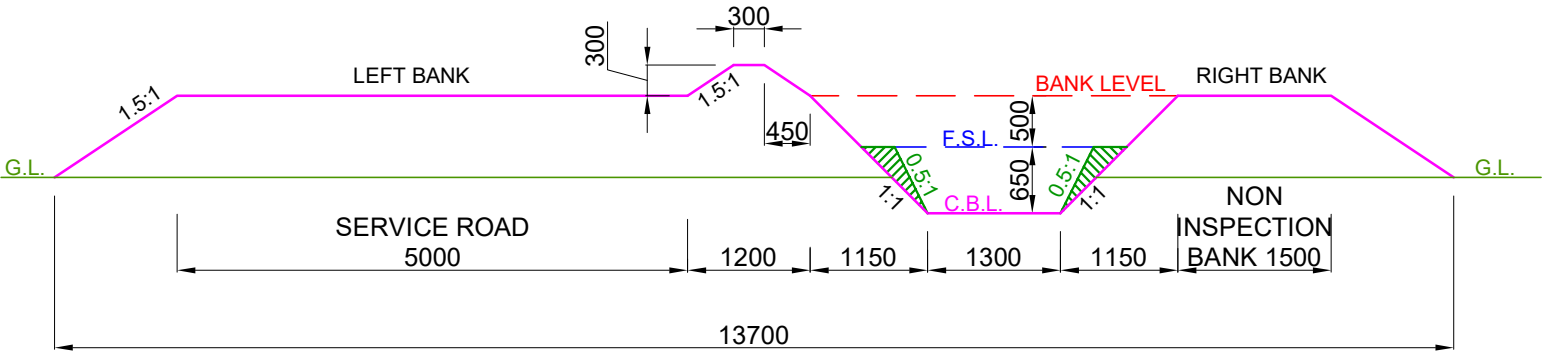


DESIGN SECTION FROM CH: 5.650 KM TO CH: 6.800 KM

- 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.

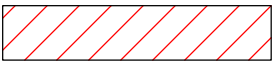
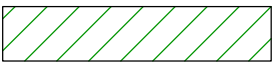
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

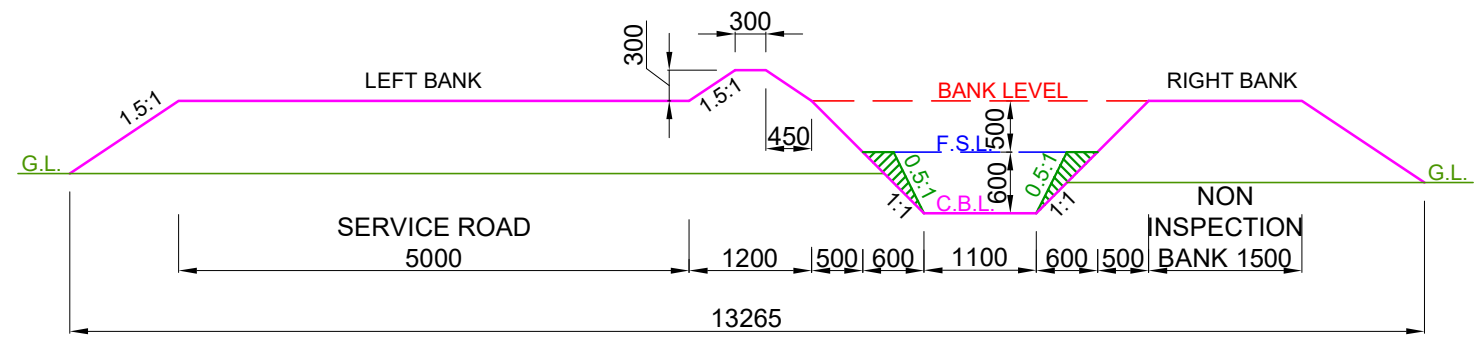


DESIGN SECTION FROM CH: 6.800 KM TO CH: 7.650 KM

- 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.

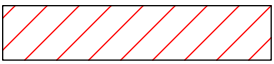
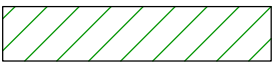
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF) 4 of 8			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

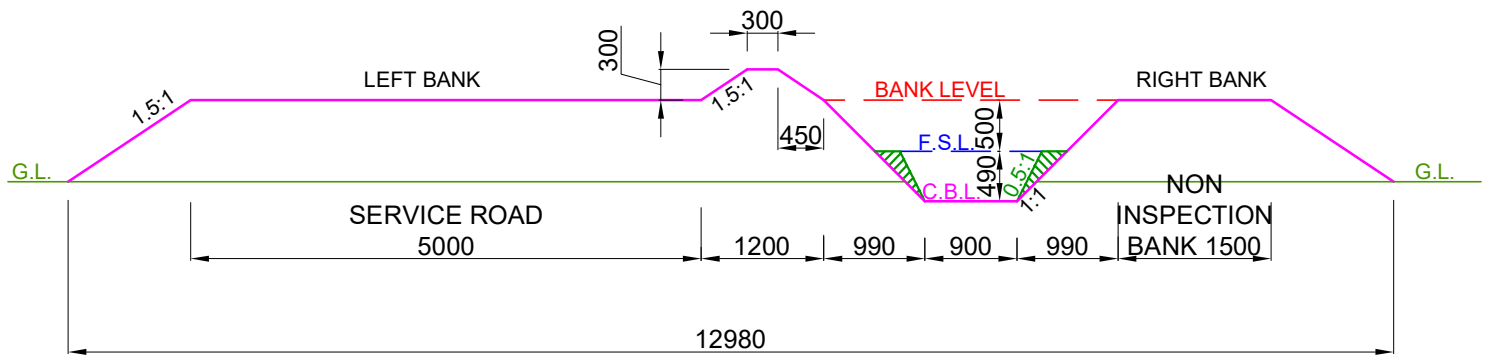


DESIGN SECTION FROM CH: 7.650 KM TO CH: 8.200 KM

- 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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

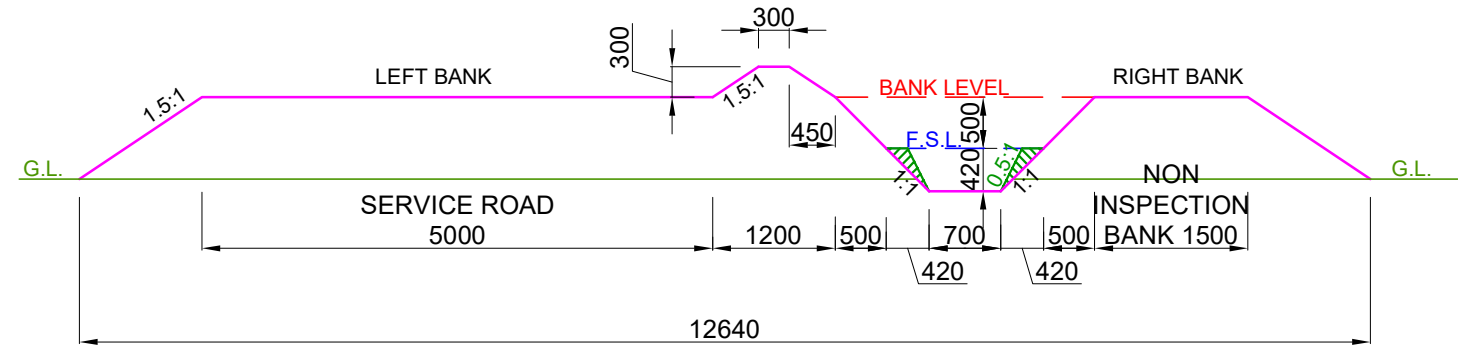


DESIGN SECTION FROM CH: 8.200 KM TO CH: 8.850 KM

- 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.

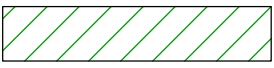
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

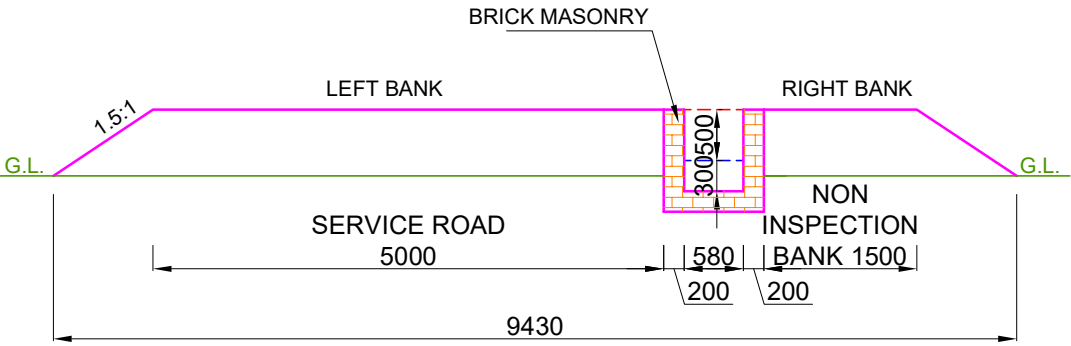


DESIGN SECTION FROM CH: 8.850 KM TO CH: 9.450 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF) 7 of 8			

TYPICAL X - SECTION OF SONDIH-III SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 81+457 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



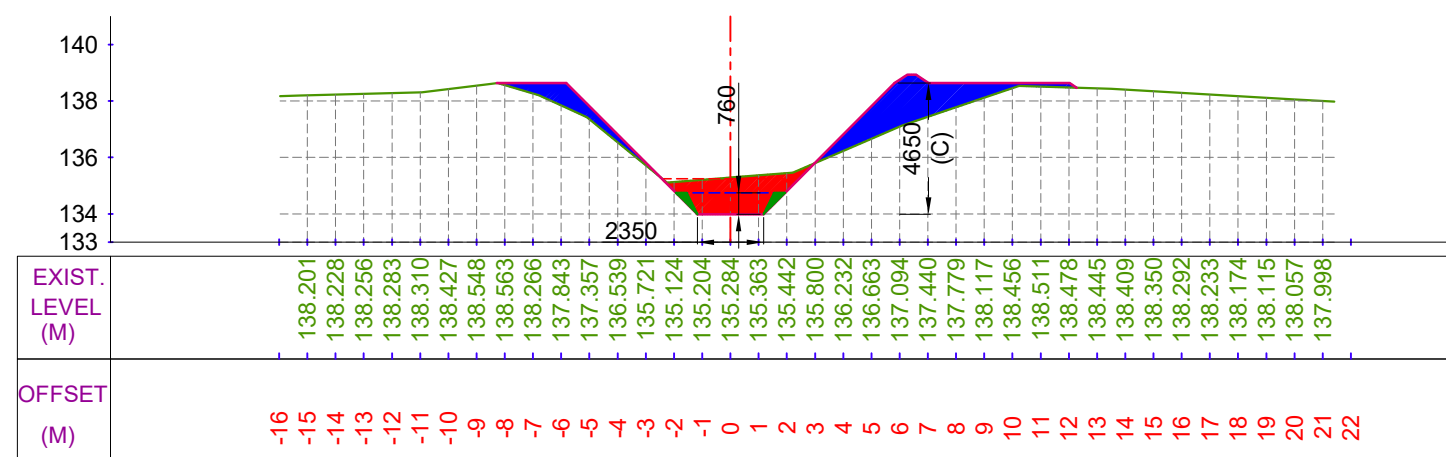
DESIGN SECTION FROM CH: 9.450 KM TO CH: 10.500 KM

- 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.

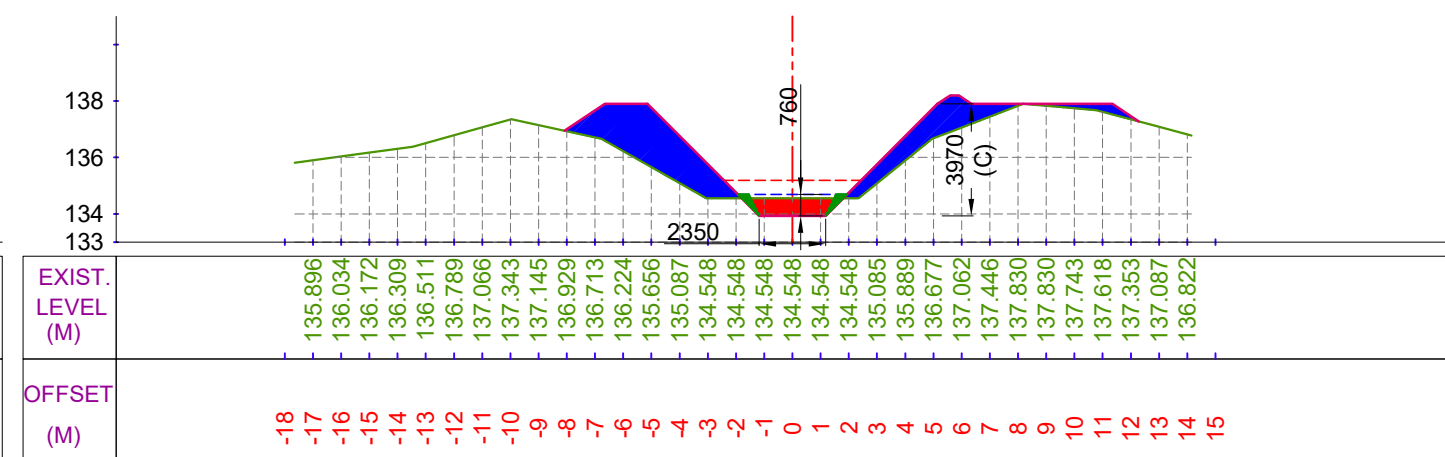
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC /TYP-(PCF)

CROSS-SECTION

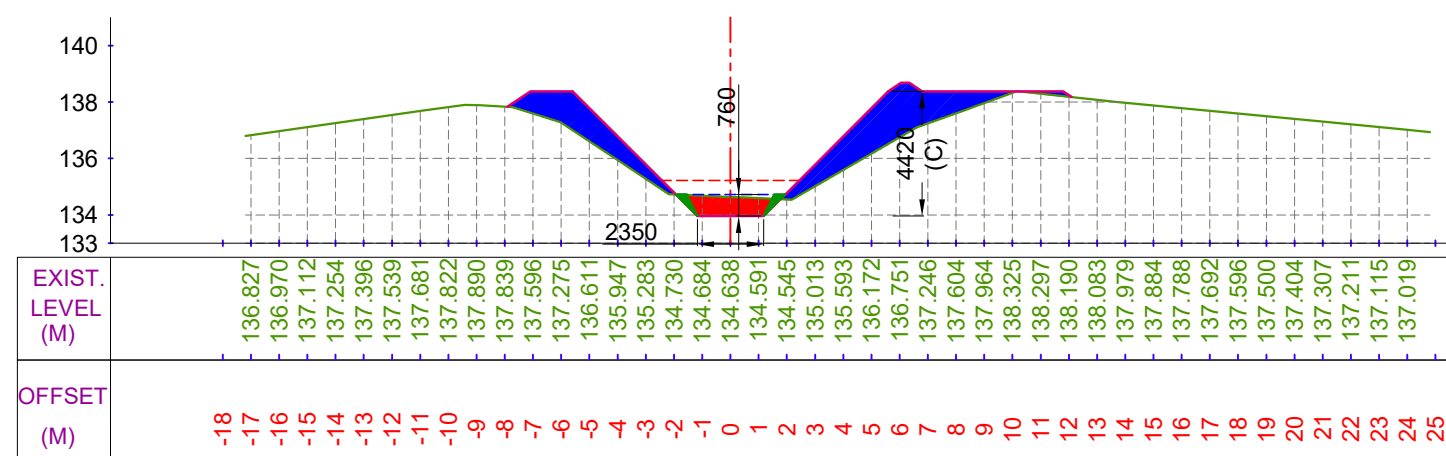
X SECTION OF SONDIH-III SUB-DY.



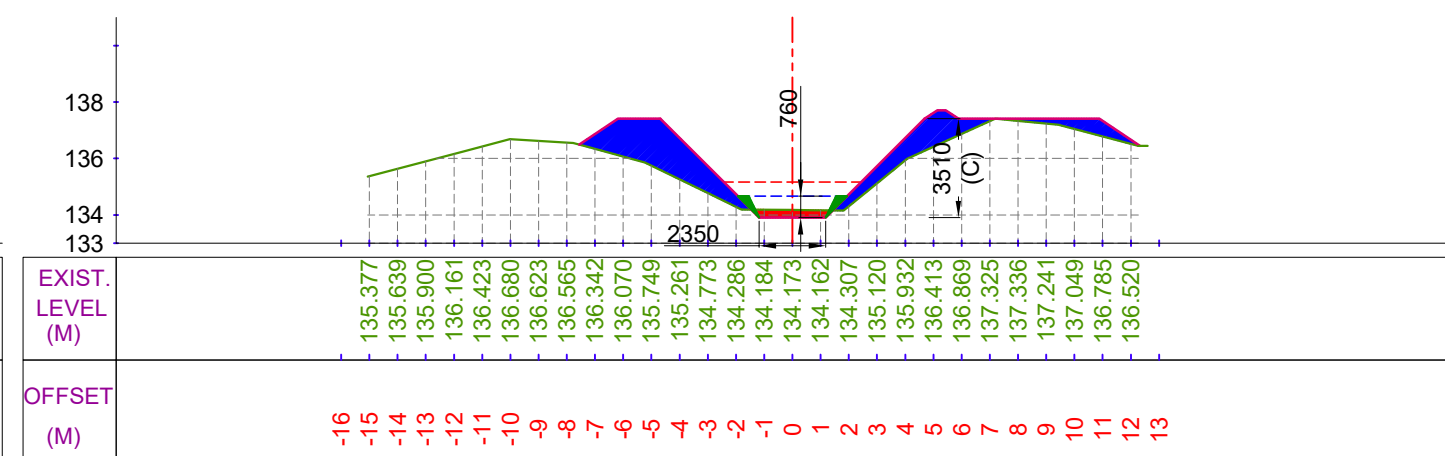
CUTTING AREA (SQ.M) = 4.553 CH. (KM):- 0+100
FILLING AREA (SQ.M) = 8.560 DESIGNED BED LEVEL = 133.986 M



CUTTING AREA (SQ.M) = 1.646 CH. (KM):- 0+300
FILLING AREA (SQ.M) = 12.940 DESIGNED BED LEVEL = 133.929 M



CUTTING AREA (SQ.M) = 1.831 CH. (KM):- 0+200
FILLING AREA (SQ.M) = 12.770 DESIGNED BED LEVEL = 133.958 M



CUTTING AREA (SQ.M) = 0.676 CH. (KM):- 0+400
FILLING AREA (SQ.M) = 11.255 DESIGNED BED LEVEL = 133.901 M

LEGEND

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

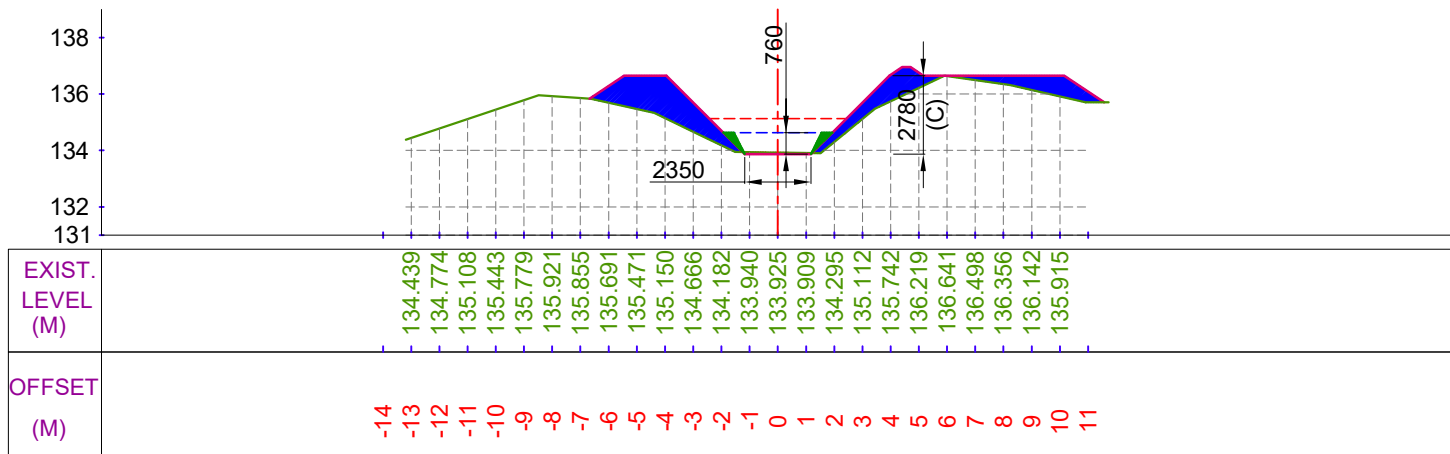
Prepared by :-

WAPCOS LTD.

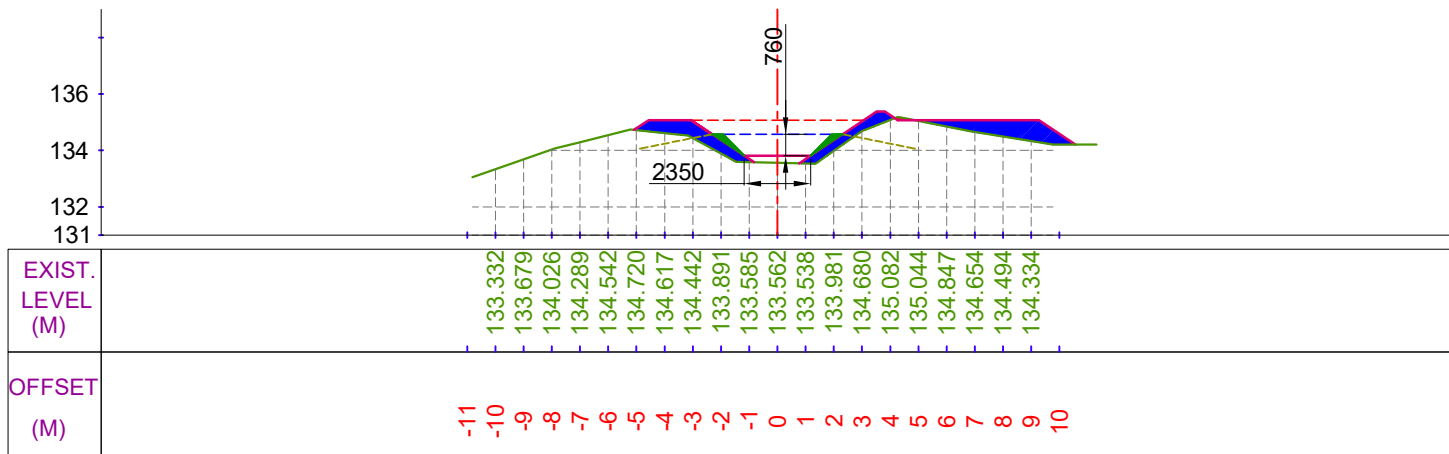


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 1 of 27

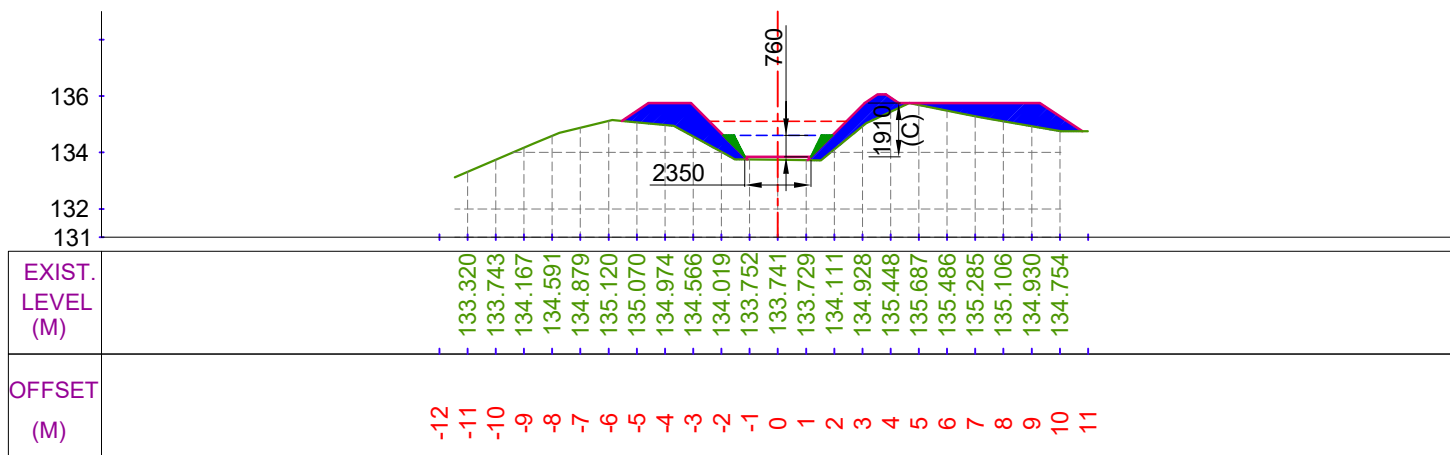
X SECTION OF SONDIH-III SUB-DY.



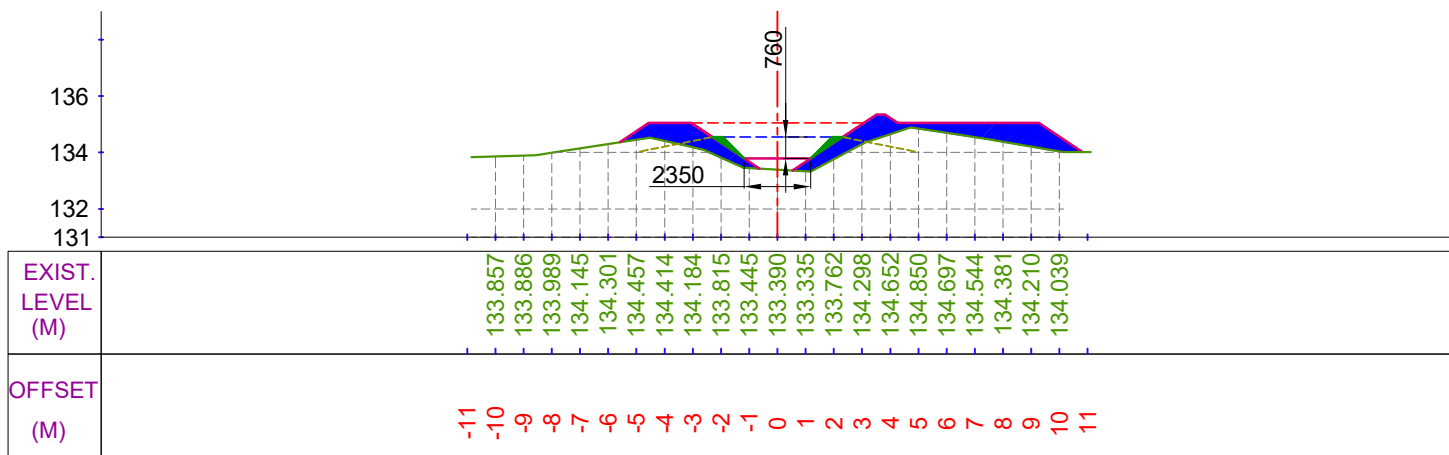
CUTTING AREA (SQ.M) = 0.125 CH. (KM):- 0+500
FILLING AREA (SQ.M) = 9.354 DESIGNED BED LEVEL = 133.872 M



CUTTING AREA (SQ.M) = 0.039 CH. (KM):- 0+700
FILLING AREA (SQ.M) = 5.272 DESIGNED BED LEVEL = 133.815 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 0+600
FILLING AREA (SQ.M) = 7.609 DESIGNED BED LEVEL = 133.844 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 0+800
FILLING AREA (SQ.M) = 7.657 DESIGNED BED LEVEL = 133.786 M

LEGEND

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

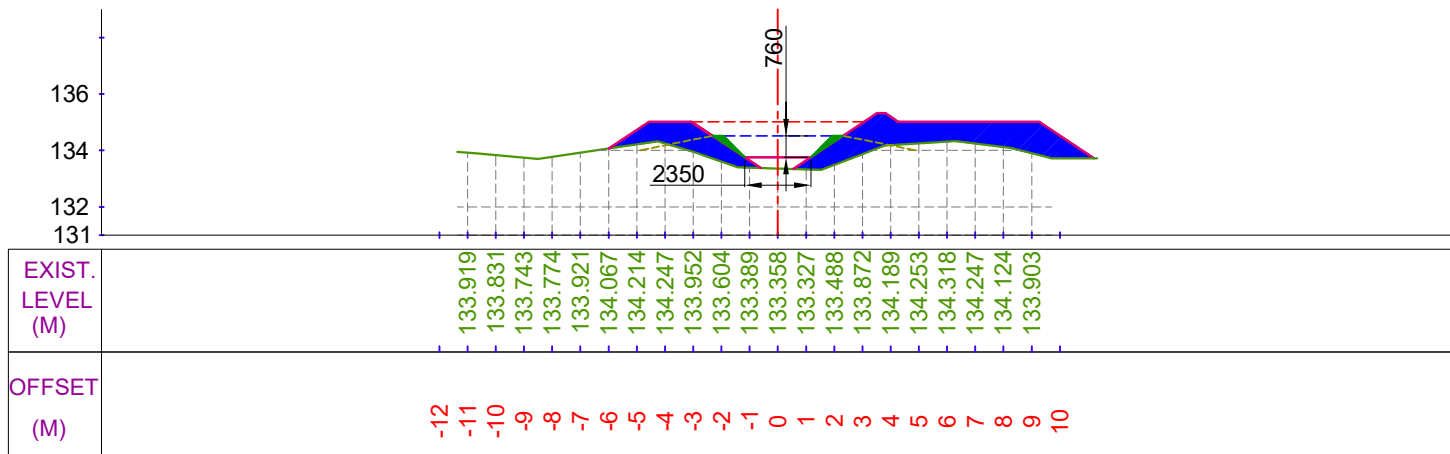
Prepared by :-

WAPCOS LTD.

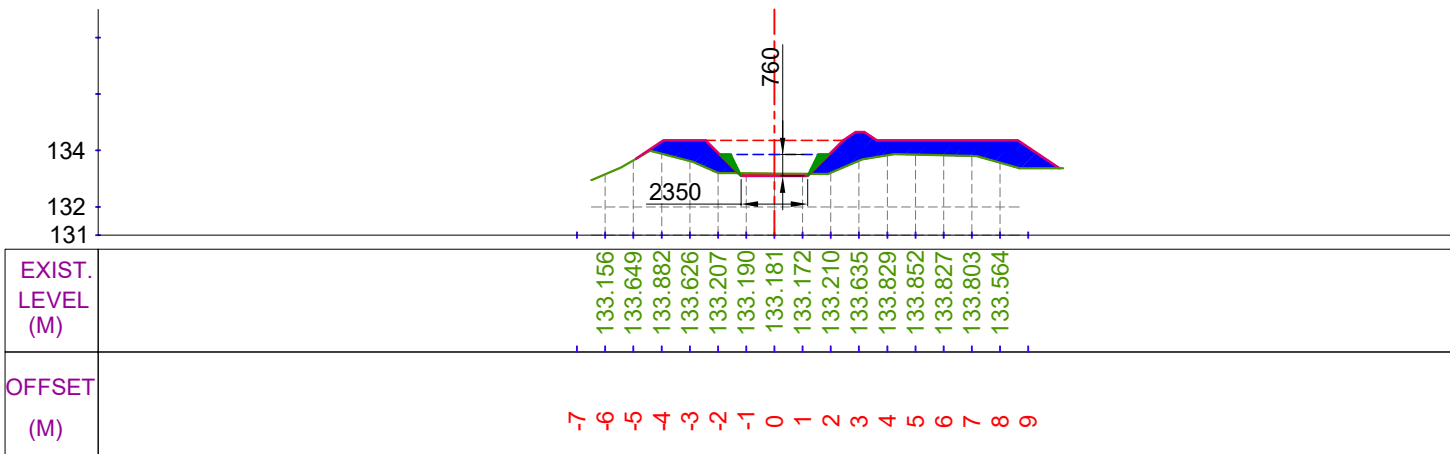


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 2 of 27

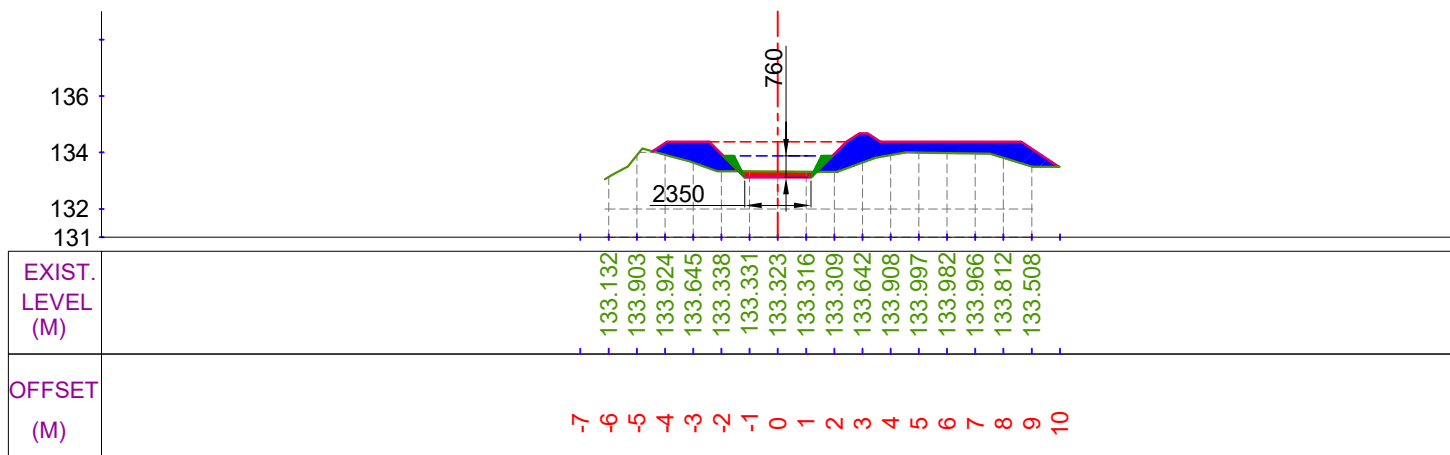
X SECTION OF SONDIH-III SUB-DY.



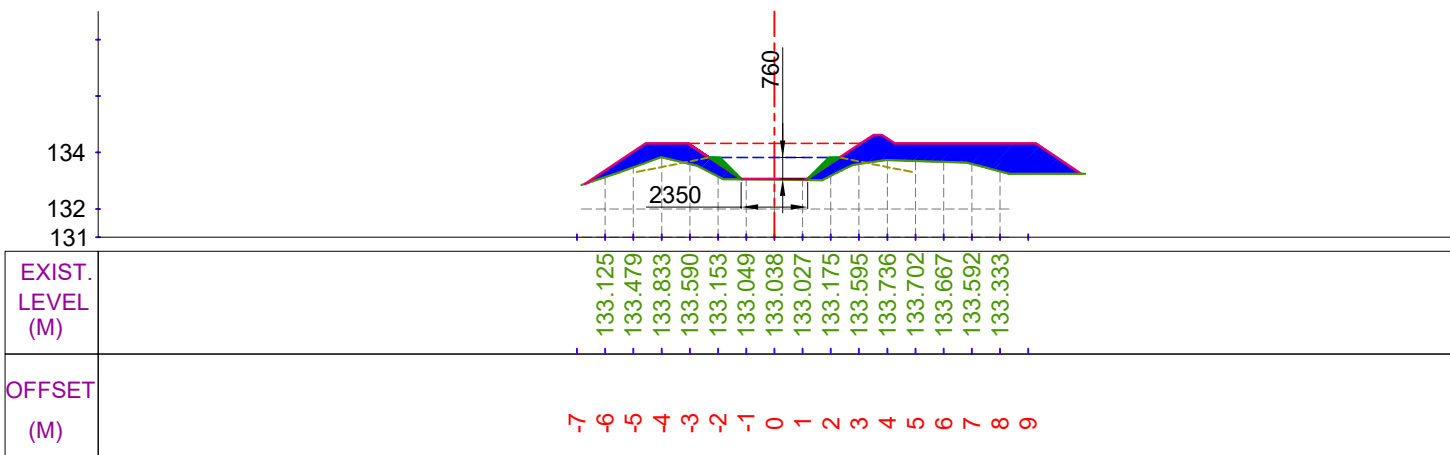
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.723
CH. (KM):- 0+900
DESIGNED BED LEVEL = 133.758 M



CUTTING AREA (SQ.M) = 0.215
FILLING AREA (SQ.M) = 7.201
CH. (KM):- 1+100
DESIGNED BED LEVEL = 133.091 M

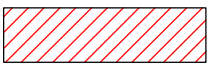


CUTTING AREA (SQ.M) = 0.501
FILLING AREA (SQ.M) = 6.141
CH. (KM):- 1+000
DESIGNED BED LEVEL = 133.119 M

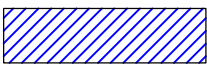


CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.090
CH. (KM):- 1+200
DESIGNED BED LEVEL = 133.062 M

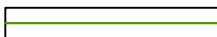
LEGEND



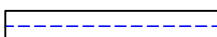
CUT AREA



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 :-

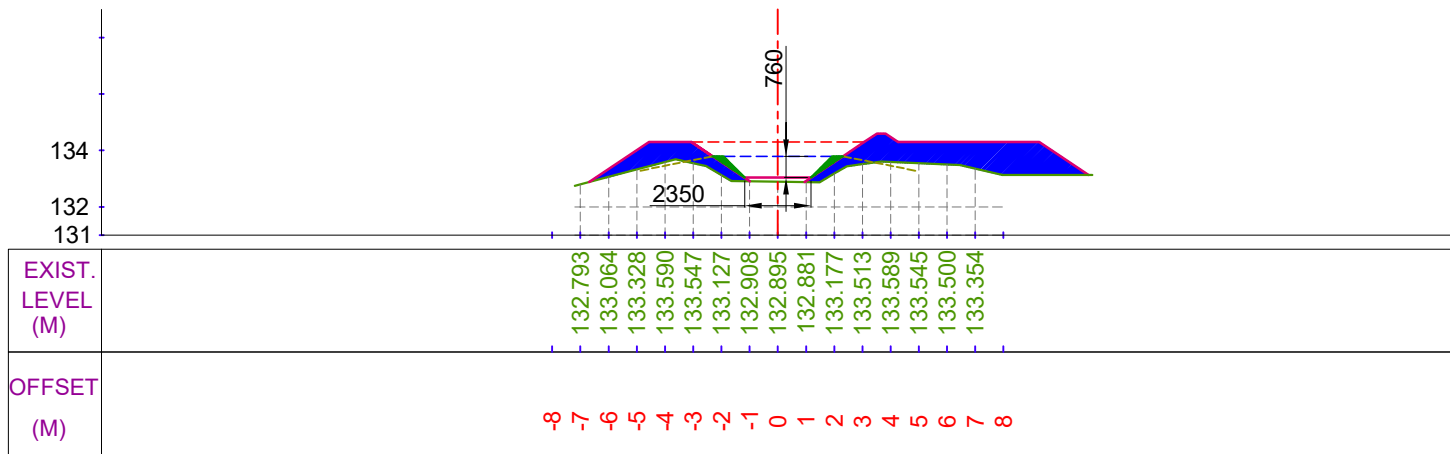
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

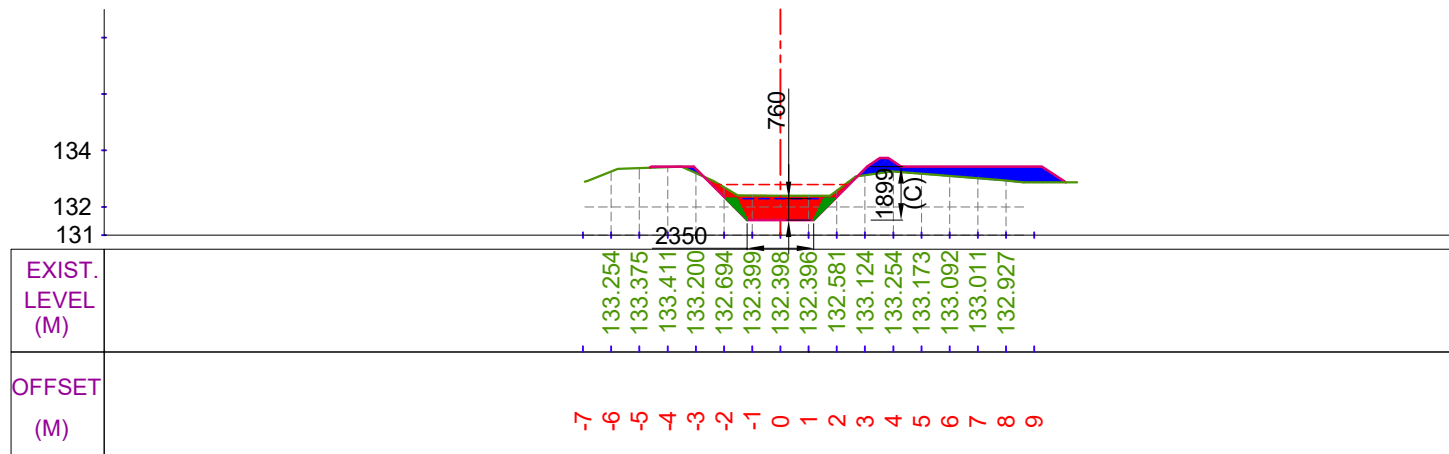
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

3 of 27

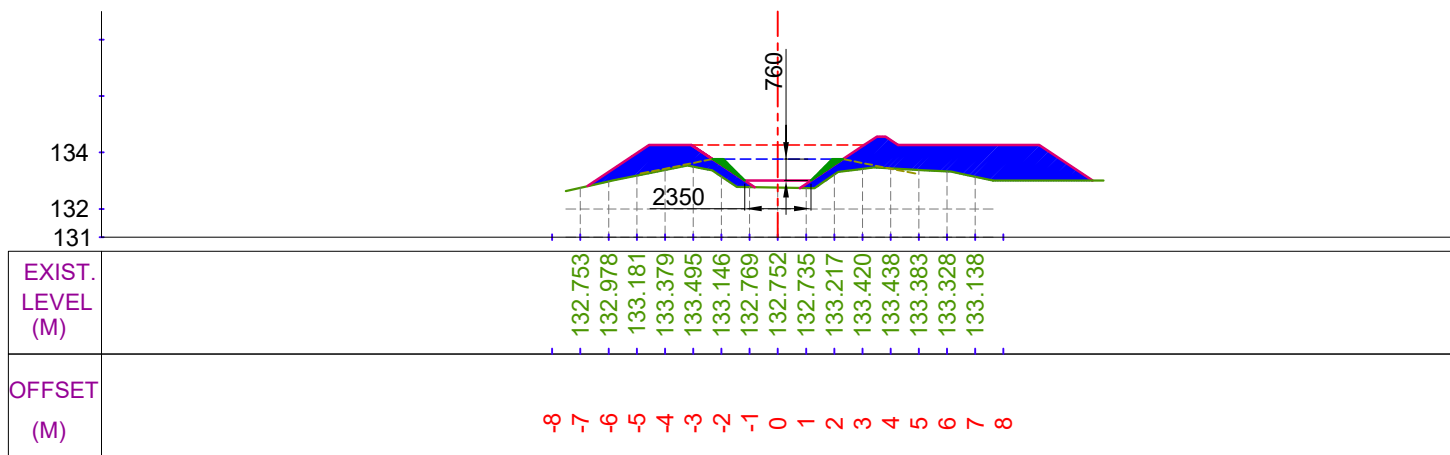
X SECTION OF SONDIH-III SUB-DY.



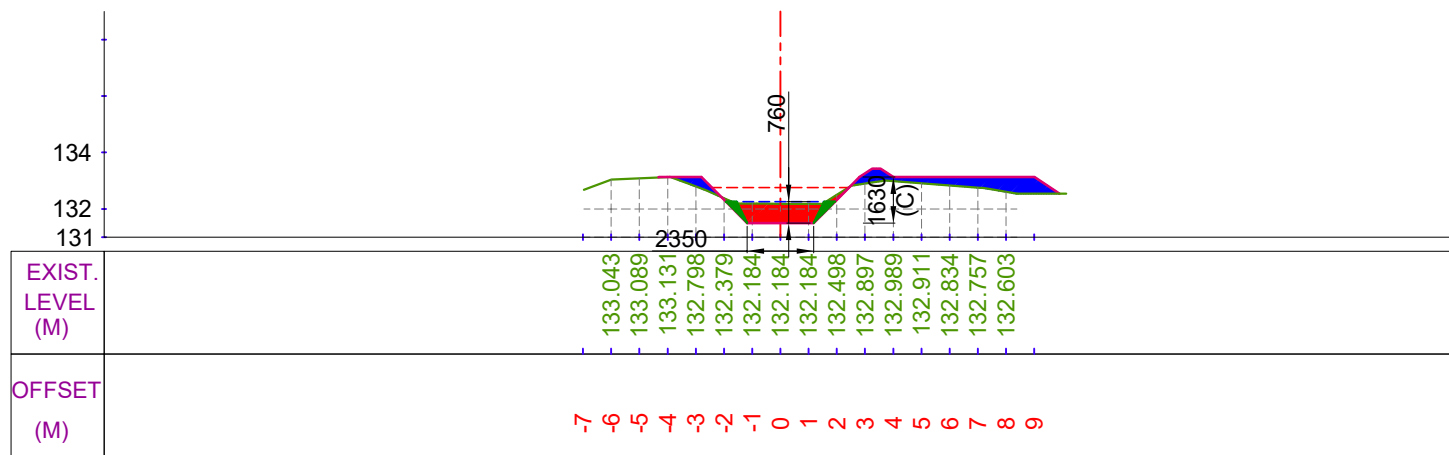
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.498
CH. (KM):- 1+300
DESIGNED BED LEVEL = 133.034 M



CUTTING AREA (SQ.M) = 2.836
FILLING AREA (SQ.M) = 2.862
CH. (KM):- 1+500
DESIGNED BED LEVEL = 131.528 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.973
CH. (KM):- 1+400
DESIGNED BED LEVEL = 133.005 M



CUTTING AREA (SQ.M) = 1.942
FILLING AREA (SQ.M) = 2.897
CH. (KM):- 1+600
DESIGNED BED LEVEL = 131.500 M

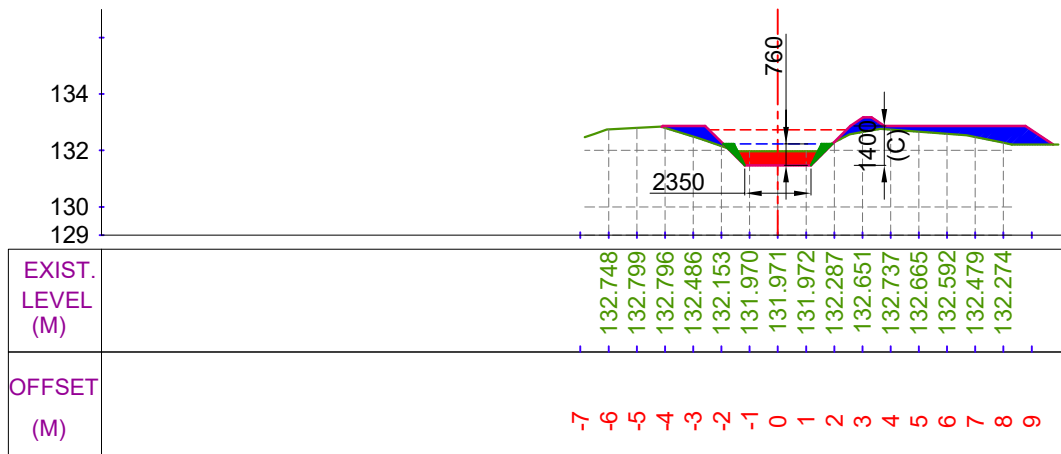
LEGEND

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

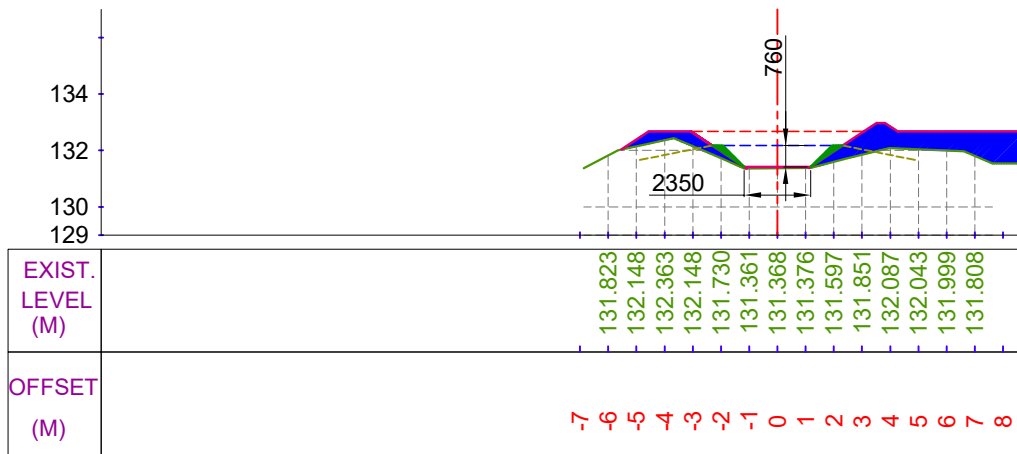
Prepared by :-
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 4 of 27

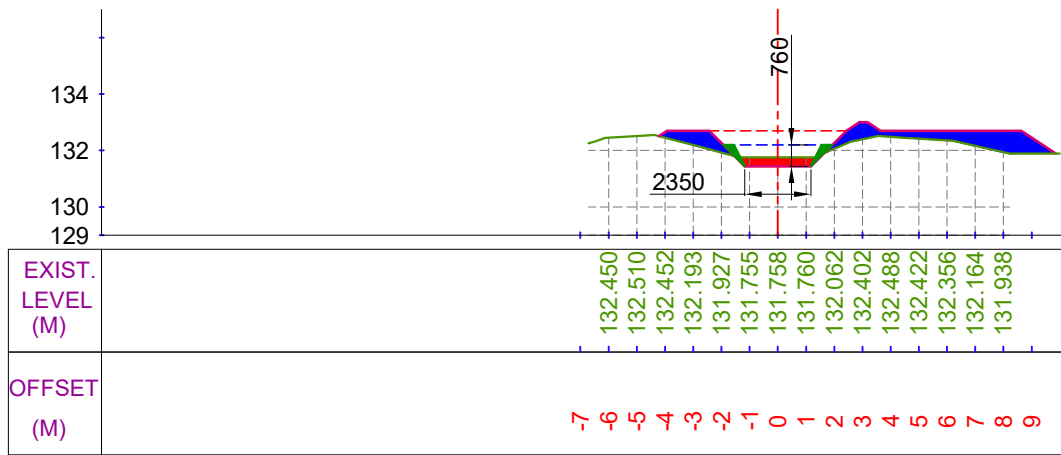
X SECTION OF SONDIH-III SUB-DY.



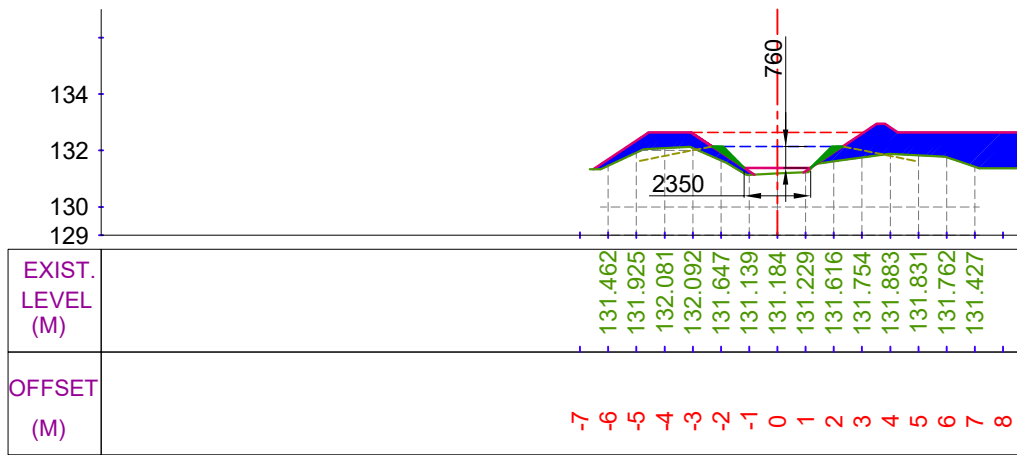
CUTTING AREA (SQ.M) = 1.301
FILLING AREA (SQ.M) = 3.256
CH. (KM):- 1+700
DESIGNED BED LEVEL = 131.471 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.351
CH. (KM):- 1+900
DESIGNED BED LEVEL = 131.414 M



CUTTING AREA (SQ.M) = 0.789
FILLING AREA (SQ.M) = 4.519
CH. (KM):- 1+800
DESIGNED BED LEVEL = 131.443 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.641
CH. (KM):- 2+000
DESIGNED BED LEVEL = 131.386 M

LEGEND

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

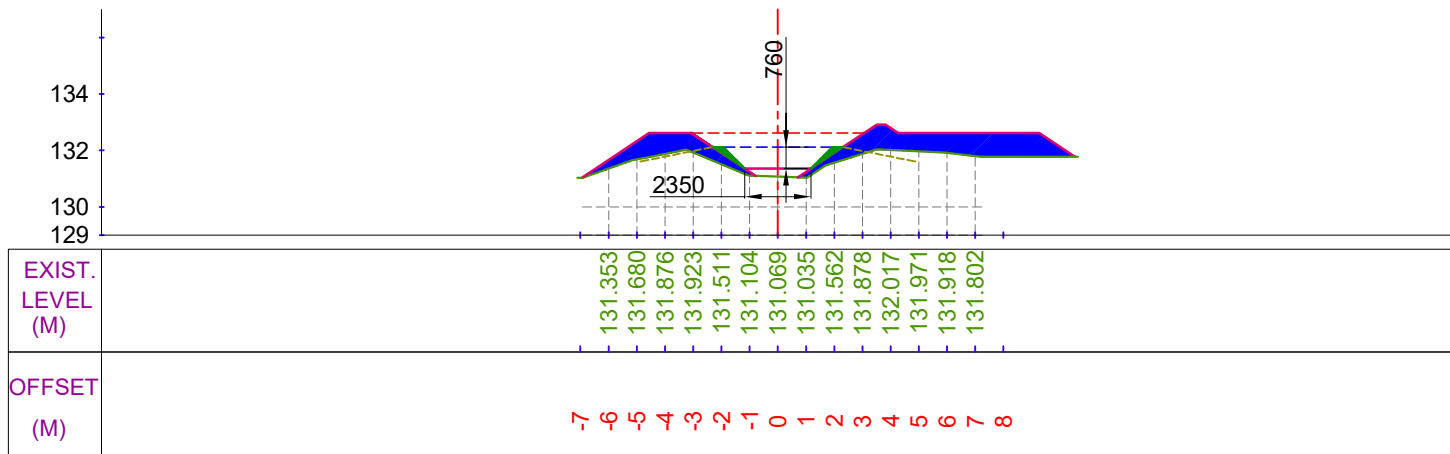
Prepared by :-

WAPCOS LTD.

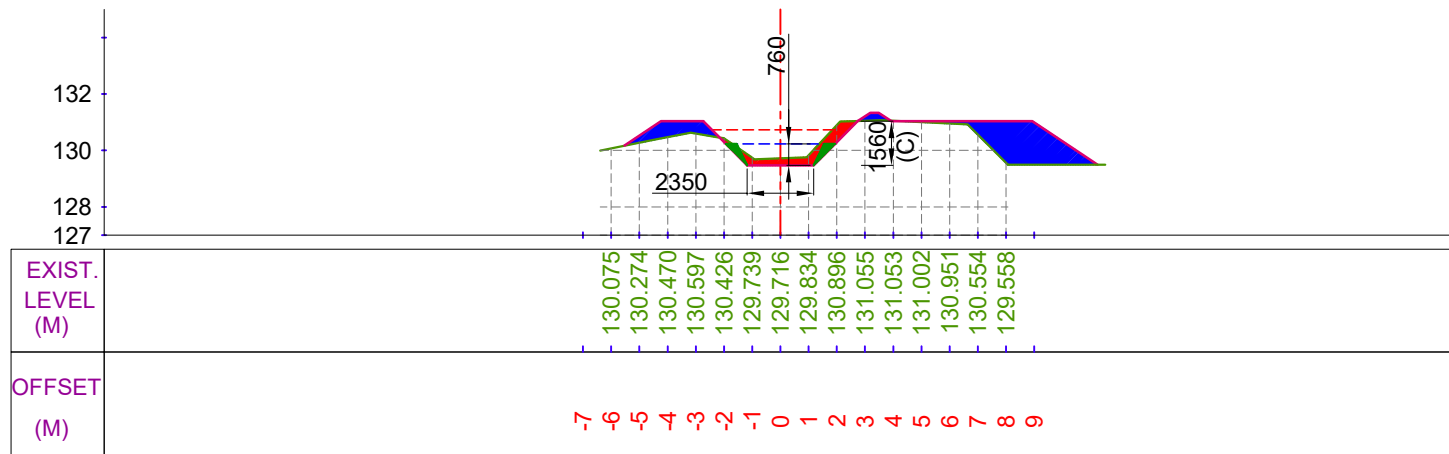


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		5 of 27

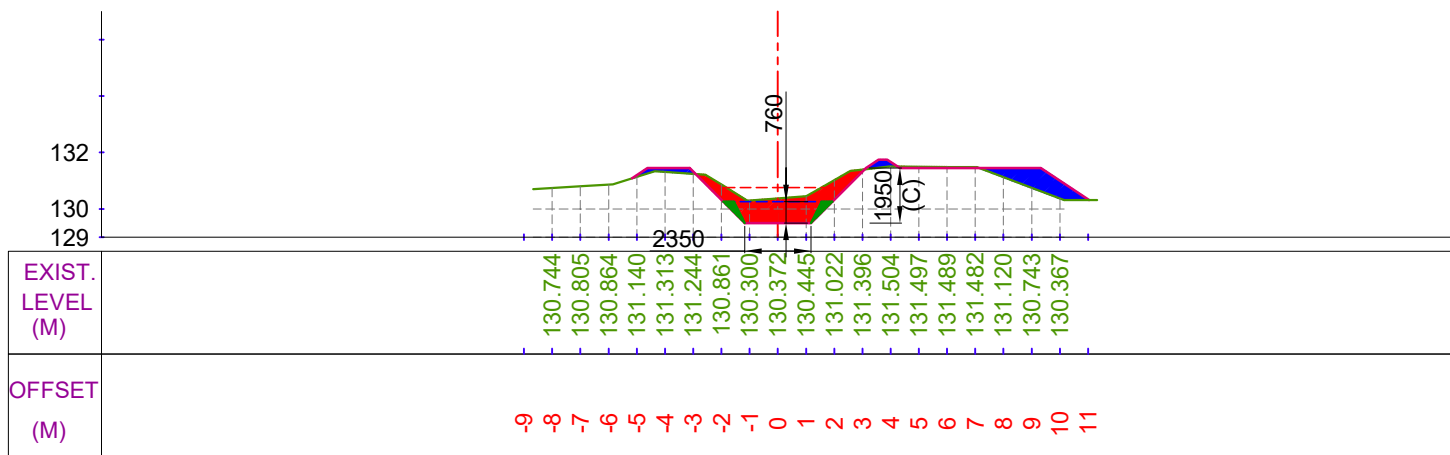
X SECTION OF SONDIH-III SUB-DY.



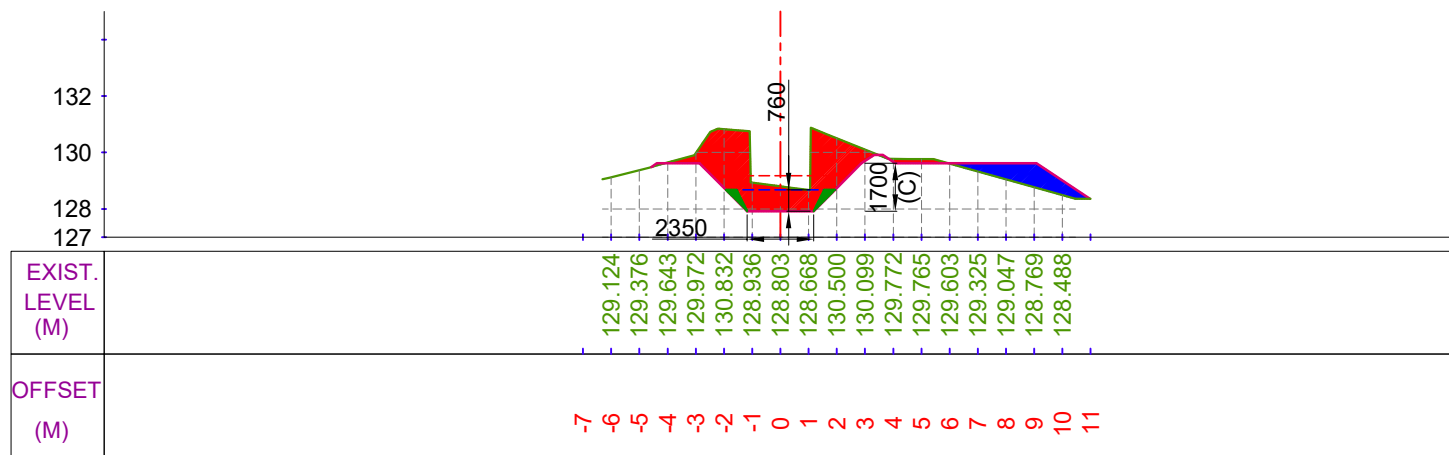
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.987
CH. (KM):- 2+100
DESIGNED BED LEVEL = 131.357 M



CUTTING AREA (SQ.M) = 1.320
FILLING AREA (SQ.M) = 5.867
CH. (KM):- 2+300
DESIGNED BED LEVEL = 129.471 M

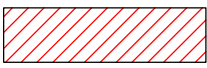


CUTTING AREA (SQ.M) = 3.934
FILLING AREA (SQ.M) = 2.254
CH. (KM):- 2+200
DESIGNED BED LEVEL = 129.499 M

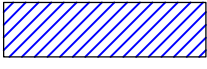


CUTTING AREA (SQ.M) = 9.071
FILLING AREA (SQ.M) = 2.316
CH. (KM):- 2+400
DESIGNED BED LEVEL = 127.918 M

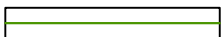
LEGEND



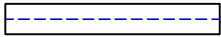
CUT AREA



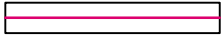
FILL AREA



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

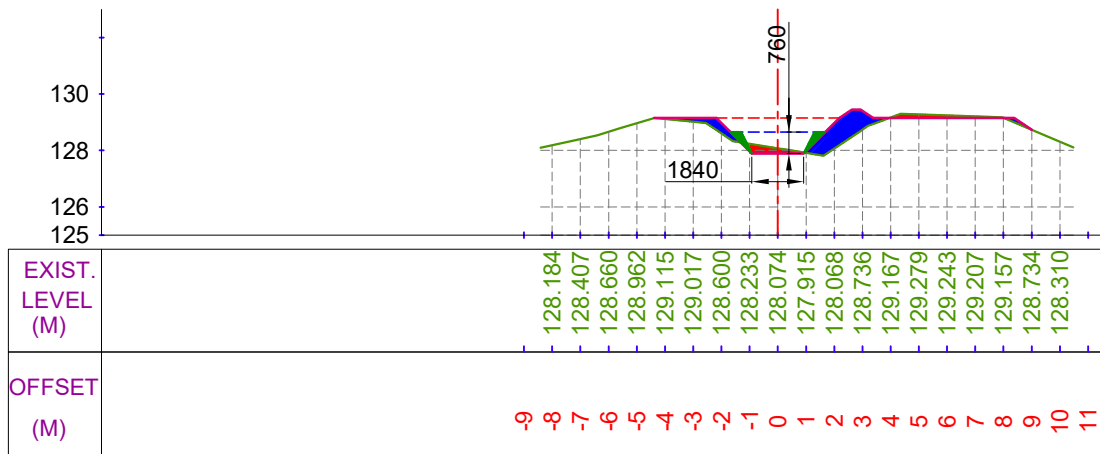
Drawing Title :-

X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

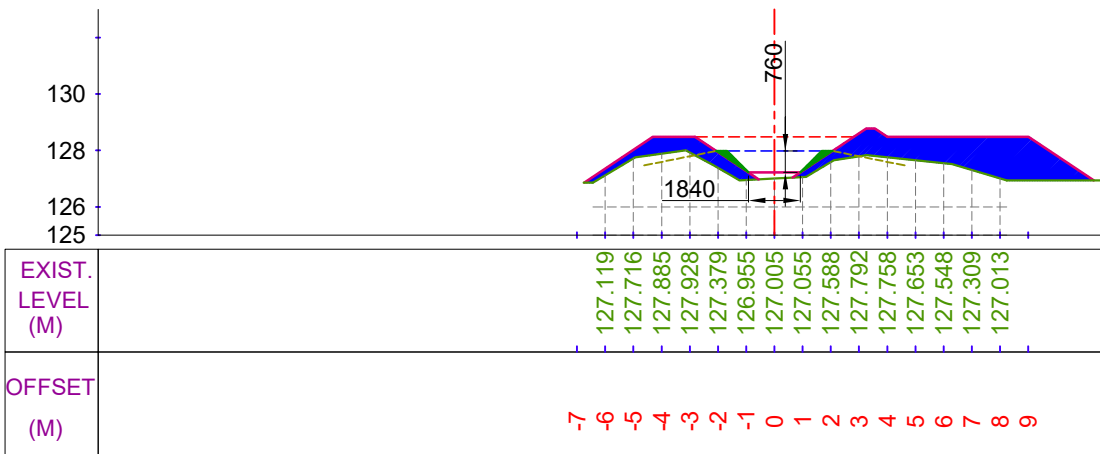
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

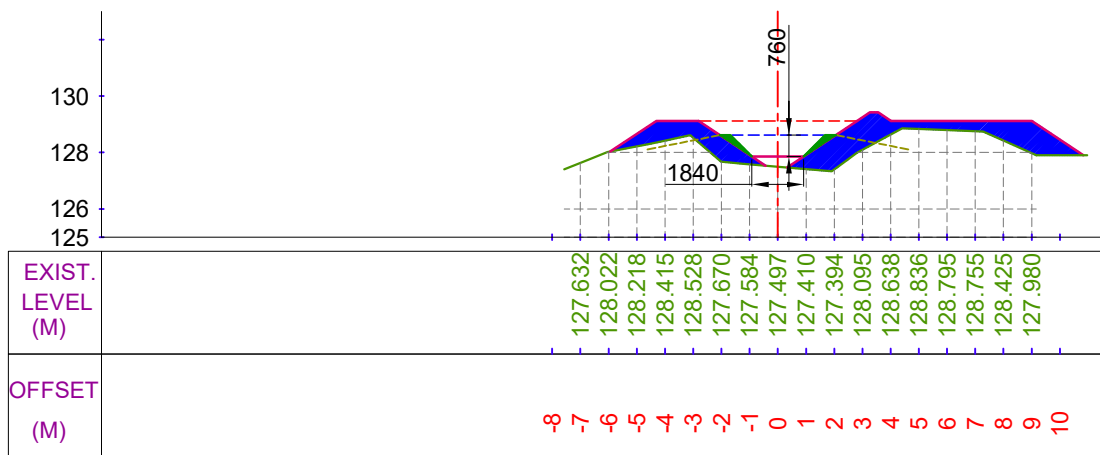
X SECTION OF SONDIH-III SUB-DY.



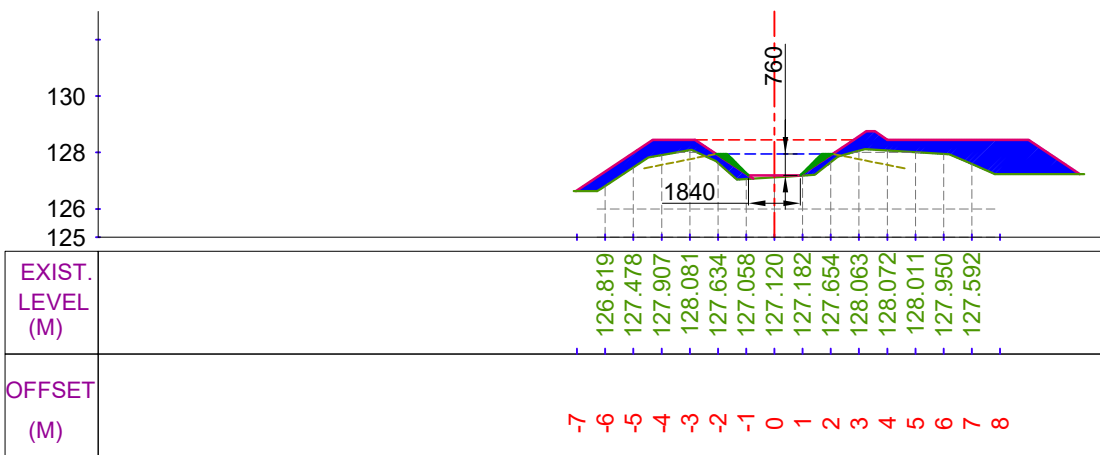
CUTTING AREA (SQ.M) = 0.720
FILLING AREA (SQ.M) = 2.281
CH. (KM):- 2+500
DESIGNED BED LEVEL = 127.889 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.737
CH. (KM):- 2+700
DESIGNED BED LEVEL = 127.220 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.600
CH. (KM):- 2+600
DESIGNED BED LEVEL = 127.859 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.625
CH. (KM):- 2+800
DESIGNED BED LEVEL = 127.191 M

LEGEND

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

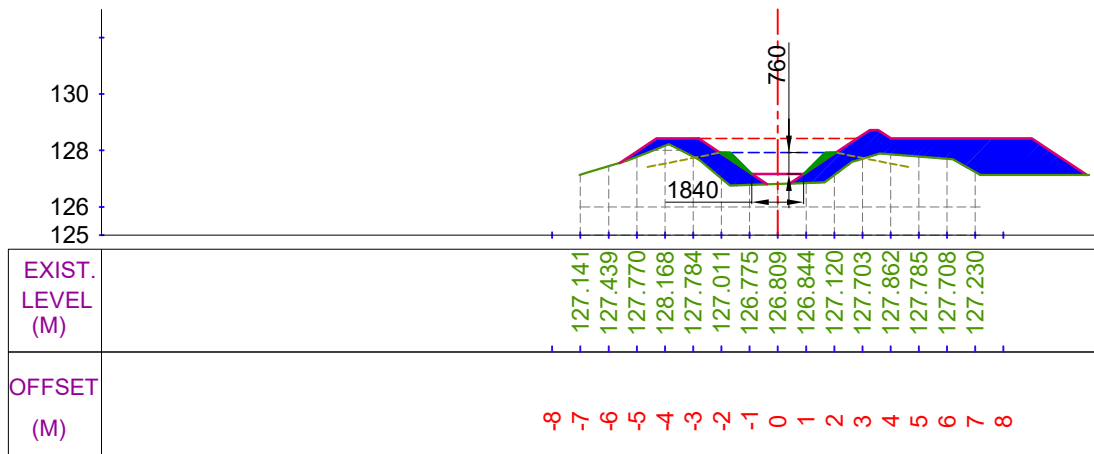
Prepared by :-

WAPCOS LTD.

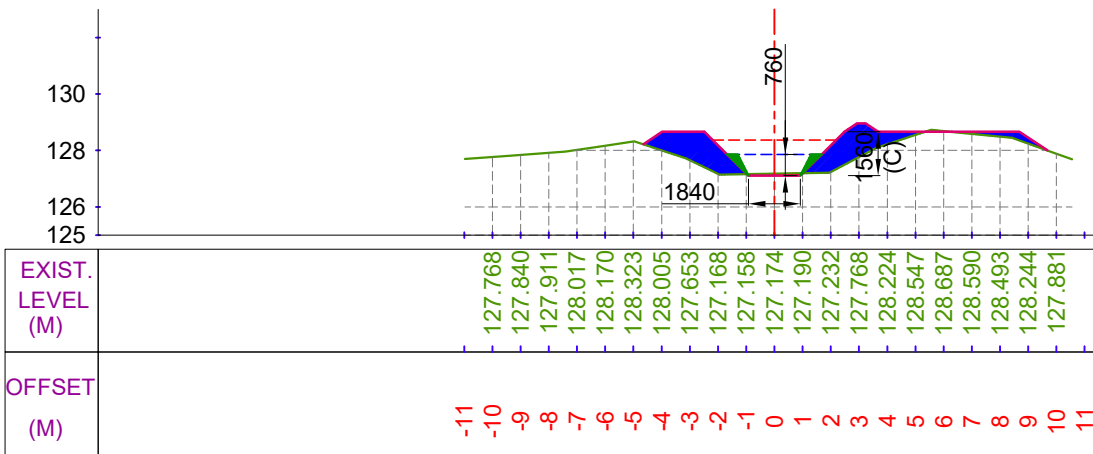


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 7 of 27

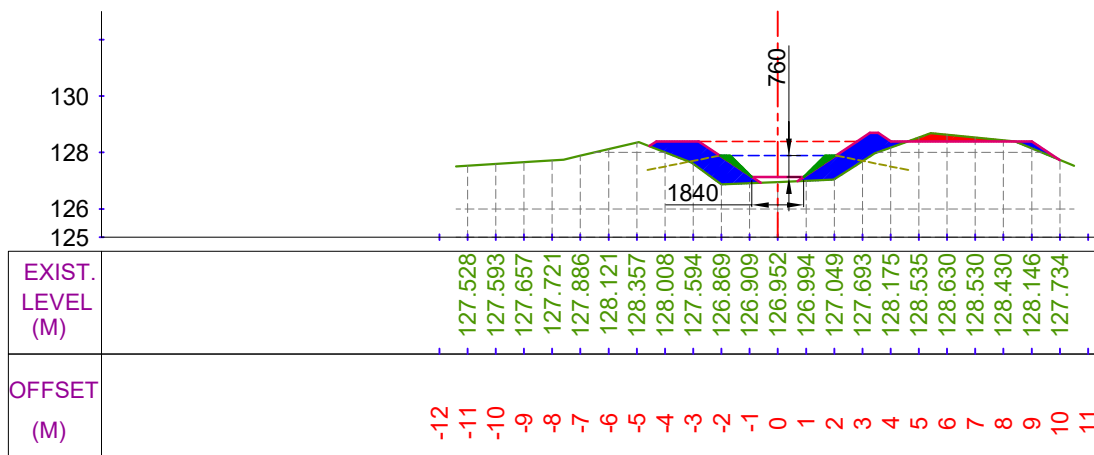
X SECTION OF SONDIH-III SUB-DY.



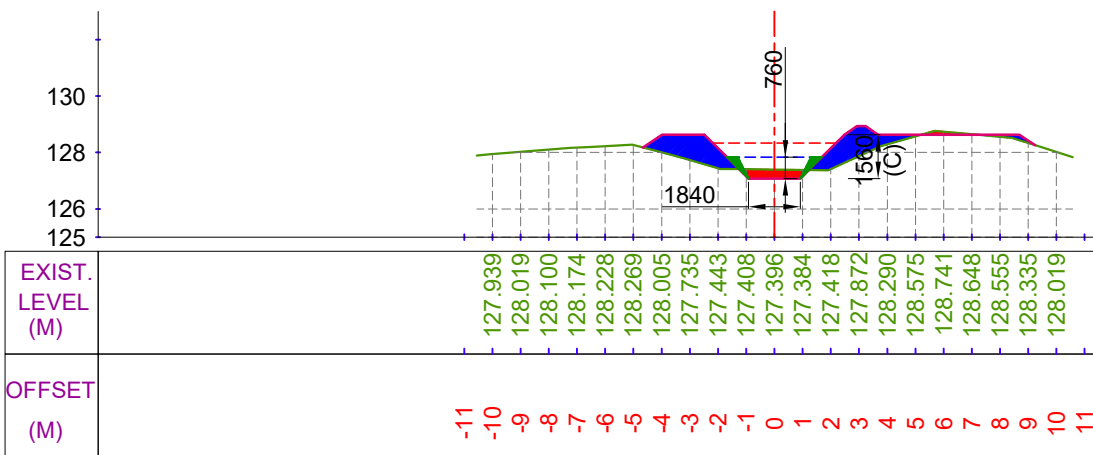
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.754
CH. (KM):- 2+900
DESIGNED BED LEVEL = 127.161 M



CUTTING AREA (SQ.M) = 0.165
FILLING AREA (SQ.M) = 5.836
CH. (KM):- 3+100
DESIGNED BED LEVEL = 127.102 M



CUTTING AREA (SQ.M) = 0.558
FILLING AREA (SQ.M) = 4.587
CH. (KM):- 3+000
DESIGNED BED LEVEL = 127.132 M



CUTTING AREA (SQ.M) = 0.781
FILLING AREA (SQ.M) = 4.475
CH. (KM):- 3+200
DESIGNED BED LEVEL = 127.073 M

LEGEND

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

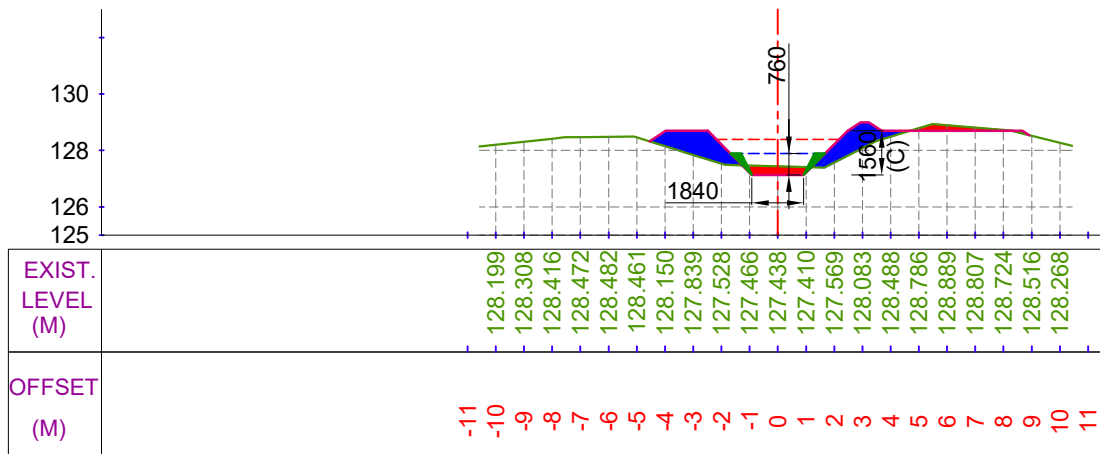
Prepared by :-

WAPCOS LTD.

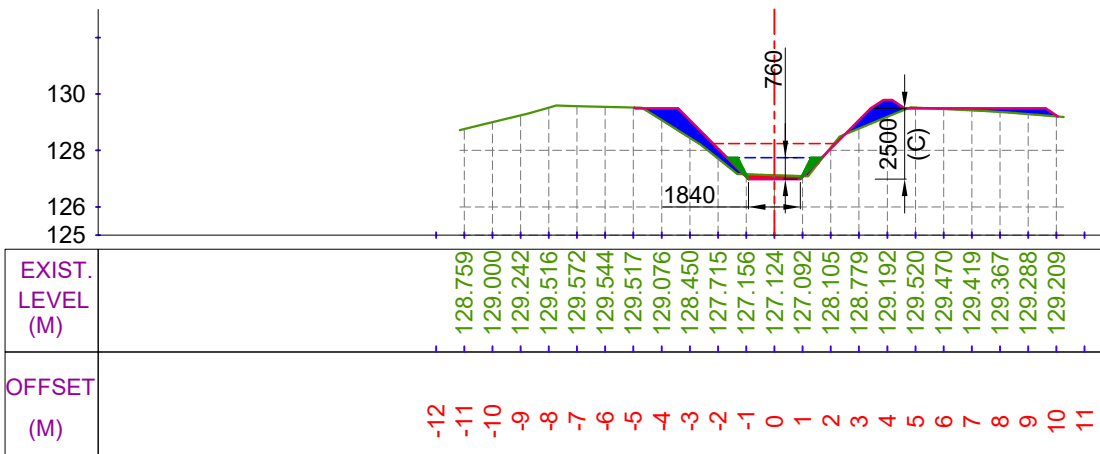


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		8 of 27

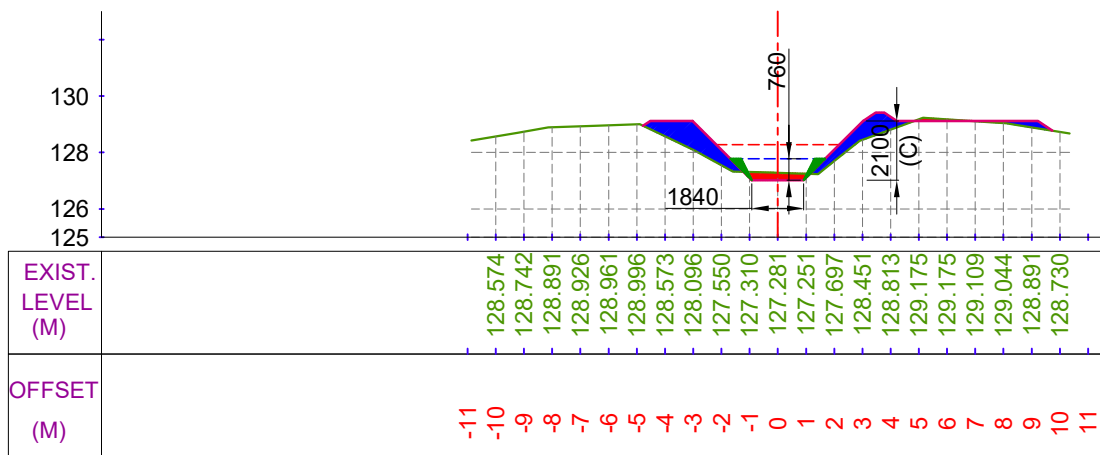
X SECTION OF SONDIH-III SUB-DY.



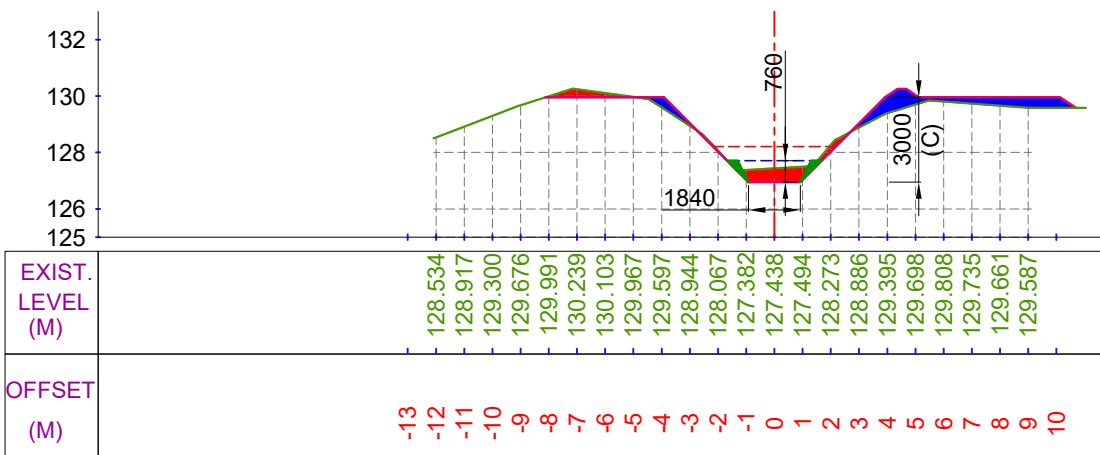
CUTTING AREA (SQ.M) = 1.053 CH. (KM):- 3+300
FILLING AREA (SQ.M) = 3.754 DESIGNED BED LEVEL = 127.044 M



CUTTING AREA (SQ.M) = 0.334 CH. (KM):- 3+500
FILLING AREA (SQ.M) = 2.808 DESIGNED BED LEVEL = 126.985 M



CUTTING AREA (SQ.M) = 0.649 CH. (KM):- 3+400
FILLING AREA (SQ.M) = 3.917 DESIGNED BED LEVEL = 127.014 M



CUTTING AREA (SQ.M) = 1.722 CH. (KM):- 3+600
FILLING AREA (SQ.M) = 2.878 DESIGNED BED LEVEL = 126.955 M

LEGEND

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

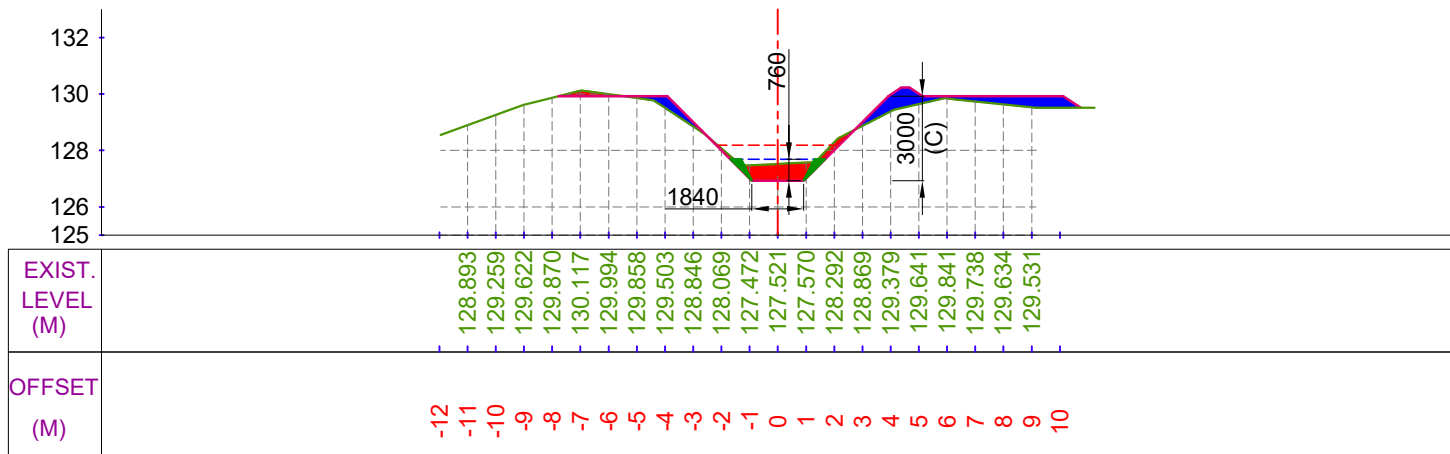
Prepared by :-

WAPCOS LTD.

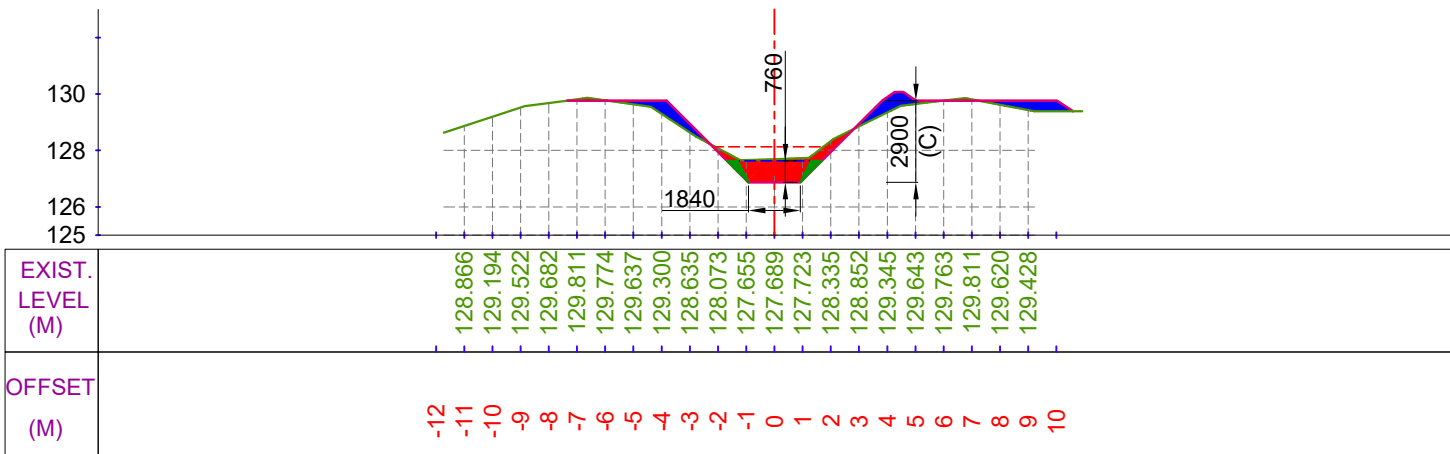


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 9 of 27

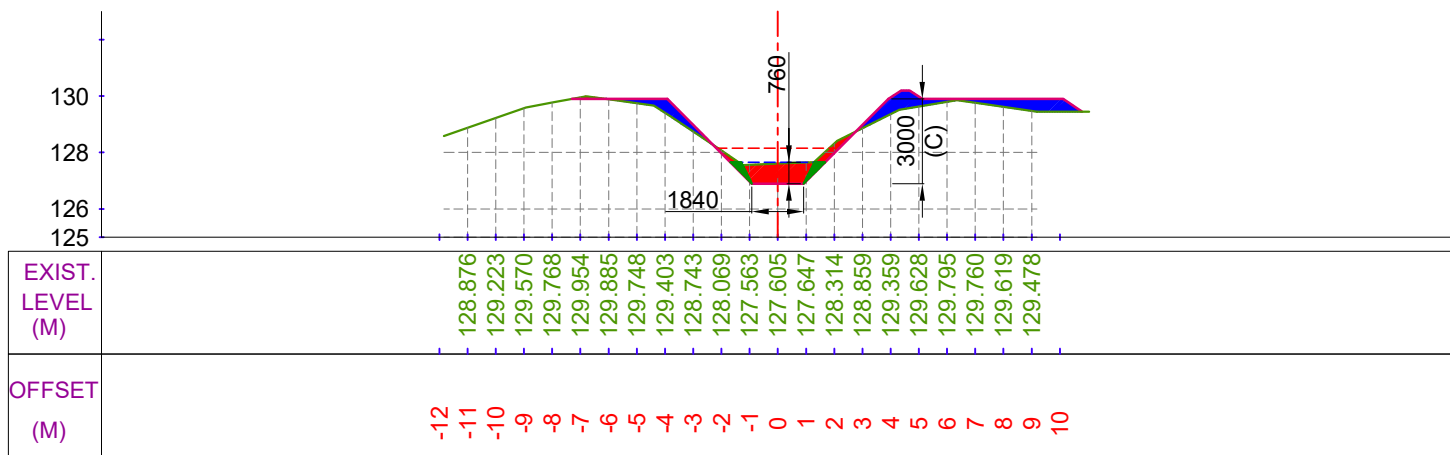
X SECTION OF SONDIH-III SUB-DY.



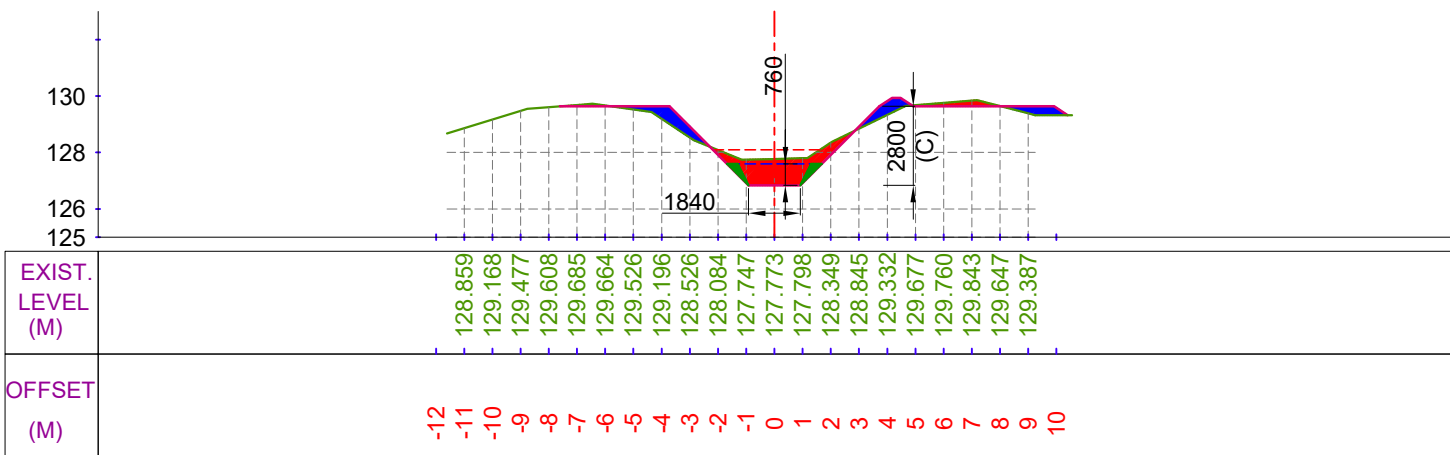
CUTTING AREA (SQ.M) = 1.798 CH. (KM):- 3+700
FILLING AREA (SQ.M) = 3.067 DESIGNED BED LEVEL = 126.926 M



CUTTING AREA (SQ.M) = 2.540 CH. (KM):- 3+900
FILLING AREA (SQ.M) = 2.532 DESIGNED BED LEVEL = 126.867 M



CUTTING AREA (SQ.M) = 2.031 CH. (KM):- 3+800
FILLING AREA (SQ.M) = 3.268 DESIGNED BED LEVEL = 126.897 M



CUTTING AREA (SQ.M) = 3.328 CH. (KM):- 4+000
FILLING AREA (SQ.M) = 2.020 DESIGNED BED LEVEL = 126.838 M

LEGEND

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

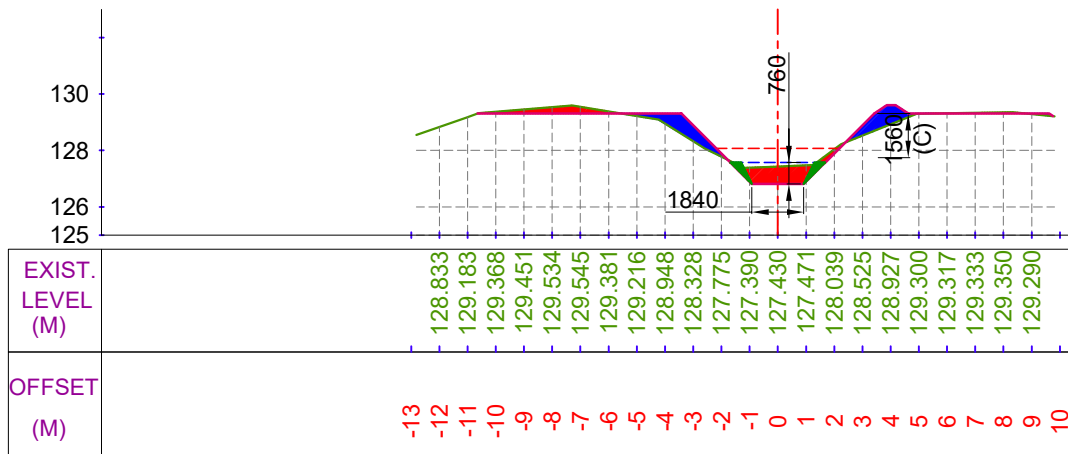
Prepared by :-

WAPCOS LTD.

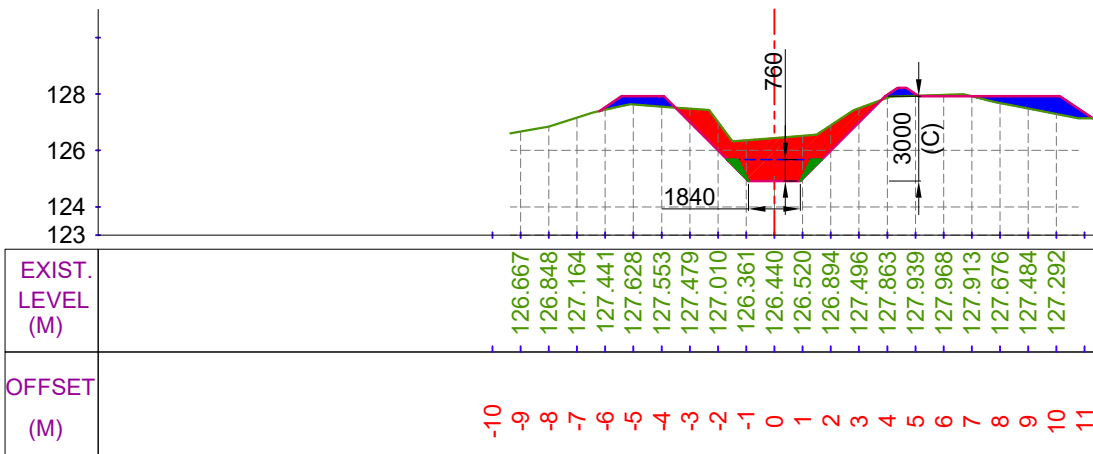


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		10 of 27

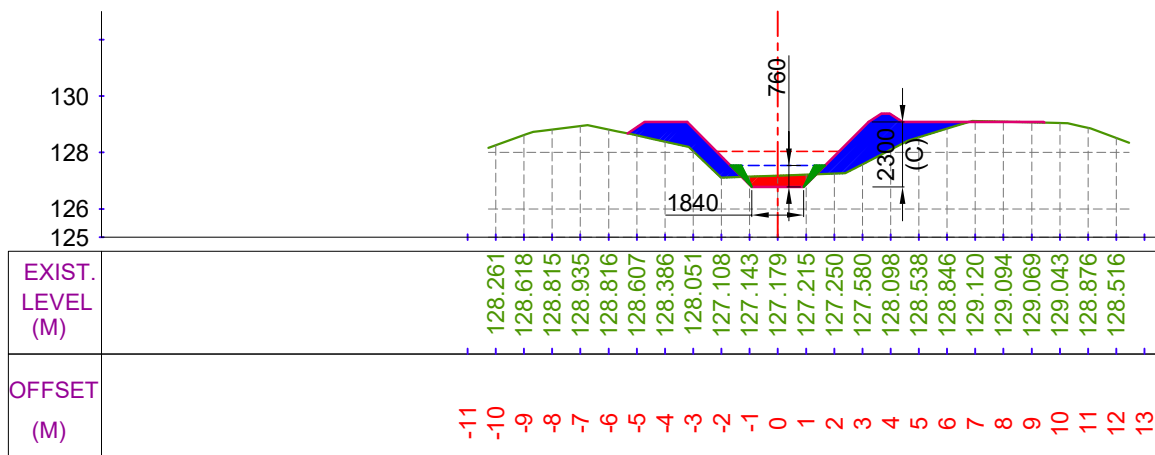
X SECTION OF SONDIH-III SUB-DY.



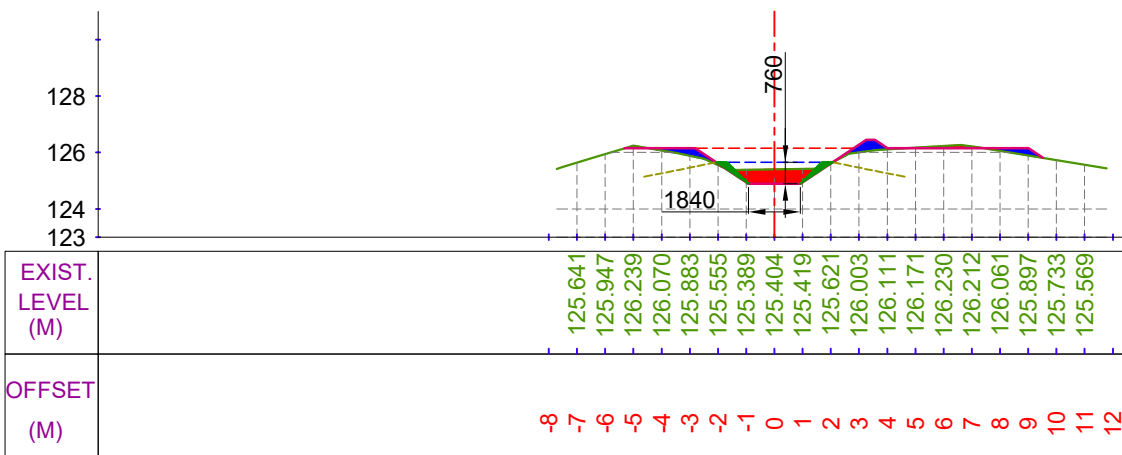
CUTTING AREA (SQ.M) = 2.292 CH. (KM):- 4+100
FILLING AREA (SQ.M) = 2.205 DESIGNED BED LEVEL = 126.808 M



CUTTING AREA (SQ.M) = 6.887 CH. (KM):- 4+300
FILLING AREA (SQ.M) = 2.427 DESIGNED BED LEVEL = 124.920 M



CUTTING AREA (SQ.M) = 0.856 CH. (KM):- 4+200
FILLING AREA (SQ.M) = 6.302 DESIGNED BED LEVEL = 126.779 M



CUTTING AREA (SQ.M) = 1.404 CH. (KM):- 4+400
FILLING AREA (SQ.M) = 1.048 DESIGNED BED LEVEL = 124.891 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 :-

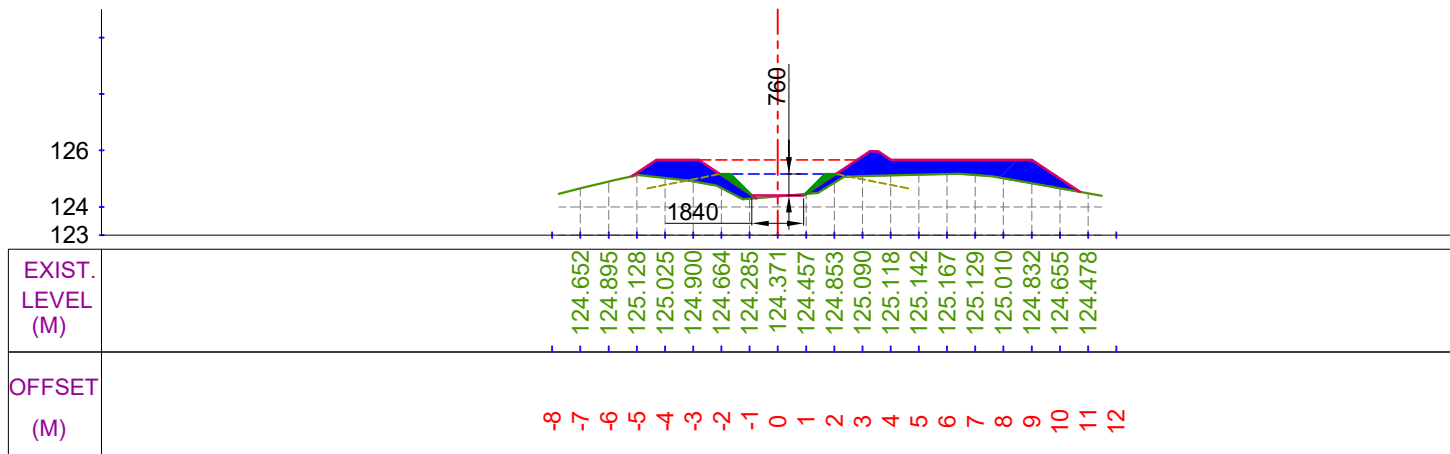
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

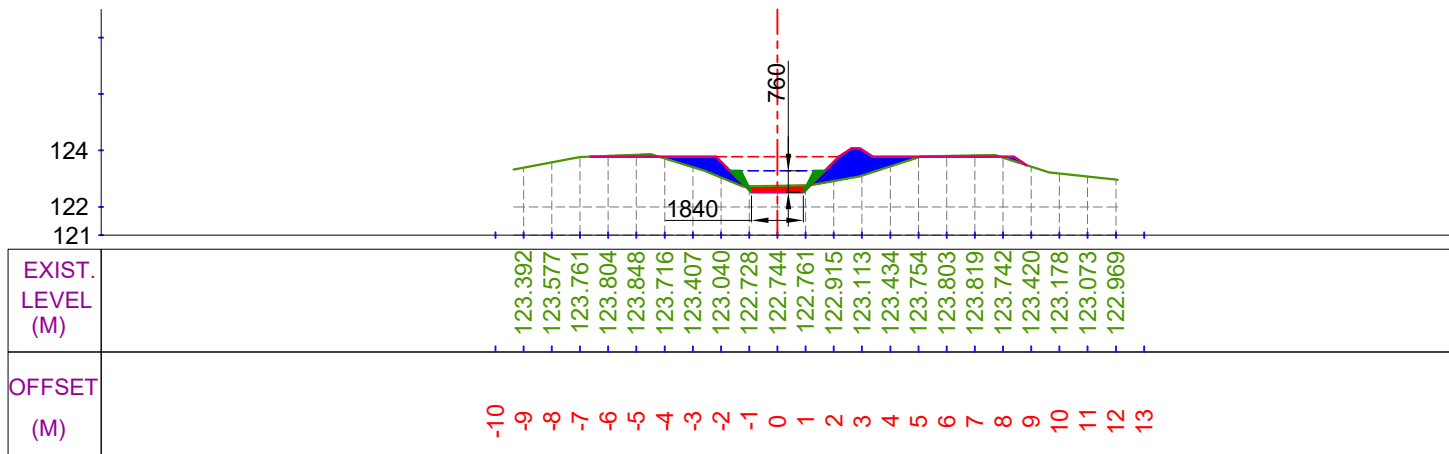
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

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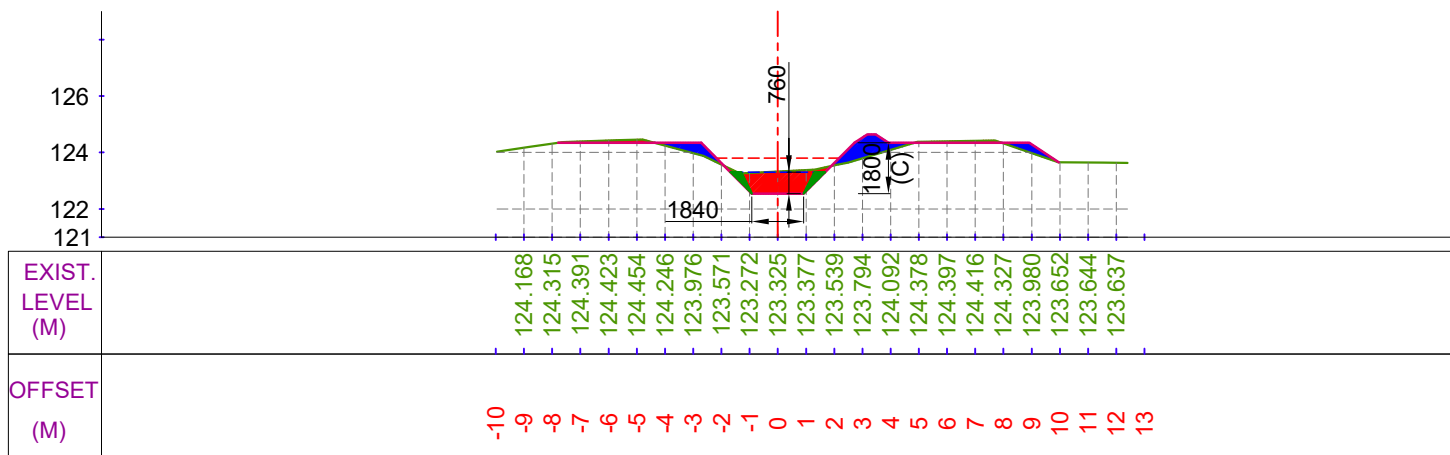
X SECTION OF SONDIH-III SUB-DY.



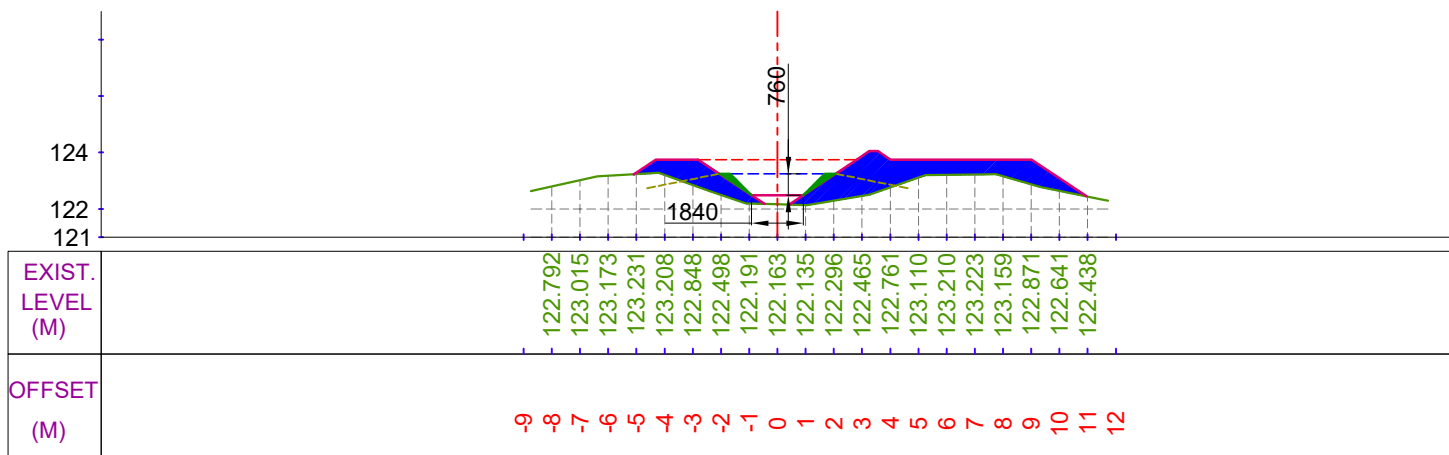
CUTTING AREA (SQ.M) = 0.013
FILLING AREA (SQ.M) = 7.157
CH. (KM):- 4+500
DESIGNED BED LEVEL = 124.405 M



CUTTING AREA (SQ.M) = 0.647
FILLING AREA (SQ.M) = 3.030
CH. (KM):- 4+700
DESIGNED BED LEVEL = 122.517 M



CUTTING AREA (SQ.M) = 2.218
FILLING AREA (SQ.M) = 2.060
CH. (KM):- 4+600
DESIGNED BED LEVEL = 122.546 M

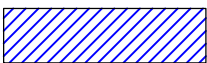


CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.905
CH. (KM):- 4+800
DESIGNED BED LEVEL = 122.487 M

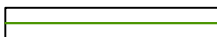
LEGEND



CUT AREA



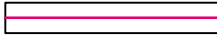
FILL AREA



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 :-

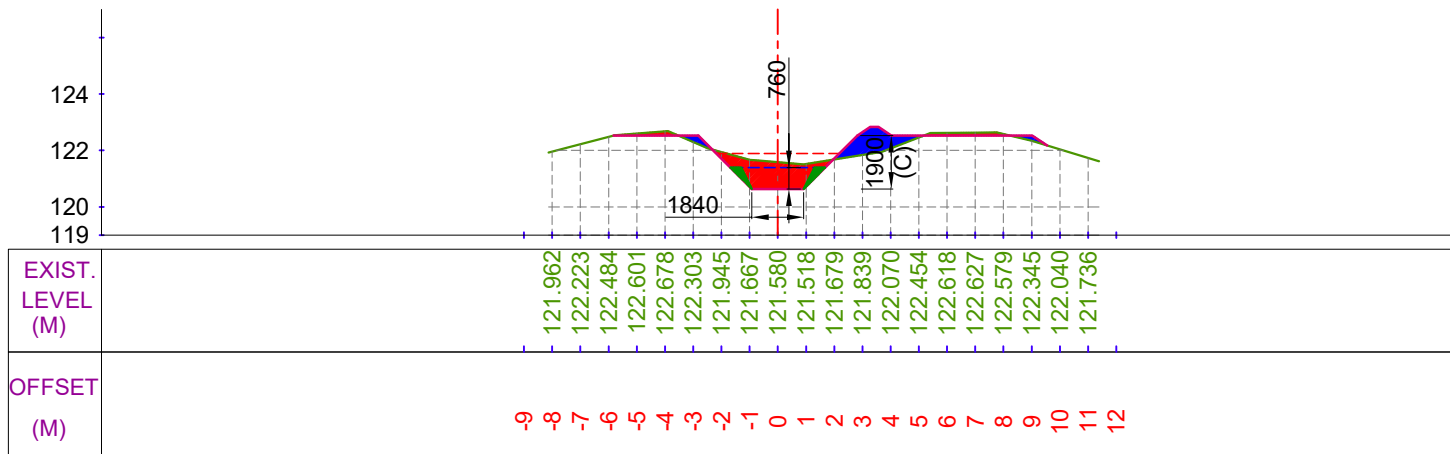
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

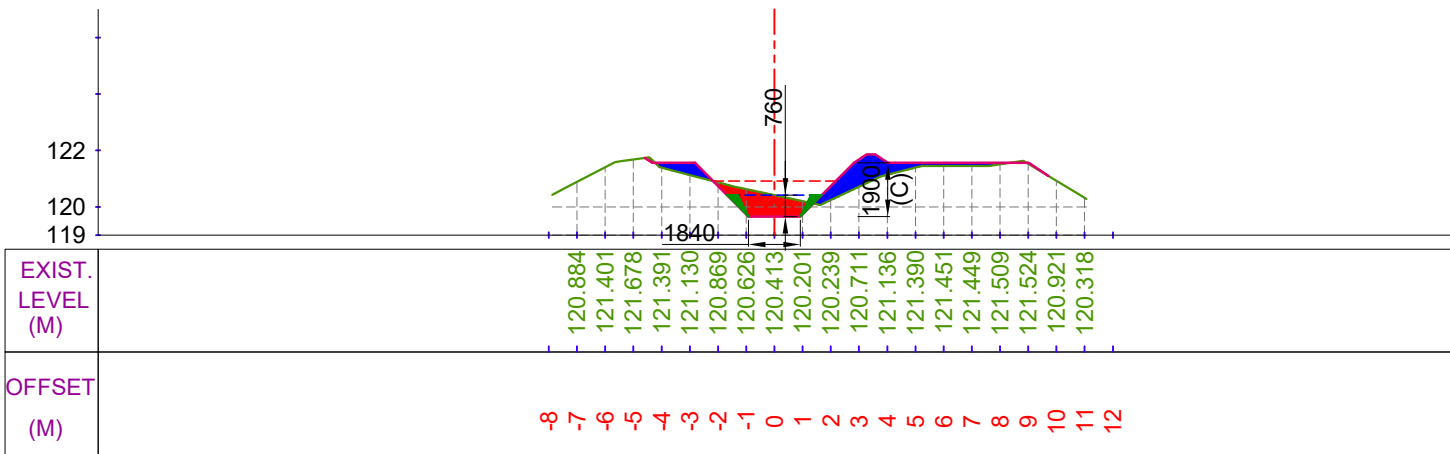
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

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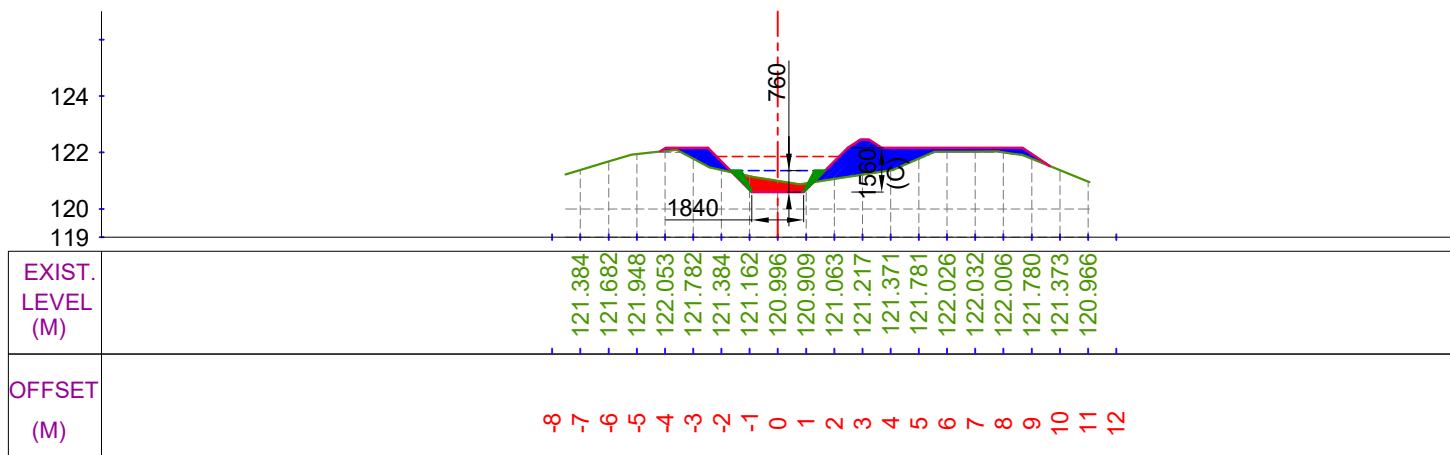
X SECTION OF SONDIH-III SUB-DY.



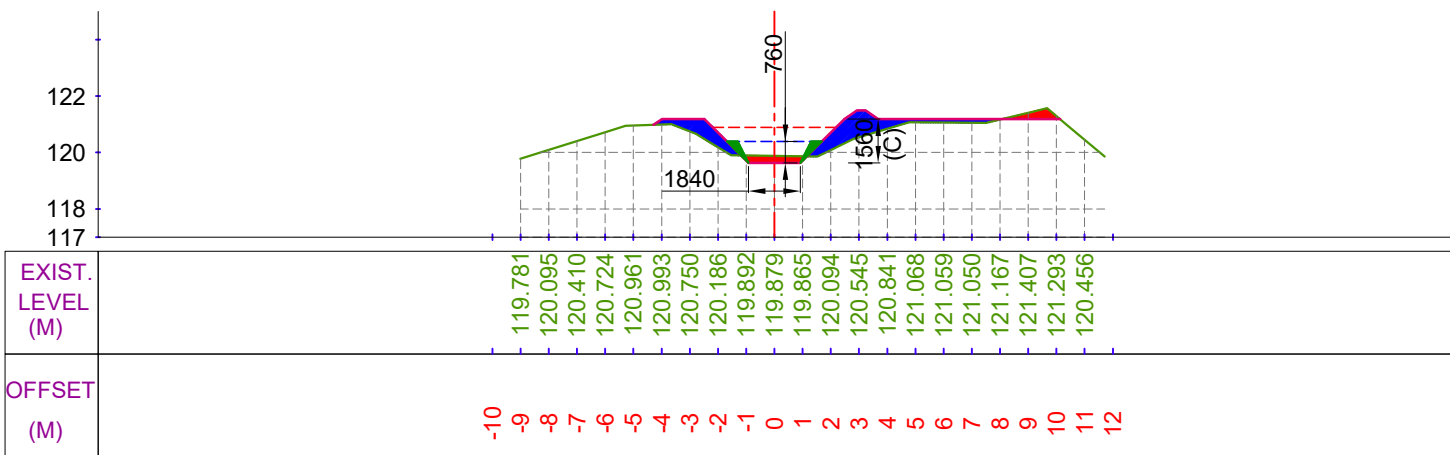
CUTTING AREA (SQ.M) = 3.078
FILLING AREA (SQ.M) = 1.845
CH. (KM):- 4+900
DESIGNED BED LEVEL = 120.629 M



CUTTING AREA (SQ.M) = 1.960
FILLING AREA (SQ.M) = 2.934
CH. (KM):- 5+100
DESIGNED BED LEVEL = 119.656 M



CUTTING AREA (SQ.M) = 0.840
FILLING AREA (SQ.M) = 4.266
CH. (KM):- 5+000
DESIGNED BED LEVEL = 120.600 M



CUTTING AREA (SQ.M) = 0.885
FILLING AREA (SQ.M) = 3.469
CH. (KM):- 5+200
DESIGNED BED LEVEL = 119.627 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 :-

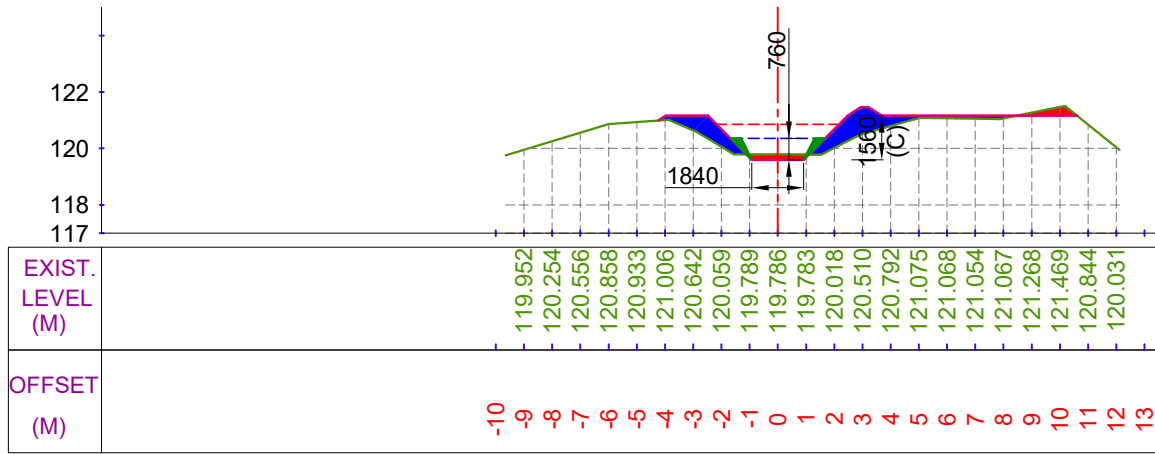
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

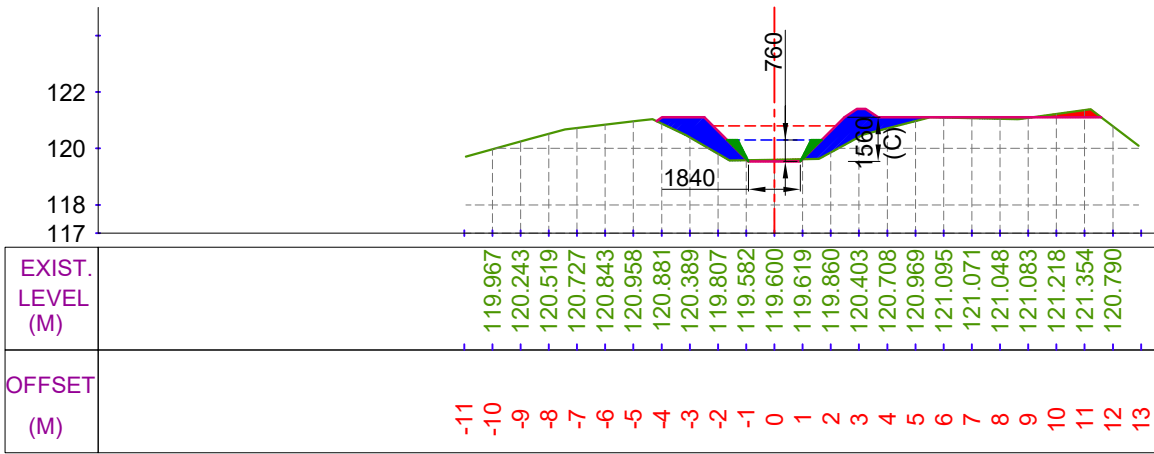
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

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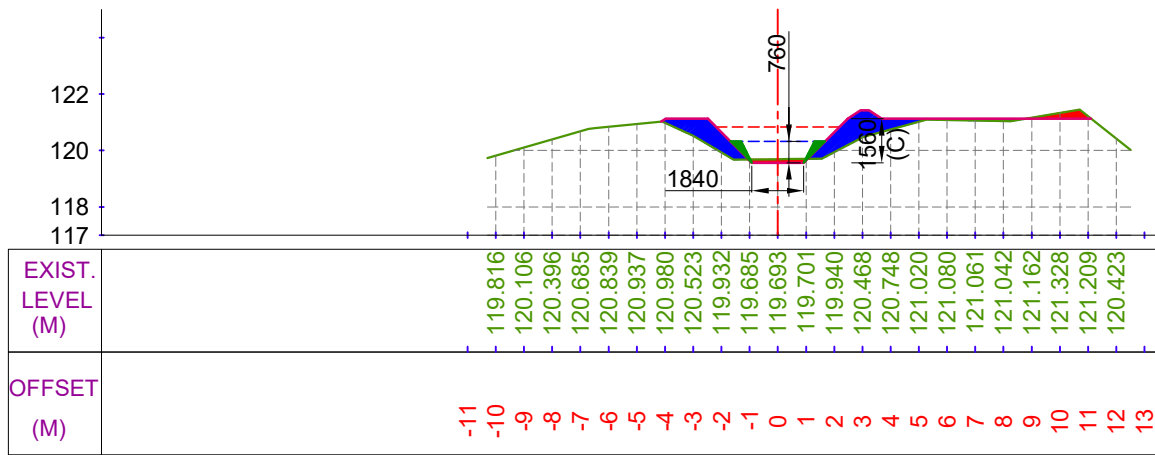
X SECTION OF SONDIH-III SUB-DY.



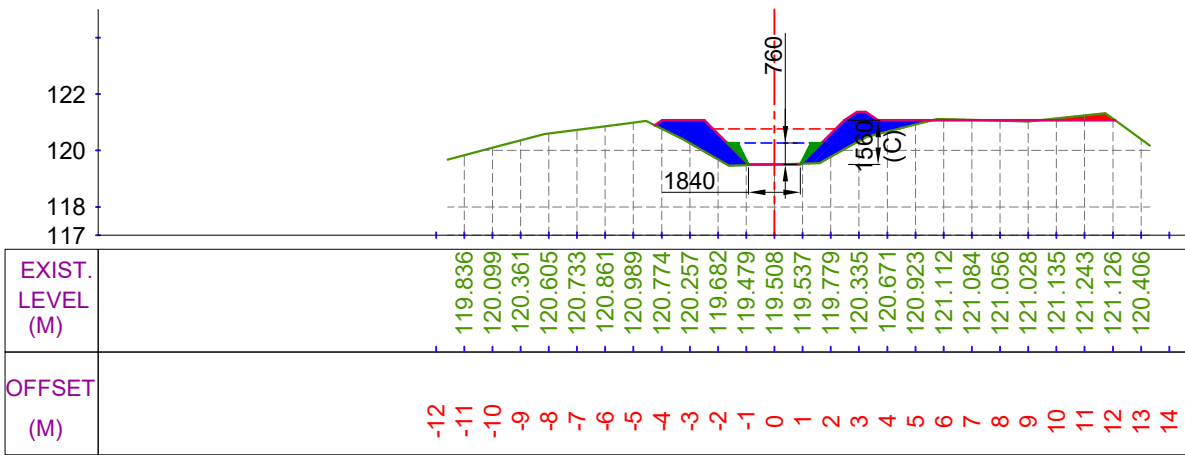
CUTTING AREA (SQ.M) = 0.744
FILLING AREA (SQ.M) = 3.716
CH. (KM):- 5+300
DESIGNED BED LEVEL = 119.597 M



CUTTING AREA (SQ.M) = 0.467
FILLING AREA (SQ.M) = 4.307
CH. (KM):- 5+500
DESIGNED BED LEVEL = 119.539 M

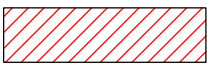


CUTTING AREA (SQ.M) = 0.603
FILLING AREA (SQ.M) = 3.999
CH. (KM):- 5+400
DESIGNED BED LEVEL = 119.568 M

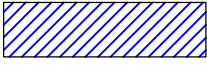


CUTTING AREA (SQ.M) = 0.400
FILLING AREA (SQ.M) = 4.669
CH. (KM):- 5+600
DESIGNED BED LEVEL = 119.509 M

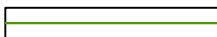
LEGEND



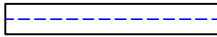
CUT AREA



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 :-

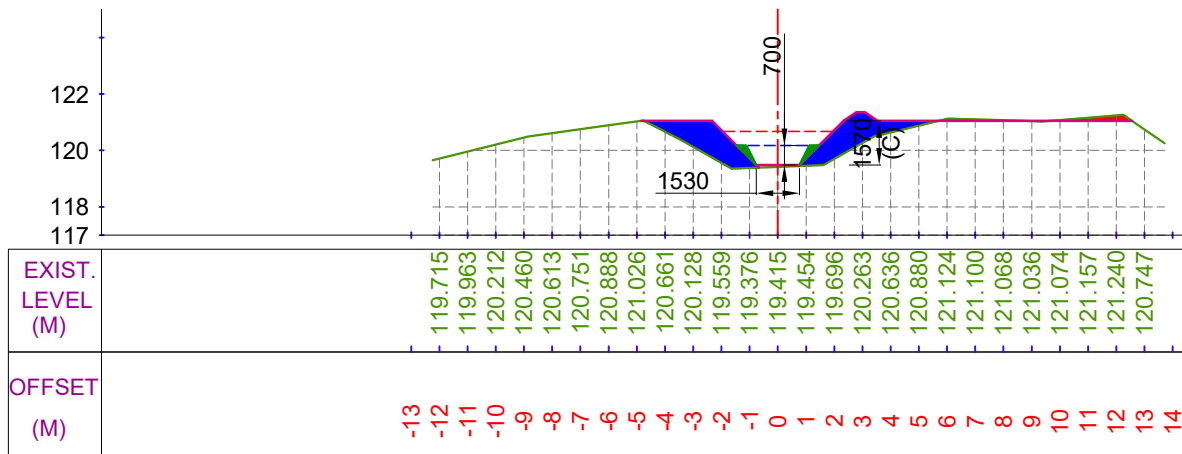
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

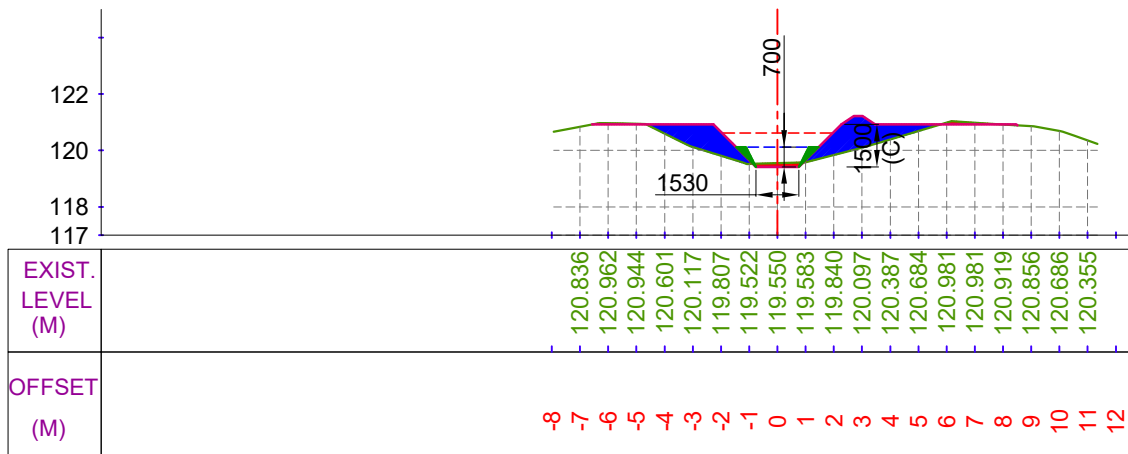
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

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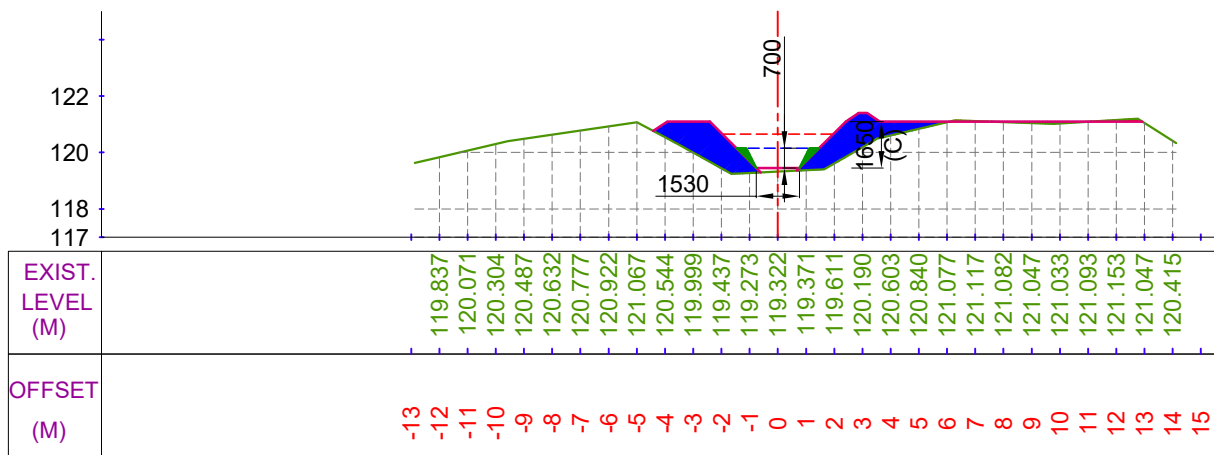
X SECTION OF SONDIH-III SUB-DY.



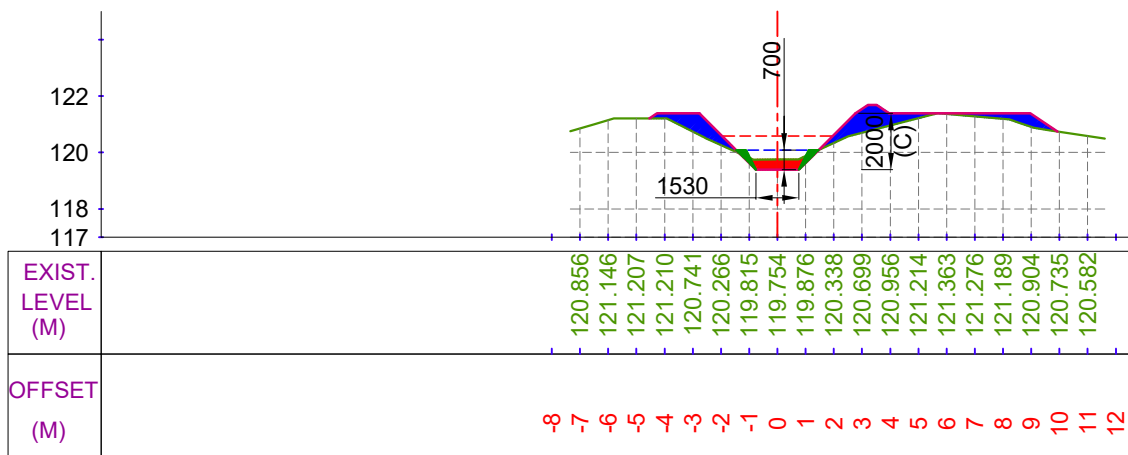
CUTTING AREA (SQ.M) = 0.420
FILLING AREA (SQ.M) = 5.715
CH. (KM):- 5+700
DESIGNED BED LEVEL = 119.479 M



CUTTING AREA (SQ.M) = 0.396
FILLING AREA (SQ.M) = 4.851
CH. (KM):- 5+900
DESIGNED BED LEVEL = 119.419 M

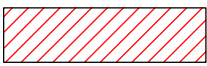


CUTTING AREA (SQ.M) = 0.121
FILLING AREA (SQ.M) = 6.662
CH. (KM):- 5+800
DESIGNED BED LEVEL = 119.449 M

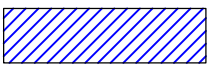


CUTTING AREA (SQ.M) = 0.642
FILLING AREA (SQ.M) = 3.723
CH. (KM):- 6+000
DESIGNED BED LEVEL = 119.388 M

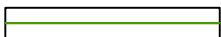
LEGEND



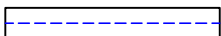
CUT AREA



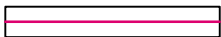
FILL AREA



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 :-

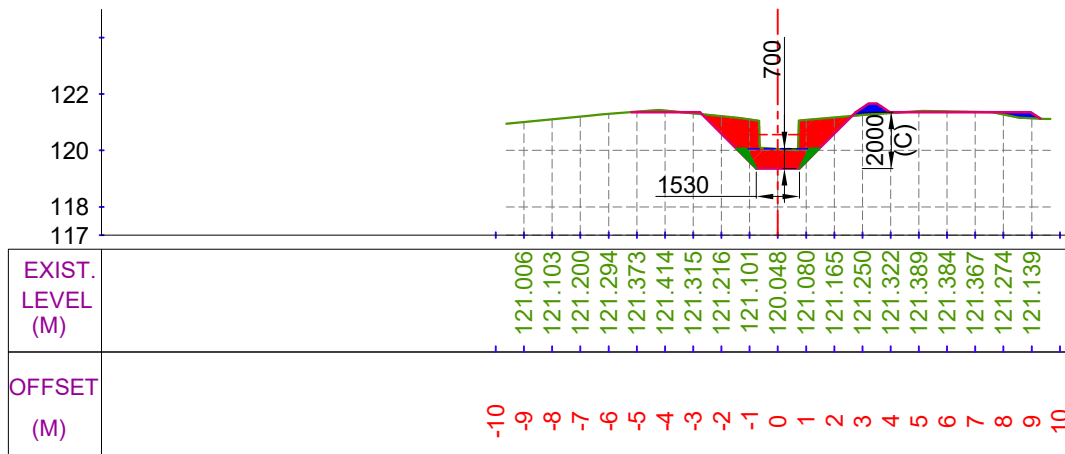
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

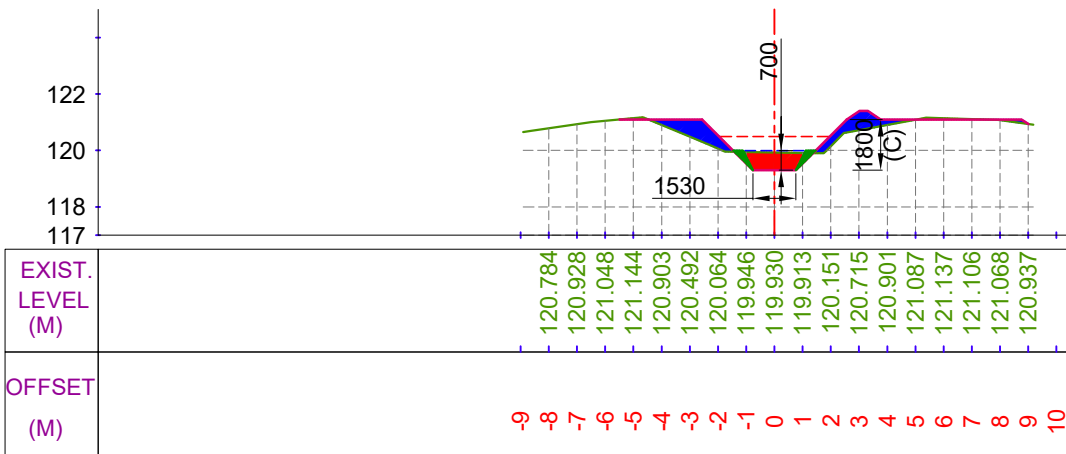
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

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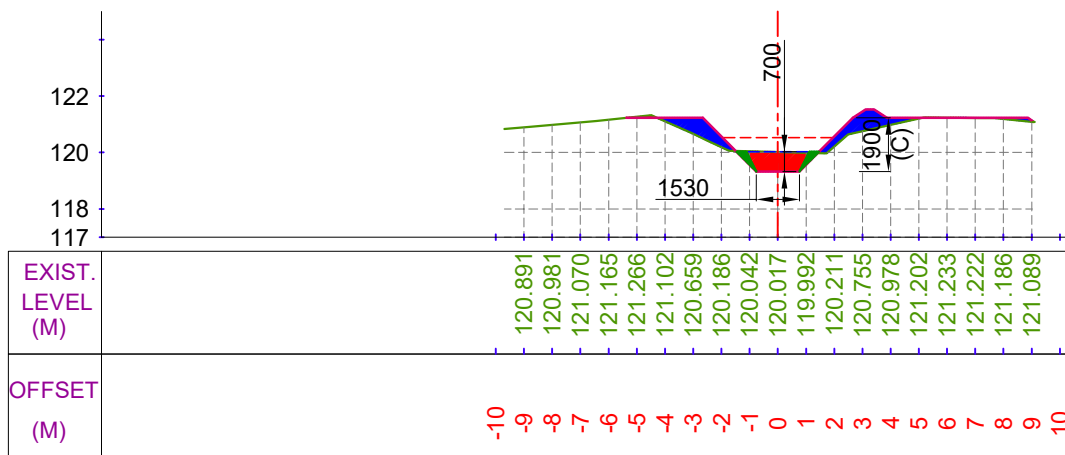
X SECTION OF SONDIH-III SUB-DY.



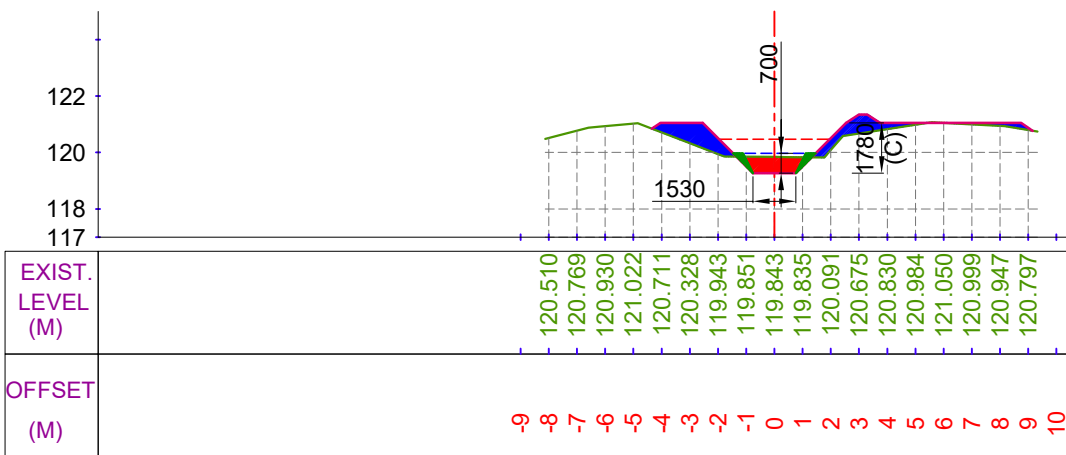
CUTTING AREA (SQ.M) = 4.331
FILLING AREA (SQ.M) = 0.587
CH. (KM):- 6+100
DESIGNED BED LEVEL = 119.358 M



CUTTING AREA (SQ.M) = 1.276
FILLING AREA (SQ.M) = 2.528
CH. (KM):- 6+300
DESIGNED BED LEVEL = 119.297 M



CUTTING AREA (SQ.M) = 1.357
FILLING AREA (SQ.M) = 2.471
CH. (KM):- 6+200
DESIGNED BED LEVEL = 119.328 M



CUTTING AREA (SQ.M) = 1.055
FILLING AREA (SQ.M) = 3.062
CH. (KM):- 6+400
DESIGNED BED LEVEL = 119.267 M

LEGEND

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

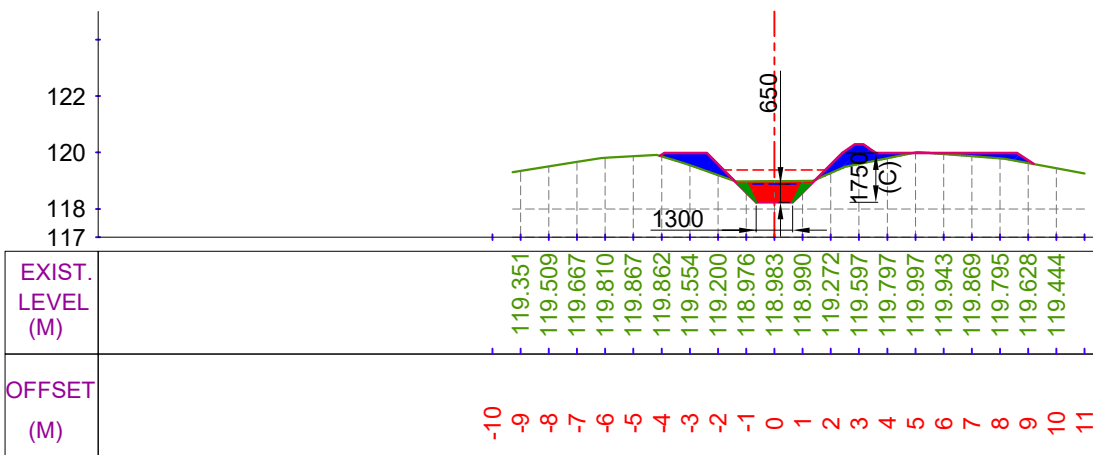
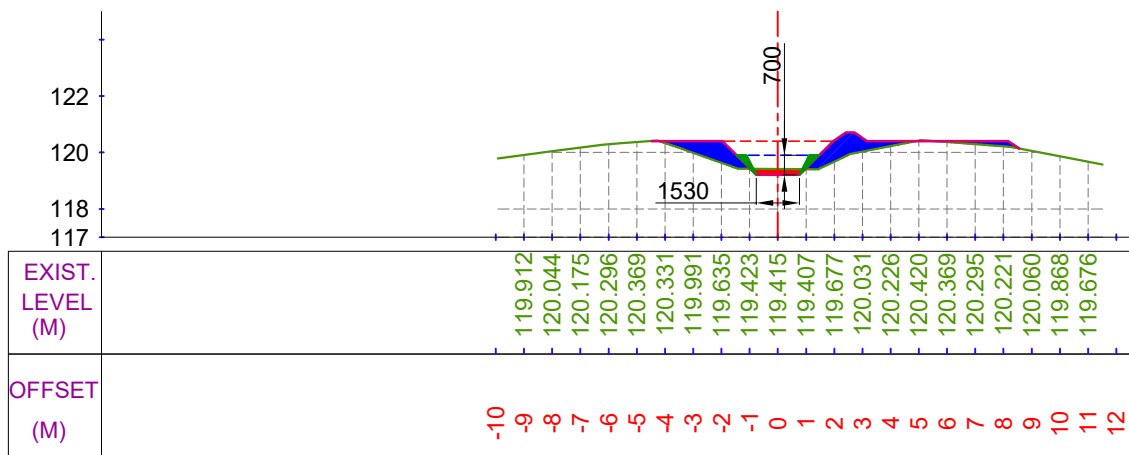
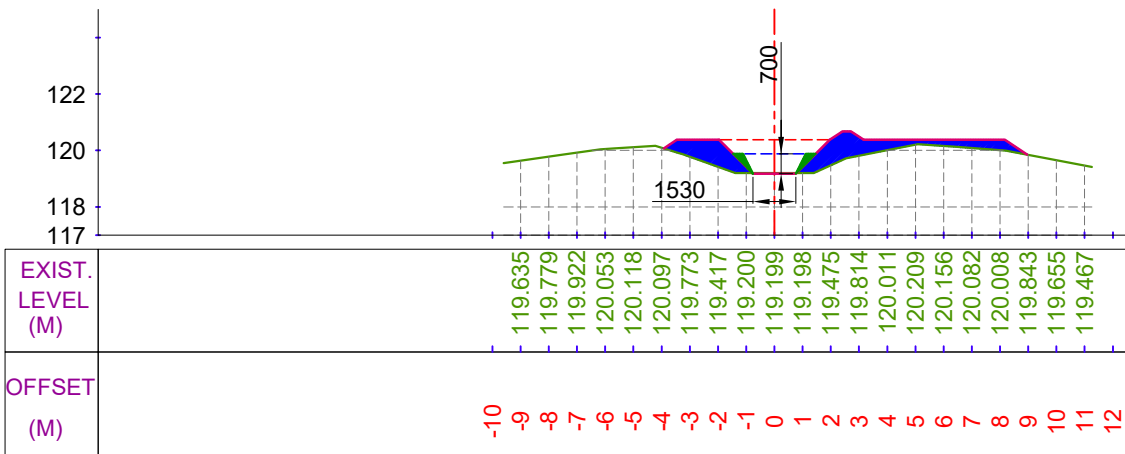
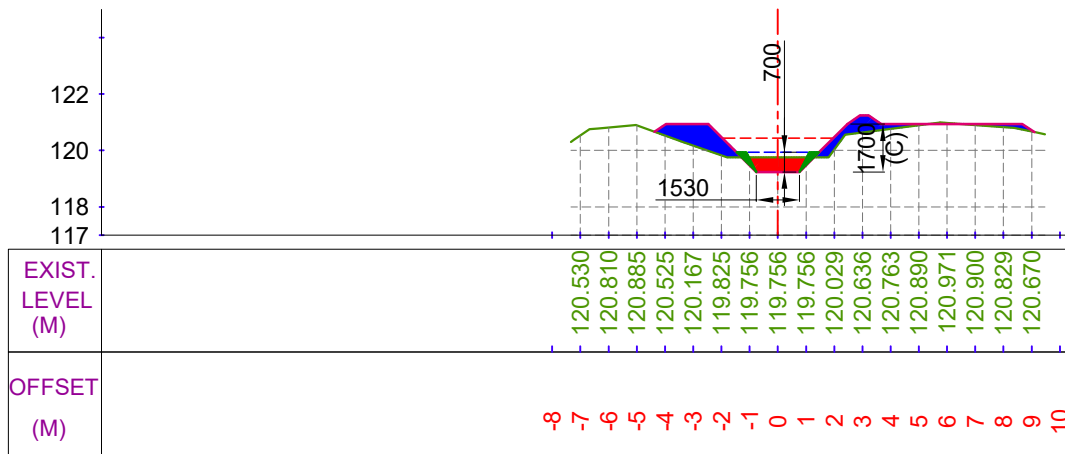
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		16 of 27

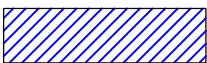
X SECTION OF SONDIH-III SUB-DY.



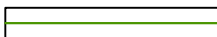
LEGEND



CUT AREA



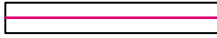
FILL AREA



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 :-

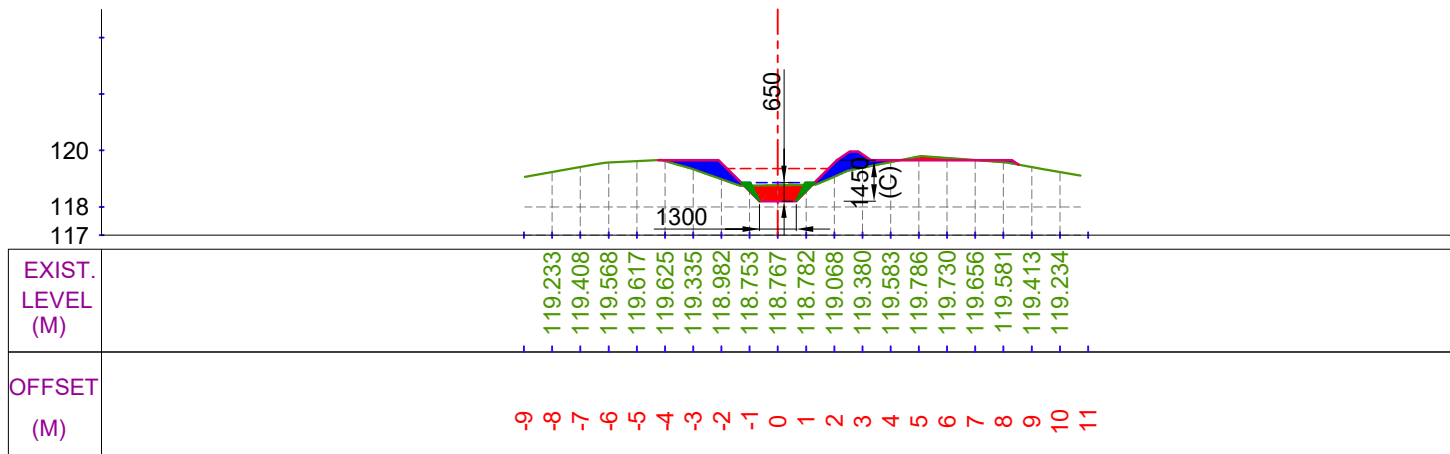
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

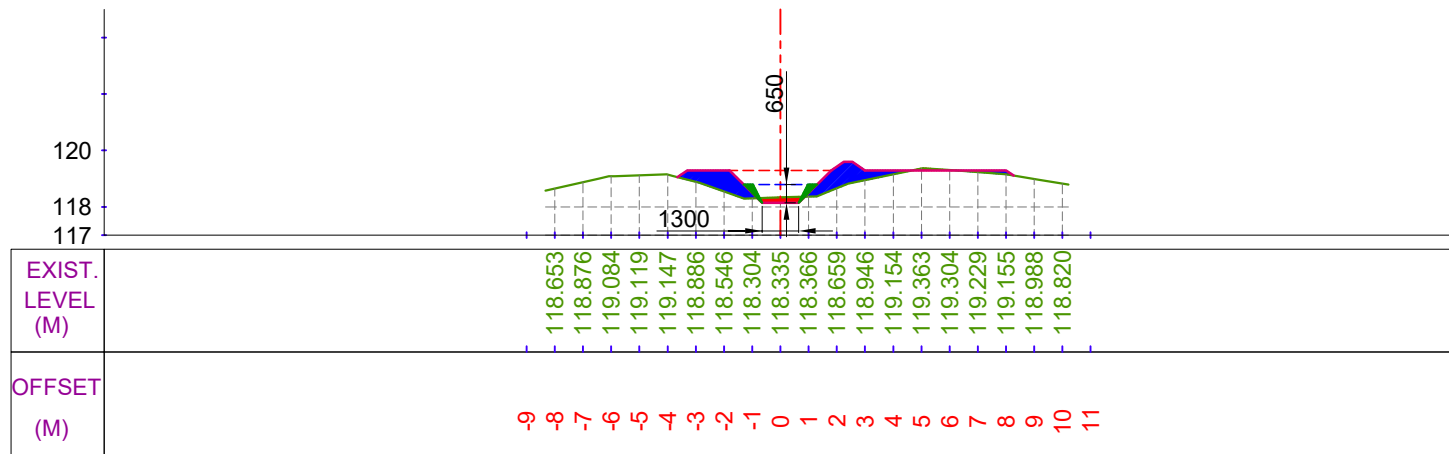
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

17 of 27

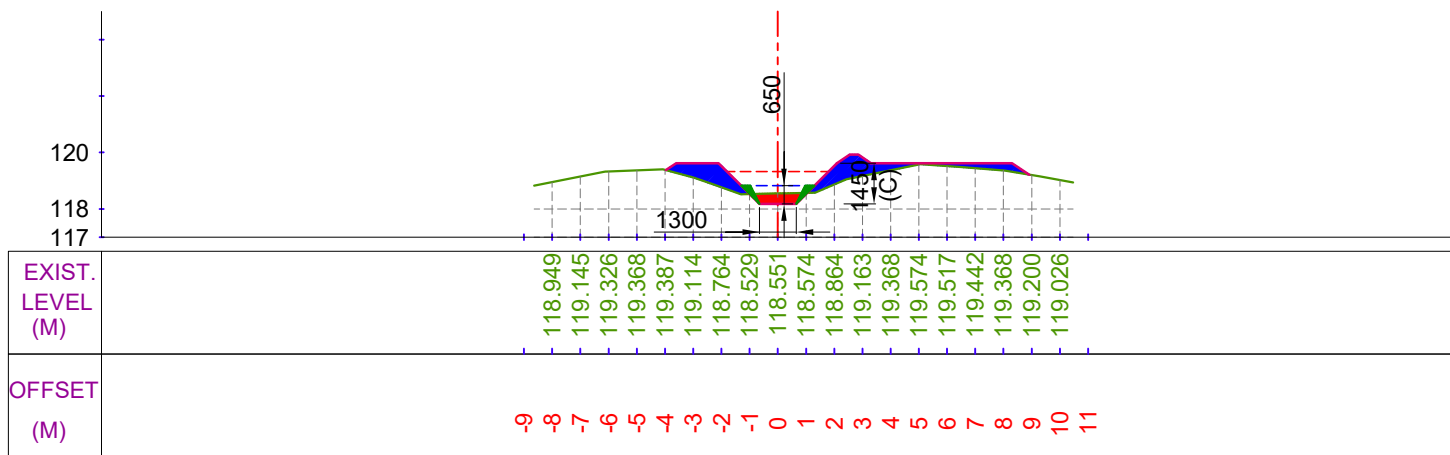
X SECTION OF SONDIH-III SUB-DY.



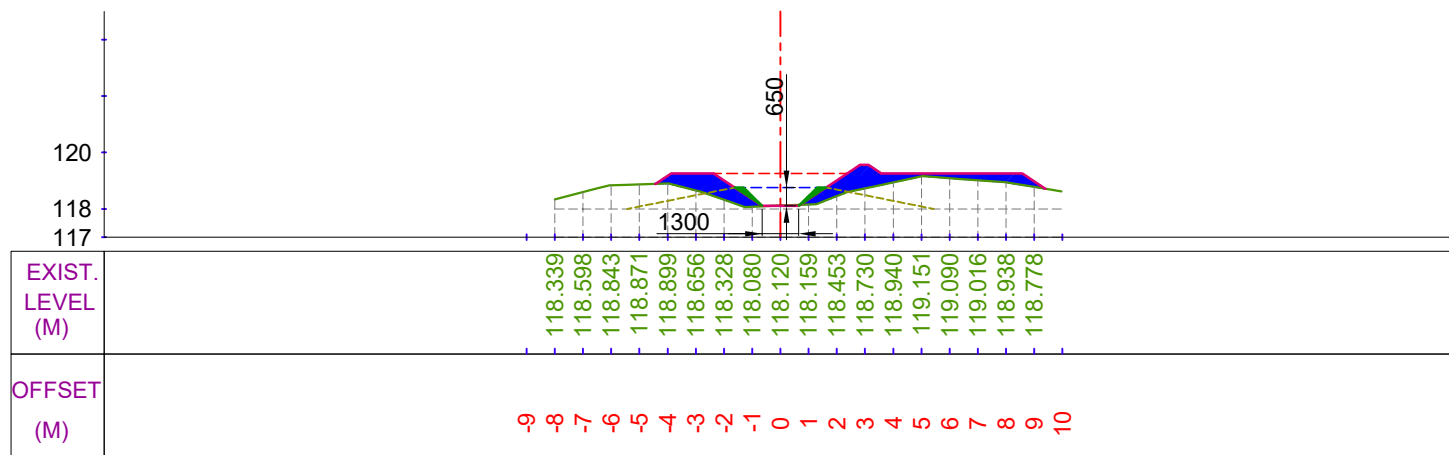
CUTTING AREA (SQ.M) = 1.080
FILLING AREA (SQ.M) = 2.004
CH. (KM):- 6+900
DESIGNED BED LEVEL = 118.205 M



CUTTING AREA (SQ.M) = 0.332
FILLING AREA (SQ.M) = 2.971
CH. (KM):- 7+100
DESIGNED BED LEVEL = 118.142 M



CUTTING AREA (SQ.M) = 0.564
FILLING AREA (SQ.M) = 3.681
CH. (KM):- 7+000
DESIGNED BED LEVEL = 118.173 M



CUTTING AREA (SQ.M) = 0.015
FILLING AREA (SQ.M) = 4.721
CH. (KM):- 7+200
DESIGNED BED LEVEL = 118.111 M

LEGEND

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

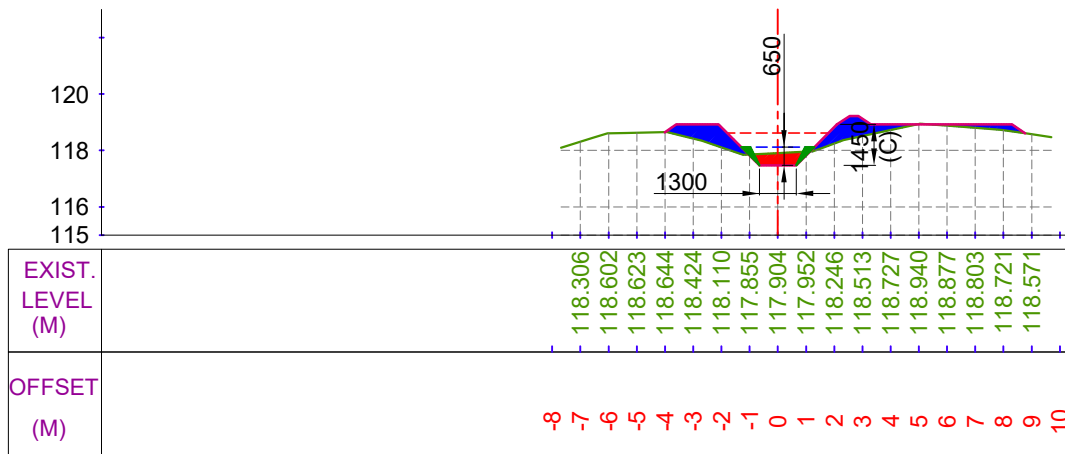
Prepared by :-

WAPCOS LTD.

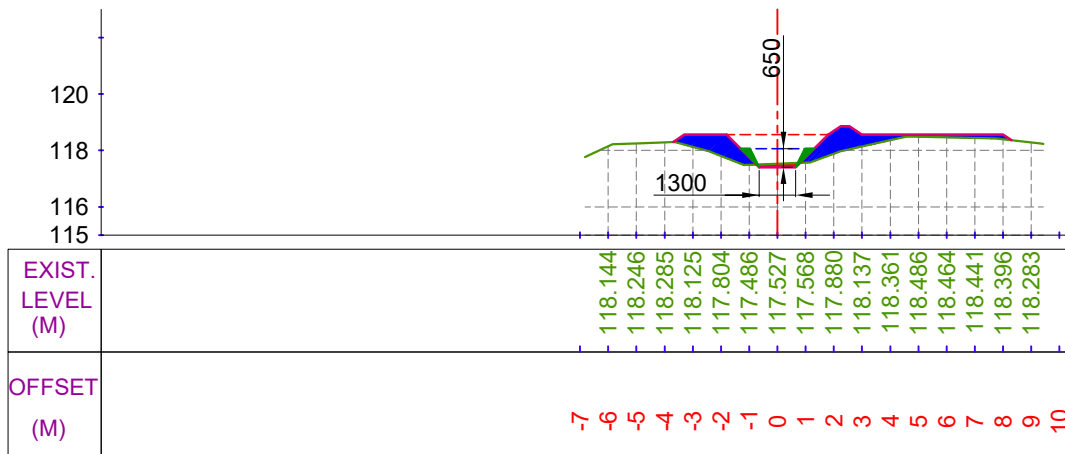


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-18 of 27

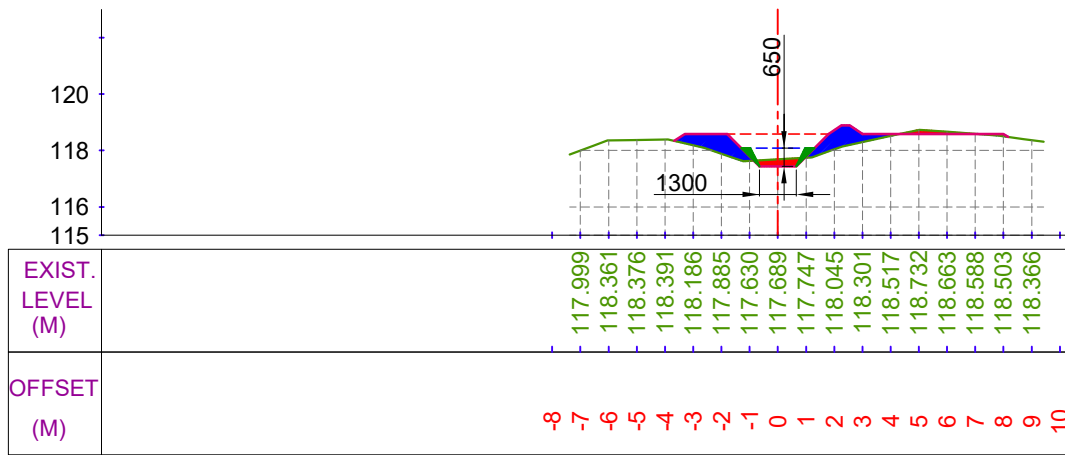
X SECTION OF SONDIH-III SUB-DY.



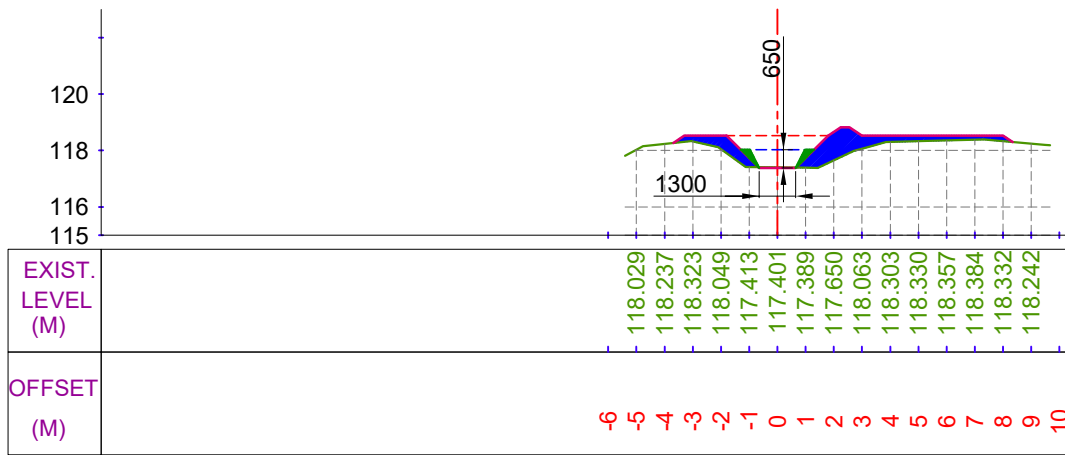
CUTTING AREA (SQ.M) = 0.666
FILLING AREA (SQ.M) = 3.096
CH. (KM):- 7+300
DESIGNED BED LEVEL = 117.470 M



CUTTING AREA (SQ.M) = 0.164
FILLING AREA (SQ.M) = 3.487
CH. (KM):- 7+500
DESIGNED BED LEVEL = 117.407 M



CUTTING AREA (SQ.M) = 0.556
FILLING AREA (SQ.M) = 2.527
CH. (KM):- 7+400
DESIGNED BED LEVEL = 117.438 M



CUTTING AREA (SQ.M) = 0.033
FILLING AREA (SQ.M) = 3.719
CH. (KM):- 7+600
DESIGNED BED LEVEL = 117.376 M

LEGEND

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

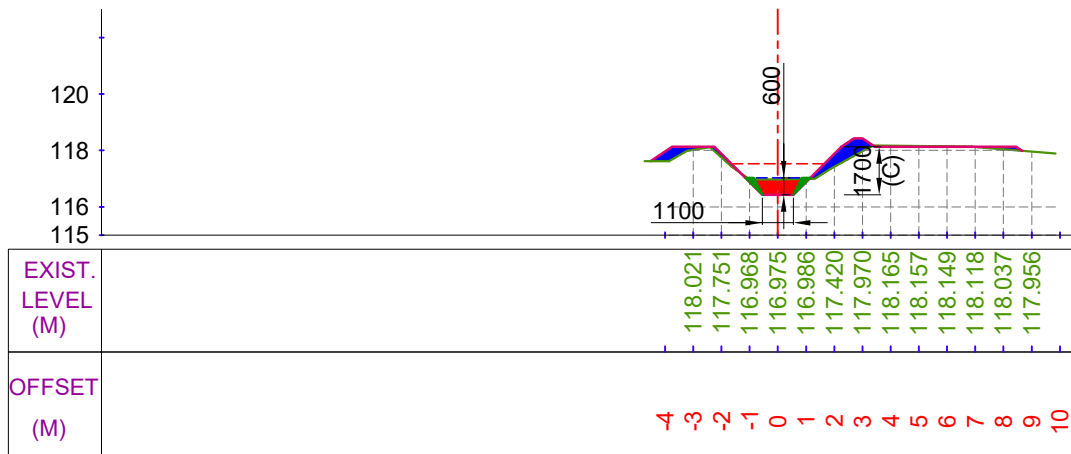
Prepared by :-

WAPCOS LTD.

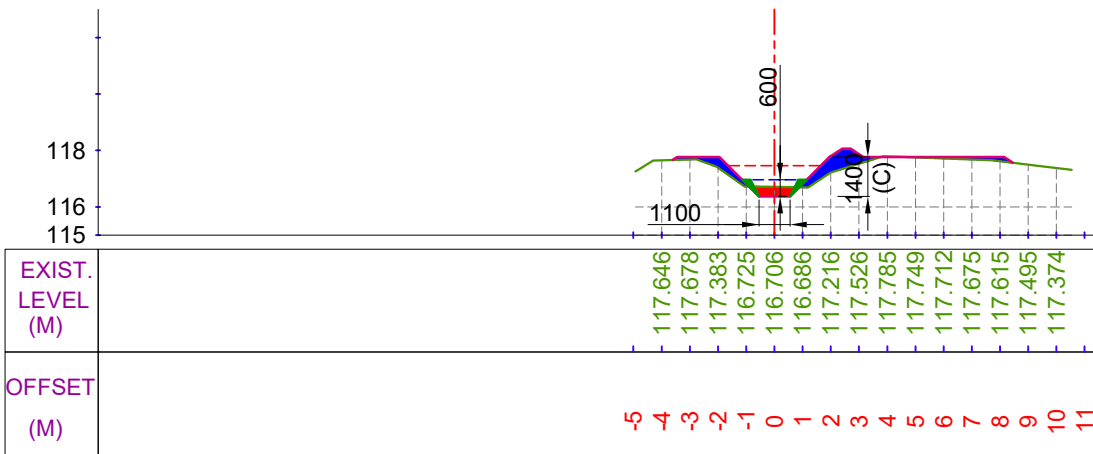


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		19 of 27

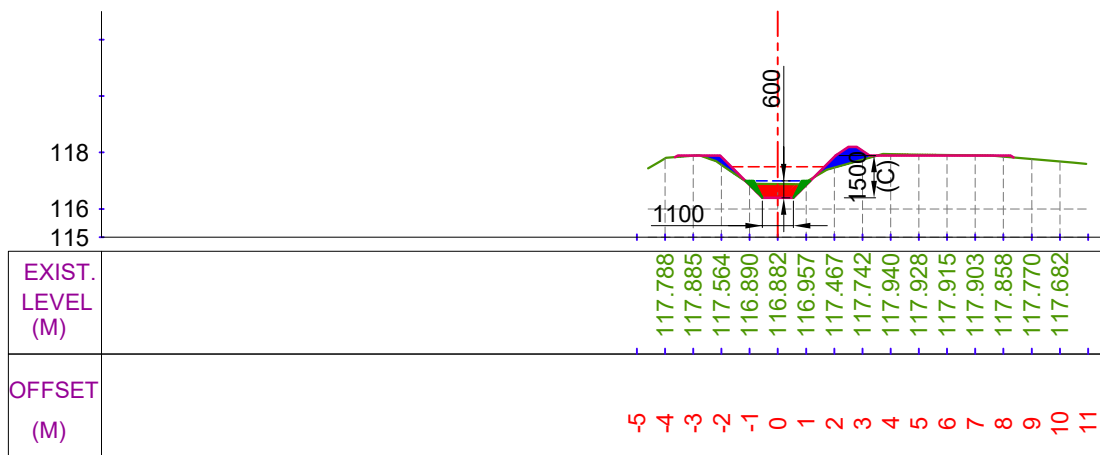
X SECTION OF SONDIH-III SUB-DY.



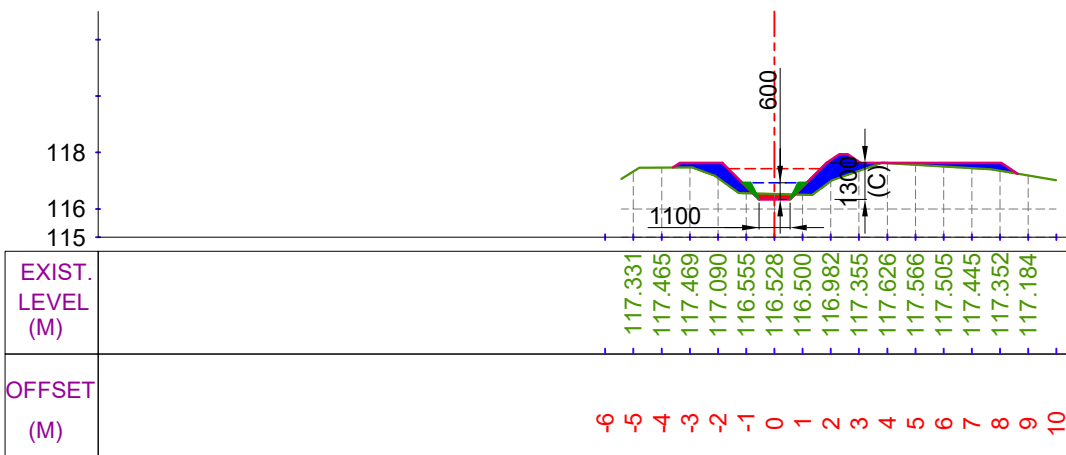
CUTTING AREA (SQ.M) = 0.847
FILLING AREA (SQ.M) = 1.518
CH. (KM):- 7+700
DESIGNED BED LEVEL = 116.429 M



CUTTING AREA (SQ.M) = 0.443
FILLING AREA (SQ.M) = 1.920
CH. (KM):- 7+900
DESIGNED BED LEVEL = 116.365 M

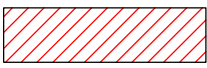


CUTTING AREA (SQ.M) = 0.746
FILLING AREA (SQ.M) = 0.962
CH. (KM):- 7+800
DESIGNED BED LEVEL = 116.397 M

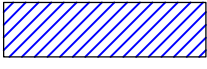


CUTTING AREA (SQ.M) = 0.235
FILLING AREA (SQ.M) = 2.992
CH. (KM):- 8+000
DESIGNED BED LEVEL = 116.332 M

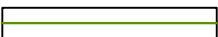
LEGEND



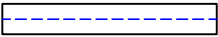
CUT AREA



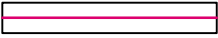
FILL AREA



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 :-

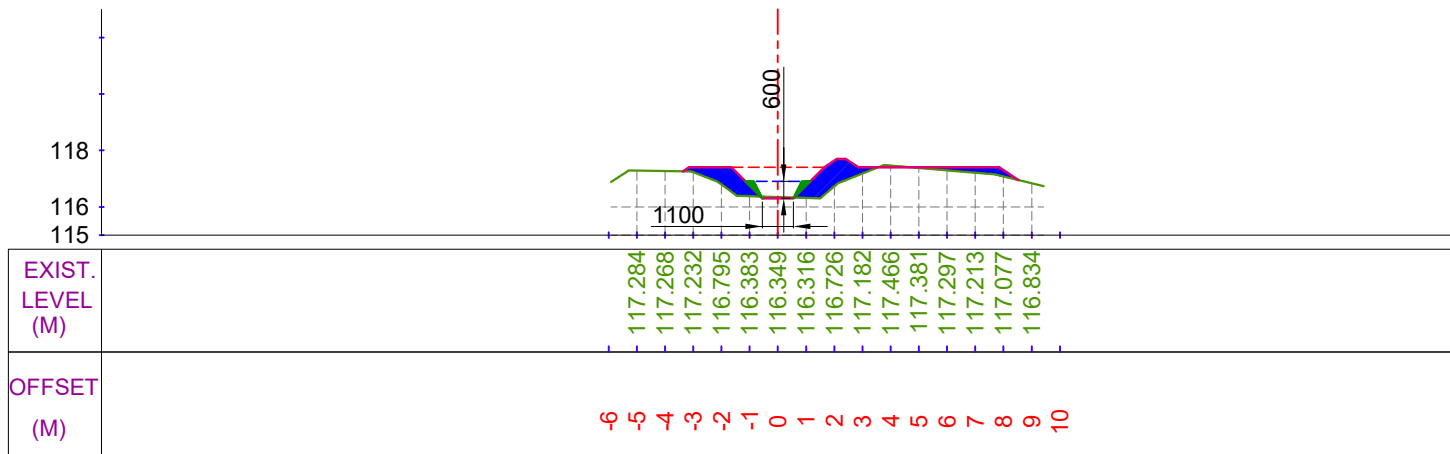
X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

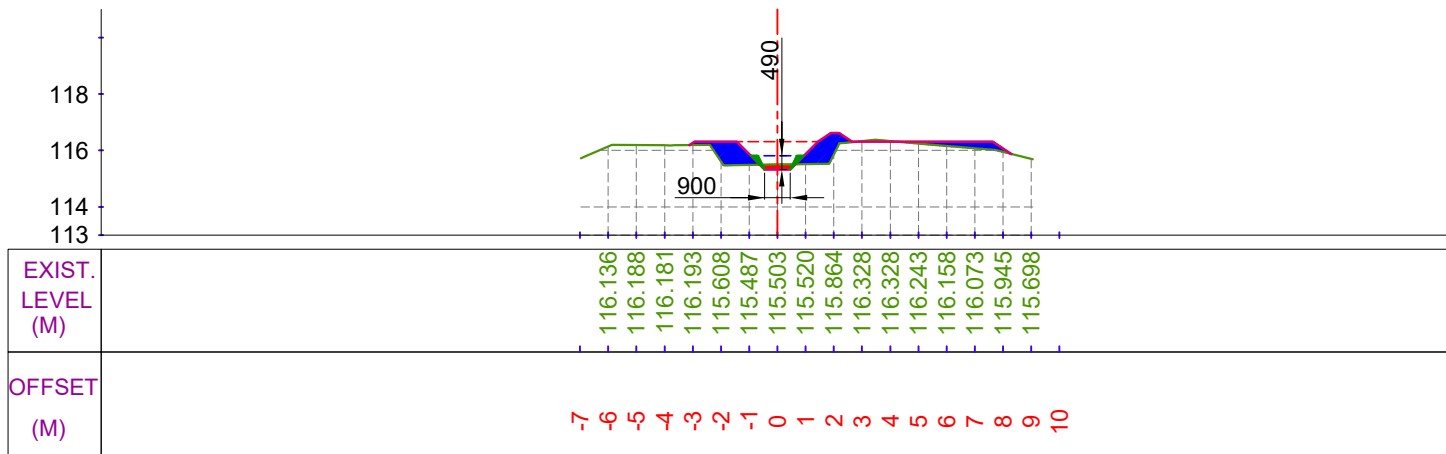
WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-

20 of 27

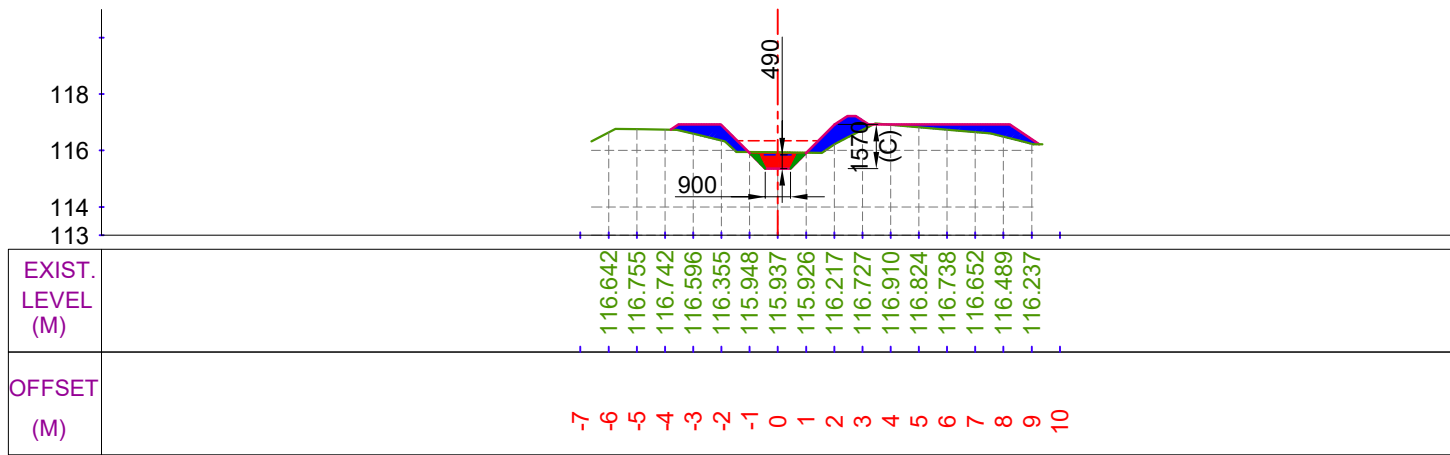
X SECTION OF SONDIH-III SUB-DY.



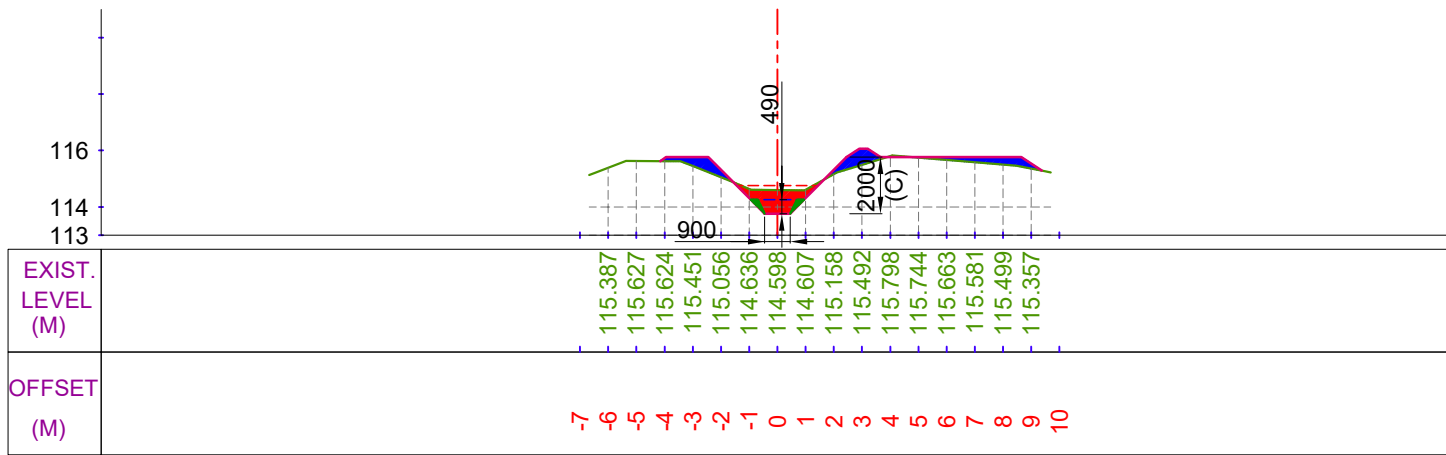
CUTTING AREA (SQ.M) = 0.109
FILLING AREA (SQ.M) = 3.231
CH. (KM):- 8+100
DESIGNED BED LEVEL = 116.300 M



CUTTING AREA (SQ.M) = 0.223
FILLING AREA (SQ.M) = 2.647
CH. (KM):- 8+300
DESIGNED BED LEVEL = 115.321 M



CUTTING AREA (SQ.M) = 0.752
FILLING AREA (SQ.M) = 3.218
CH. (KM):- 8+200
DESIGNED BED LEVEL = 115.354 M



CUTTING AREA (SQ.M) = 1.464
FILLING AREA (SQ.M) = 2.081
CH. (KM):- 8+400
DESIGNED BED LEVEL = 113.763 M

LEGEND

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

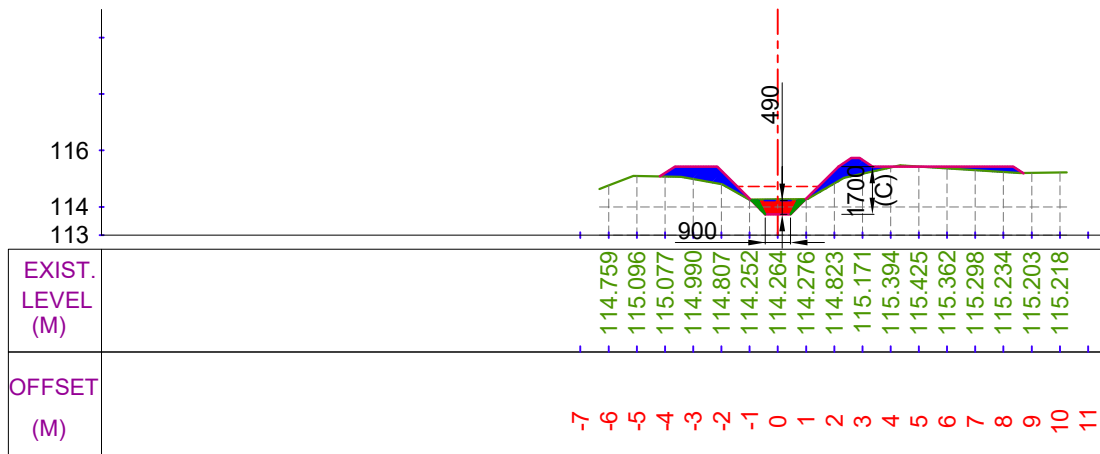
Prepared by :-

WAPCOS LTD.

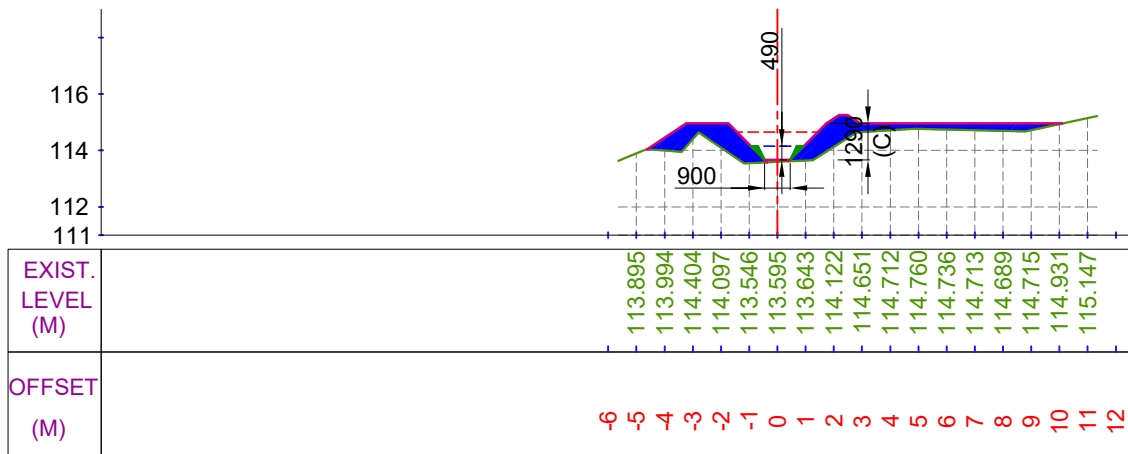


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		21 of 27

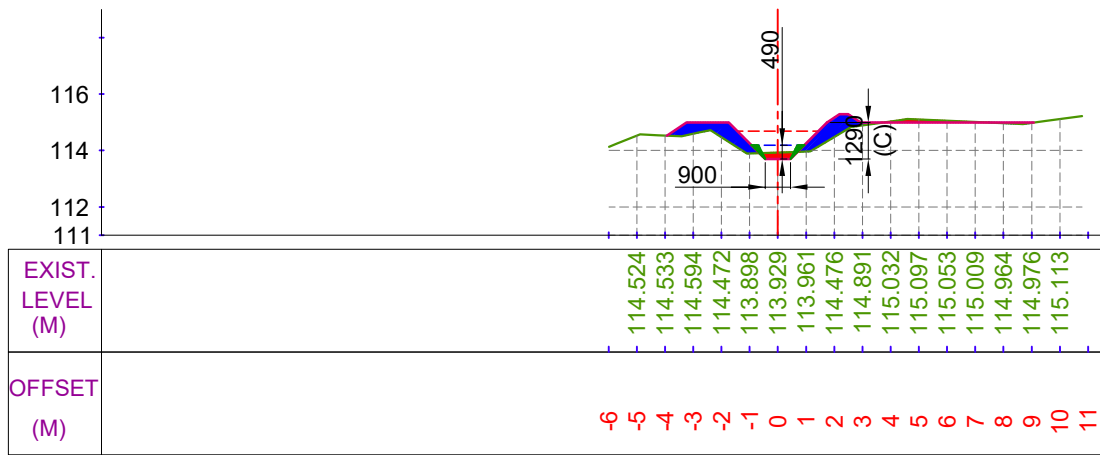
X SECTION OF SONDIH-III SUB-DY.



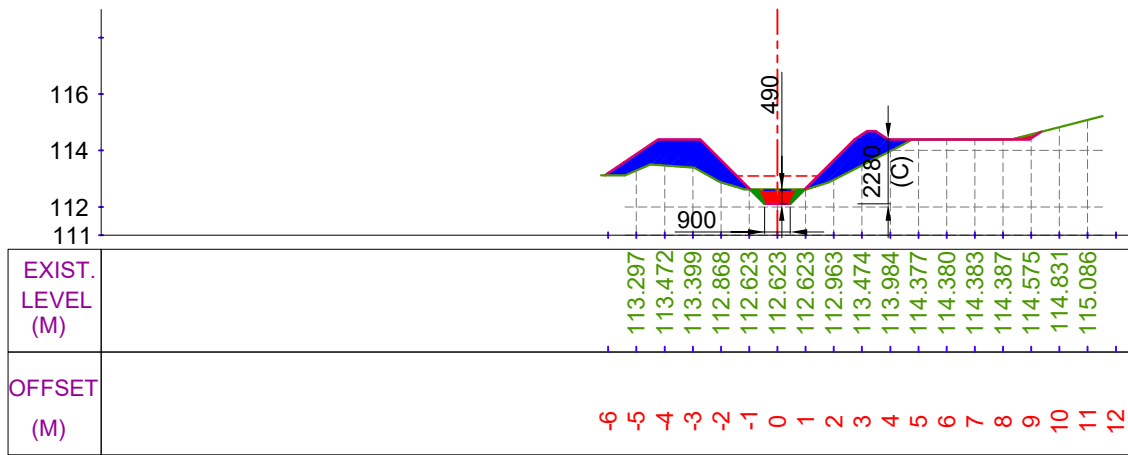
CUTTING AREA (SQ.M) = 0.660
FILLING AREA (SQ.M) = 2.535
CH. (KM):- 8+500
DESIGNED BED LEVEL = 113.730 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.866
CH. (KM):- 8+700
DESIGNED BED LEVEL = 113.663 M



CUTTING AREA (SQ.M) = 0.481
FILLING AREA (SQ.M) = 2.354
CH. (KM):- 8+600
DESIGNED BED LEVEL = 113.697 M



CUTTING AREA (SQ.M) = 0.706
FILLING AREA (SQ.M) = 5.828
CH. (KM):- 8+800
DESIGNED BED LEVEL = 112.106 M

LEGEND

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

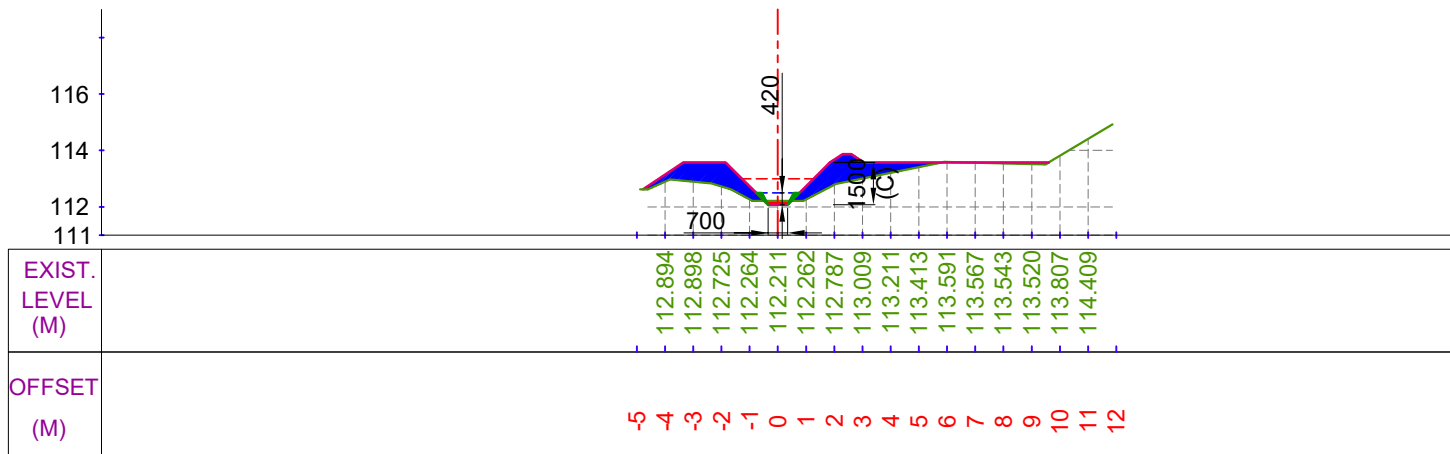
Prepared by :-

WAPCOS LTD.

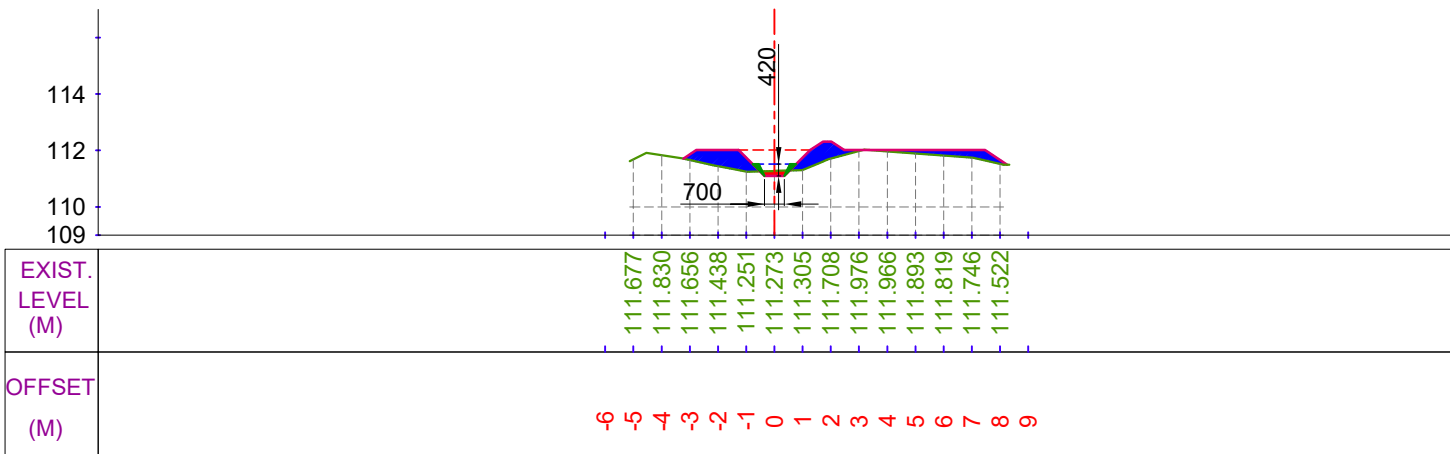


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 22 of 27

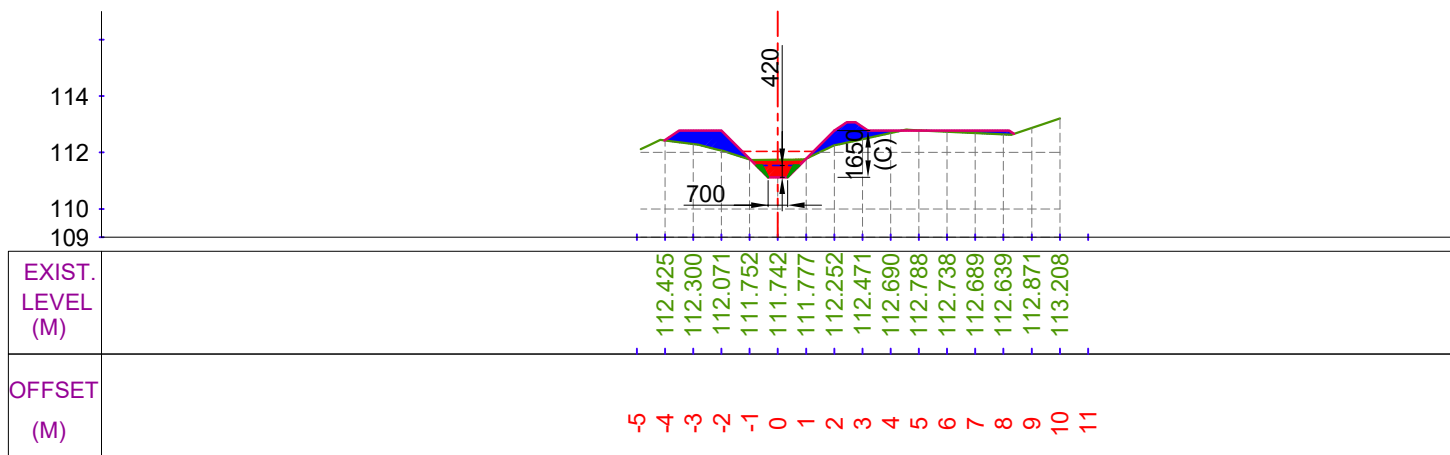
X SECTION OF SONDIH-III SUB-DY.



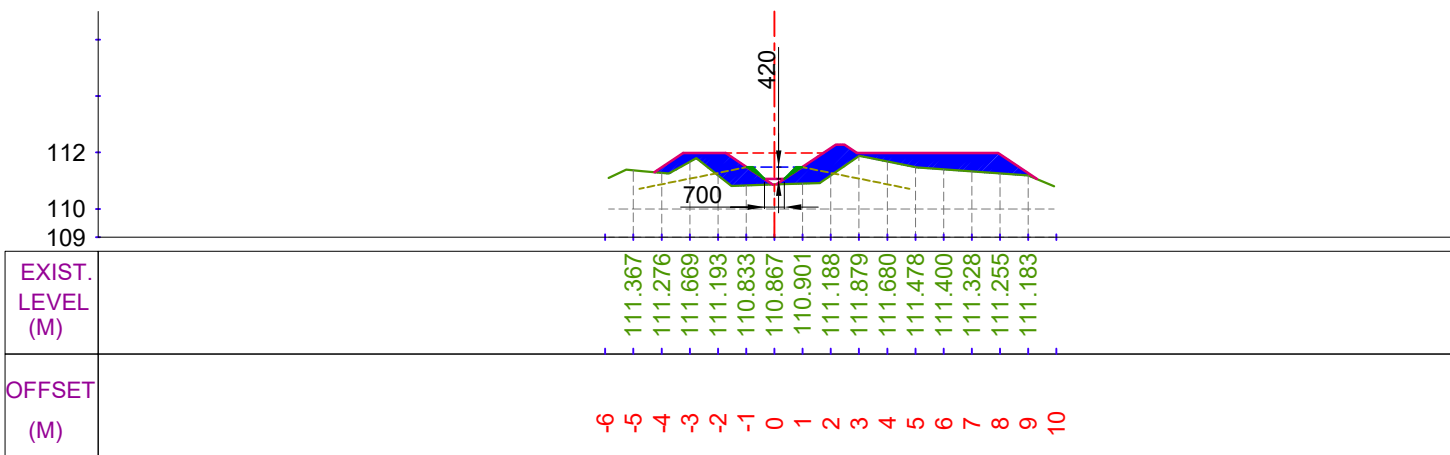
CUTTING AREA (SQ.M) = 0.116
FILLING AREA (SQ.M) = 4.761
CH. (KM):- 8+900
DESIGNED BED LEVEL = 112.073 M



CUTTING AREA (SQ.M) = 0.145
FILLING AREA (SQ.M) = 2.967
CH. (KM):- 9+100
DESIGNED BED LEVEL = 111.092 M



CUTTING AREA (SQ.M) = 0.740
FILLING AREA (SQ.M) = 2.608
CH. (KM):- 9+000
DESIGNED BED LEVEL = 111.125 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.637
CH. (KM):- 9+200
DESIGNED BED LEVEL = 111.059 M

LEGEND

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

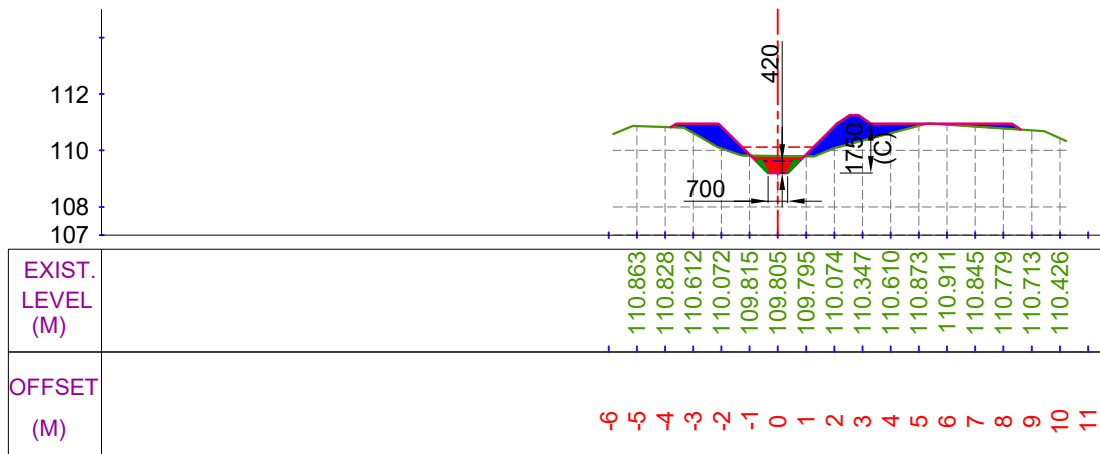
Prepared by :-

WAPCOS LTD.

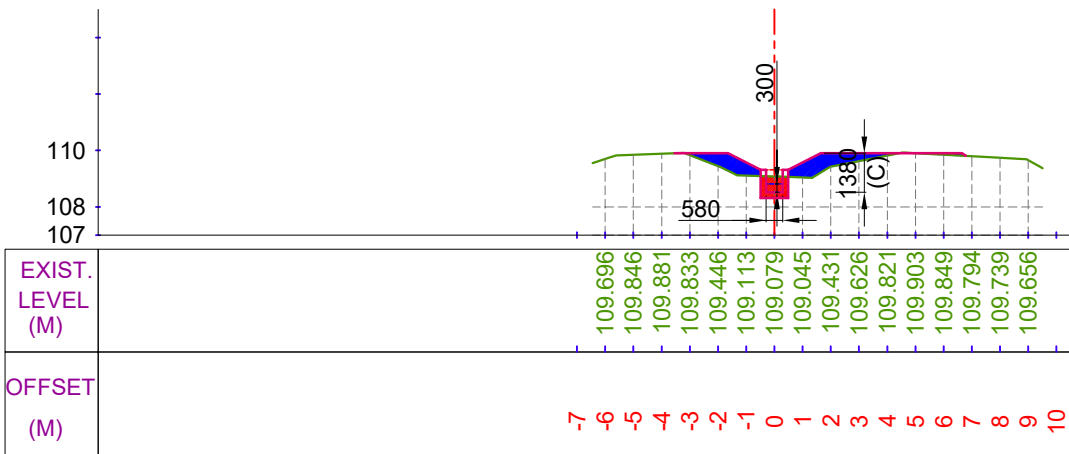


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 23 of 27

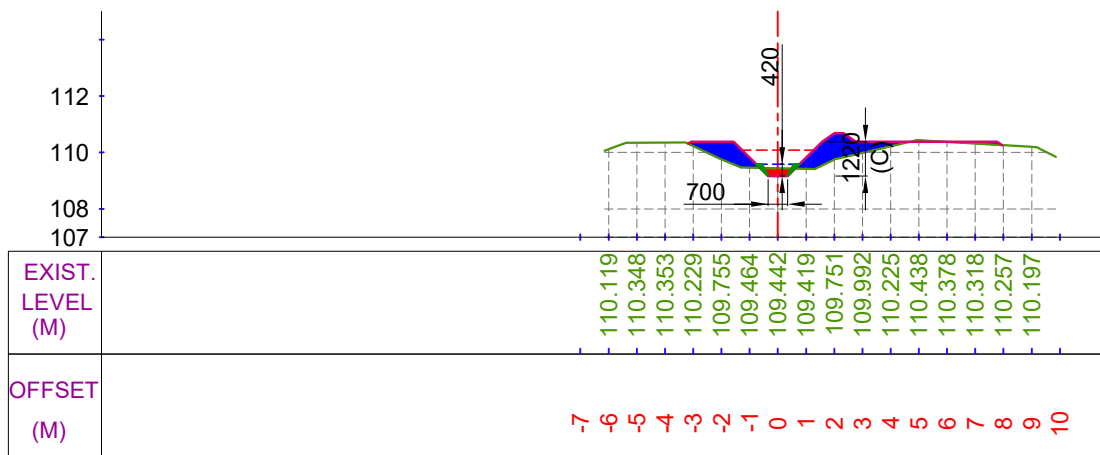
X SECTION OF SONDIH-III SUB-DY.



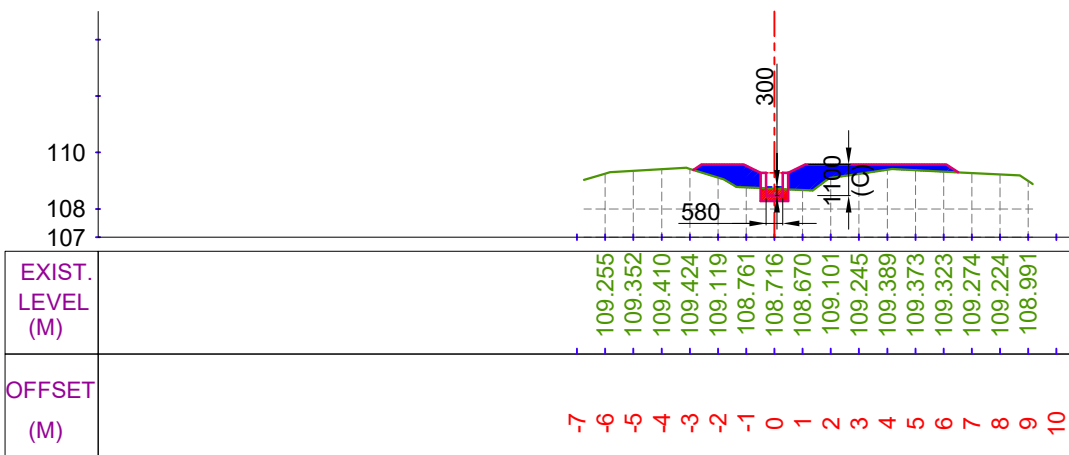
CUTTING AREA (SQ.M) = 0.707
FILLING AREA (SQ.M) = 3.572
CH. (KM):- 9+300
DESIGNED BED LEVEL = 109.197 M



CUTTING AREA (SQ.M) = 0.758
FILLING AREA (SQ.M) = 2.445
CH. (KM):- 9+500
DESIGNED BED LEVEL = 108.517 M



CUTTING AREA (SQ.M) = 0.268
FILLING AREA (SQ.M) = 3.072
CH. (KM):- 9+400
DESIGNED BED LEVEL = 109.164 M



CUTTING AREA (SQ.M) = 0.430
FILLING AREA (SQ.M) = 3.555
CH. (KM):- 9+600
DESIGNED BED LEVEL = 108.477 M

LEGEND

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

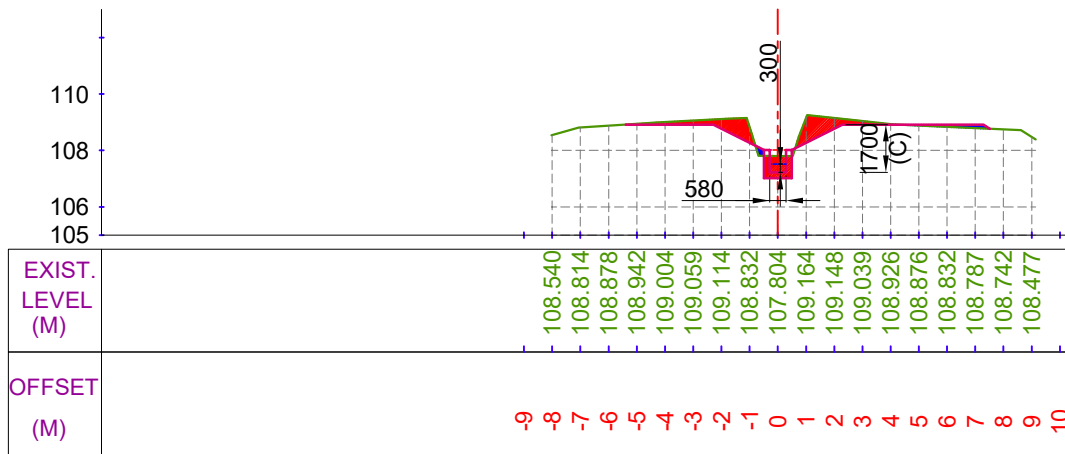
Prepared by :-

WAPCOS LTD.

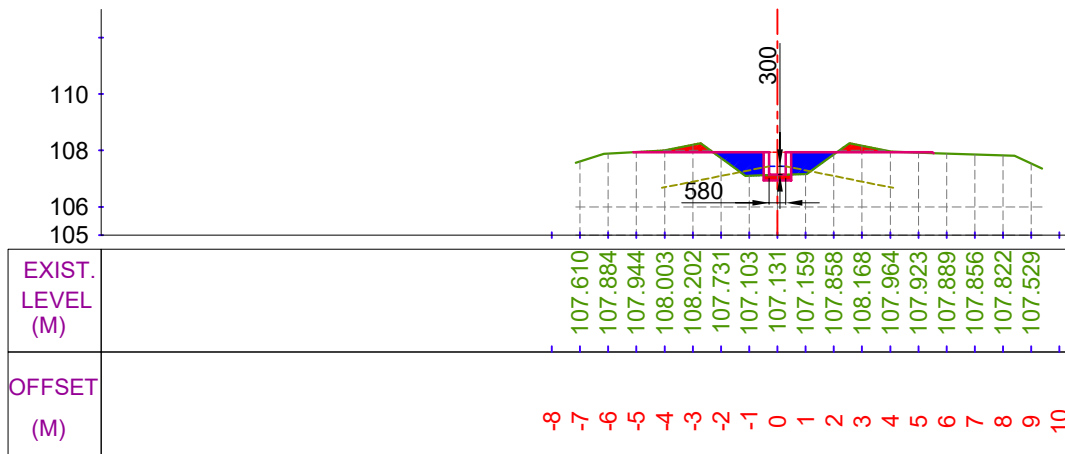


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		24 of 27

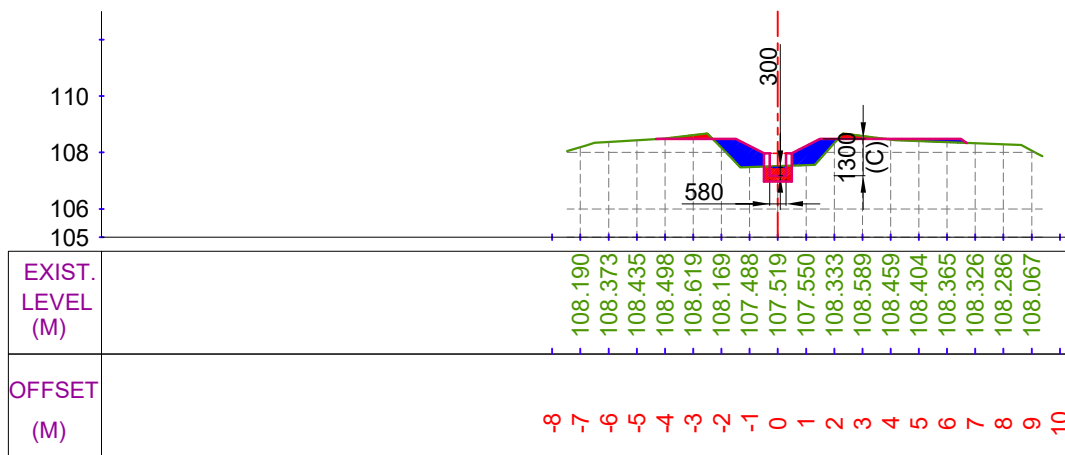
X SECTION OF SONDIH-III SUB-DY.



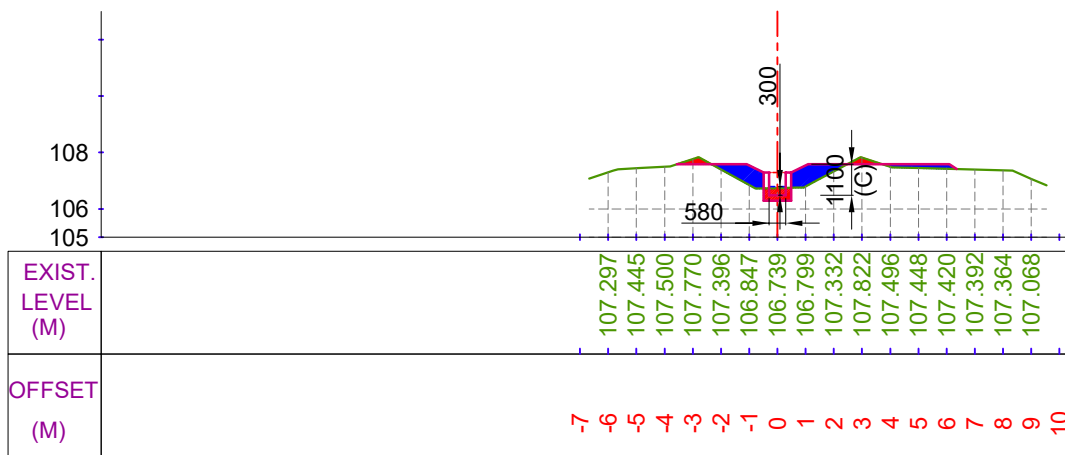
CUTTING AREA (SQ.M) = 2.923
FILLING AREA (SQ.M) = 0.329
CH. (KM):- 9+700
DESIGNED BED LEVEL = 107.217 M



CUTTING AREA (SQ.M) = 0.872
FILLING AREA (SQ.M) = 1.874
CH. (KM):- 9+900
DESIGNED BED LEVEL = 107.137 M



CUTTING AREA (SQ.M) = 0.898
FILLING AREA (SQ.M) = 2.169
CH. (KM):- 9+800
DESIGNED BED LEVEL = 107.177 M



CUTTING AREA (SQ.M) = 0.750
FILLING AREA (SQ.M) = 2.078
CH. (KM):- 10+000
DESIGNED BED LEVEL = 106.487 M

LEGEND

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

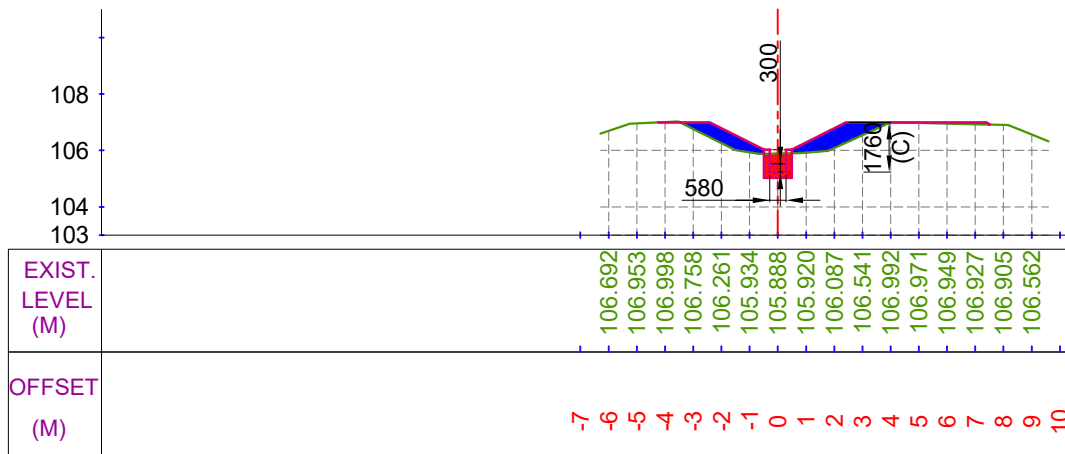
Prepared by :-

WAPCOS LTD.

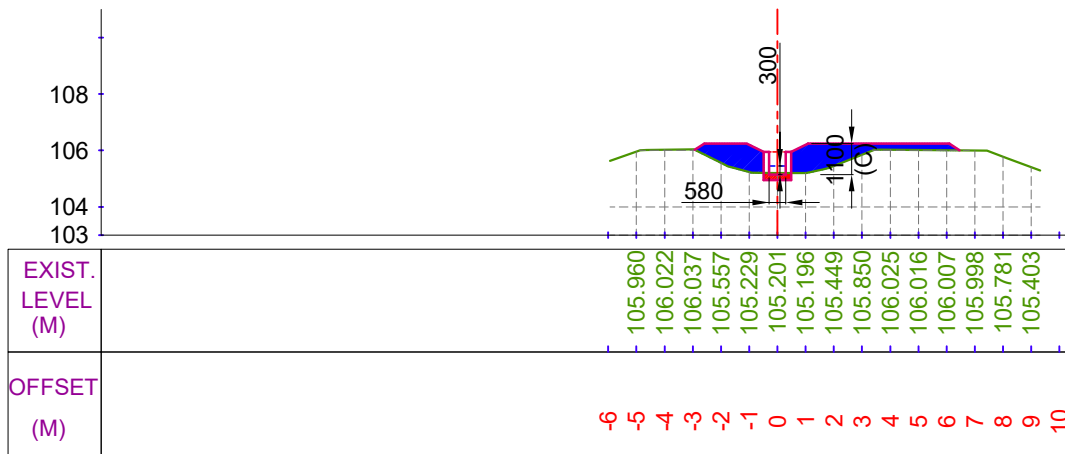


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 25 of 27

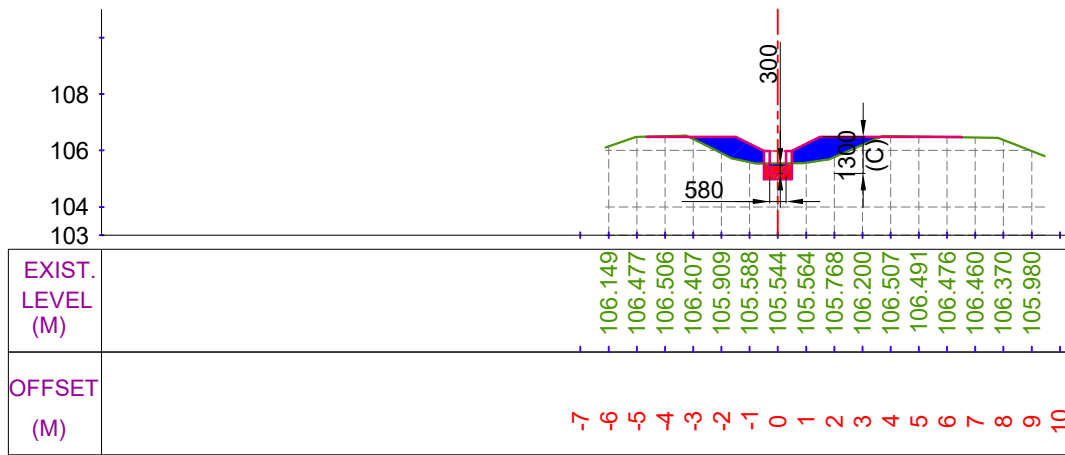
X SECTION OF SONDIH-III SUB-DY.



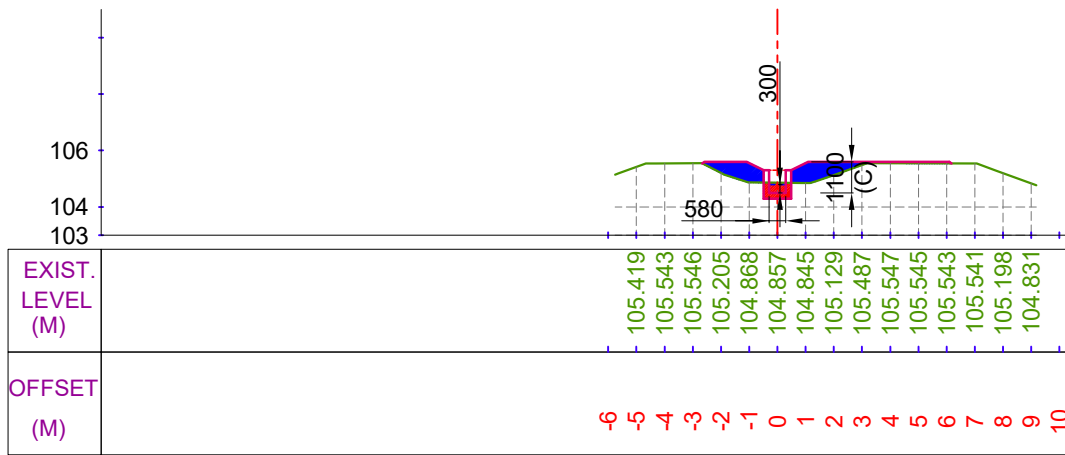
CUTTING AREA (SQ.M) = 0.858
FILLING AREA (SQ.M) = 2.747
CH. (KM):- 10+100
DESIGNED BED LEVEL = 105.227 M



CUTTING AREA (SQ.M) = 0.248
FILLING AREA (SQ.M) = 4.472
CH. (KM):- 10+300
DESIGNED BED LEVEL = 105.147 M



CUTTING AREA (SQ.M) = 0.597
FILLING AREA (SQ.M) = 3.015
CH. (KM):- 10+200
DESIGNED BED LEVEL = 105.187 M



CUTTING AREA (SQ.M) = 0.548
FILLING AREA (SQ.M) = 2.388
CH. (KM):- 10+400
DESIGNED BED LEVEL = 104.497 M

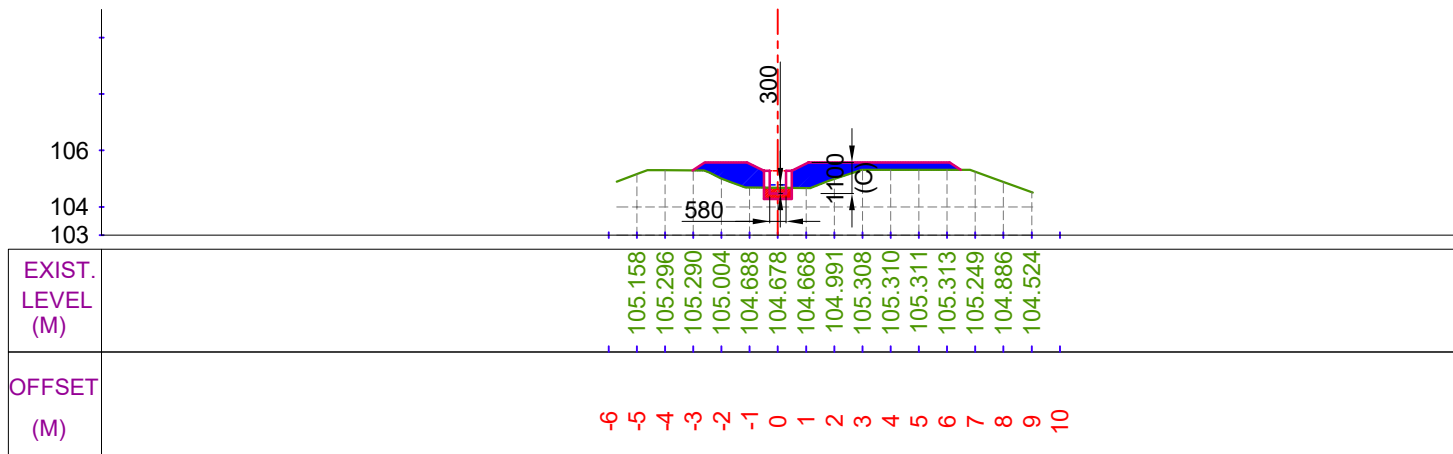
LEGEND

	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 SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC- 26 of 27

X SECTION OF SONDIH-III SUB-DY.



CUTTING AREA (SQ.M) = 0.393
FILLING AREA (SQ.M) = 3.877
CH. (KM):- 10+450
DESIGNED BED LEVEL = 104.477 M

LEGEND

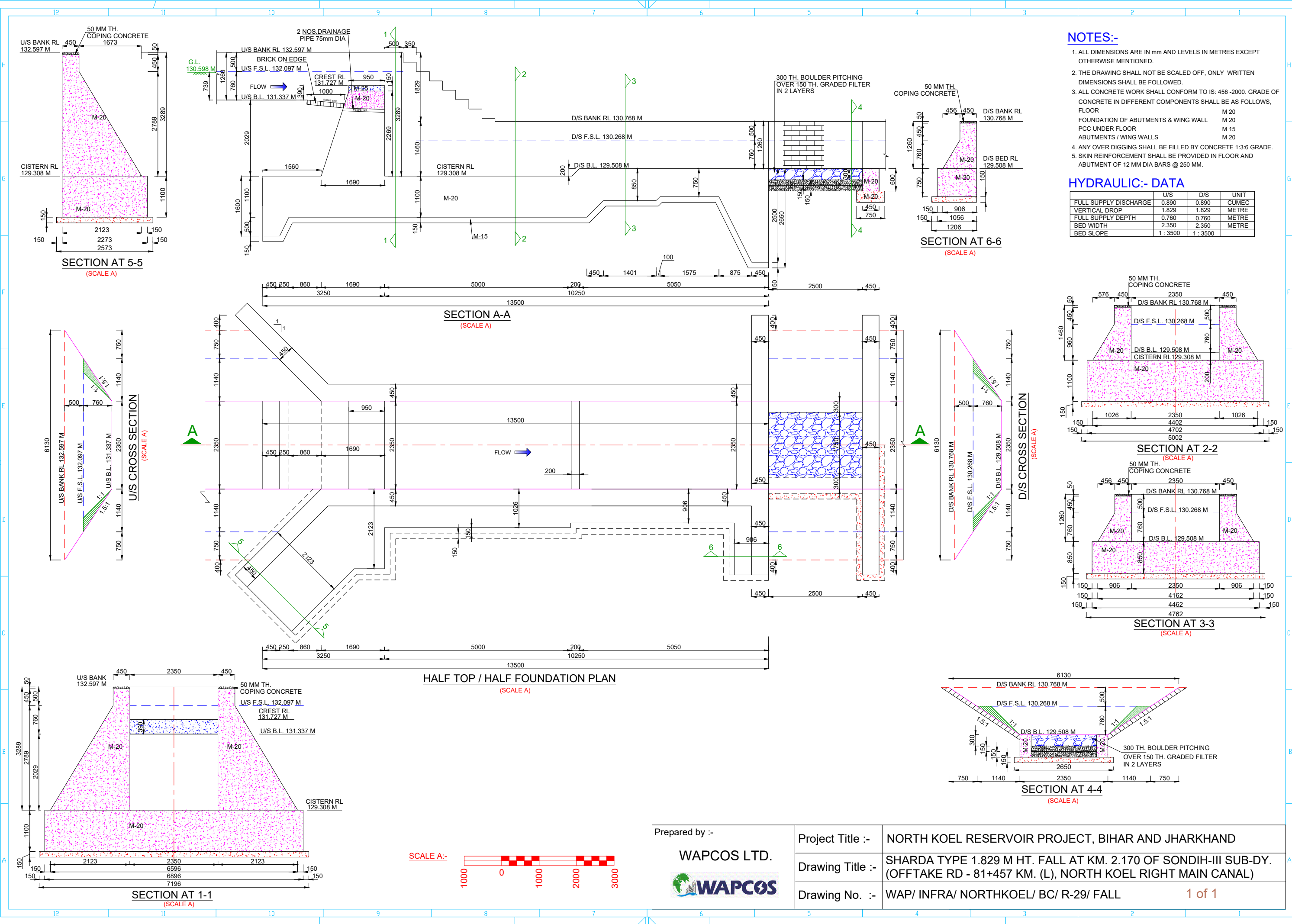
	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
Drawing Title :-	X SEC OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ XSEC-		27 of 27

DRAWING OF STRUCTURES



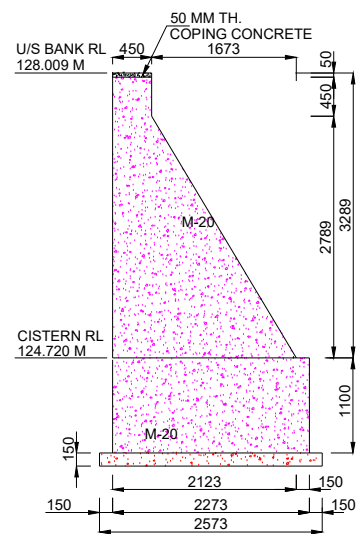
- NOTES:-**
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
 2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS.
FLOOR M 20
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

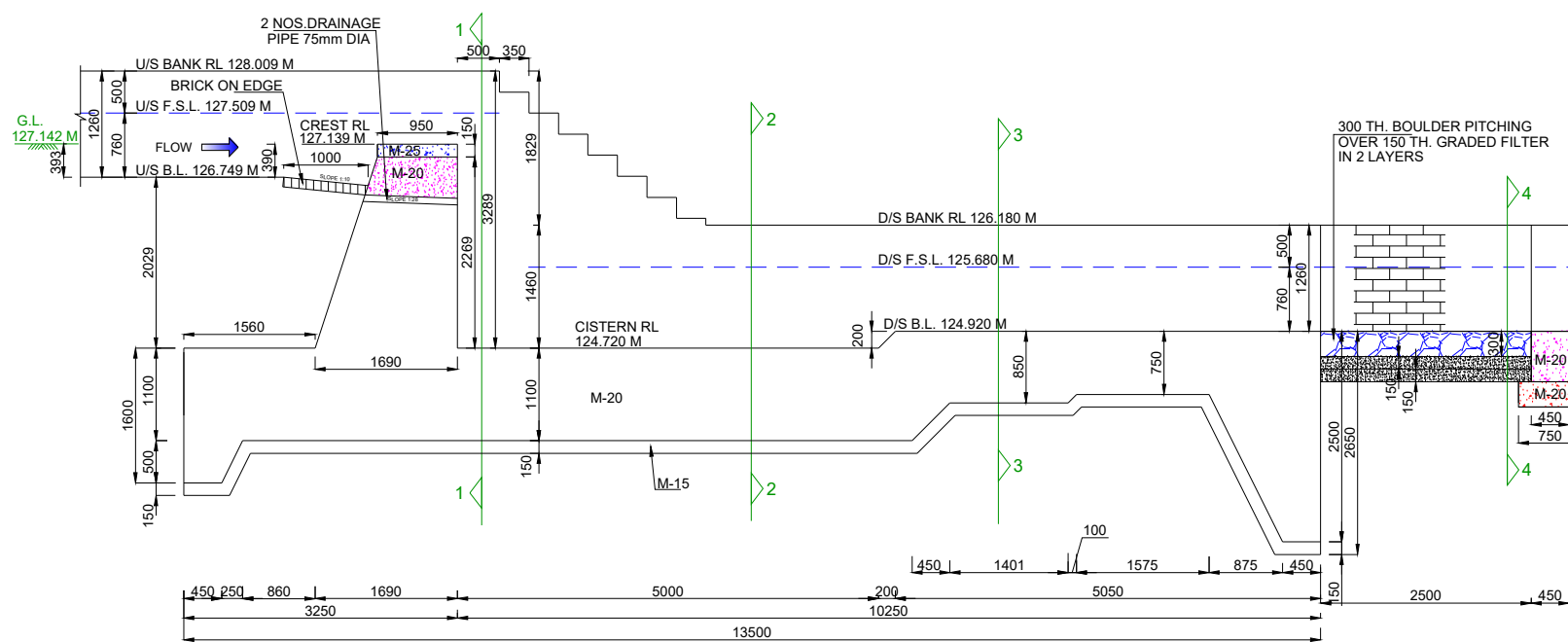
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.890	0.890	CUMEC
VERTICAL DROP	1.829	1.829	METRE
FULL SUPPLY DEPTH	0.760	0.760	METRE
BED WIDTH	2.350	2.350	METRE
BED SLOPE	1 : 3500	1 : 3500	

Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.829 M HT. FALL AT KM. 2.170 OF SONDIH-III SUB-DY. (OFFTAKE RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

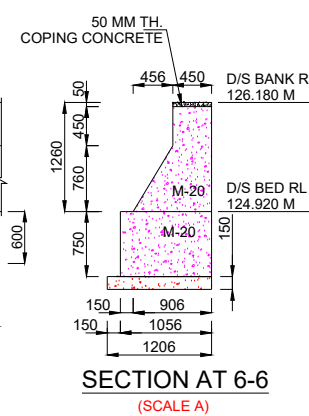
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



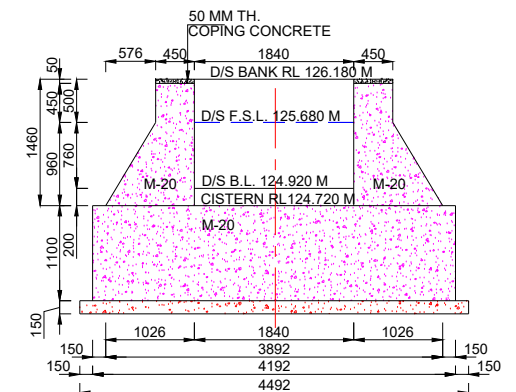
SECTION AT 6-6
(SCALE A)

NOTES:-

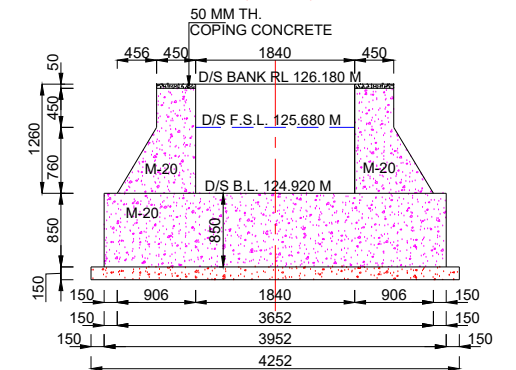
- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
- THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS.
FLOOR M 20
FOUNDATION OF ABUTMENTS & 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

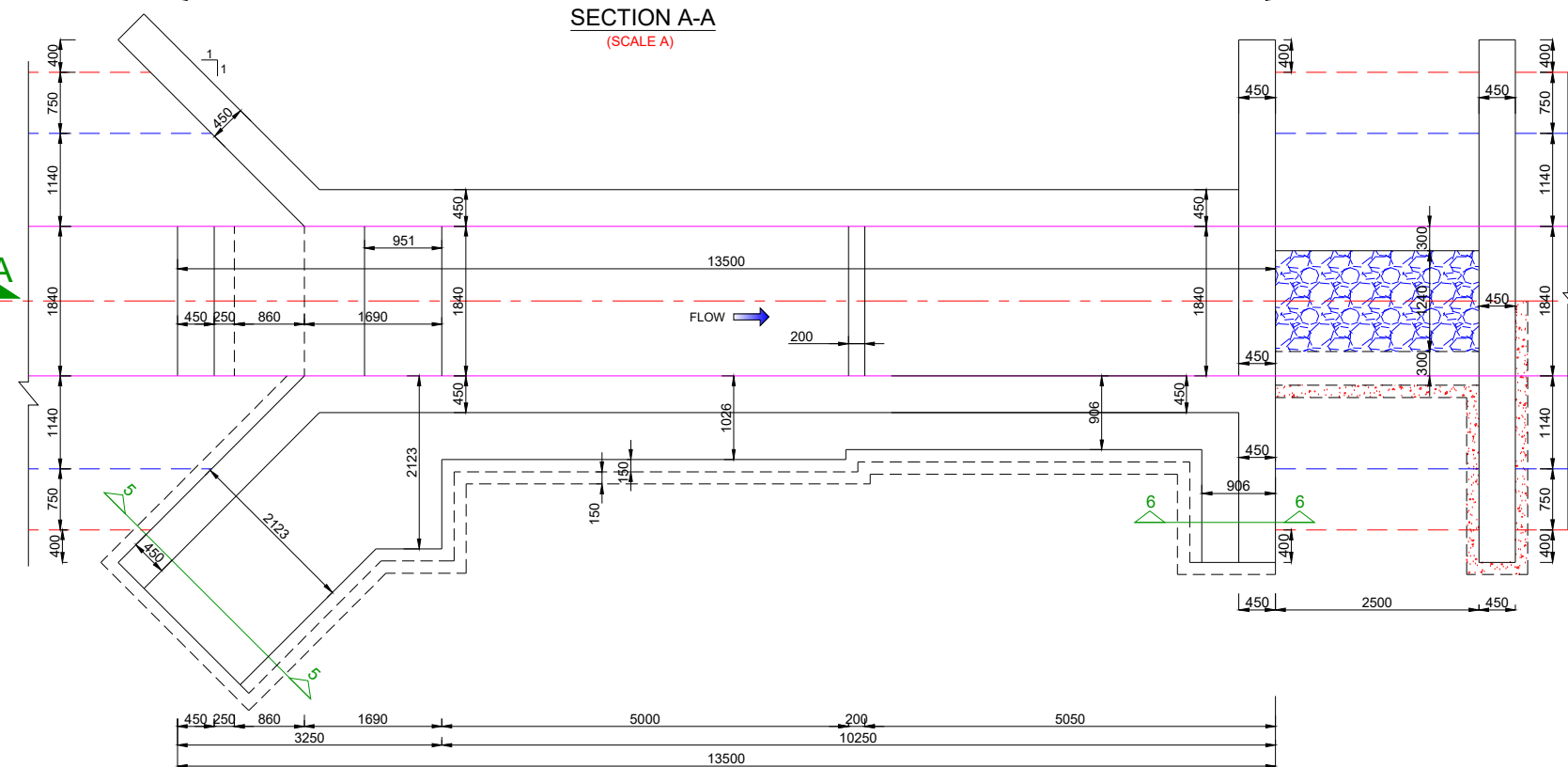
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.700	0.700	CUMEC
VERTICAL DROP	1.829	1.829	METRE
FULL SUPPLY DEPTH	0.760	0.760	METRE
BED WIDTH	1.840	1.840	METRE
BED SLOPE	1 : 3400	1 : 3400	



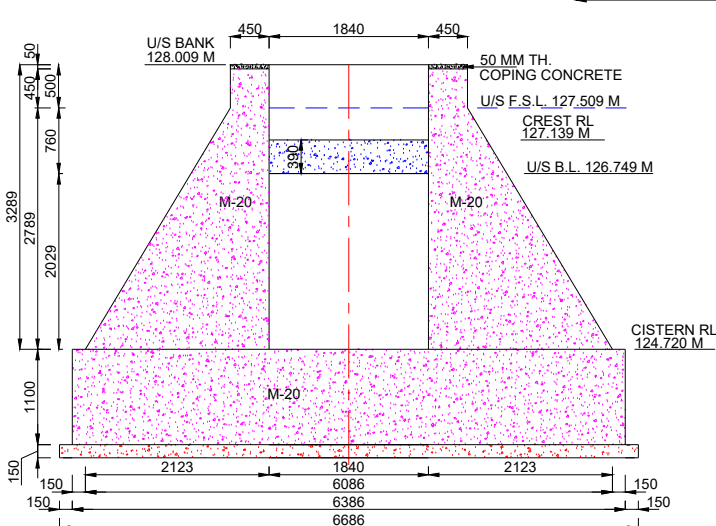
SECTION AT 2-2
(SCALE A)



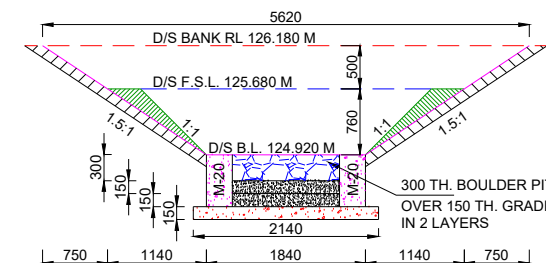
SECTION AT 3-3
(SCALE A)



HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

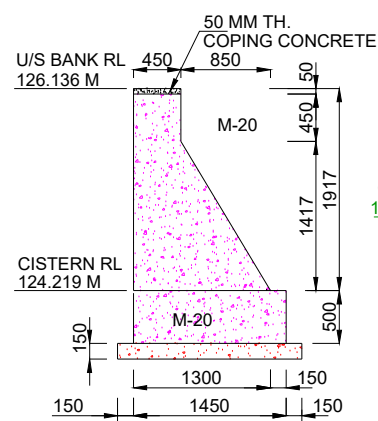
Drawing Title :-

SHARDA TYPE 1.829 M HT. FALL AT KM. 4.300 OF SONDIH-III SUB-DY. (OFFTAKE RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

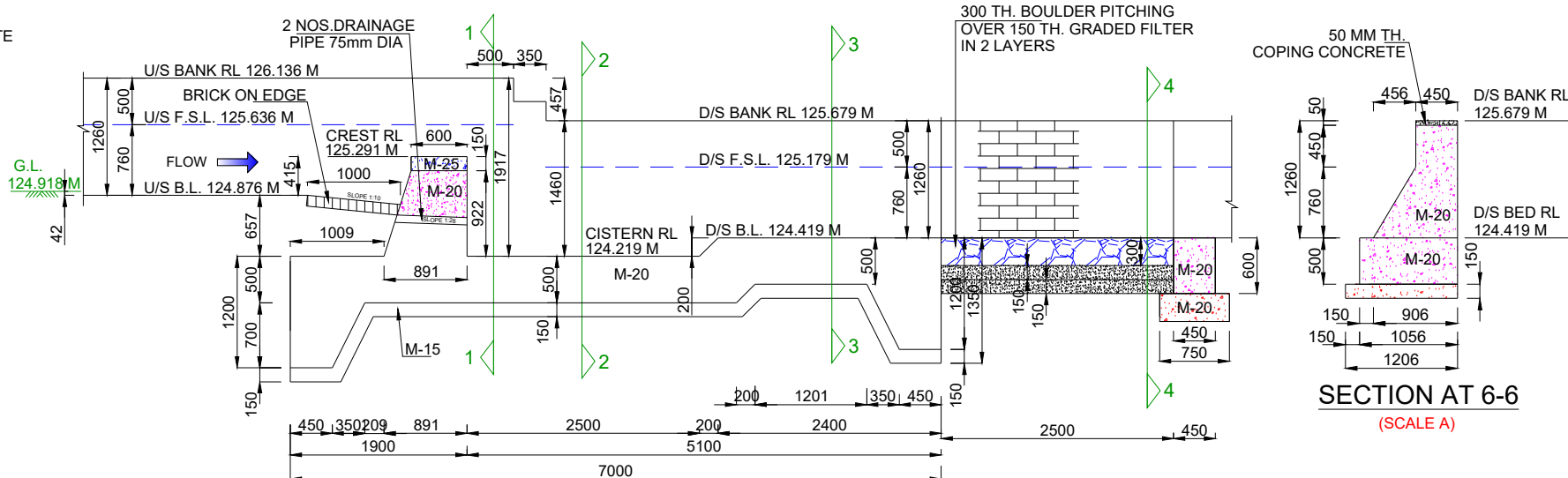
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

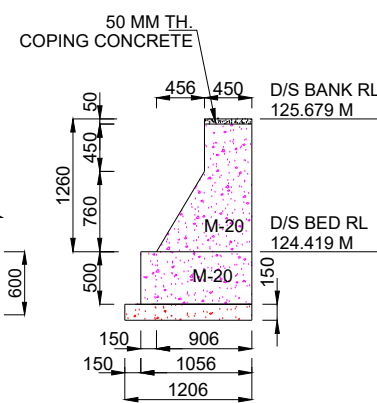
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

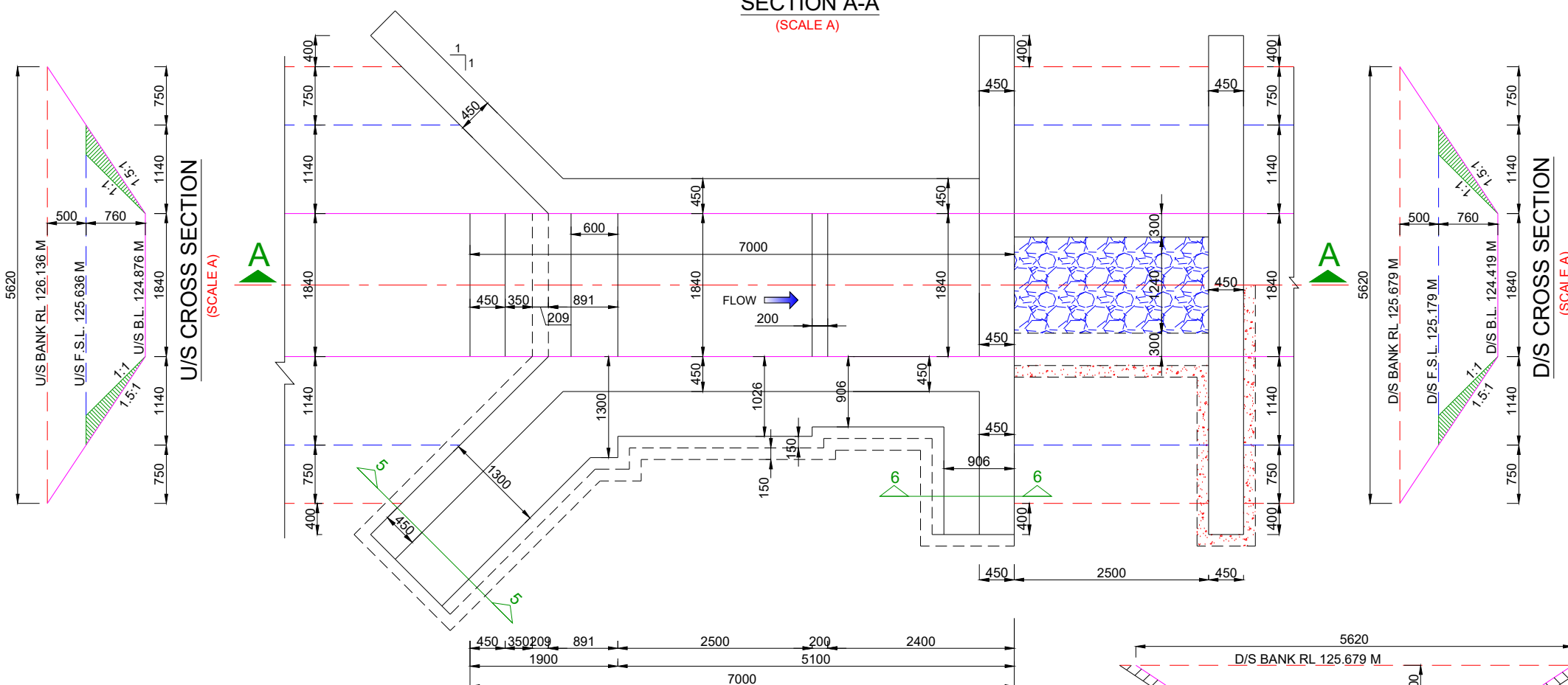
NOTES:-

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- ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

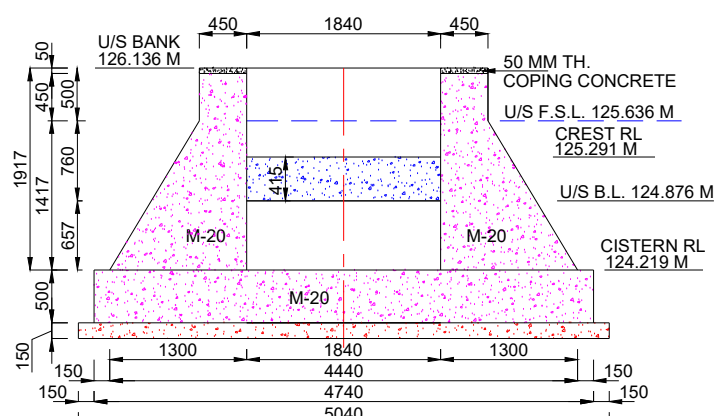
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
- ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
- SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

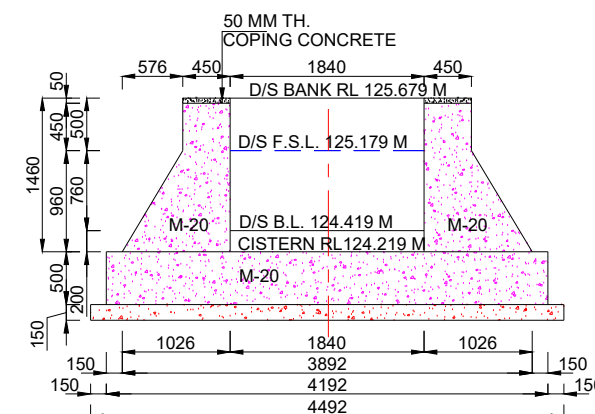
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.700	0.700	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.760	0.760	METRE
BED WIDTH	1.840	1.840	METRE
BED SLOPE	1 : 3400	1 : 3400	



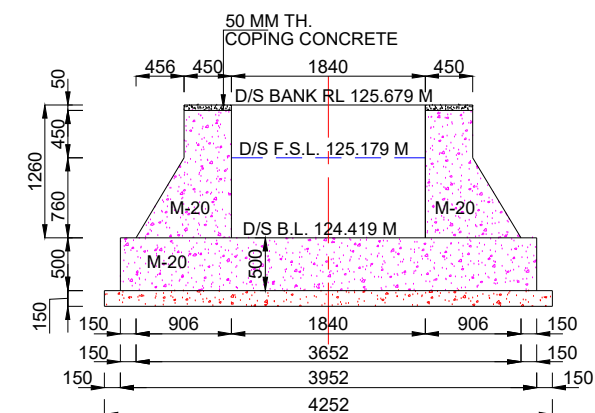
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



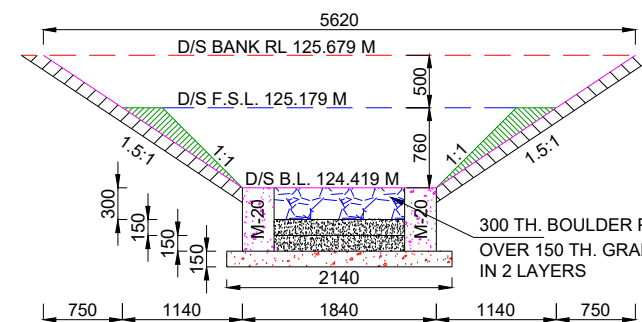
SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)

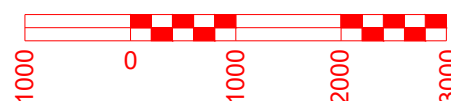


SECTION AT 3-3
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

SHARDA TYPE 0.457 M HT. FALL AT KM. 4.450 OF SONDIH-III SUB-DY. (OFFTAKE RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

1 of 1

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.

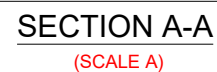
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.100	0.100	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.420	0.300	METRE
BED WIDTH	0.700	0.580	METRE
BED SLOPE	1 : 2500	1 : 2500	

67

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.

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.030	0.030	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.300	0.300	METRE
BED WIDTH	0.580	0.580	METRE
BED SLOPE	1 : 2500	1 : 2500	



WAPCOS LTD.

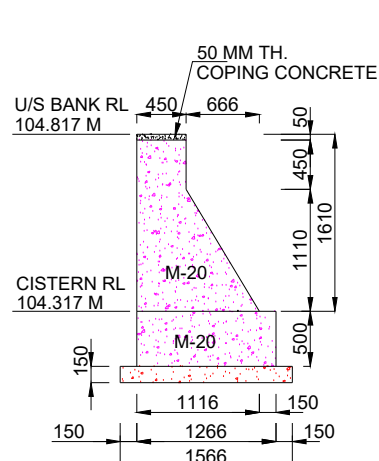


NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

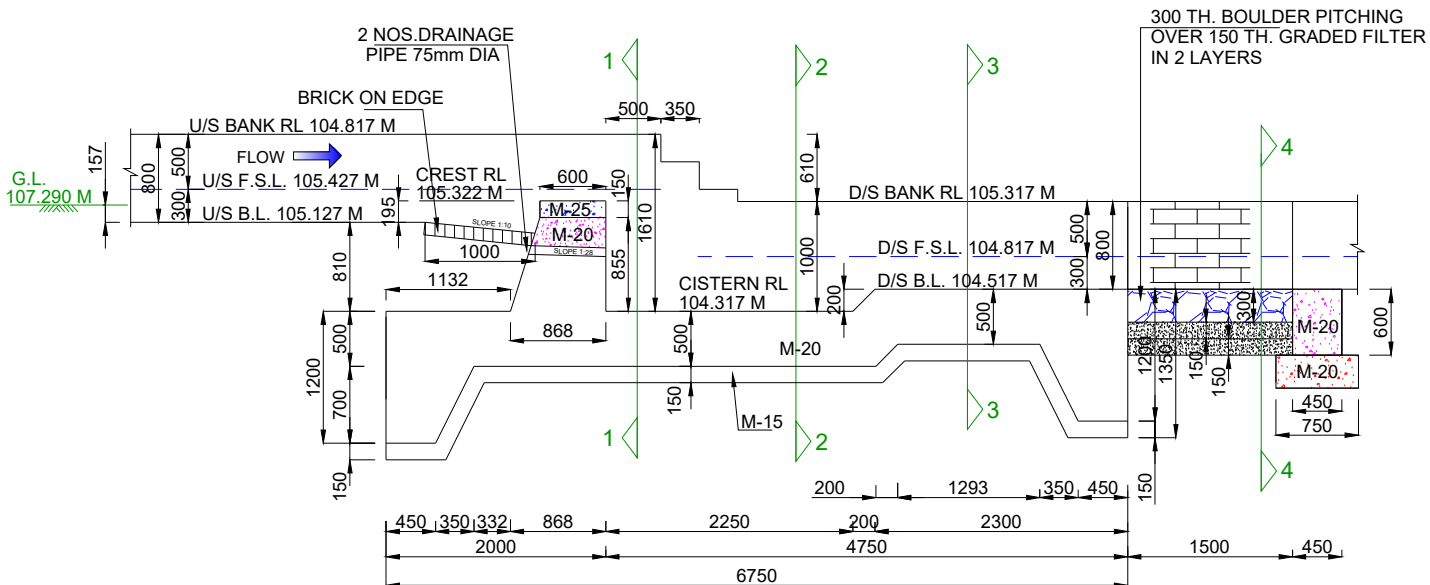
SHARDA TYPE 0.610 M HT. FALL AT KM. 9.912 OF SONDIH-III SUB-DY.
(OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

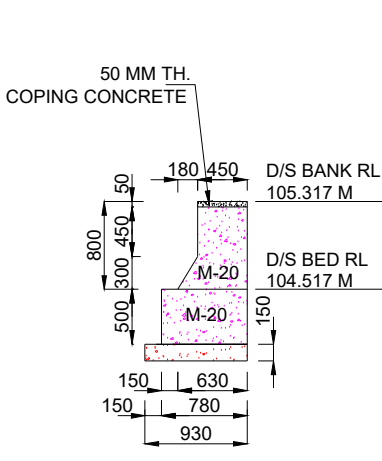
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

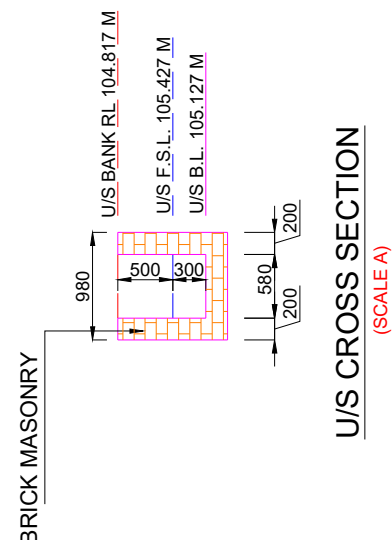
NOTES:-

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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

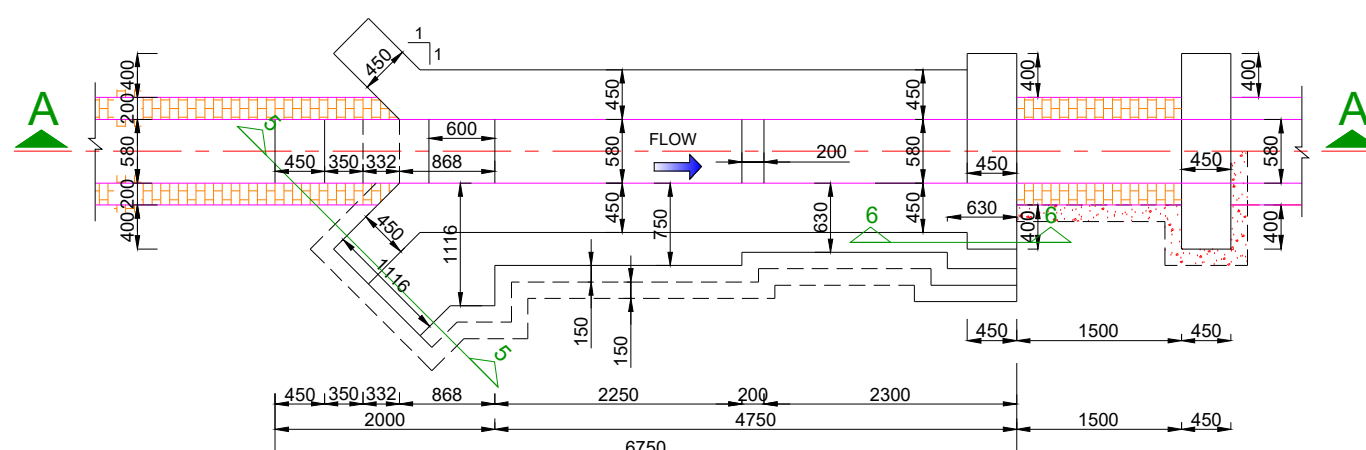
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

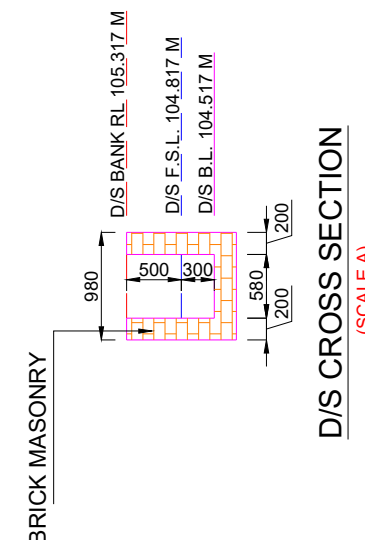
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.030	0.030	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.300	0.300	METRE
BED WIDTH	0.580	0.580	METRE
BED SLOPE	1 : 2500	1 : 2500	



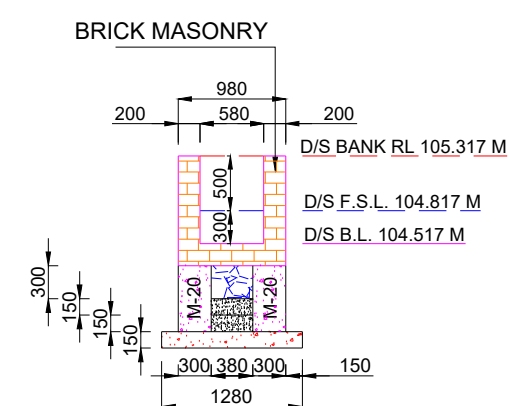
U/S CROSS SECTION
(SCALE A)



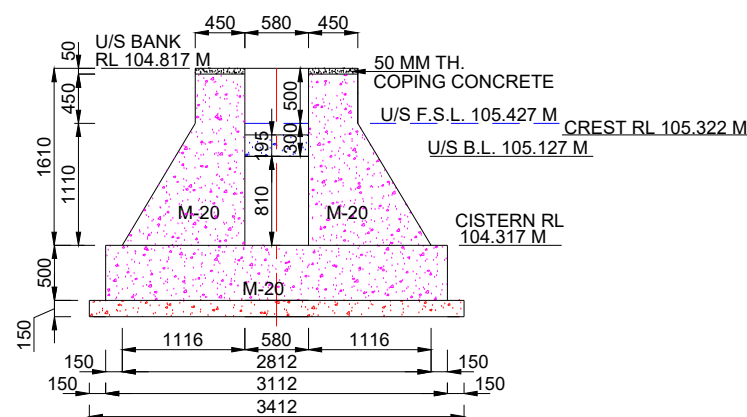
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



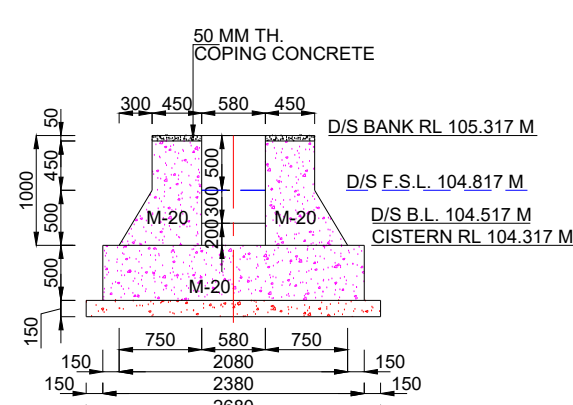
D/S CROSS SECTION
(SCALE A)



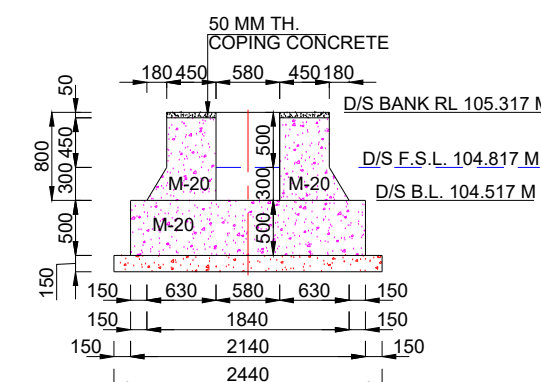
SECTION AT 4-4
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

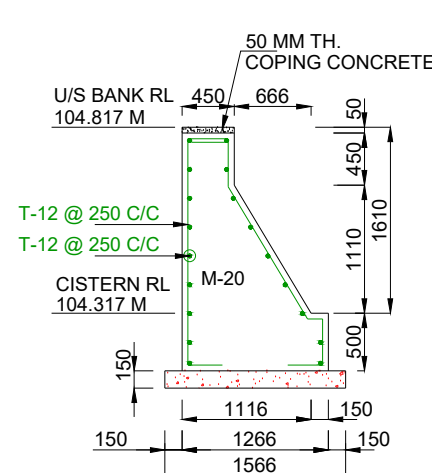
Drawing Title :-

SHARDA TYPE 0.610 M HT. FALL AT KM. 9.912 OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

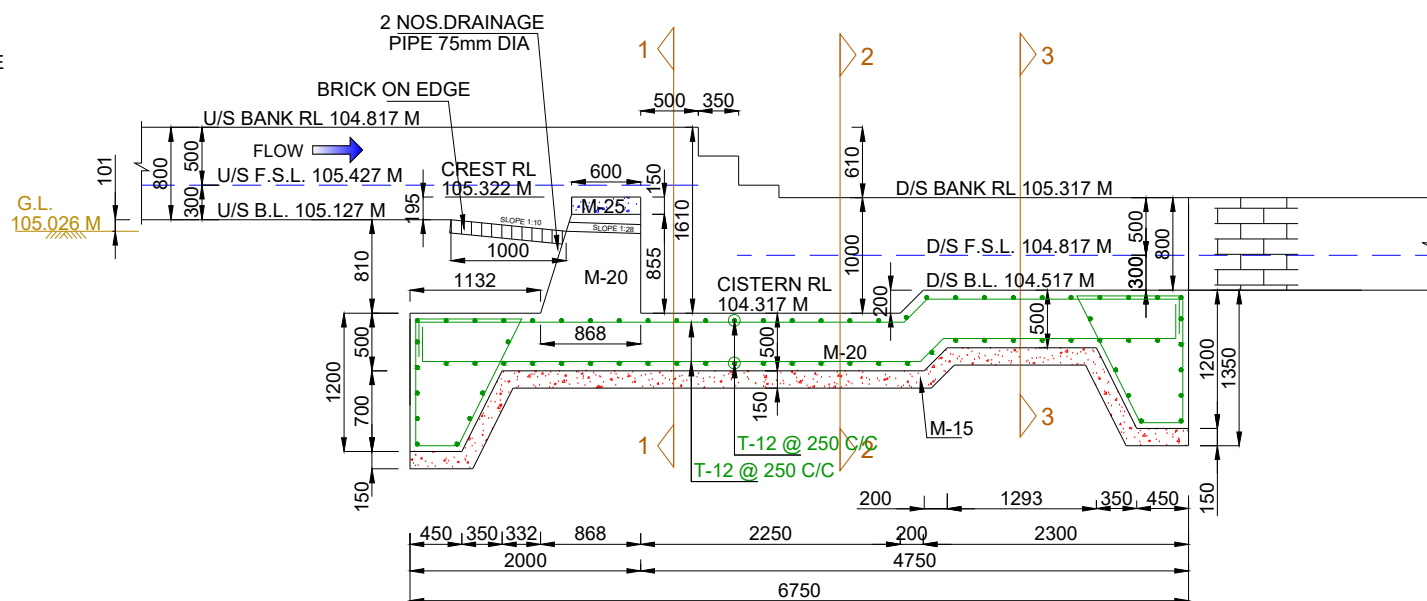
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

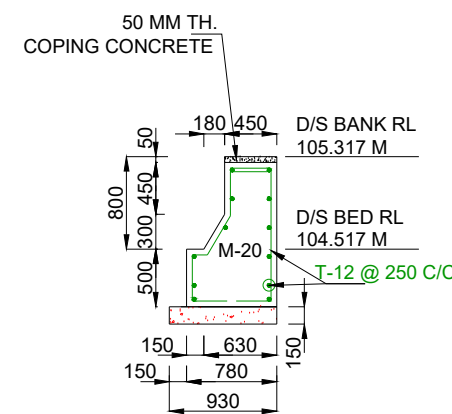
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

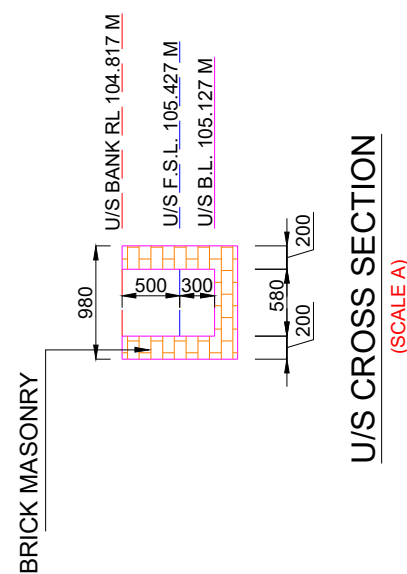
NOTES:-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

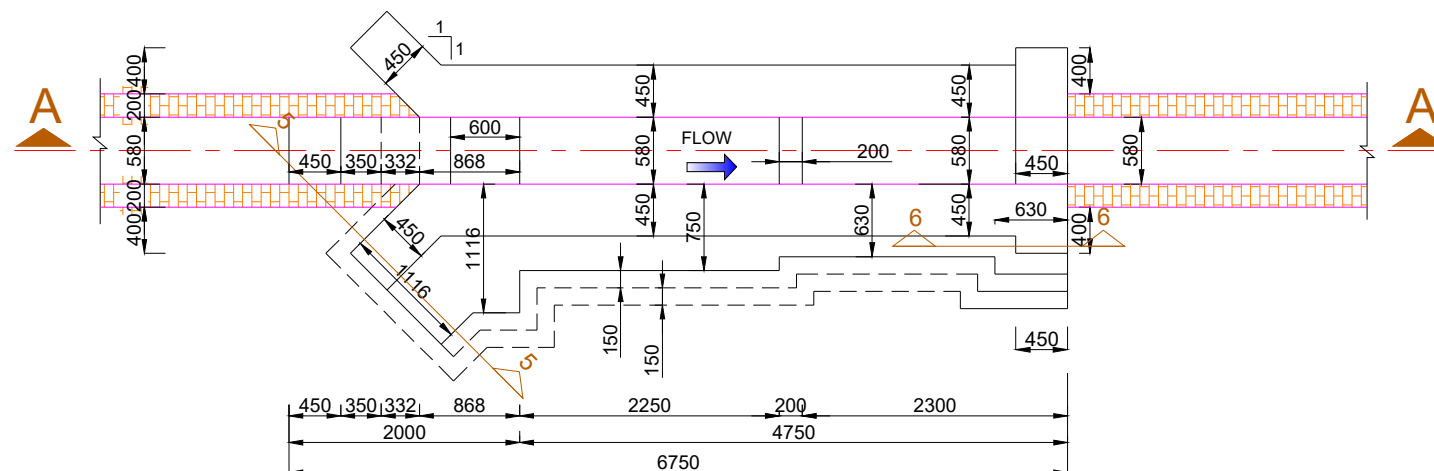
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

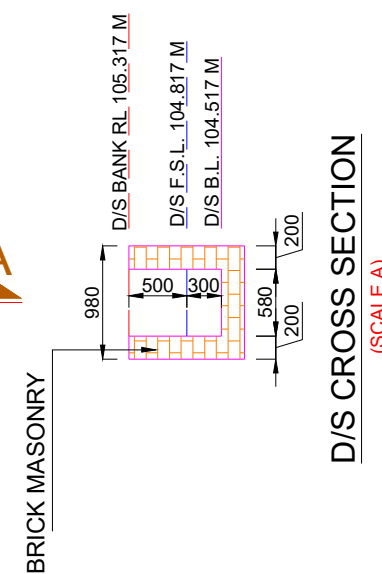
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.030	0.030	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.300	0.300	METRE
BED WIDTH	0.580	0.580	METRE
BED SLOPE	1 : 2500	1 : 2500	



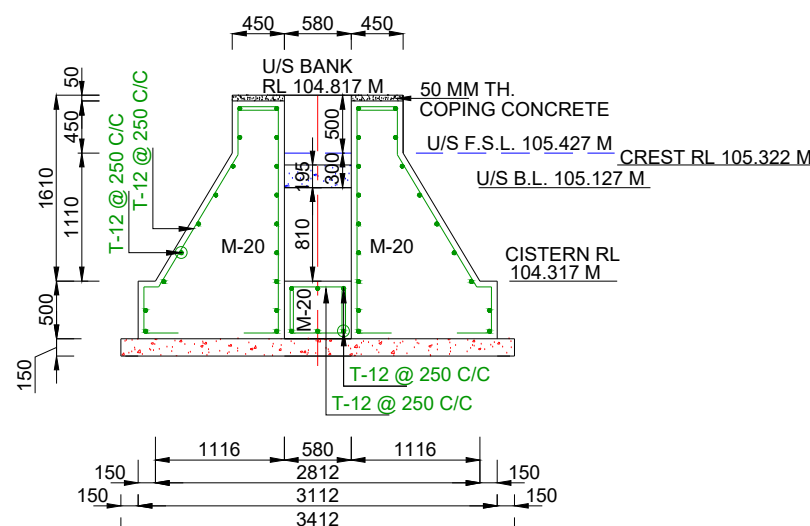
U/S CROSS SECTION
(SCALE A)



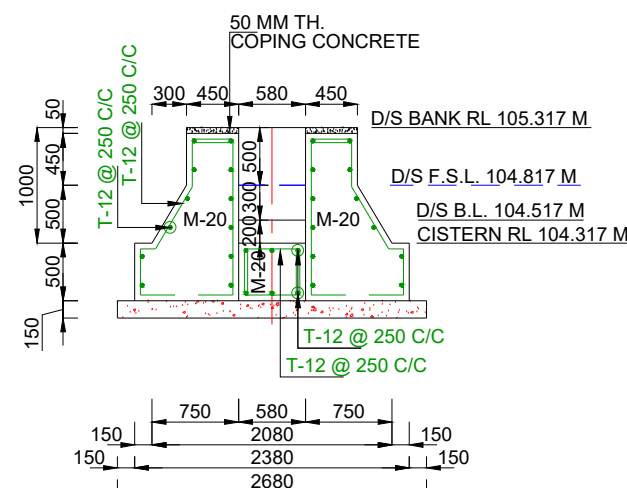
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



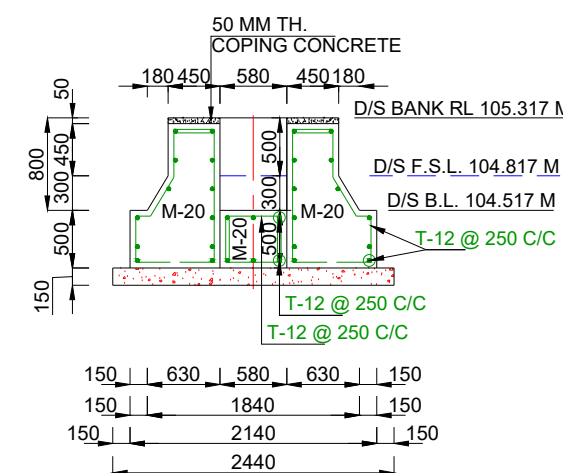
D/S CROSS SECTION
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

SHARDA TYPE 0.610 M HT. FALL AT KM. 10.350 OF SONDIH-III SUB-DY. (OFFTAKE FROM RD - 81+457 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-29/ FALL

1 of 1

