

TENDER DOCUMENT

FOR

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

Estimated Cost (Rs. 50.95 Crores)

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

MARCH 2025

Completion of Balance
Works of North Koel
Reservoir Project

DRAWING REPORT – KOTWARA
DISTRIBUTARY (OFFTAKING FROM RIGHT
MAIN CANAL AT 96.83 KM)



WAPCOS LIMITED

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

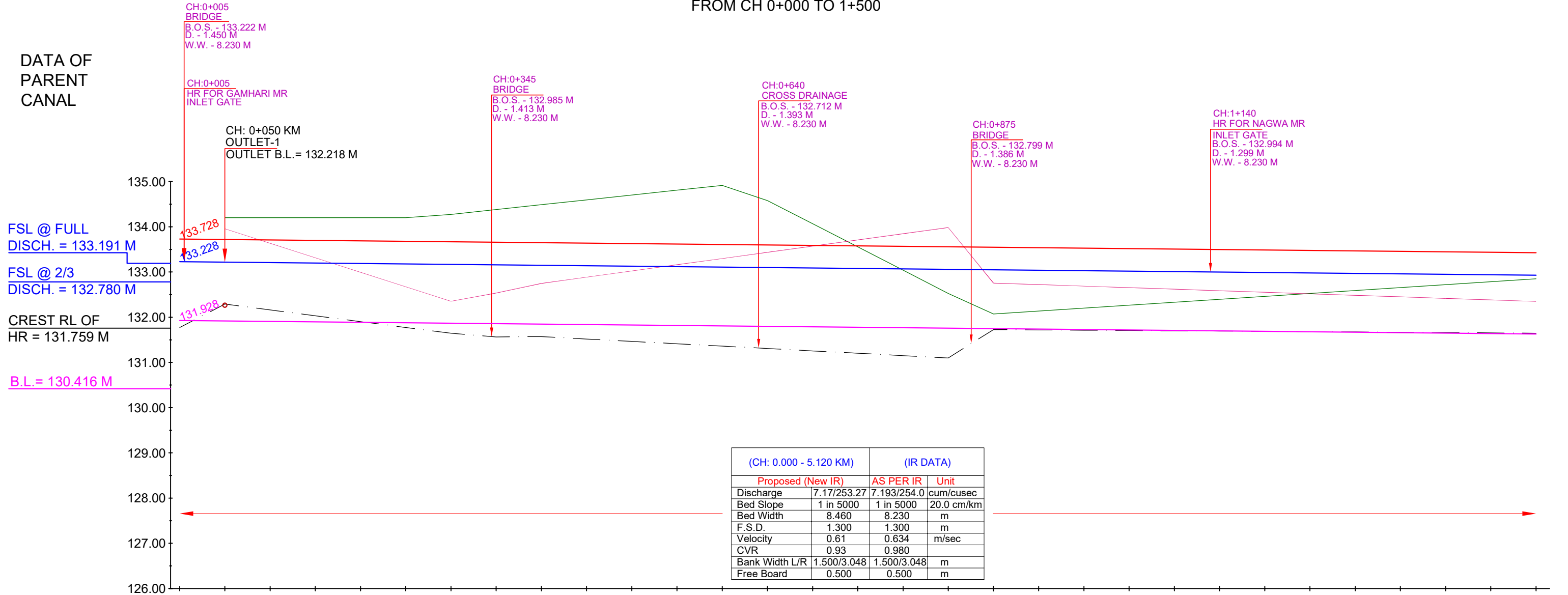


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L-SECTION

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 0+000 TO 1+500

DATA OF
PARENT
CANAL



DESIGN DATA	TOP OF BANK LEVEL	133.728	133.718	133.708	133.698	133.688	133.678	133.668	133.658	133.648	133.638	133.628	133.618	133.608	133.598	133.588	133.578	133.568	133.558	133.548	133.538	133.528	133.518	133.508	133.498	133.488	133.478	133.468	133.458	133.448	133.438	133.428
	F.S.L.	133.228	133.218	133.208	133.198	133.188	133.178	133.168	133.158	133.148	133.138	133.128	133.118	133.108	133.098	133.088	133.078	133.068	133.058	133.048	133.038	133.028	133.018	133.008	132.998	132.988	132.978	132.968	132.958	132.948	132.938	132.928
EXISTING DATA	Proposed Bed Level	131.928	131.918	131.908	131.898	131.888	131.878	131.868	131.858	131.848	131.838	131.828	131.818	131.808	131.798	131.788	131.778	131.768	131.758	131.748	131.738	131.728	131.718	131.708	131.698	131.688	131.678	131.668	131.658	131.648	131.638	131.628
	Bed Level	131.772	132.291	132.162	132.032	131.903	131.774	131.645	131.564	131.572	131.518	131.466	131.413	131.361	131.309	131.254	131.205	131.150	131.099	131.727	131.720	131.713	131.707	131.700	131.694	131.687	131.680	131.674	131.667	131.660	131.654	131.647
	TOP OF BANK LEVEL		133.956	133.635	133.315	132.994	132.674	132.353	132.536	132.749	132.886	133.023	133.161	133.297	133.435	133.572	133.709	133.846	133.983	132.755	132.721	132.688	132.654	132.620	132.586	132.552	132.518	132.485	132.451	132.417	132.383	132.349
Chainage IN KM	NSL		134.200	134.200	134.200	134.200	134.200	134.273	134.381	134.488	134.595	134.702	134.809	134.916	134.581	134.068	133.555	133.040	132.527	132.071	132.136	132.200	132.265	132.330	132.395	132.460	132.525	132.590	132.655	132.720	132.784	132.849
		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

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

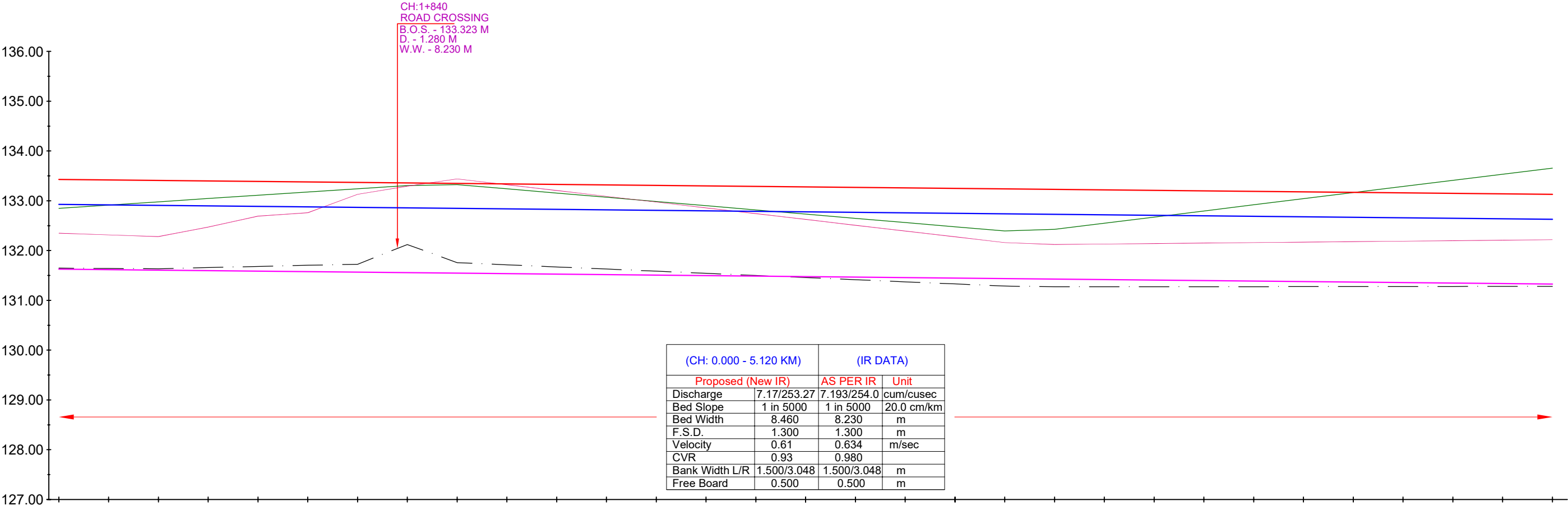
PROJECT TITLE :-
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-
L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

01 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 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
- 1+500	132.849	132.349	131.647	131.628
- 1+550	132.914	132.315	131.640	131.618
- 1+600	132.979	132.282	131.634	131.608
- 1+650	133.045	132.471	131.658	131.598
- 1+700	133.111	132.691	131.681	131.588
- 1+750	133.175	132.760	131.705	131.578
- 1+800	133.240	133.130	131.725	131.568
- 1+850	133.306	133.292	132.122	131.558
- 1+900	133.325	133.439	131.757	131.548
- 1+950	133.240	133.323	131.715	131.538
- 2+000	133.155	133.207	131.671	131.528
- 2+050	133.071	133.090	131.629	131.518
- 2+100	132.986	132.974	131.586	131.508
- 2+150	132.901	132.858	131.543	131.498
- 2+200	132.817	132.742	131.500	131.488
- 2+250	132.732	132.626	131.458	131.478
- 2+300	132.647	132.509	131.415	131.468
- 2+350	132.563	132.393	131.372	131.458
- 2+400	132.478	132.277	131.330	131.448
- 2+450	132.393	132.160	131.287	131.438
- 2+500	132.427	132.121	131.272	131.428
- 2+550	132.550	132.131	131.273	131.418
- 2+600	132.673	132.141	131.273	131.408
- 2+650	132.796	132.150	131.274	131.398
- 2+700	132.919	132.160	131.275	131.388
- 2+750	133.042	132.170	131.276	131.378
- 2+800	133.165	132.179	131.277	131.368
- 2+850	133.288	132.189	131.278	131.358
- 2+900	133.411	132.199	131.279	131.348
- 2+950	133.534	132.209	131.280	131.338
- 3+000	133.657	132.218	131.280	131.328

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

02 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 4+500

CH: 4+450 KM
OUTLET-5
OUTLET B.L.= 131.338 M

CH:4+405
BRIDGE
B.O.S. - 132.825 M
D. - 0.876 M
W.W. - 8.230 M

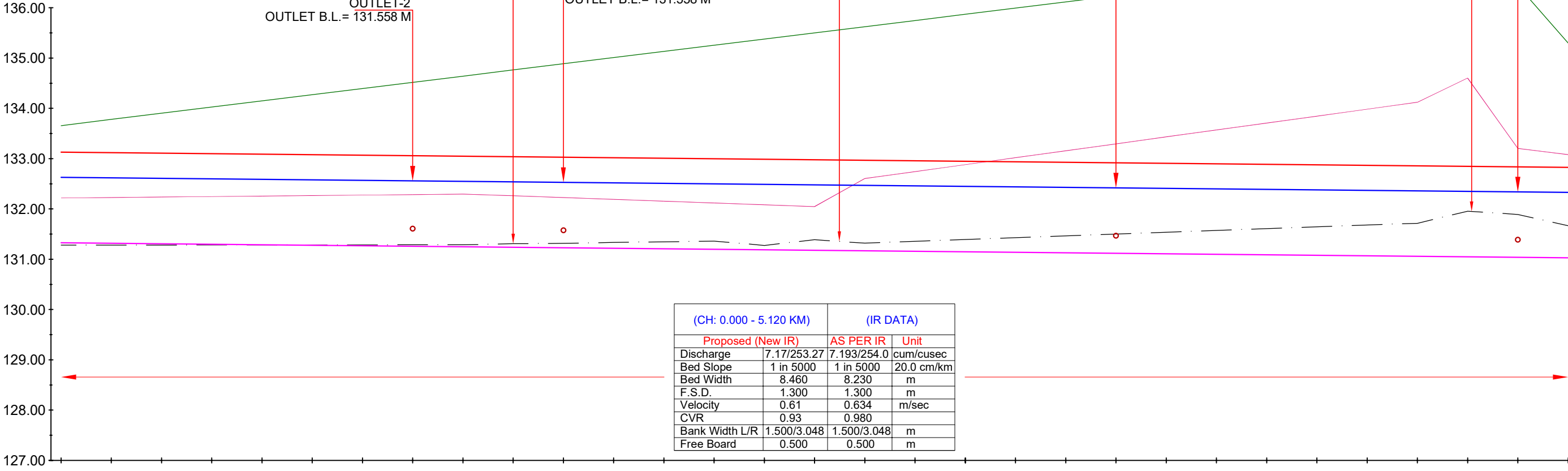
CH: 4+050 KM
OUTLET-4
OUTLET B.L.= 131.418 M

CH:3+775
BRIDGE
B.O.S. - 132.767 M
D. - 1.413 M
W.W. - 8.230 M

CH: 3+500 KM
OUTLET-3
OUTLET B.L.= 131.558 M

CH:3+450
BRIDGE
B.O.S. - 132.748 M
D. - 1.440 M
W.W. - 8.230 M

CH: 3+350 KM
OUTLET-2
OUTLET B.L.= 131.558 M



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
3+000	133.657	132.218	131.280	131.328	132.628	133.128
3+050	133.780	132.227	131.281	131.318	132.618	133.118
3+100	133.903	132.237	131.282	131.308	132.608	133.108
3+150	134.025	132.247	131.283	131.298	132.598	133.098
3+200	134.148	132.256	131.284	131.288	132.588	133.088
3+250	134.271	132.266	131.285	131.278	132.578	133.078
3+300	134.394	132.276	131.285	131.268	132.568	133.068
3+350	134.517	132.286	131.287	131.258	132.558	133.058
3+400	134.640	132.295	131.287	131.248	132.548	133.048
3+450	134.764	132.262	131.308	131.238	132.538	133.038
3+500	134.886	132.226	131.316	131.228	132.528	133.028
3+550	135.010	132.190	131.335	131.218	132.518	133.018
3+600	135.132	132.155	131.346	131.208	132.508	133.008
3+650	135.256	132.119	131.361	131.198	132.498	132.998
3+700	135.378	132.083	131.375	131.188	132.488	132.988
3+750	135.501	132.047	131.389	131.178	132.478	132.978
3+800	135.624	132.606	131.319	131.168	132.468	132.968
3+850	135.747	132.743	131.355	131.158	132.458	132.958
3+900	135.870	132.881	131.391	131.148	132.448	132.948
3+950	135.993	133.019	131.427	131.138	132.438	132.938
4+000	136.116	133.157	131.463	131.128	132.428	132.928
4+050	136.239	133.295	131.499	131.118	132.418	132.918
4+100	136.362	133.433	131.535	131.108	132.408	132.908
4+150	136.484	133.570	131.571	131.098	132.398	132.898
4+200	136.608	133.708	131.607	131.088	132.388	132.888
4+250	136.730	133.846	131.643	131.078	132.378	132.878
4+300	136.853	133.984	131.680	131.068	132.368	132.868
4+350	136.976	134.121	131.715	131.058	132.358	132.858
4+400	137.065	134.604	131.955	131.048	132.348	132.848
4+450	136.441	133.204	131.891	131.038	132.338	132.838
4+500	135.300	133.081	131.667	131.028	132.328	132.828

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

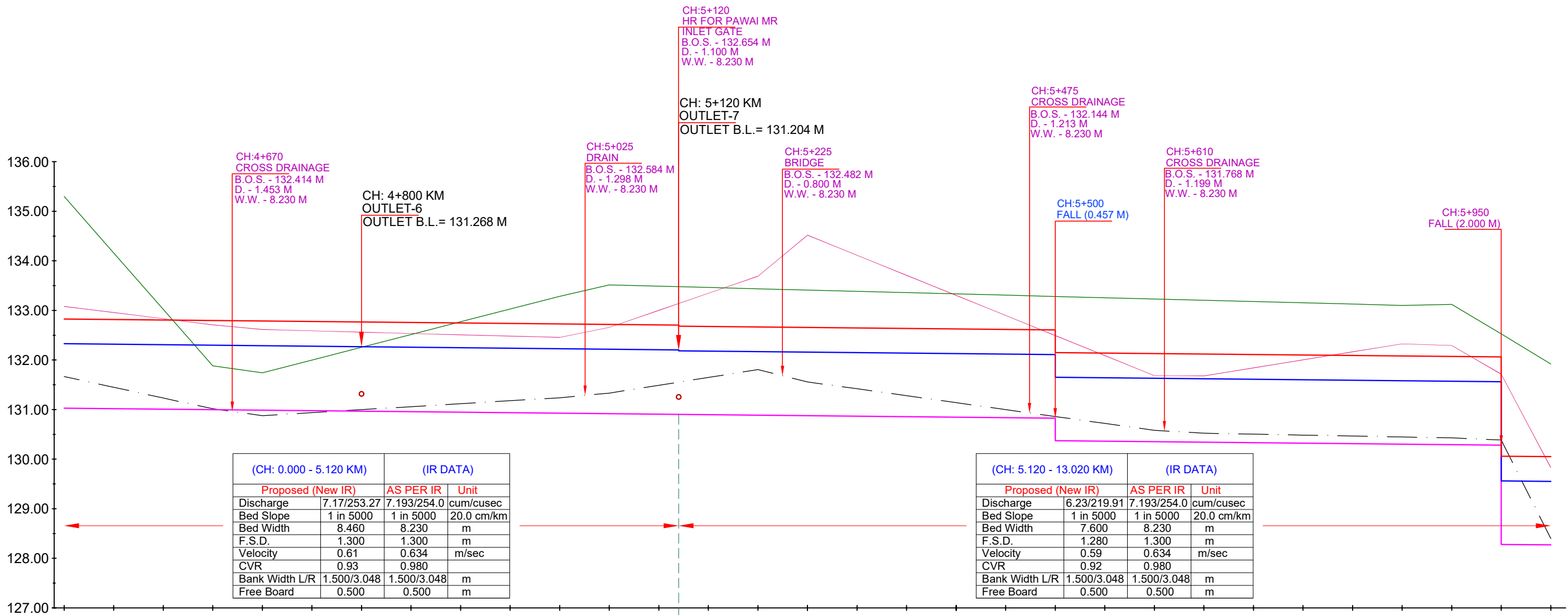
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

03 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 4+500 TO 6+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
+ 4+500	135.300	133.081	131.667	131.028	132.328	132.828
+ 4+550	134.160	132.968	131.451	131.018	132.318	132.818
+ 4+600	133.021	132.834	131.233	131.008	132.308	132.808
+ 4+650	131.883	132.711	131.016	130.998	132.298	132.798
+ 4+700	131.742	132.615	130.878	130.988	132.288	132.788
+ 4+750	131.998	132.589	130.938	130.978	132.278	132.778
+ 4+800	132.257	132.562	130.998	130.968	132.268	132.768
+ 4+850	132.513	132.535	131.058	130.958	132.258	132.758
+ 4+900	132.771	132.509	131.118	130.948	132.248	132.748
+ 4+950	133.029	132.482	131.179	130.938	132.238	132.738
+ 5+000	133.286	132.456	131.239	130.928	132.228	132.728
+ 5+050	133.514	132.658	131.333	130.918	132.218	132.718
+ 5+100	133.488	133.001	131.490	130.908	132.208	132.708
+ 5+120	---	---	---	130.904	132.204	132.704
+ 5+150	133.463	133.345	131.649	130.898	132.184	132.684
+ 5+200	133.437	133.689	131.807	130.888	132.178	132.678
+ 5+250	133.411	134.518	131.557	130.878	132.168	132.668
+ 5+300	133.385	134.113	131.420	130.868	132.158	132.658
+ 5+350	133.359	133.708	131.280	130.858	132.148	132.648
+ 5+400	133.334	133.304	131.140	130.848	132.138	132.638
+ 5+450	133.308	132.899	131.000	130.838	132.128	132.628
+ 5+500	133.282	132.494	130.861	130.828	132.118	132.618
+ 5+550	133.256	132.090	130.721	130.371	132.108	132.608
+ 5+600	133.231	131.685	130.581	130.828	131.651	132.151
+ 5+650	133.205	131.680	130.523	130.361	131.641	132.141
+ 5+700	133.179	131.841	130.506	130.351	131.631	132.131
+ 5+750	133.153	132.003	130.485	130.341	131.621	132.121
+ 5+800	133.128	132.165	130.467	130.331	131.611	132.111
+ 5+850	133.102	132.326	130.448	130.321	131.601	132.101
+ 5+900	133.122	132.294	130.429	130.311	131.591	132.091
+ 5+950	132.527	131.715	130.387	130.301	131.581	132.081
+ 6+000	131.918	129.830	128.397	130.291	131.571	132.071

LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

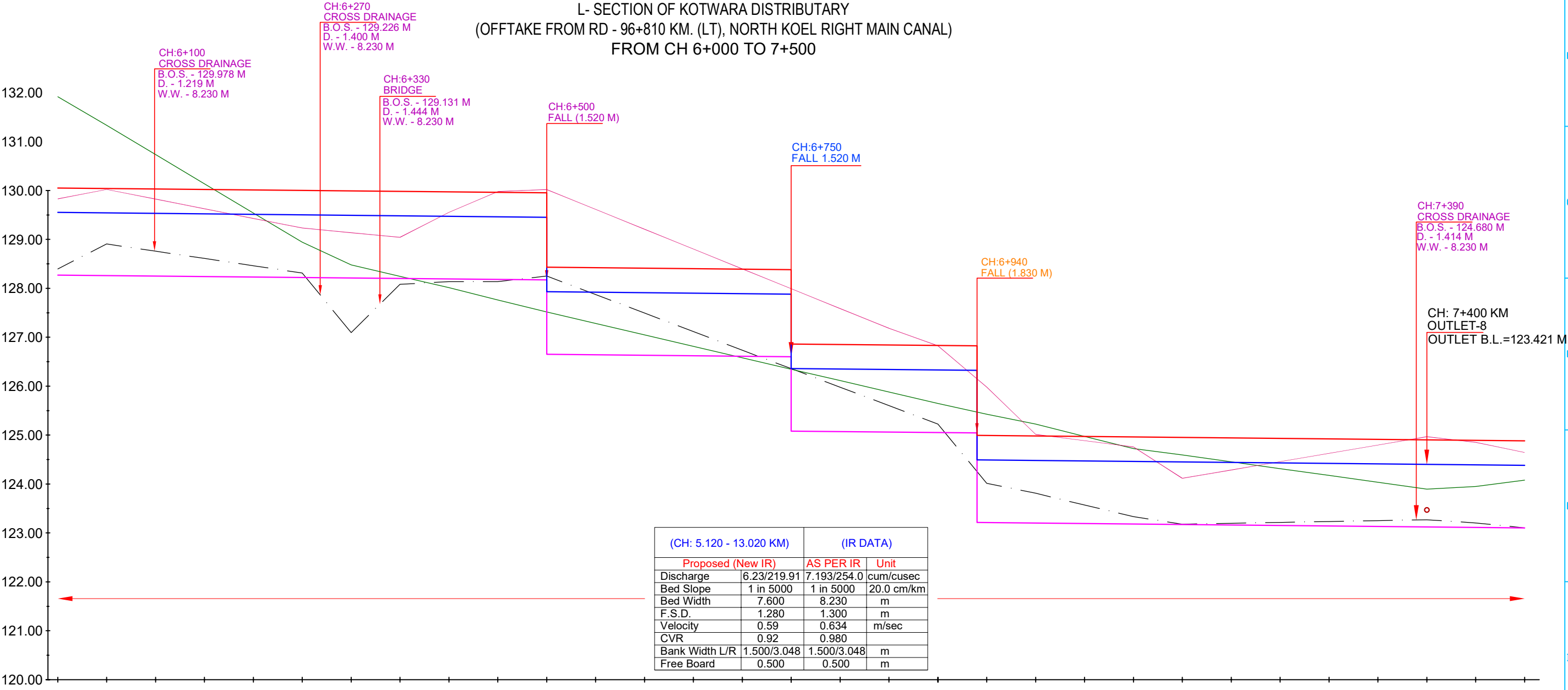
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

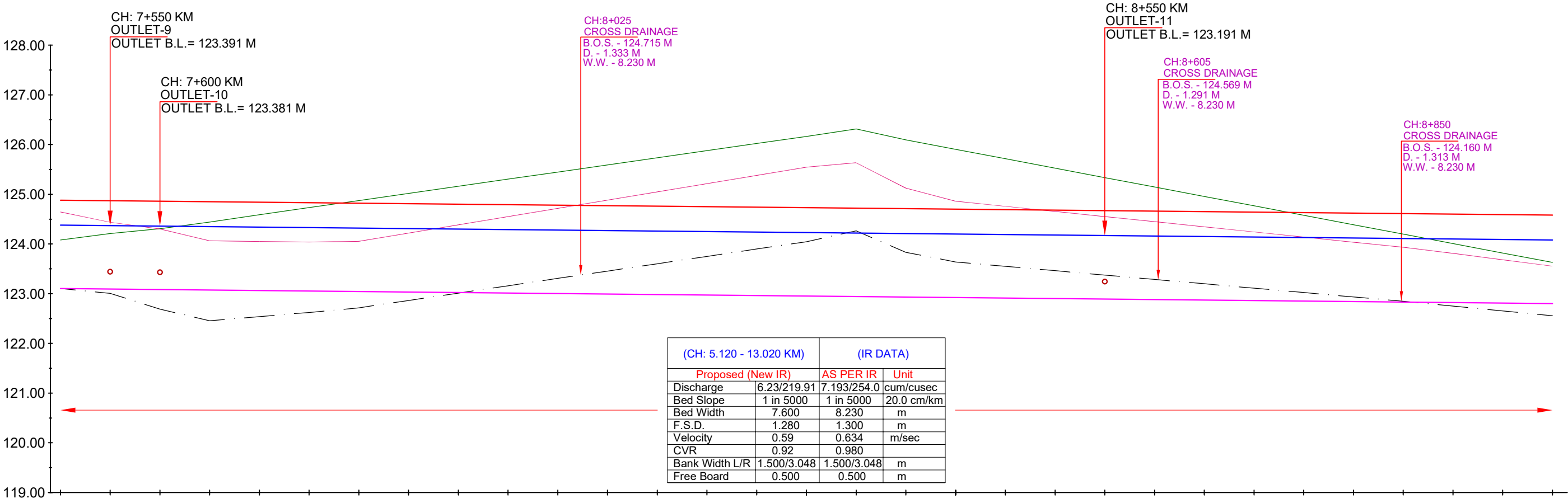
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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 6+000 TO 7+500



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
6+000	131.918	129.830	128.397	128.271	129.551	130.051
6+050	131.331	130.021	128.906	128.261	129.541	130.041
6+100	130.734	129.824	128.759	128.251	129.531	130.031
6+150	130.138	129.627	128.611	128.241	129.521	130.021
6+200	129.538	129.430	128.461	128.231	129.511	130.011
6+250	128.944	129.233	128.313	128.221	129.501	130.001
6+300	128.478	129.135	127.096	128.211	129.491	129.991
6+350	128.245	129.043	128.081	128.201	129.481	129.981
6+400	128.014	129.552	128.138	128.191	129.471	129.971
6+450	127.763	129.979	128.138	128.181	129.461	129.961
6+500	127.517	130.019	128.250	128.171	129.451	129.951
6+550	127.282	129.614	127.873	126.641	127.921	128.421
6+600	127.049	129.209	127.496	126.631	127.911	128.411
6+650	126.814	128.803	127.116	126.621	127.901	128.401
6+700	126.581	128.398	126.734	126.611	127.891	128.391
6+750	126.347	127.993	126.359	126.601	127.881	128.381
6+800	126.114	127.588	125.979	125.071	126.351	126.851
6+850	125.880	127.183	125.603	125.061	126.341	126.841
6+900	125.647	126.827	125.225	125.051	126.331	126.831
6+950	125.427	125.981	124.015	125.043 123.213 123.211	126.323 124.493 124.491	126.823 124.993 124.991
7+000	125.226	125.015	123.811	123.201	124.481	124.981
7+050	124.974	124.887	123.571	123.191	124.471	124.971
7+100	124.724	124.788	123.333	123.181	124.461	124.961
7+150	124.593	124.117	123.179	123.171	124.451	124.951
7+200	124.454	124.287	123.198	123.161	124.441	124.941
7+250	124.314	124.457	123.216	123.151	124.431	124.931
7+300	124.175	124.627	123.234	123.141	124.421	124.921
7+350	124.036	124.797	123.252	123.131	124.411	124.911
7+400	123.896	124.967	123.270	123.121	124.401	124.901
7+450	123.949	124.853	123.204	123.111	124.391	124.891
7+500	124.080	124.645	123.103	123.101	124.381	124.881

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 7+500 TO 9+000



Chainage IN KM	EXISTING DATA		DESIGN DATA	
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level
7+500	124.080	124.645	123.103	123.101
7+550	124.211	124.438	123.007	123.091
7+600	124.308	124.303	122.689	123.081
7+650	124.442	124.064	122.457	123.071
7+700	124.588	124.051	122.540	123.061
7+750	124.734	124.040	122.623	123.051
7+800	124.875	124.053	122.716	123.041
7+850	125.018	124.219	122.864	123.031
7+900	125.162	124.385	123.012	123.021
7+950	125.305	124.551	123.160	123.011
8+000	125.448	124.716	123.308	123.001
8+050	125.592	124.882	123.455	122.991
8+100	125.735	125.048	123.603	122.981
8+150	125.878	125.214	123.751	122.971
8+200	126.022	125.380	123.899	122.961
8+250	126.165	125.545	124.046	122.951
8+300	126.315	125.635	124.266	122.941
8+350	126.094	125.124	123.833	122.931
8+400	125.905	124.862	123.639	122.921
8+450	125.716	124.758	123.551	122.911
8+500	125.526	124.655	123.463	122.901
8+550	125.336	124.552	123.375	122.891
8+600	125.147	124.450	123.287	122.881
8+650	124.957	124.346	123.200	122.871
8+700	124.768	124.243	123.111	122.861
8+750	124.578	124.140	123.024	122.851
8+800	124.388	124.036	122.935	122.841
8+850	124.199	123.934	122.847	122.831
8+900	124.007	123.813	122.752	122.821
8+950	123.818	123.683	122.654	122.811
9+000	123.629	123.555	122.557	122.801

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

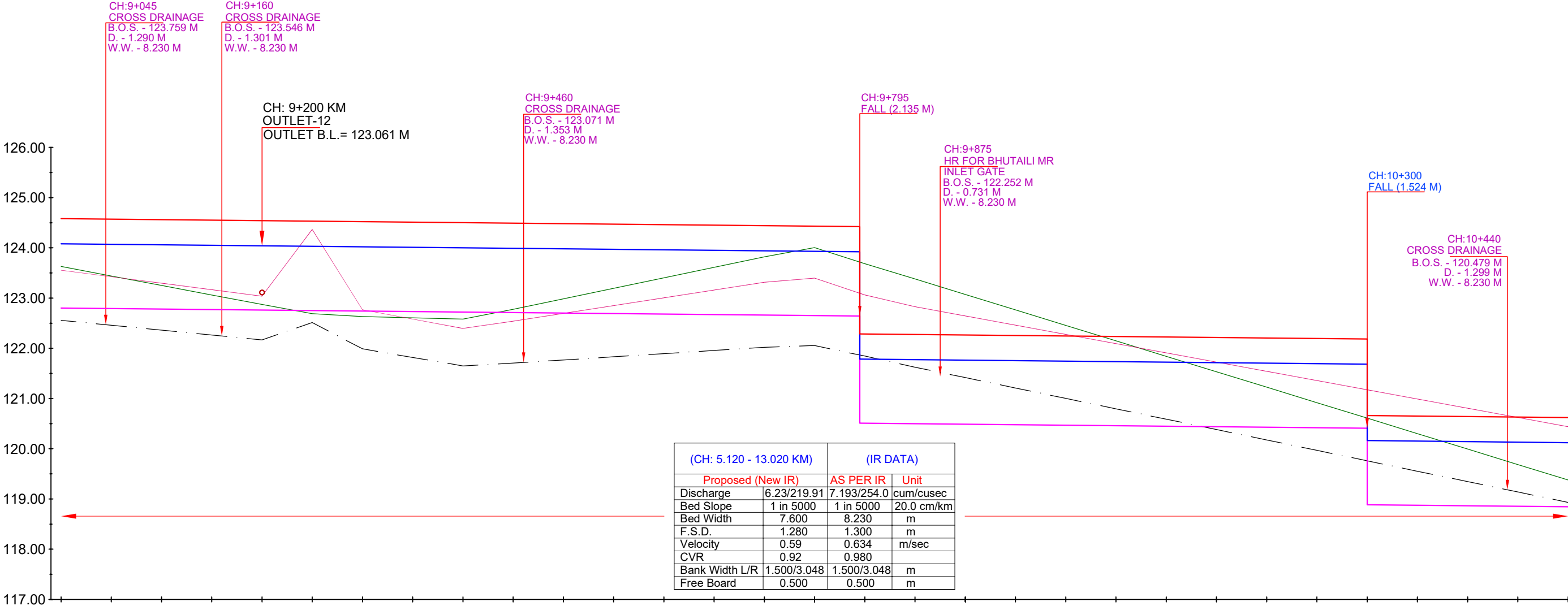
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-06 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 9+000 TO 10+500



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
- 9+000	123.629	123.555	122.557	122.801	124.081	124.581
- 9+050	123.439	123.425	122.459	122.791	124.071	124.571
- 9+100	123.251	123.297	122.362	122.781	124.061	124.561
- 9+150	123.061	123.168	122.264	122.771	124.051	124.551
- 9+200	122.872	123.039	122.168	122.761	124.041	124.541
- 9+250	122.689	124.366	122.513	122.751	124.031	124.531
- 9+300	122.633	122.769	121.989	122.741	124.021	124.521
- 9+350	122.607	122.582	121.818	122.731	124.011	124.511
- 9+400	122.580	122.397	121.650	122.721	124.001	124.501
- 9+450	122.775	122.540	121.705	122.711	123.991	124.491
- 9+500	122.984	122.695	121.768	122.701	123.981	124.481
- 9+550	123.193	122.850	121.831	122.691	123.971	124.471
- 9+600	123.402	123.004	121.894	122.681	123.961	124.461
- 9+650	123.611	123.159	121.957	122.671	123.951	124.451
- 9+700	123.820	123.314	122.019	122.661	123.941	124.441
- 9+750	124.005	123.399	122.054	122.651	123.931	124.431
- 9+800	123.683	123.063	121.846	122.642	123.922	124.422
- 9+850	123.380	122.828	121.624	120.496	121.776	122.276
- 9+900	123.072	122.644	121.417	120.486	121.766	122.266
- 9+950	122.764	122.460	121.210	120.476	121.756	122.256
- 10+000	122.456	122.277	121.003	120.466	121.746	122.246
- 10+050	122.149	122.093	120.796	120.456	121.736	122.236
- 10+100	121.841	121.910	120.589	120.446	121.726	122.226
- 10+150	121.533	121.726	120.382	120.436	121.716	122.216
- 10+200	121.225	121.542	120.175	120.426	121.706	122.206
- 10+250	120.917	121.358	119.968	120.416	121.696	122.196
- 10+300	120.609	121.174	119.760	120.406	121.686	122.186
- 10+350	120.302	120.991	119.553	118.882	120.162	120.682
- 10+400	119.994	120.807	119.346	118.872	120.152	120.652
- 10+450	119.686	120.623	119.139	118.862	120.142	120.642
- 10+500	119.378	120.440	118.932	118.852	120.132	120.632
- 10+500	119.378	120.440	118.932	118.842	120.122	120.622

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

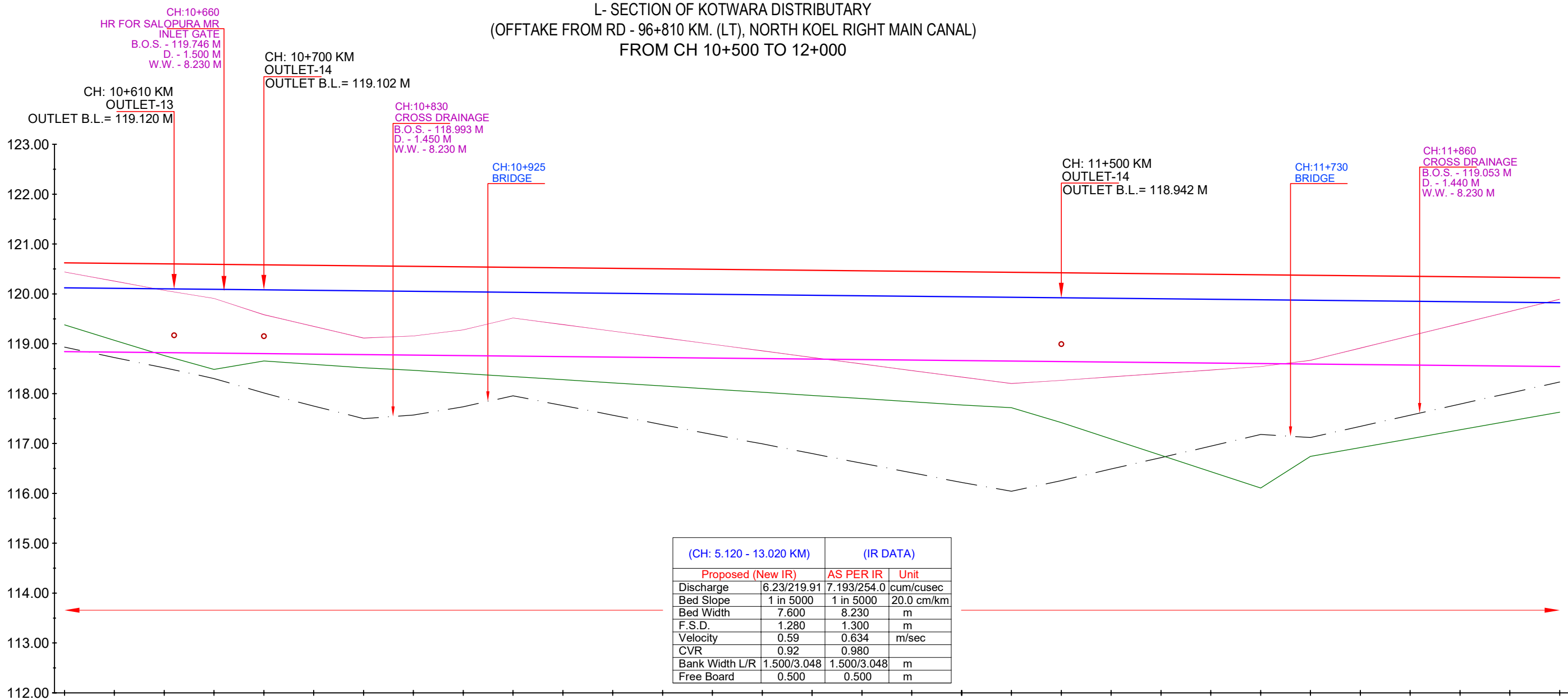
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

07 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 10+500 TO 12+000



DESIGN DATA	TOP OF BANK LEVEL	120.622	120.612	120.602	120.592	120.582	120.572	120.562	120.552	120.542	120.532	120.522	120.512	120.502	120.492	120.482	120.472	120.462	120.452	120.442	120.432	120.422	120.412	120.402	120.392	120.382	120.372	120.362	120.352	120.342	120.332	120.322
	F.S.L.	120.122	120.112	120.102	120.092	120.082	120.072	120.062	120.052	120.042	120.032	120.022	120.012	120.002	119.992	119.982	119.972	119.962	119.952	119.942	119.932	119.922	119.912	119.902	119.892	119.882	119.872	119.862	119.852	119.842	119.832	119.822
EXISTING DATA	Proposed Bed Level	118.842	118.832	118.822	118.812	118.802	118.792	118.782	118.772	118.762	118.752	118.742	118.732	118.722	118.712	118.702	118.692	118.682	118.672	118.662	118.652	118.642	118.632	118.622	118.612	118.602	118.592	118.582	118.572	118.562	118.552	118.542
Chainage IN KM	Bed Level	118.932	118.724	118.518	118.304	118.013	117.751	117.500	117.572	117.737	117.956	117.762	117.569	117.378	117.181	116.993	116.798	116.606	116.415	116.218	116.043	116.255	116.489	116.717	116.947	117.181	117.120	117.344	117.568	117.791	118.012	118.235
	TOP OF BANK LEVEL	120.440	120.256	120.072	119.909	119.583	119.349	119.115	119.157	119.279	119.517	119.386	119.254	119.122	118.991	118.859	118.727	118.596	118.464	118.333	118.205	118.267	118.336	118.406	118.475	118.544	118.667	118.667	118.913	119.157	119.402	119.647
	NSL	119.378	119.071	118.763	118.487	118.656	118.588	118.520	118.469	118.405	118.342	118.279	118.216	118.153	118.090	118.027	117.963	117.901	117.837	117.774	117.717	117.418	117.093	116.762	116.437	116.107	116.741	116.919	117.096	117.274	117.452	117.629

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

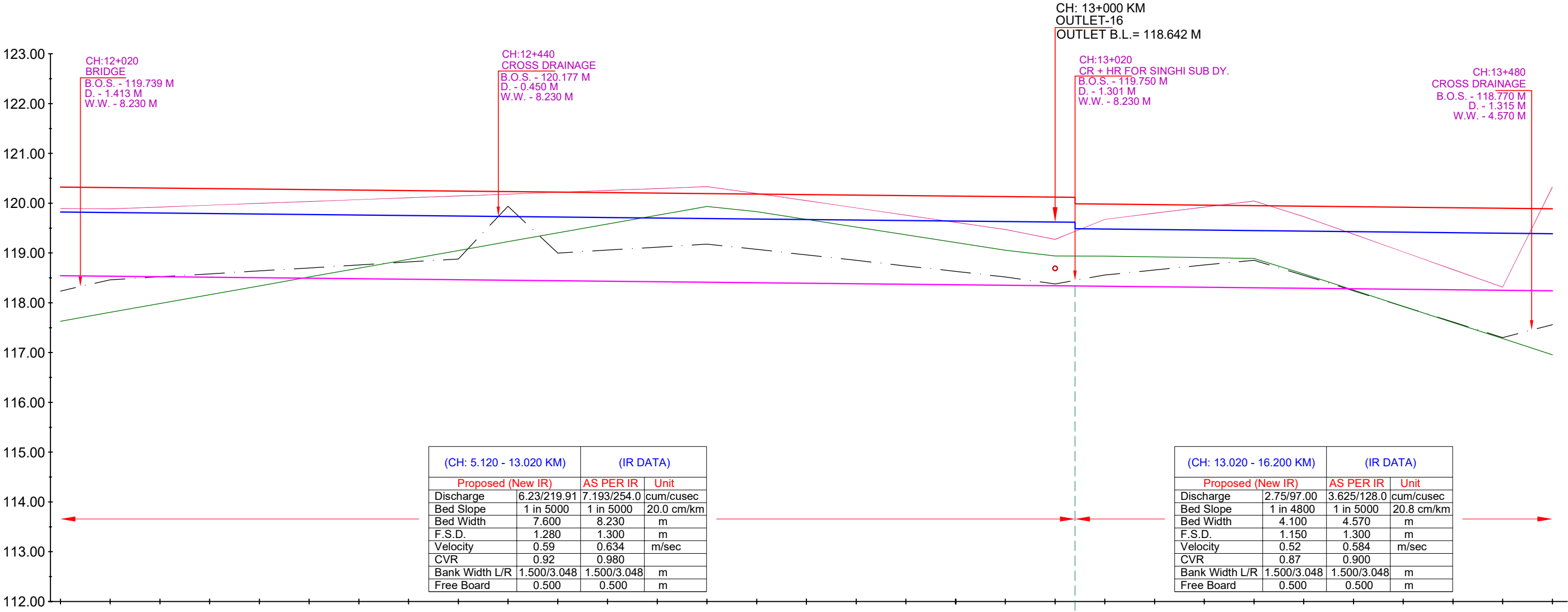
IMPLEMENTING AGENCY :-
WAPCOS LTD.


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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

08 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 12+000 TO 13+500



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-12+000	117.629	119.892	118.235	118.542	119.822	120.322
-12+050	117.807	119.886	118.462	118.532	119.812	120.312
-12+100	117.984	119.923	118.522	118.522	119.802	120.302
-12+150	118.162	119.960	118.581	118.512	119.792	120.292
-12+200	118.339	119.998	118.641	118.502	119.782	120.282
-12+250	118.517	120.035	118.700	118.492	119.772	120.272
-12+300	118.694	120.072	118.760	118.482	119.762	120.262
-12+350	118.872	120.109	118.820	118.472	119.752	120.252
-12+400	119.049	120.146	118.879	118.462	119.742	120.242
-12+450	119.227	120.183	118.939	118.452	119.732	120.232
-12+500	119.404	120.220	118.999	118.442	119.722	120.222
-12+550	119.581	120.257	119.058	118.432	119.712	120.212
-12+600	119.759	120.294	119.118	118.422	119.702	120.202
-12+650	119.935	120.332	119.177	118.412	119.692	120.192
-12+700	119.831	120.196	119.073	118.402	119.682	120.182
-12+750	119.676	120.051	118.962	118.392	119.672	120.172
-12+800	119.521	119.906	118.852	118.382	119.662	120.162
-12+850	119.366	119.761	118.740	118.372	119.652	120.152
-12+900	119.212	119.616	118.632	118.362	119.642	120.142
-12+950	119.057	119.471	118.518	118.352	119.632	120.132
-13+000	118.939	119.273	118.377	118.342	119.622	120.122
-13+020	---	---	---	118.336	119.618	120.118
-13+050	118.935	119.676	118.558	118.332	119.488	119.988
-13+100	118.921	119.799	118.658	118.321	119.482	119.982
-13+150	118.906	119.923	118.760	118.311	119.471	119.971
-13+200	118.891	120.044	118.854	118.301	119.461	119.961
-13+250	118.578	119.731	118.551	118.290	119.451	119.951
-13+300	118.255	119.377	118.242	118.280	119.440	119.940
-13+350	117.929	119.023	117.928	118.269	119.430	119.930
-13+400	117.605	118.669	117.615	118.259	119.419	119.919
-13+450	117.282	118.315	117.299	118.248	119.409	119.909
-13+500	116.956	120.325	117.559	118.238	119.398	119.898

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

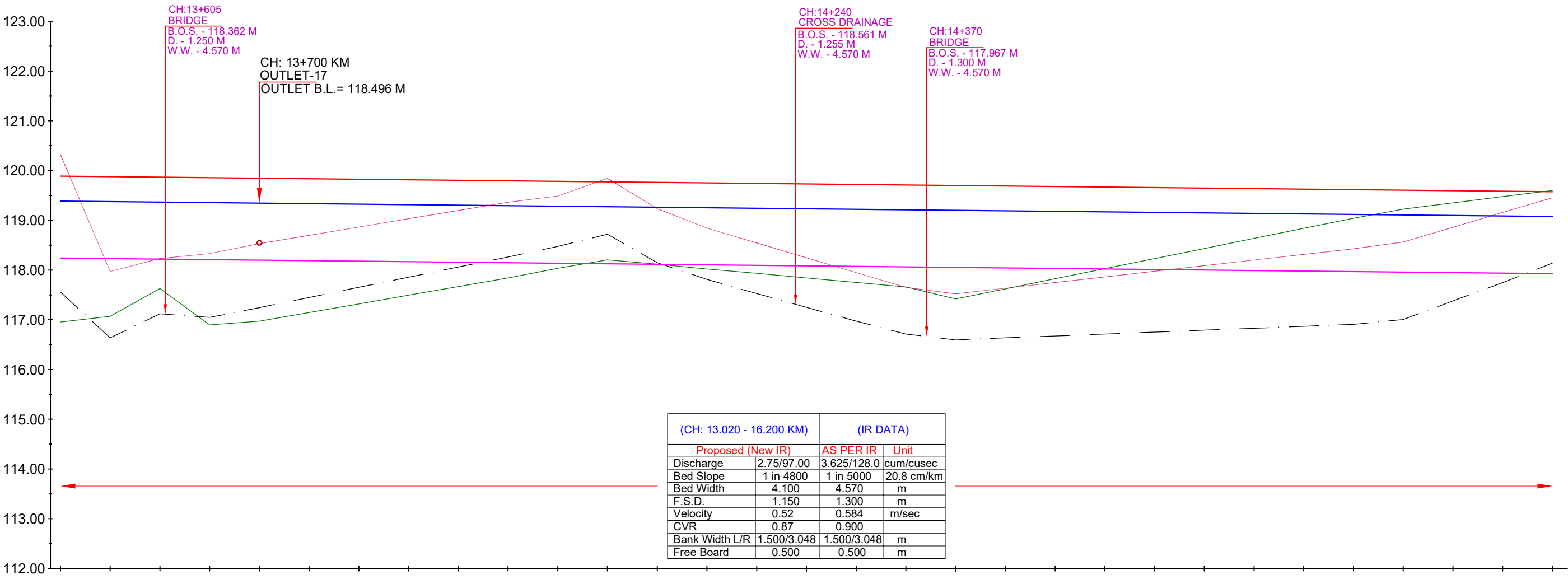
DRAWING TITLE :-

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 13+500 TO 15+000



Chainage IN KM	DESIGN DATA			EXISTING DATA	
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL
-13+500	119.888	119.388	118.238	117.559	120.325
-13+550	119.878	119.378	118.228	116.636	117.971
-13+600	119.867	119.367	118.217	117.119	118.233
-13+650	119.857	119.357	118.207	117.047	118.332
-13+700	119.846	119.346	118.196	117.244	118.531
-13+750	119.836	119.336	118.186	117.449	118.698
-13+800	119.826	119.326	118.176	117.653	118.865
-13+850	119.815	119.315	118.165	117.856	119.032
-13+900	119.805	119.305	118.155	118.061	119.198
-13+950	119.794	119.294	118.144	118.264	119.365
-14+000	119.784	119.284	118.134	118.477	119.488
-14+050	119.773	119.273	118.123	118.719	119.843
-14+100	119.763	119.263	118.113	118.148	119.235
-14+150	119.753	119.253	118.103	117.811	118.843
-14+200	119.742	119.242	118.092	117.529	118.545
-14+250	119.732	119.232	118.082	117.250	118.247
-14+300	119.721	119.221	118.071	116.972	117.949
-14+350	119.711	119.211	118.061	116.714	117.651
-14+400	119.701	119.201	118.051	116.596	117.523
-14+450	119.690	119.190	118.040	116.636	117.636
-14+500	119.680	119.180	118.030	116.674	117.749
-14+550	119.669	119.169	118.019	116.713	117.862
-14+600	119.659	119.159	118.009	116.752	117.976
-14+650	119.648	119.148	117.998	116.791	118.089
-14+700	119.638	119.138	117.988	116.829	118.202
-14+750	119.628	119.128	117.978	116.869	118.315
-14+800	119.617	119.117	117.967	116.909	118.428
-14+850	119.607	119.107	117.957	117.006	118.563
-14+900	119.596	119.096	117.946	117.379	118.860
-14+950	119.586	119.086	117.936	117.746	119.157
-15+000	119.576	119.076	117.926	118.139	119.455

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

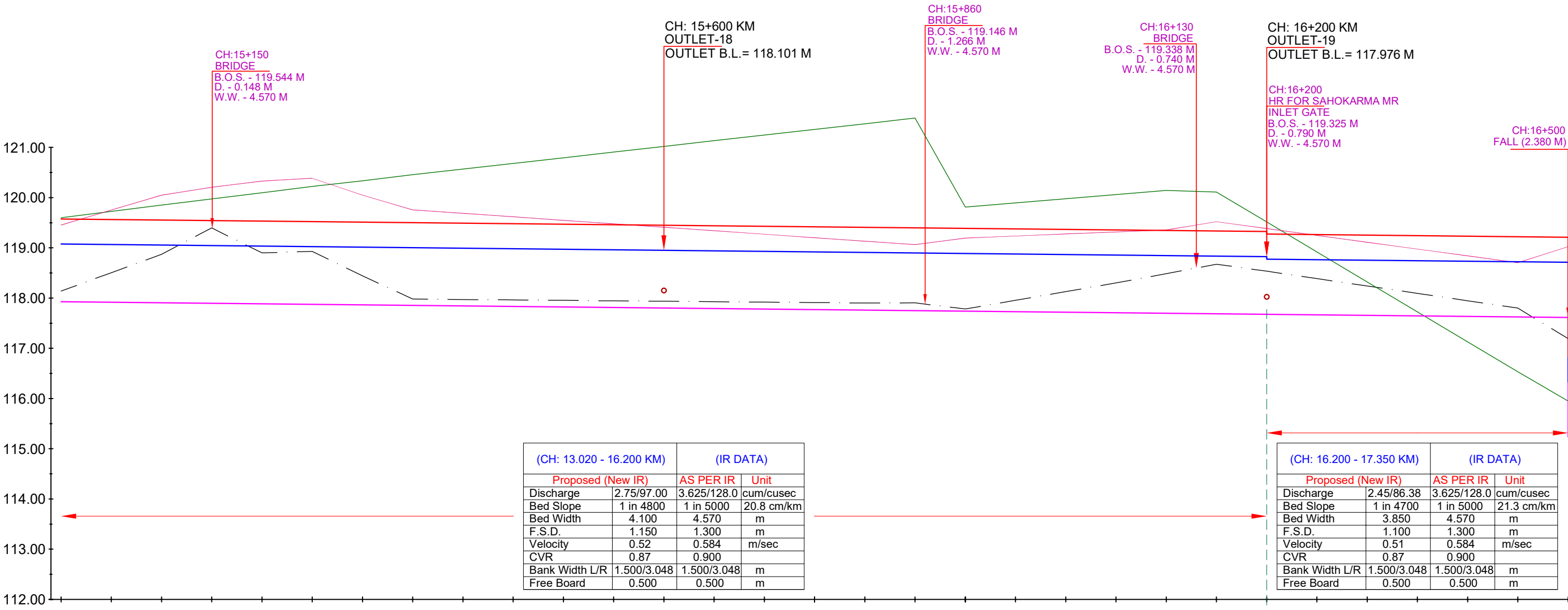
IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 15+000 TO 16+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
-15+000	119.576	119.076	117.926	118.139	119.455	119.600
-15+050	119.565	119.065	117.915	118.505	119.752	119.725
-15+100	119.555	119.055	117.905	118.873	120.049	119.850
-15+150	119.544	119.044	117.894	119.396	120.207	119.974
-15+200	119.534	119.034	117.884	118.900	120.328	120.097
-15+250	119.523	119.023	117.873	118.929	120.386	120.223
-15+300	119.513	119.013	117.863	118.442	120.051	120.336
-15+350	119.503	119.003	117.853	117.981	119.757	120.456
-15+400	119.492	118.992	117.842	117.971	119.688	120.569
-15+450	119.482	118.982	117.832	117.963	119.618	120.681
-15+500	119.471	118.971	117.821	117.955	119.549	120.794
-15+550	119.461	118.961	117.811	117.944	119.479	120.907
-15+600	119.451	118.951	117.801	117.938	119.410	121.020
-15+650	119.440	118.940	117.790	117.927	119.341	121.133
-15+700	119.430	118.930	117.780	117.920	119.272	121.245
-15+750	119.419	118.919	117.769	117.911	119.202	121.358
-15+800	119.409	118.909	117.759	117.901	119.133	121.471
-15+850	119.398	118.898	117.748	117.905	119.064	121.584
-15+900	119.388	118.888	117.738	117.782	119.195	119.813
-15+950	119.378	118.878	117.728	117.955	119.236	119.896
-16+000	119.367	118.867	117.717	118.128	119.276	119.979
-16+050	119.357	118.857	117.707	118.302	119.317	120.061
-16+100	119.346	118.846	117.696	118.485	119.357	120.144
-16+150	119.336	118.836	117.686	118.674	119.520	120.112
-16+200	119.226	118.826	117.676	118.535	119.384	119.515
-16+250	119.265	118.765	117.665	118.388	119.248	118.918
-16+300	119.254	118.754	117.654	118.241	119.112	118.322
-16+350	119.244	118.744	117.644	118.095	118.976	117.726
-16+400	119.233	118.733	117.633	117.947	118.840	117.129
-16+450	119.222	118.722	117.622	117.801	118.704	116.533
-16+500	119.212	118.712	117.612	117.192	119.024	115.948

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

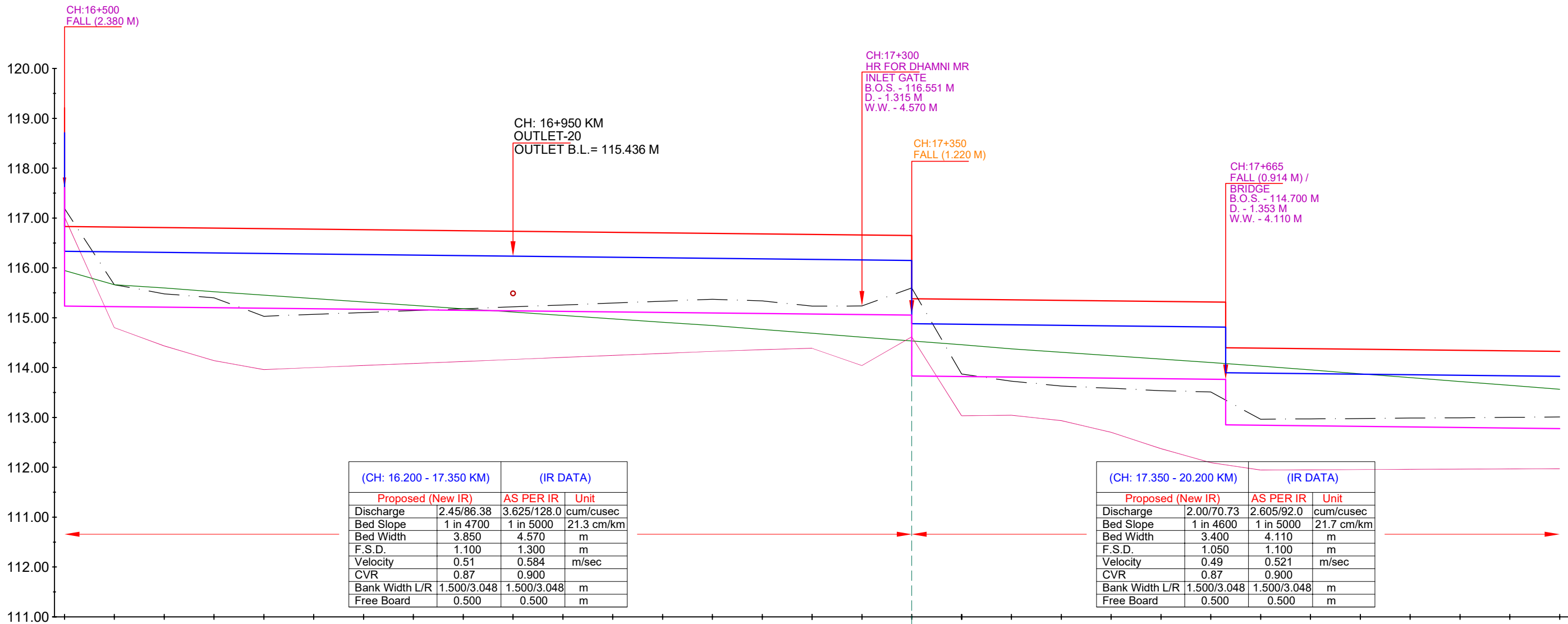
DRAWING TITLE :-

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 16+500 TO 18+000



DESIGN DATA	DESIGN DATA		EXISTING DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	Bed Level	TOP OF BANK LEVEL	
	119.212 116.832	118.712 116.332	117.192 115.232	119.024 116.801	-16+500
	116.821	116.321	115.664	116.436	-16+550
	116.810	116.310	115.480	116.140	-16+600
	116.800	116.300	115.400	116.140	-16+650
	116.789	116.289	115.030	115.961	-16+700
	116.778	116.278	115.067	116.002	-16+750
	116.768	116.268	115.105	116.042	-16+800
	116.757	116.257	115.143	116.083	-16+850
	116.747	116.247	115.181	116.123	-16+900
	116.736	116.236	115.218	116.164	-16+950
	116.725	116.225	115.256	116.205	-17+000
	116.715	116.215	115.294	116.245	-17+050
	116.704	116.204	115.332	116.286	-17+100
	116.693	116.193	115.370	116.326	-17+150
	116.683	116.183	115.338	116.359	-17+200
	116.672	116.172	115.234	116.388	-17+250
	116.661	116.161	115.236	116.041	-17+300
	116.651	116.151	115.597	116.618	-17+350
	115.381	114.881	113.831	115.035	-17+400
	115.370	114.870	113.873	115.044	-17+450
	115.359	114.859	113.728	114.938	-17+500
	115.348	114.848	113.630	114.702	-17+550
	115.337	114.837	113.586	114.376	-17+600
	115.326	114.826	113.538	114.095	-17+650
	115.316	114.816	113.511	113.947	-17+700
	115.312	114.812	113.511	113.951	-17+750
	114.398	113.898	112.841	113.955	-17+800
	114.391	113.891	112.841	113.959	-17+850
	114.380	113.880	112.972	113.964	-17+900
	114.369	113.869	112.978	113.968	-17+950
	114.358	113.858	112.988	113.972	-18+000
	114.347	113.847	112.993		
	114.336	113.836	113.002		
	114.326	113.826	113.009		

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

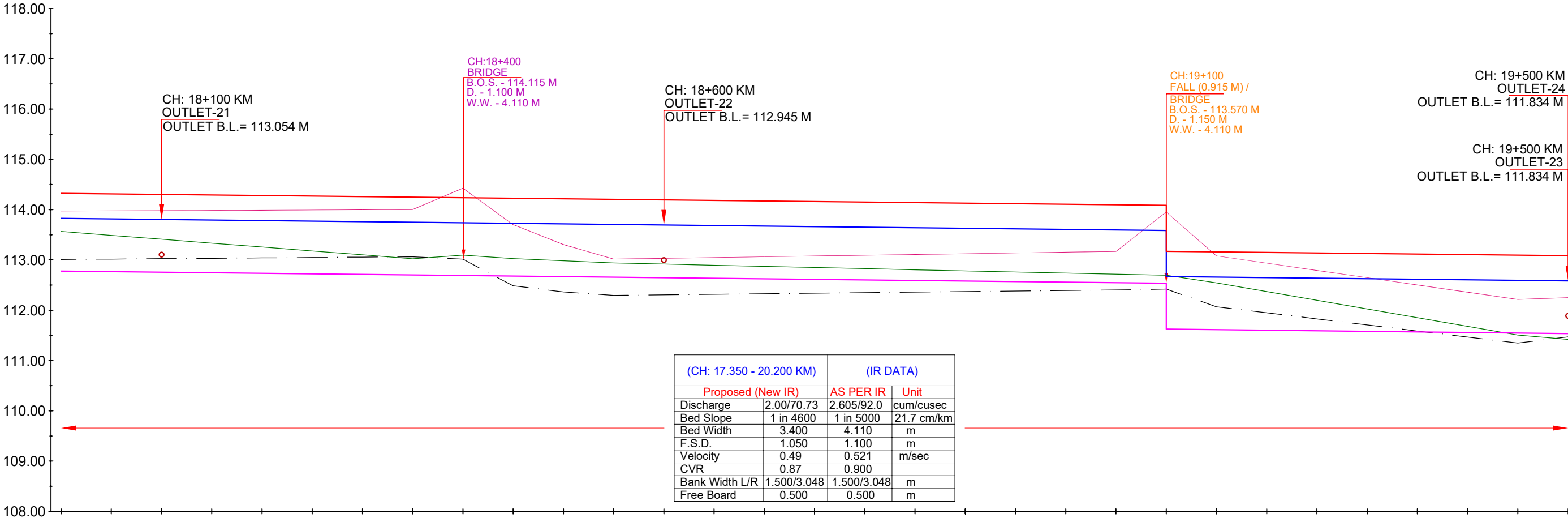
PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-
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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 18+000 TO 19+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
-18+000	114.326	113.826	112.776	113.009	113.972	113.566
-18+050	114.315	113.815	112.765	113.017	113.976	113.488
-18+100	114.304	113.804	112.754	113.025	113.980	113.411
-18+150	114.293	113.793	112.743	113.032	113.984	113.333
-18+200	114.282	113.782	112.732	113.041	113.988	113.256
-18+250	114.271	113.771	112.721	113.047	113.993	113.178
-18+300	114.260	113.760	112.710	113.057	113.997	113.101
-18+350	114.249	113.749	112.699	113.062	114.001	113.023
-18+400	114.239	113.739	112.689	113.015	114.427	113.095
-18+450	114.228	113.728	112.678	112.486	113.702	113.027
-18+500	114.217	113.717	112.667	112.362	113.305	112.983
-18+550	114.206	113.706	112.656	112.295	113.018	112.939
-18+600	114.195	113.695	112.645	112.306	113.033	112.917
-18+650	114.184	113.684	112.634	112.316	113.048	112.895
-18+700	114.173	113.673	112.623	112.327	113.063	112.872
-18+750	114.162	113.662	112.612	112.338	113.078	112.850
-18+800	114.152	113.652	112.602	112.349	113.093	112.828
-18+850	114.141	113.641	112.591	112.359	113.108	112.805
-18+900	114.130	113.630	112.580	112.370	113.123	112.783
-18+950	114.119	113.619	112.569	112.381	113.139	112.761
-19+000	114.108	113.608	112.558	112.392	113.154	112.738
-19+050	114.097	113.597	112.547	112.402	113.169	112.716
-19+100	114.086	113.586	112.536	112.420	113.952	112.694
-19+150	113.171	112.671	111.621	112.069	113.081	112.543
-19+200	113.150	112.650	111.600	111.951	112.937	112.370
-19+250	113.139	112.639	111.589	111.828	112.792	112.198
-19+300	113.128	112.628	111.578	111.708	112.648	112.025
-19+350	113.117	112.617	111.567	111.587	112.504	111.852
-19+400	113.106	112.606	111.556	111.466	112.360	111.679
-19+450	113.095	112.595	111.545	111.346	112.216	111.506
-19+500	113.084	112.584	111.534	111.470	112.250	111.418

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

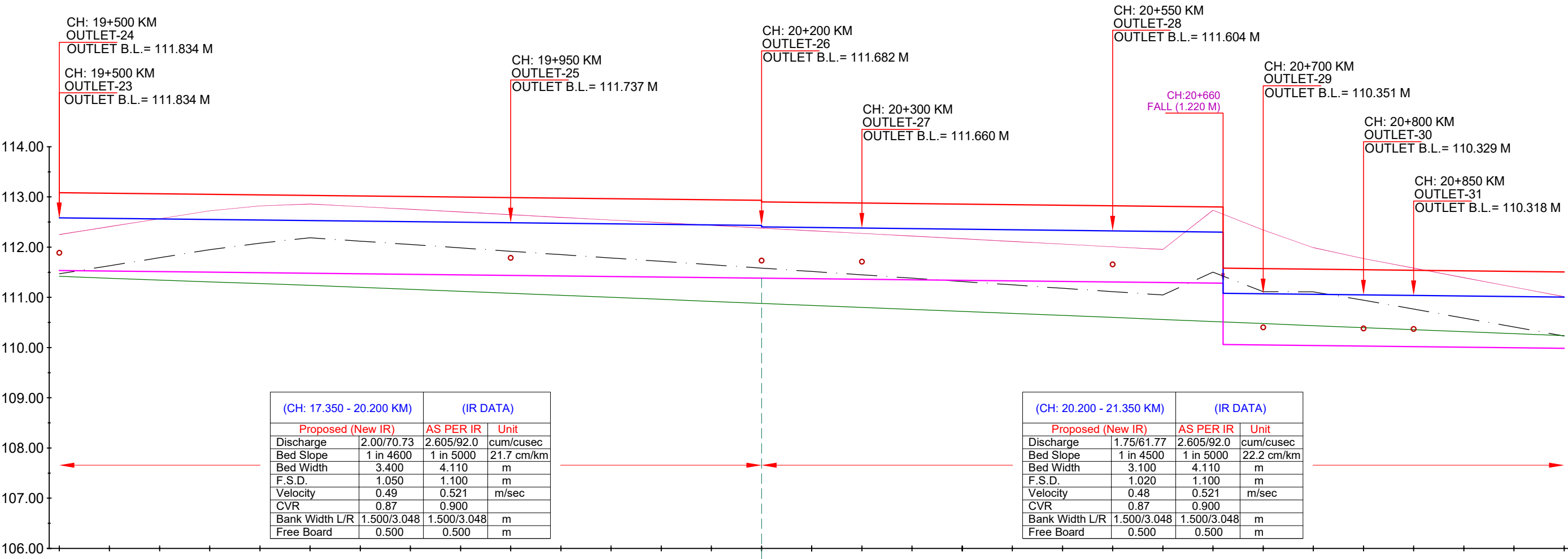
IMPLEMENTING AGENCY :-
WAPCOS LTD.


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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 19+500 TO 21+000



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	111.470	111.534	-19+500
TOP OF BANK LEVEL	112.250	111.524	-19+550
NSL	111.418	111.513	-19+600
	112.408	111.502	-19+650
	112.566	111.491	-19+700
	112.724	111.480	-19+750
	112.822	111.469	-19+800
	112.860	111.458	-19+850
	112.754	111.447	-19+900
	112.700	111.437	-19+950
	112.647	111.426	-20+000
	112.594	111.415	-20+050
	112.541	111.404	-20+100
	112.487	111.393	-20+150
	112.434	111.382	-20+200
	112.327	111.371	-20+250
	112.274	111.360	-20+300
	112.220	111.349	-20+350
	112.167	111.338	-20+400
	112.114	111.327	-20+450
	112.061	111.316	-20+500
	112.007	111.304	-20+550
	111.954	111.293	-20+600
	112.735	111.282	-20+650
	112.342	111.271	-20+700
	111.990	111.260	-20+750
	111.773	111.250	-20+800
	111.583	111.240	-20+850
	111.393	111.230	-20+900
	111.204	111.220	-20+950
	111.014	111.210	-21+000

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

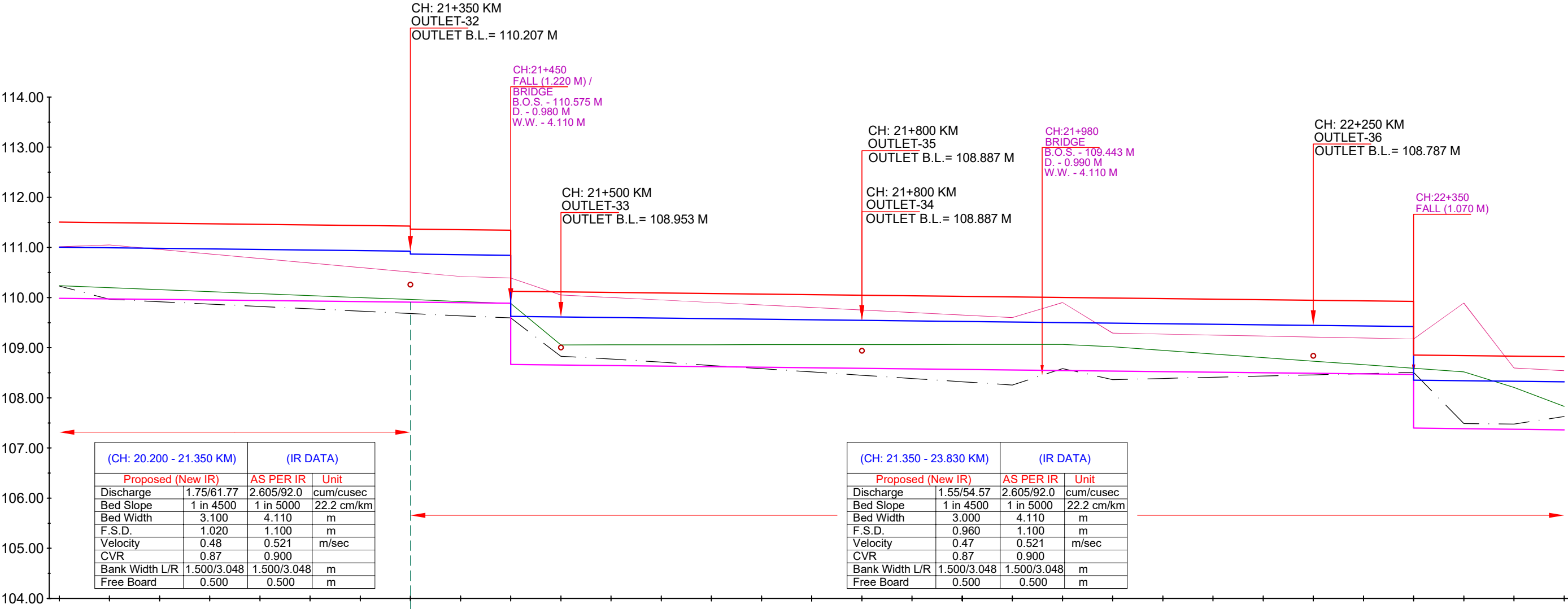
DRAWING TITLE :-

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 21+000 TO 22+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Proposed Bed Level			
Bed Level			
TOP OF BANK LEVEL			
NSL			

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

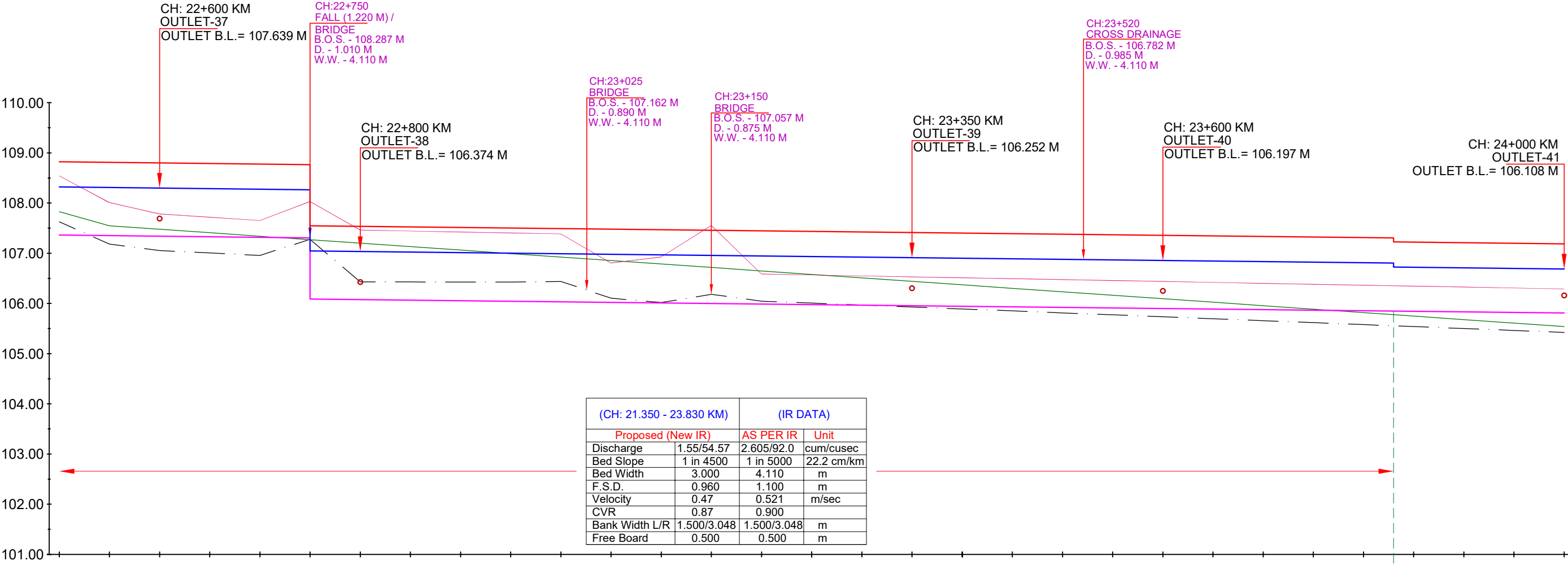
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 22+500 TO 24+000



EXISTING DATA	DESIGN DATA			Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	
Bed Level	107.627	108.321	107.361	-22+500
TOP OF BANK LEVEL	108.543	108.310	107.350	-22+550
NSL	107.829	108.299	107.339	-22+600
	107.548	108.288	107.328	-22+650
	107.479	108.277	107.317	-22+700
	107.410	108.266	107.306	-22+750
	107.340	107.046	106.086	-22+800
	107.271	107.034	106.074	-22+850
	107.202	107.023	106.063	-22+900
	107.132	107.012	106.052	-22+950
	107.063	107.001	106.041	-23+000
	106.994	106.990	106.030	-23+050
	106.925	106.979	106.019	-23+100
	106.856	106.968	106.008	-23+150
	106.786	106.957	105.997	-23+200
	106.717	106.946	105.986	-23+250
	106.648	106.934	105.974	-23+300
	106.579	106.923	105.963	-23+350
	106.509	106.912	105.952	-23+400
	106.440	106.901	105.941	-23+450
	106.371	106.890	105.930	-23+500
	106.302	106.879	105.919	-23+550
	106.232	106.868	105.908	-23+600
	106.163	106.857	105.897	-23+650
	106.094	106.846	105.886	-23+700
	106.025	106.834	105.874	-23+750
	105.955	106.823	105.863	-23+800
	105.886	106.812	105.852	-23+830
	105.817	106.801	105.841	-23+850
	105.748	106.790	105.830	-23+900
	105.678	106.779	105.819	-23+950
	105.609	106.768	105.808	-24+000

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

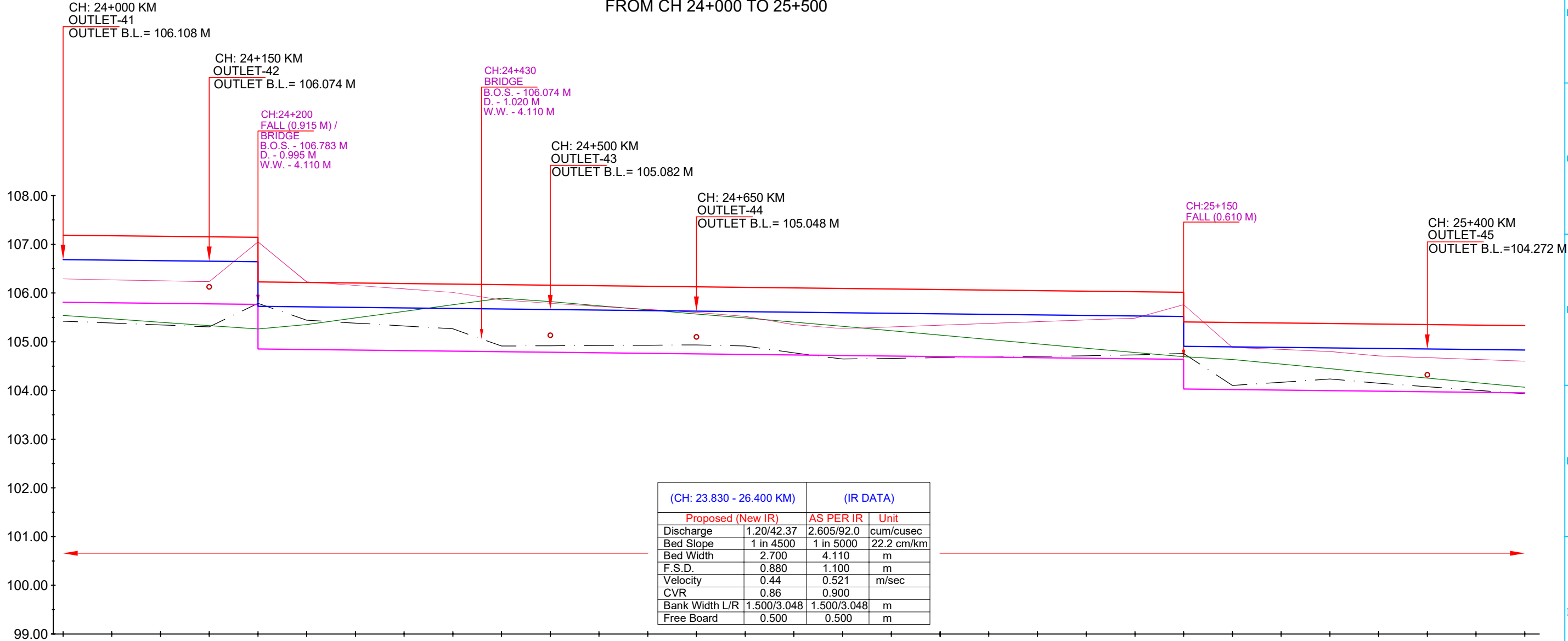
DRAWING TITLE :-

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 24+000 TO 25+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Proposed Bed Level			
Bed Level			
TOP OF BANK LEVEL			
NSL			

107.188	106.688	105.808	105.423	106.290	105.540	-24+000
107.177	106.677	105.797	105.384	106.271	105.471	-24+050
107.166	106.666	105.786	105.345	106.253	105.401	-24+100
107.154	106.654	105.774	105.306	106.234	105.332	-24+150
107.143	106.643	105.763	105.788	107.050	105.263	-24+200
106.228	105.728	104.848	105.443	106.229	105.352	-24+250
106.217	105.717	104.837	105.383	106.157	105.488	-24+300
106.206	105.706	104.826	105.325	106.085	105.624	-24+350
106.195	105.695	104.815	105.266	106.013	105.760	-24+400
106.184	105.684	104.804	104.913	105.860	105.895	-24+450
106.173	105.673	104.793	104.917	105.789	105.823	-24+500
106.162	105.662	104.782	104.924	105.726	105.738	-24+550
106.151	105.651	104.771	104.929	105.665	105.654	-24+600
106.139	105.639	104.759	104.935	105.603	105.569	-24+650
106.128	105.628	104.748	104.914	105.520	105.488	-24+700
106.117	105.617	104.737	104.771	105.352	105.403	-24+750
106.106	105.606	104.726	104.645	105.270	105.315	-24+800
106.095	105.595	104.715	104.659	105.305	105.225	-24+850
106.084	105.584	104.704	104.674	105.342	105.136	-24+900
106.073	105.573	104.693	104.685	105.378	105.047	-24+950
106.062	105.562	104.682	104.702	105.413	104.958	-25+000
106.051	105.551	104.671	104.711	105.449	104.868	-25+050
106.039	105.539	104.659	104.731	105.485	104.790	-25+100
106.028	105.528	104.648	104.760	105.761	104.694	-25+150
106.007	105.517	104.637	104.104	104.882	104.637	-25+200
105.996	104.907	104.027	104.169	104.842	104.543	-25+250
105.396	104.896	104.016	104.235	104.800	104.449	-25+300
105.385	104.885	104.005	104.149	104.710	104.346	-25+350
105.374	104.874	103.994	104.076	104.674	104.252	-25+400
105.363	104.863	103.983	104.005	104.638	104.159	-25+450
105.352	104.852	103.972	103.933	104.603	104.065	-25+500
105.341	104.841	103.961				
105.329	104.829	103.949				

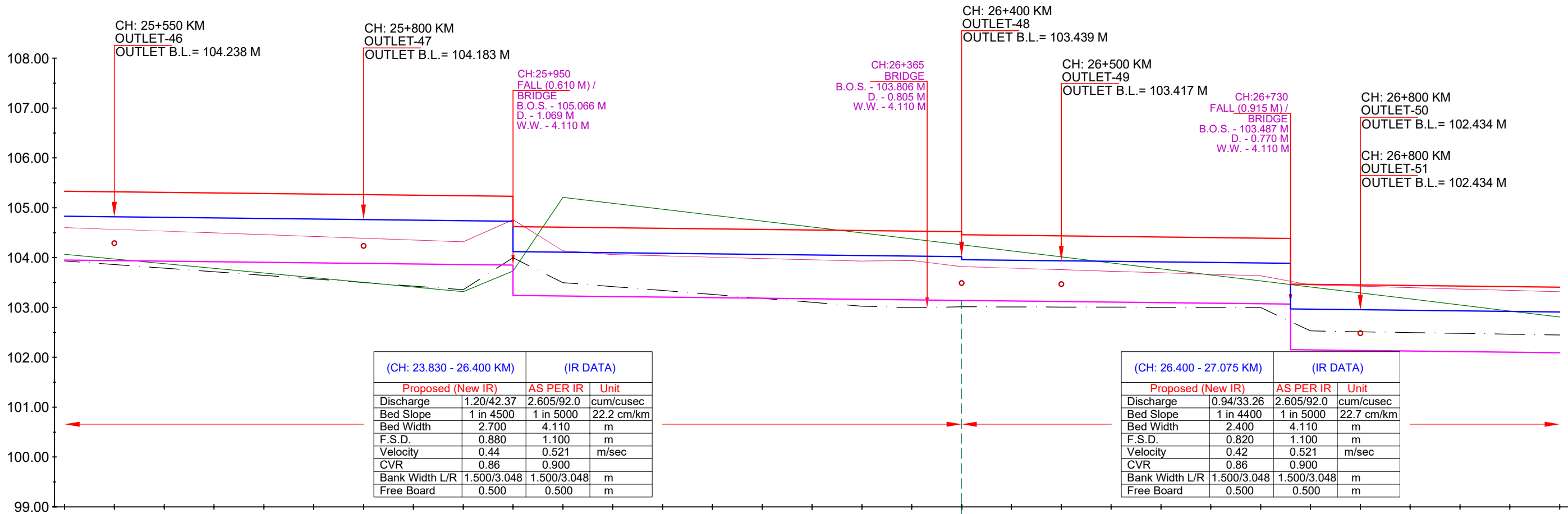
LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-
	17 of 21

L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 25+500 TO 27+000



Chainage IN KM	EXISTING DATA		DESIGN DATA	
	NSL	TOP OF BANK LEVEL	Proposed Bed Level	F.S.L.
-25+500	104.065	104.603	103.949	104.829
-25+550	103.971	104.567	103.938	104.818
-25+600	103.878	104.532	103.927	104.807
-25+650	103.784	104.497	103.916	104.796
-25+700	103.690	104.461	103.905	104.785
-25+750	103.599	104.425	103.894	104.774
-25+800	103.505	104.389	103.883	104.763
-25+850	103.412	104.353	103.872	104.752
-25+900	103.318	104.316	103.861	104.741
-25+950	103.733	104.761	103.849	104.729
-26+000	105.208	104.138	103.228	104.108
-26+050	105.089	104.062	103.217	104.097
-26+100	104.970	104.036	103.206	104.086
-26+150	104.851	104.009	103.195	104.075
-26+200	104.732	103.983	103.184	104.064
-26+250	104.613	103.957	103.173	104.053
-26+300	104.494	103.930	103.162	104.042
-26+350	104.375	103.941	103.151	104.031
-26+400	104.257	103.820	103.139	104.019
-26+450	104.136	103.789	103.128	103.948
-26+500	104.015	103.759	103.117	103.937
-26+550	103.894	103.727	103.105	103.925
-26+600	103.774	103.697	103.094	103.914
-26+650	103.653	103.666	103.083	103.903
-26+700	103.532	103.635	103.071	103.891
-26+750	103.412	103.453	102.145	103.884
-26+800	103.291	103.426	102.134	102.954
-26+850	103.171	103.398	102.122	102.942
-26+900	103.050	103.371	102.111	102.931
-26+950	102.929	103.343	102.099	102.919
-27+000	102.808	103.315	102.088	102.908

LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

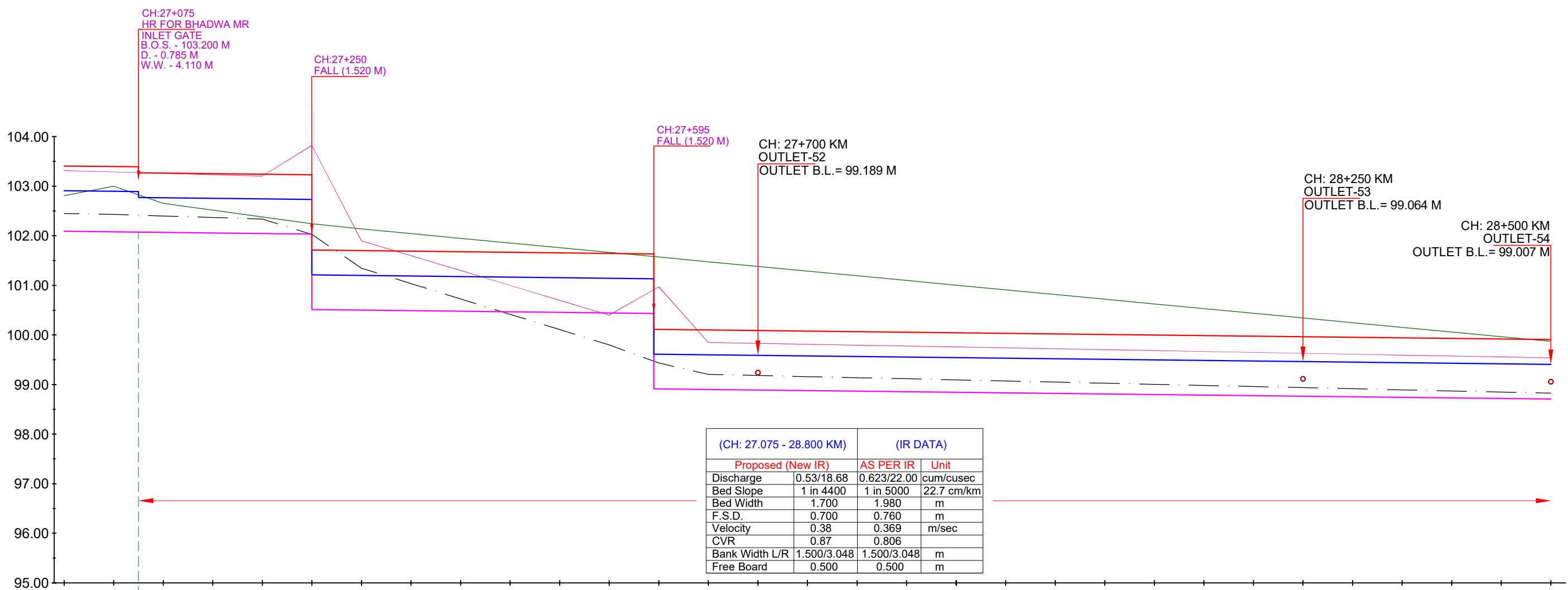
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

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L- SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 27+000 TO 28+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	103.408	102.908	-27+000
TOP OF BANK LEVEL	103.397	102.897	-27+050
NSL	103.391	102.891	-27+075
	103.271	102.771	-27+100
	103.265	102.765	-27+150
	103.254	102.754	-27+200
	103.243	102.743	-27+250
	103.231	102.731	-27+300
	101.711	101.211	-27+350
	101.700	101.200	-27+400
	101.689	101.189	-27+450
	101.677	101.177	-27+500
	101.666	101.166	-27+550
	101.654	101.154	-27+600
	101.643	101.143	-27+650
	101.633	101.133	-27+700
	100.113	99.612	-27+750
	100.112	99.612	-27+800
	100.100	99.600	-27+850
	100.089	99.589	-27+900
	100.078	99.578	-27+950
	100.066	99.566	-28+000
	100.055	99.555	-28+050
	100.044	99.544	-28+100
	100.032	99.532	-28+150
	100.021	99.521	-28+200
	100.009	99.509	-28+250
	99.998	99.498	-28+300
	99.987	99.487	-28+350
	99.975	99.475	-28+400
	99.964	99.464	-28+450
	99.953	99.453	-28+500

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

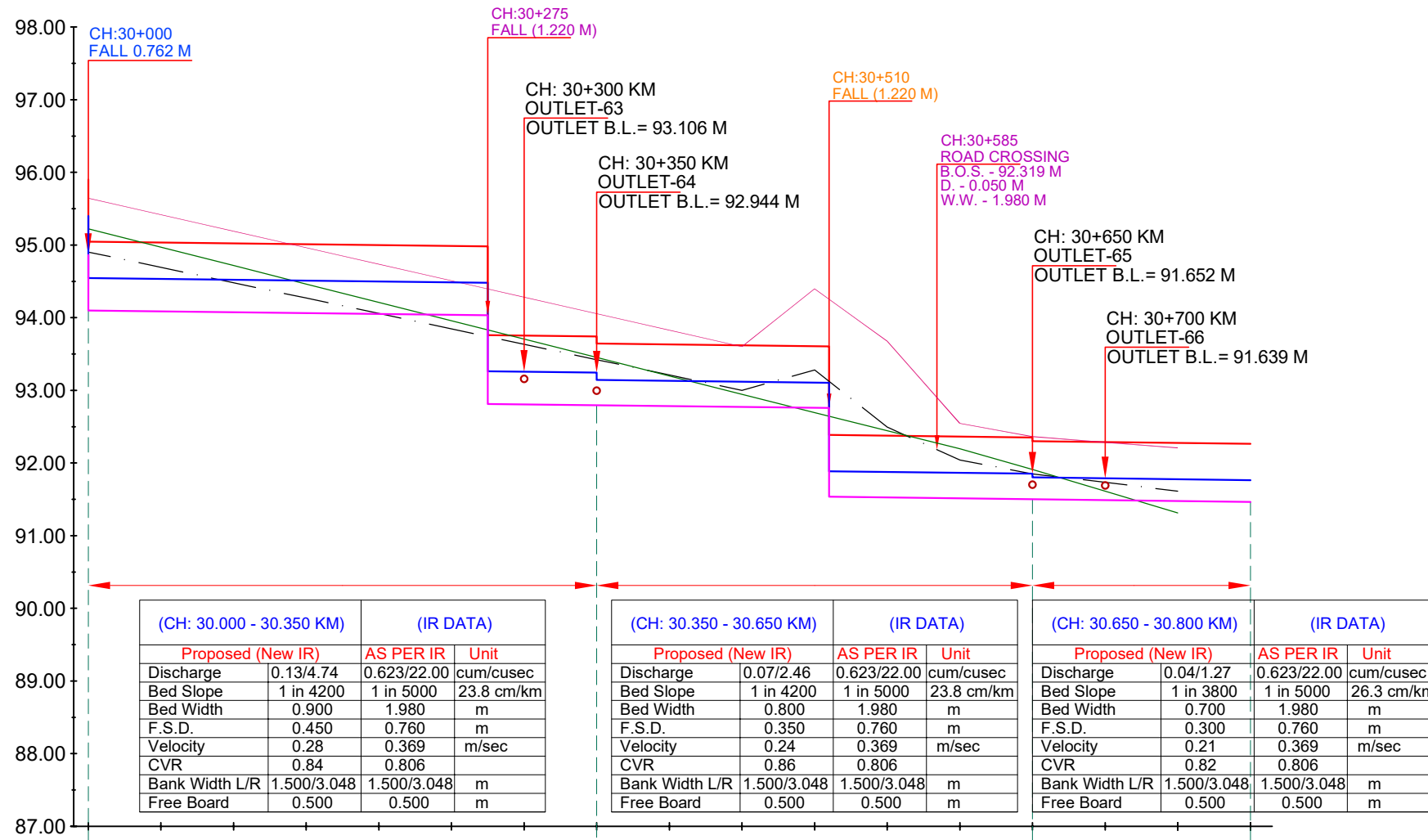
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L),
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC-

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FROM CH 30+000 TO 30+800



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
30+000	95.223	95.645	94.904	94.859 94.097	95.399 94.547	95.899 95.047
30+050	94.970	95.417	94.693	94.085	94.535	95.035
30+100	94.717	95.190	94.481	94.073	94.523	95.023
30+150	94.464	94.964	94.270	94.061	94.511	95.011
30+200	94.211	94.736	94.058	94.049	94.499	94.999
30+250	93.958	94.509	93.847	94.037	94.487	94.987
30+300	93.705	94.283	93.635	94.032 92.812	94.482 93.262	94.982 93.762
30+350	93.452	94.055	93.423	92.794	93.244 93.144	93.744 93.644
30+400	93.199	93.828	93.212	92.782	93.132	93.632
30+450	92.946	93.602	93.000	92.770	93.120	93.620
30+500	92.693	94.397	93.281	92.758 92.756 91.536	93.108 93.106 91.886	93.608 93.606 92.386
30+550	92.446	93.678	92.494	91.526	91.876	92.376
30+600	92.197	92.546	92.041	91.514	91.864	92.364
30+650	91.910	92.363	91.851	91.502	91.852 91.802	92.352 92.302
30+700	91.611	92.286	91.734	91.489	91.789	92.289
30+750	91.312	92.209	91.614	91.476	91.776	92.276
30+800				91.463	91.763	92.263

LEGEND				IMPLEMENTING AGENCY :- WAPCOS LTD. 	PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
	NSL		EXISTING BED LEVEL		DRAWING TITLE :-	L- SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)		
	EXISTING TOP OF BANK		PROPOSED BED LEVEL		DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035/ LSEC- 21 of 21		
	EXISTING STRUCTURE		PROPOSED FSL					
	MODIFIED STRUCTURE		PROPOSED TOP OF BANK LEVEL					
	NEW STRUCTURE							

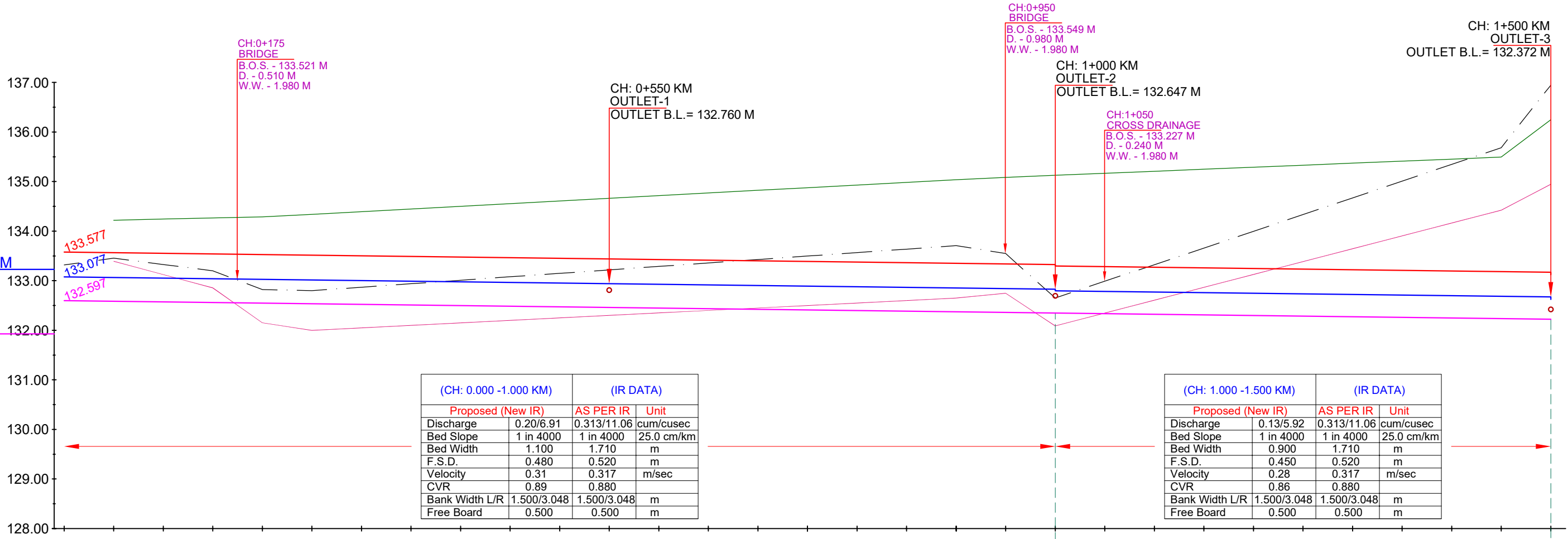
GAMHARIA MINOR

L- SECTION OF GAMHARI MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500

DATA OF
PARENT
CANAL

FSL @ FULL
DISCH. = 133.227 M

B.L.= 131.927 M



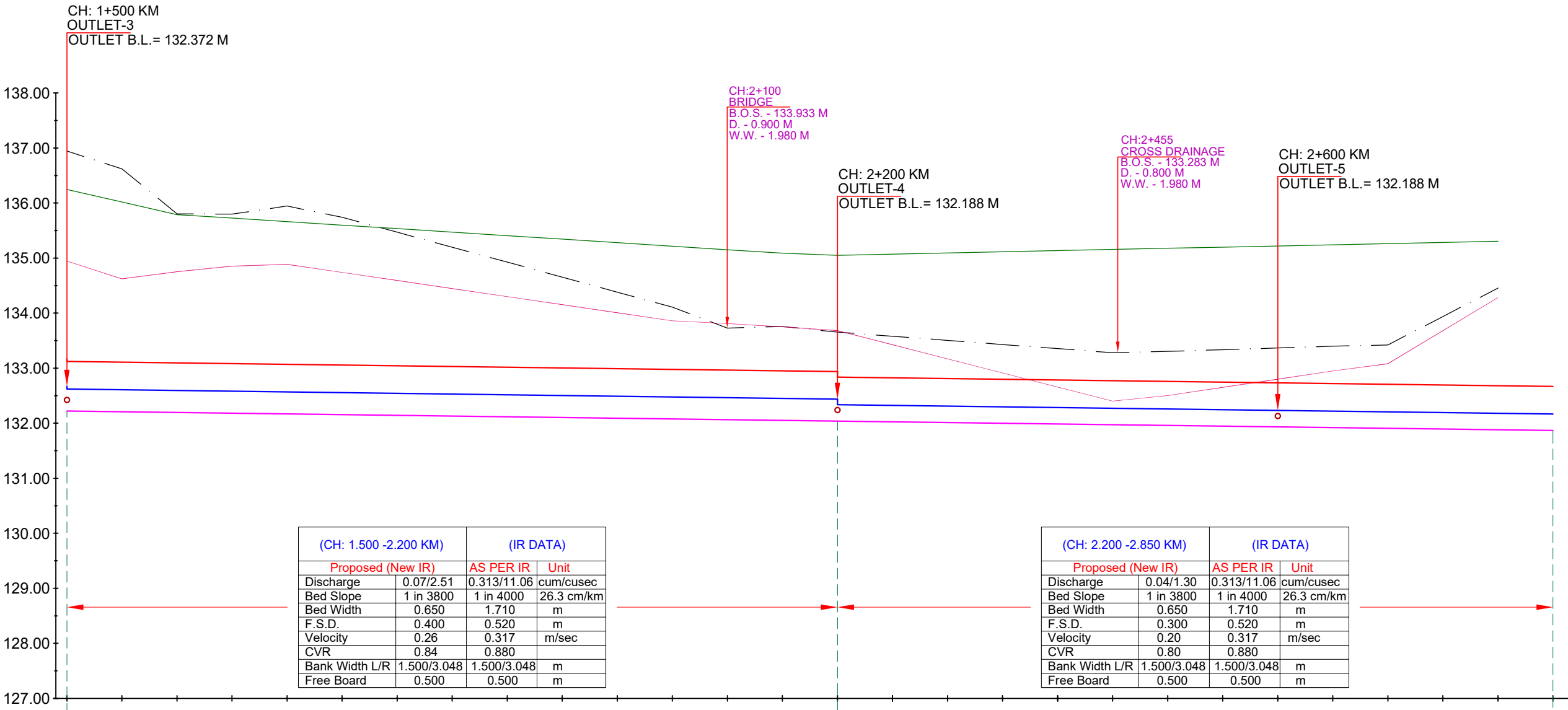
Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
+ 0+000			133.319	132.597	133.077	133.577
+ 0+050	134.220	135.394	133.454	132.585	133.065	133.565
+ 0+100	134.243	135.124	133.327	132.572	133.052	133.552
+ 0+150	134.266	134.855	133.201	132.560	133.040	133.540
+ 0+200	134.289	134.151	132.820	132.547	133.027	133.527
+ 0+250	134.339	133.999	132.799	132.535	133.015	133.515
+ 0+300	134.393	134.049	132.869	132.522	133.002	133.502
+ 0+350	134.447	134.100	132.939	132.510	132.990	133.490
+ 0+400	134.501	134.150	133.009	132.497	132.977	133.477
+ 0+450	134.554	134.199	133.079	132.485	132.965	133.465
+ 0+500	134.608	134.250	133.148	132.472	132.952	133.452
+ 0+550	134.662	134.300	133.218	132.460	132.940	133.440
+ 0+600	134.716	134.350	133.288	132.447	132.927	133.427
+ 0+650	134.770	134.400	133.358	132.435	132.915	133.415
+ 0+700	134.823	134.450	133.428	132.422	132.902	133.402
+ 0+750	134.877	134.500	133.497	132.410	132.890	133.390
+ 0+800	134.931	134.550	133.567	132.397	132.877	133.377
+ 0+850	134.985	134.601	133.637	132.385	132.865	133.365
+ 0+900	135.039	134.651	133.707	132.372	132.852	133.352
+ 0+950	135.085	134.748	133.549	132.360	132.840	133.340
+ 1+000	135.126	134.089	132.651	132.347	132.827	133.327
+ 1+050	135.167	134.348	132.991	132.335	132.785	133.285
+ 1+100	135.208	134.607	133.322	132.322	132.772	133.272
+ 1+150	135.249	134.867	133.657	132.310	132.760	133.260
+ 1+200	135.290	135.126	133.997	132.297	132.747	133.247
+ 1+250	135.330	135.386	134.333	132.285	132.735	133.235
+ 1+300	135.371	135.645	134.671	132.272	132.722	133.222
+ 1+350	135.412	135.905	135.008	132.260	132.710	133.210
+ 1+400	135.453	136.164	135.346	132.247	132.697	133.197
+ 1+450	135.494	136.423	135.683	132.235	132.685	133.185
+ 1+500	136.248	136.945	136.945	132.222	132.672	133.172

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF GAMHARI MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ LSEC- 01 of 02

L- SECTION OF GAMHARI MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 2+850



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
NSL	133.172	132.672	1+500
	133.122	132.622	1+550
	133.109	132.609	1+600
Proposed Bed Level	133.096	132.596	1+650
	133.083	132.583	1+700
	133.069	132.569	1+750
Bed Level	133.056	132.556	1+800
	133.043	132.543	1+850
	133.030	132.530	1+900
TOP OF BANK LEVEL	133.017	132.517	1+950
	133.004	132.504	2+000
	132.990	132.490	2+050
NSL	132.977	132.477	2+100
	132.964	132.464	2+150
	132.951	132.451	2+200
Proposed Bed Level	132.938	132.438	2+250
	132.838	132.338	2+300
	132.811	132.311	2+350
Bed Level	132.798	132.298	2+400
	132.785	132.285	2+450
	132.772	132.272	2+500
TOP OF BANK LEVEL	132.759	132.259	2+550
	132.746	132.246	2+600
	132.733	132.233	2+650
NSL	132.719	132.219	2+700
	132.706	132.206	2+750
	132.693	132.193	2+800
Proposed Bed Level	132.680	132.180	2+850
	132.667	132.167	

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

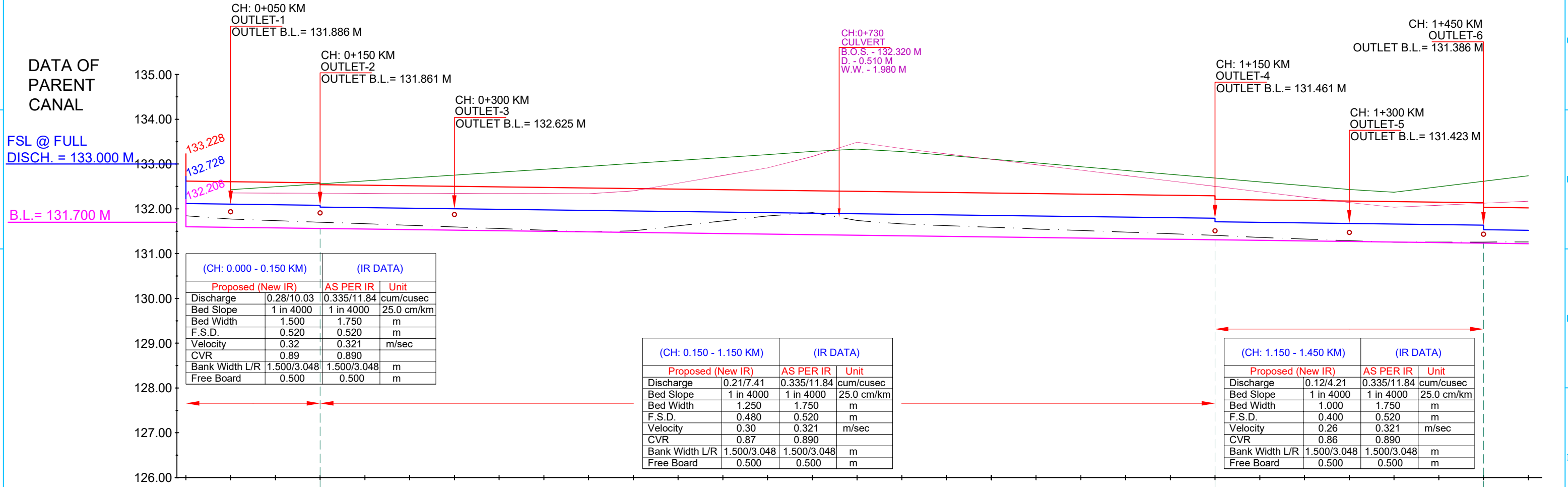
L- SECTION OF GAMHARI MR. (OFFTAKE FROM RD - 0+005 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ LSEC-

NAGWA MINOR

L- SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



DESIGN DATA	TOP OF BANK LEVEL		F.S.L.		Proposed Bed Level	
	133.228	132.728	132.728	132.728	132.208	131.598
EXISTING DATA	Bed Level		TOP OF BANK LEVEL		NSL	
	131.845	132.208	132.354	132.352	132.429	132.494
Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250
	131.845	132.208	132.208	132.208	132.208	132.208
	0+300	0+350	0+400	0+450	0+500	0+550
	132.503	132.491	132.478	132.466	132.453	132.441
	0+600	0+650	0+700	0+750	0+800	0+850
	132.428	132.416	132.403	132.391	132.378	132.366
	0+900	0+950	1+000	1+050	1+100	1+150
	132.353	132.341	132.328	132.316	132.303	132.291
	1+200	1+250	1+300	1+350	1+400	1+450
	132.198	132.186	132.173	132.161	132.148	132.136
	1+500					
	132.022					

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.



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

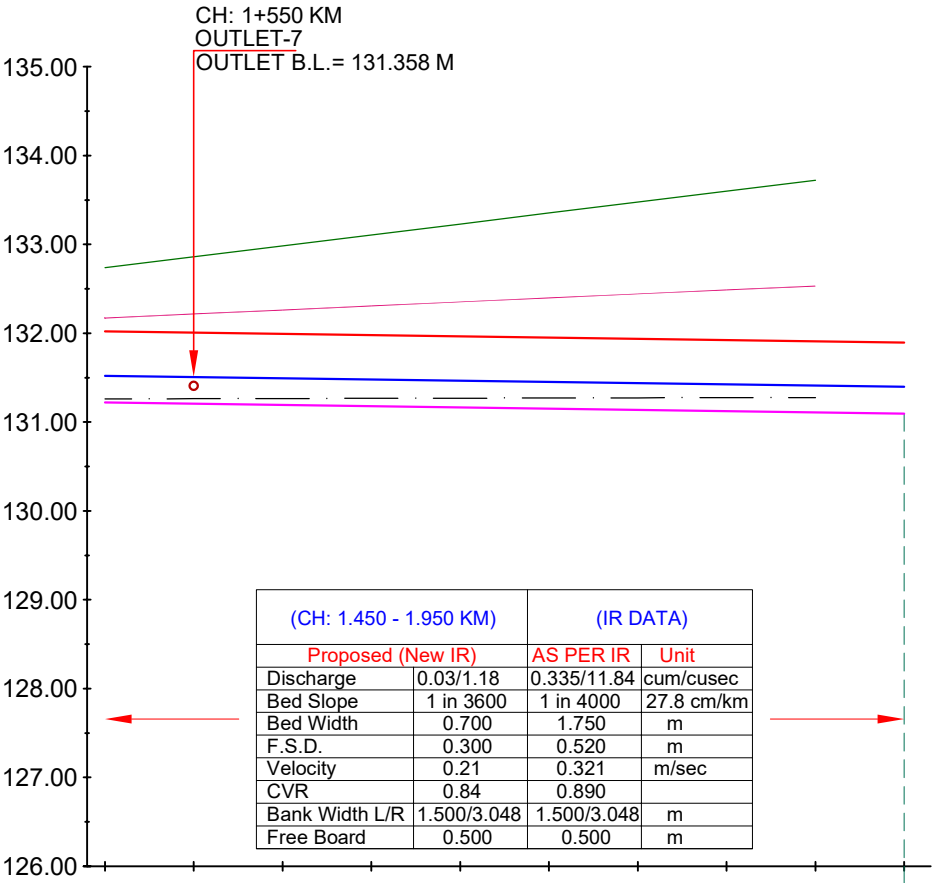
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-02/ LSEC-

01 of 02

L- SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 1+950



DESIGN DATA	TOP OF BANK LEVEL	132.022	132.008	131.994	131.980	131.966	131.952	131.938	131.925	131.911	131.897
	F.S.L.	131.522	131.508	131.494	131.480	131.466	131.452	131.438	131.425	131.411	131.397
	Proposed Bed Level	131.222	131.208	131.194	131.180	131.166	131.152	131.138	131.125	131.111	131.097
EXISTING DATA	Bed Level	131.261	131.263	131.265	131.267	131.269	131.271	131.273	131.275	131.277	
	TOP OF BANK LEVEL	132.172	132.217	132.262	132.307	132.353	132.398	132.443	132.488	132.533	
	NSL	132.739	132.862	132.984	133.107	133.230	133.353	133.476	133.599	133.722	
Chainage IN KM		1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-02/ LSEC-

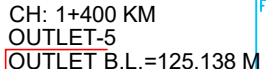
02 of 02

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PAWAI MINOR

FROM CH 0+000 TO 1+500

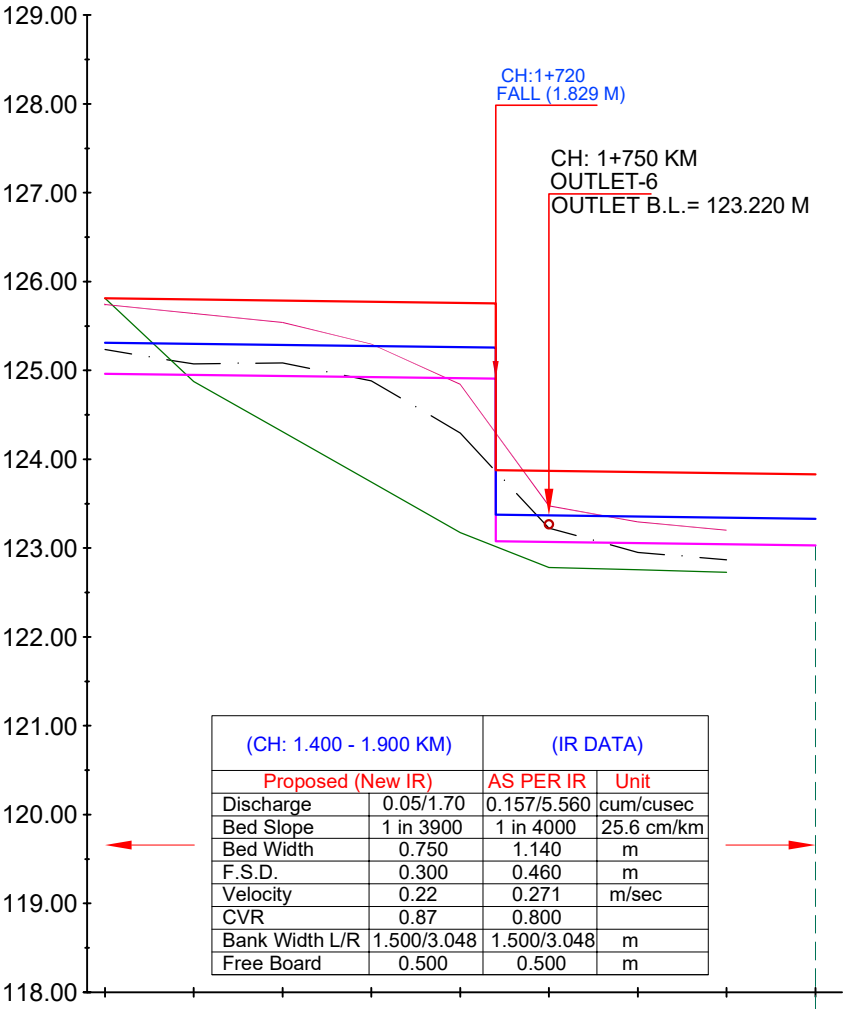
0.500	m
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Chainage
IN KM

NEW STRUCTURE

01 of 02

L- SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 1+900



DESIGN DATA	TOP OF BANK LEVEL	125.813	125.800	125.787	125.774	125.762	125.756	125.756	125.756	125.756	125.756	125.756
	F.S.L.	125.313	125.300	125.287	125.274	125.262	125.256	125.256	125.256	125.256	125.256	125.256
Proposed Bed Level	124.963	124.950	124.937	124.924	124.912	124.906	124.906	124.906	124.906	124.906	124.906	124.906
Bed Level	125.235	125.073	125.085	124.884	124.295	123.226	123.226	123.226	123.226	123.226	123.226	123.226
TOP OF BANK LEVEL	125.741	125.641	125.540	125.297	124.845	123.475	123.296	123.202	123.202	123.202	123.202	123.202
NSL	125.812	124.875	124.311	123.743	123.176	122.780	122.755	122.729	122.729	122.729	122.729	122.729
Chainage IN KM	1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+900	1+900	1+900

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
DRAWING TITLE :-	L- SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)		
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-03/ LSEC-02 of 02		

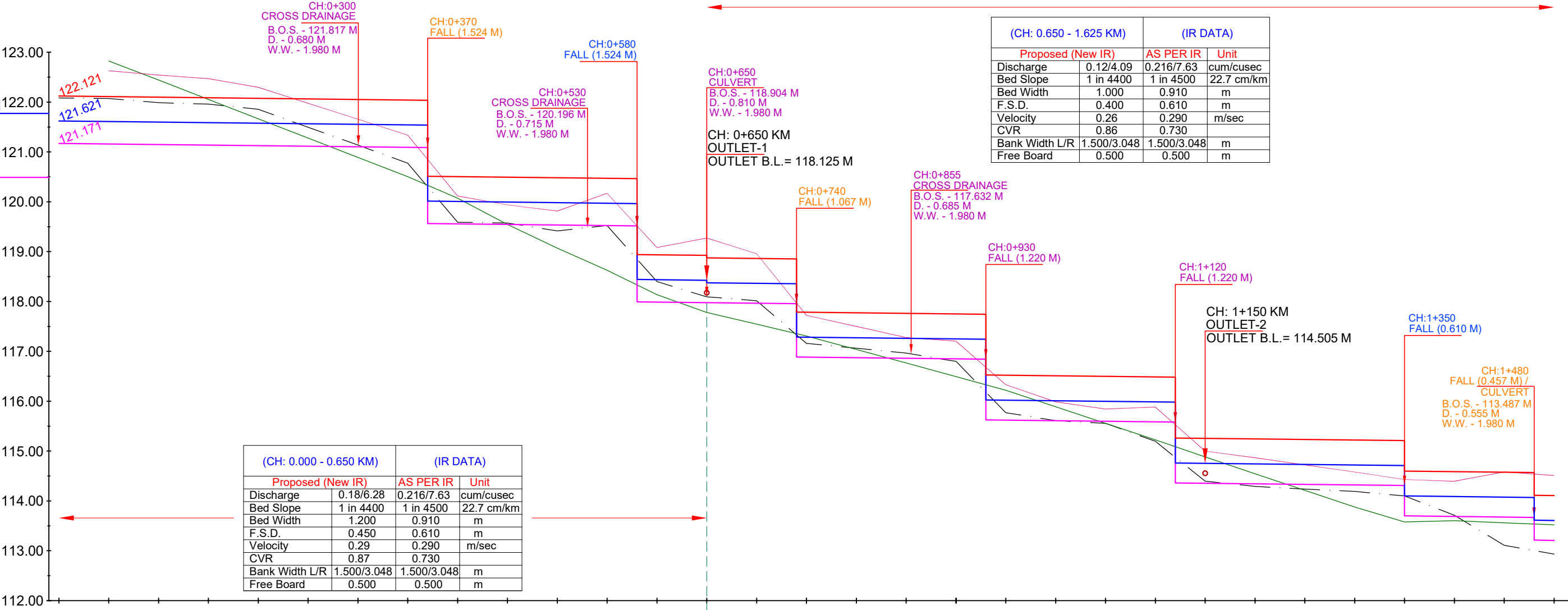
***BHUTAILI* MINOR**

L- SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500

DATA OF
PARENT
CANAL

FSL @ FULL
DISCH. = 121.771 M

B.L.= 120.491 M



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
0+000			122.082	121.171	121.621	122.121
0+050	122.824	122.629	122.073	121.160	121.610	122.110
0+100	122.443	122.543	121.987	121.148	121.598	122.098
0+150	122.052	122.471	121.960	121.137	121.587	122.087
0+200	121.663	122.296	121.856	121.126	121.576	122.076
0+250	121.277	121.977	121.495	121.114	121.564	122.064
0+300	120.891	121.657	121.137	121.103	121.553	122.053
0+350	120.505	121.337	120.776	121.091	121.541	122.041
0+400	120.072	120.116	119.589	119.556	120.006	120.506
0+450	119.545	119.938	119.574	119.545	119.995	120.495
0+500	119.070	119.813	119.416	119.533	119.983	120.483
0+550	118.626	120.171	119.525	119.522	119.972	120.472
0+600	118.135	119.082	118.398	119.515 117.991 117.987	119.965 118.441 118.437	120.465 118.941 118.937
0+650	117.779	119.273	118.094	119.475 118.375	118.425 118.375	118.925 118.875
0+700	117.545	118.959	118.015	117.964	118.364	118.864
0+750	117.309	117.723	117.161	117.955 116.888 116.886	118.355 117.288 117.286	118.855 117.788 117.786
0+800	117.038	117.500	117.062	116.874	117.274	117.774
0+850	116.767	117.276	116.964	116.863	117.263	117.763
0+900	116.493	117.204	116.798	116.851	117.251	117.751
0+950	116.219	116.331	115.769	116.845 115.625 115.620	117.245 116.025 116.020	117.745 116.525 116.520
1+000	115.887	115.988	115.610	115.609	116.009	116.509
1+050	115.557	115.844	115.556	115.597	115.997	116.497
1+100	115.226	115.884	115.196	115.586 115.581 114.361	115.986 115.981 114.761	116.486 116.481 115.261
1+150	114.881	114.998	114.395	114.355	114.755	115.255
1+200	114.543	114.866	114.292	114.343	114.743	115.243
1+250	114.211	114.724	114.236	114.332	114.732	115.232
1+300	113.879	114.581	114.191	114.321	114.721	115.221
1+350	113.580	114.429	114.100	114.309 113.699	114.709 114.099	115.209 114.599
1+400	113.605	114.394	113.713	113.688	114.088	114.588
1+450	113.562	114.583	113.110	113.676	114.076	114.576
1+500	113.519	114.510	112.932	113.670 113.213 113.208	114.070 113.613 113.608	114.570 114.113 114.108

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

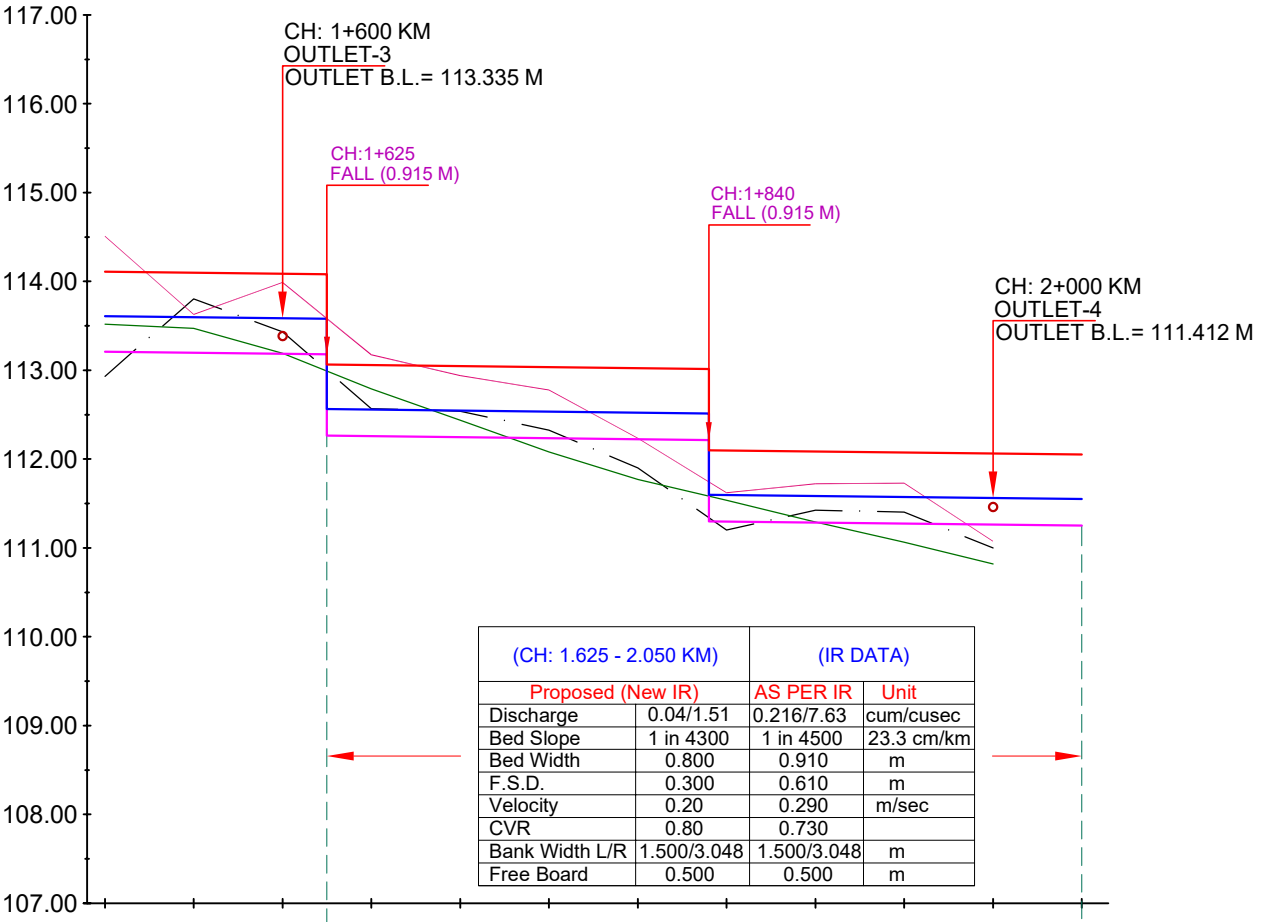
L- SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-04/ LSEC-

01 of 02

L- SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 2+050



DESIGN DATA	TOP OF BANK LEVEL	114.108	114.097	114.085	114.080	113.065	113.059	113.047	113.036	113.024	113.015	112.100	112.097	112.086	112.074	112.062	112.051
	F.S.L.	113.608	113.597	113.585	113.580	112.565	112.559	112.547	112.536	112.524	112.515	111.600	111.597	111.586	111.574	111.562	111.551
	Proposed Bed Level	113.208	113.197	113.185	113.189	112.265	112.259	112.247	112.236	112.224	112.215	111.300	111.297	111.286	111.274	111.262	111.251
EXISTING DATA	Bed Level	112.932	113.802	113.432	113.189	112.265	112.569	112.540	112.326	111.900	111.202	111.425	111.405	110.999			
	TOP OF BANK LEVEL	114.510	113.628	113.988	113.174	112.939	112.777	112.237	111.623	111.724	111.730	111.075					
	NSL	113.519	113.473	113.192	112.790	112.437	112.082	111.770	111.535	111.293	111.064	110.818					
Chainage IN KM		1+500	1+550	1+600	1+625	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050			

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

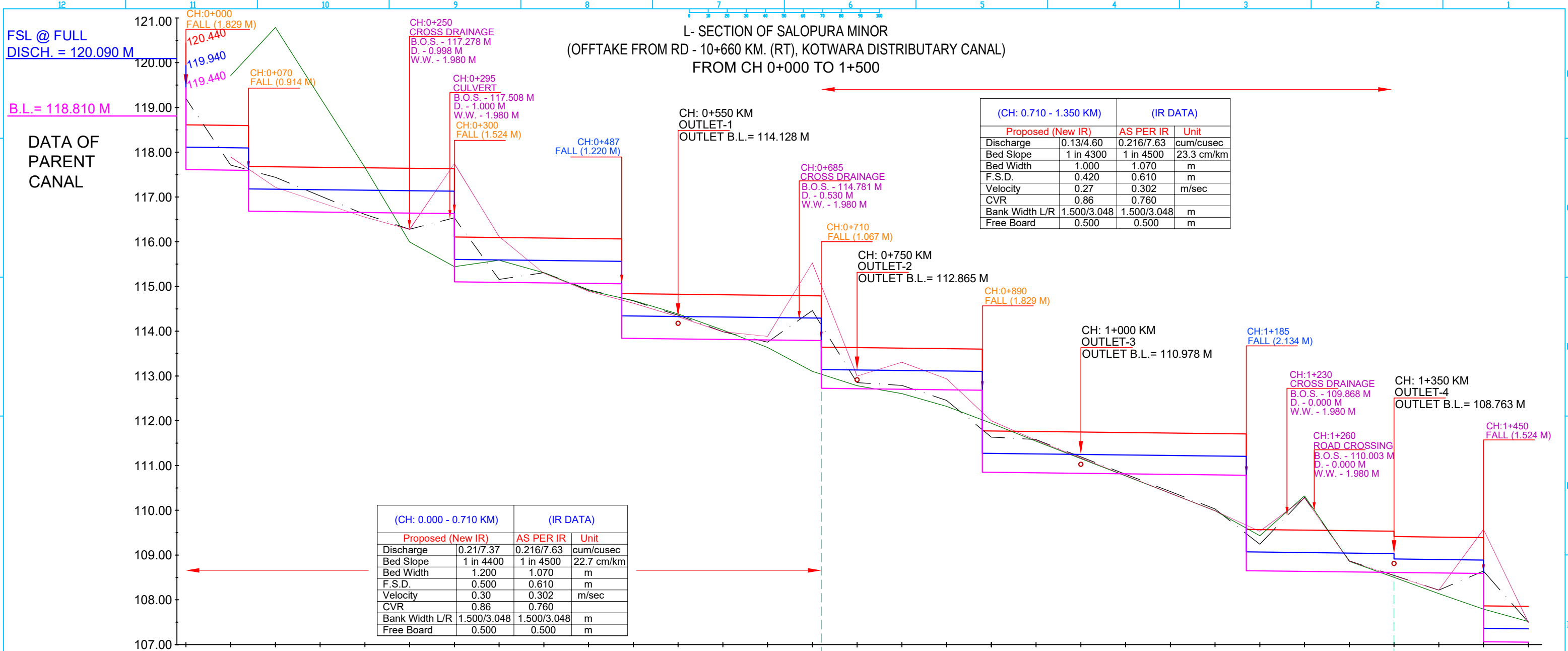
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-04/ LSEC-02 of 02

SALOPURA MINOR



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
- 0+000			119.200	117.611 117.440	118.111 119.940	120.440 118.611
- 0+050	119.709	117.895	117.714	117.600 117.595 116.681	118.100 118.095 117.181	118.600 118.595 117.681
- 0+100	120.788	117.215	117.439	116.674	117.174	117.674
- 0+150	119.222	116.881	117.025	116.663	117.163	117.663
- 0+200	117.659	116.549	116.611	116.652	117.152	117.652
- 0+250	115.994	116.275	116.280	116.640	117.140	117.640
- 0+300	115.441	117.742	116.533	116.629 115.105	117.129 115.605	117.629 116.105
- 0+350	115.586	116.116	115.158	115.093	115.593	116.093
- 0+400	115.305	115.296	115.310	115.082	115.582	116.082
- 0+450	114.911	114.894	114.928	115.071	115.571	116.071
- 0+500	114.685	114.628	114.679	115.062 113.842 113.839	115.562 114.342 114.339	116.062 114.842 114.839
- 0+550	114.388	114.323	114.357	113.828	114.328	114.828
- 0+600	114.028	113.988	113.990	113.817	114.317	114.817
- 0+650	113.639	113.886	113.757	113.805	114.305	114.805
- 0+700	113.105	115.527	114.462	113.794 113.792 112.725	114.294 114.292 113.145	114.794 114.792 113.645
- 0+750	112.784	112.997	112.853	112.715	113.135	113.635
- 0+800	112.606	113.308	112.792	112.704	113.124	113.624
- 0+850	112.321	112.939	112.456	112.692	113.112	113.612
- 0+900	111.944	112.000	111.635	112.683 112.681 110.851	113.103 113.092 111.271	113.603 113.592 111.771
- 0+950	111.544	111.565	111.580	110.840	111.260	111.760
- 1+000	111.156	111.171	111.193	110.828	111.248	111.748
- 1+050	110.768	110.776	110.806	110.817	111.237	111.737
- 1+100	110.380	110.382	110.419	110.805	111.225	111.725
- 1+150	109.992	109.987	110.032	110.793	111.213	111.713
- 1+200	109.434	109.531	109.242	108.651 108.648	111.205 109.071 109.068	111.705 109.571 109.568
- 1+250	110.322	110.277	110.286	108.636	109.056	109.556
- 1+300	108.861	108.863	108.871	108.624	109.044	109.544
- 1+350	108.501	108.539	108.546	108.613 108.913	109.033 109.413	109.533 109.413
- 1+400	108.139	108.216	108.217	108.601	108.901	109.401
- 1+450	107.791	109.573	108.642	108.590 107.066	108.890 107.366	109.390 107.866
- 1+500	107.514	107.495	107.501	107.054	107.354	107.854

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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

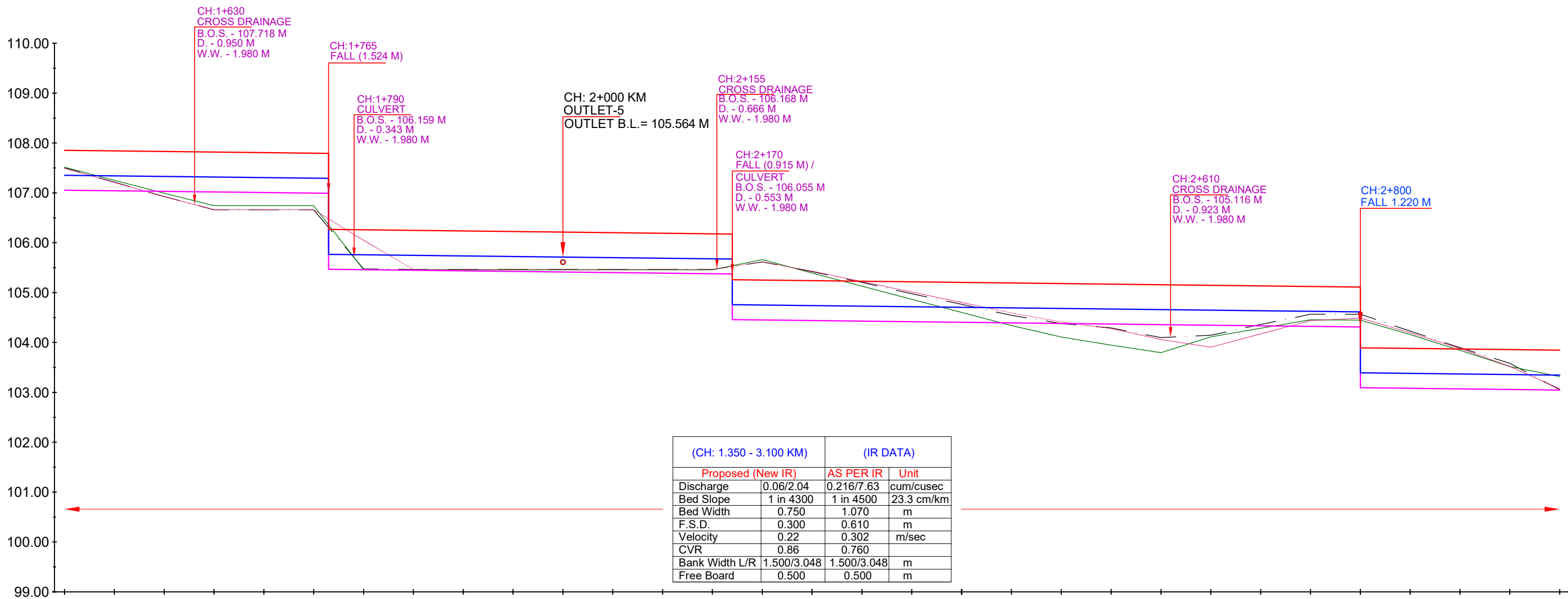
L- SECTION OF SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-05/ LSEC-

01 of 03

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L- SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000



EXISTING DATA	DESIGN DATA			Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	
EXISTING DATA	Bed Level			
	TOP OF BANK LEVEL			
	NSL			
	107.514	107.495	107.054	1+500
	107.253	107.210	107.042	1+550
	106.992	106.925	107.031	1+600
	106.743	106.662	107.019	1+650
	106.743	106.662	107.007	1+700
	106.743	106.662	106.996	1+750
	105.461	106.050	105.460	1+800
	105.457	105.465	105.449	1+850
	105.457	105.465	105.437	1+900
	105.457	105.465	105.425	1+950
	105.457	105.465	105.414	2+000
	105.457	105.465	105.402	2+050
	105.457	105.465	105.390	2+100
	105.457	105.465	105.379	2+150
	105.661	105.616	104.452	2+200
	105.394	105.431	104.440	2+250
	105.131	105.221	104.429	2+300
	104.866	105.012	104.417	2+350
	104.605	104.802	104.406	2+400
	104.340	104.592	104.394	2+450
	104.111	104.413	104.382	2+500
	103.946	104.280	104.371	2+550
	103.796	104.061	104.359	2+600
	104.113	103.908	104.347	2+650
	104.285	104.174	104.336	2+700
	104.457	104.440	104.324	2+750
	104.447	104.490	104.313	2+800
	104.159	104.194	103.081	2+850
	103.843	103.882	103.069	2+900
	103.520	103.520	103.058	2+950
	103.316	103.071	103.046	3+000

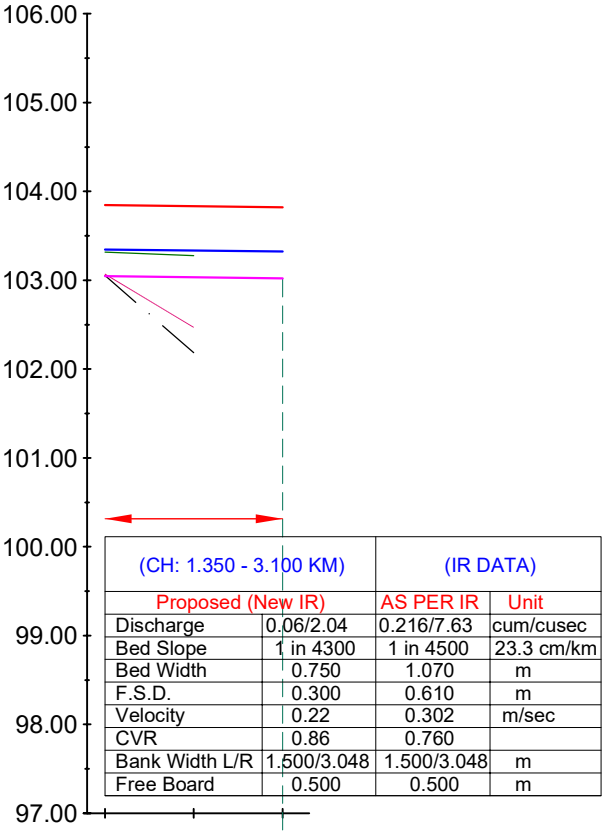
LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-05/ LSEC-02 of 03

L- SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 3+000 TO 3+100



DESIGN DATA	TOP OF BANK LEVEL	103.846	103.834	103.823
	F.S.L.	103.346	103.334	103.323
	Proposed Bed Level	103.046	103.034	103.023
EXISTING DATA	Bed Level	103.053	102.186	
	TOP OF BANK LEVEL	103.071	102.471	
	NSL	103.316	103.278	
Chainage IN KM		3+000	3+050	3+100

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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

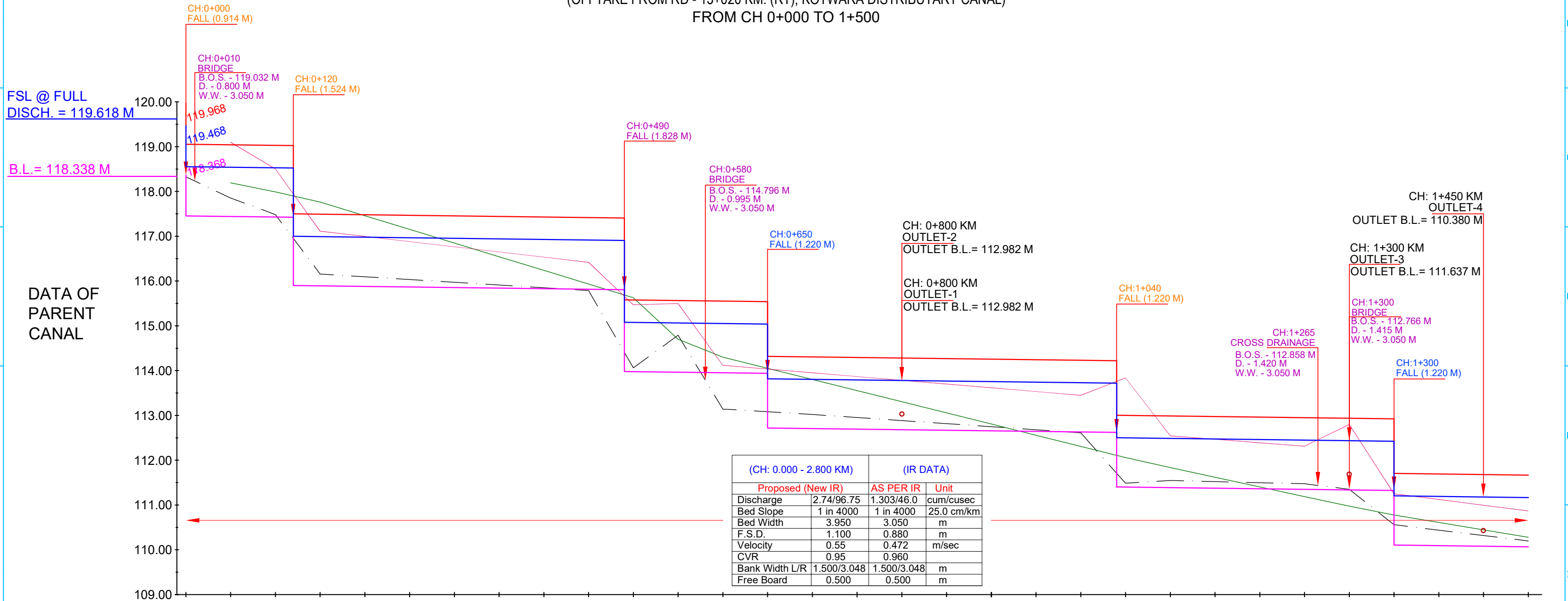
L- SECTION OF SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-05/ LSEC-

03 of 03

SINGHI SUB- DY.

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
	Proposed Bed Level		
Bed Level	118.327	119.468	0+000
TOP OF BANK LEVEL		119.054	0+050
NSL	118.193	118.542	0+100
	117.990	118.529	0+150
	117.763	118.524	0+200
	117.458	118.500	0+250
	117.153	118.493	0+300
	116.848	118.468	0+350
	116.543	118.455	0+400
	116.238	118.443	0+450
	115.933	118.430	0+500
	115.627	118.418	0+550
	115.322	118.408	0+600
	115.017	118.408	0+650
	114.712	118.408	0+700
	114.407	118.408	0+750
	114.102	118.408	0+800
	113.797	118.408	0+850
	113.492	118.408	0+900
	113.187	118.408	0+950
	112.882	118.408	1+000
	112.577	118.408	1+050
	112.272	118.408	1+100
	111.967	118.408	1+150
	111.662	118.408	1+200
	111.357	118.408	1+250
	111.052	118.408	1+300
	110.747	118.408	1+350
	110.442	118.408	1+400
	110.137	118.408	1+450
	109.832	118.408	1+500

LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

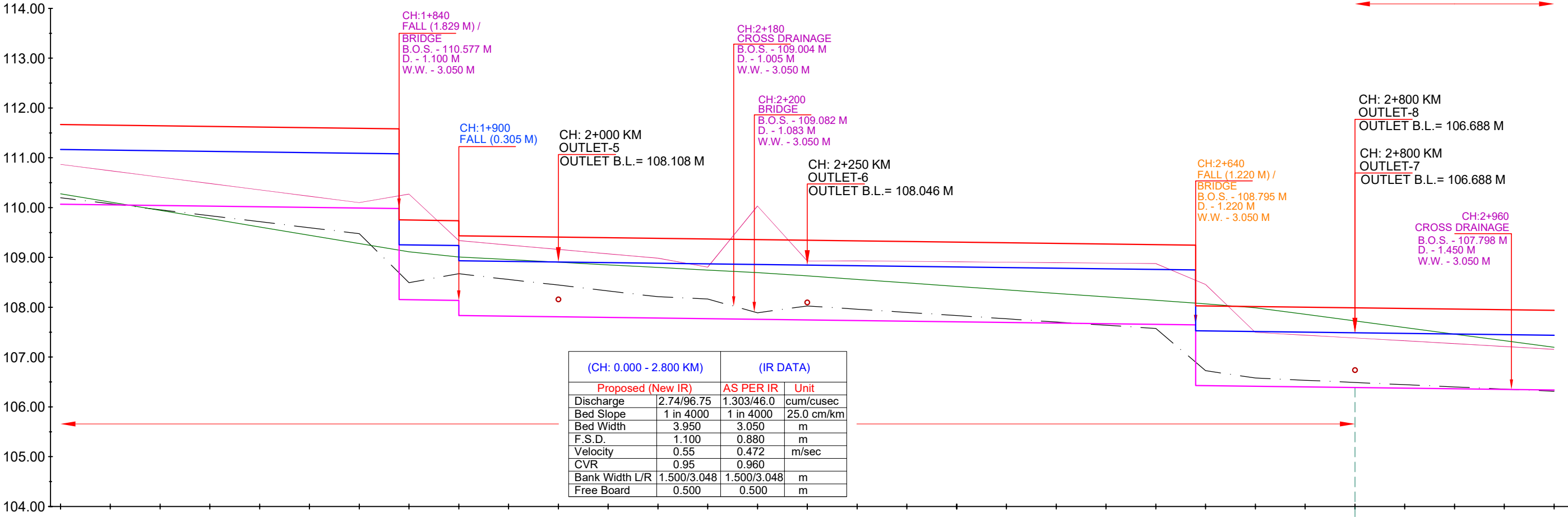
L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-

01 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000

(CH: 2.800 - 4.584 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.41/85.26	1.303/46.0	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	3.500	3.050	m
F.S.D.	1.100	0.880	m
Velocity	0.54	0.472	m/sec
CVR	0.93	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m



(CH: 0.000 - 2.800 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.74/96.75	1.303/46.0	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	3.950	3.050	m
F.S.D.	1.100	0.880	m
Velocity	0.55	0.472	m/sec
CVR	0.95	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

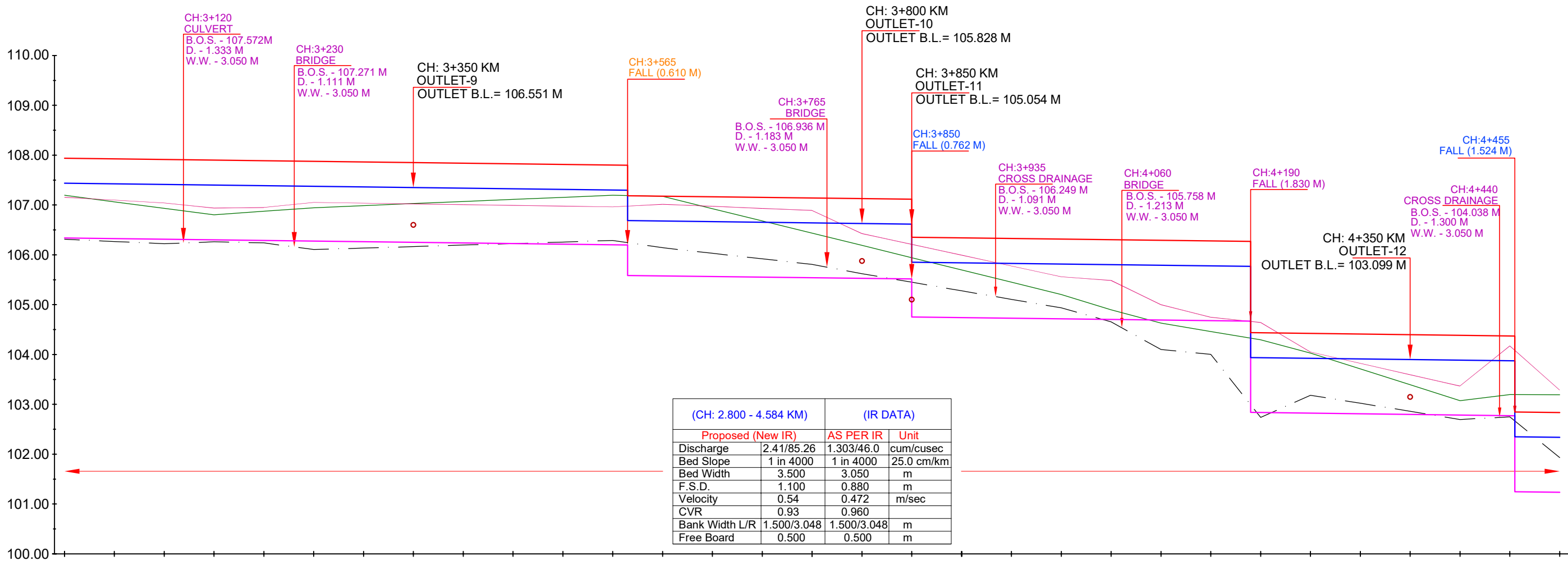
Chainage IN KM	DESIGN DATA		EXISTING DATA	
	TOP OF BANK LEVEL	F.S.L.	Bed Level	TOP OF BANK LEVEL
- 1+500	111.667	111.167	110.198	110.868
- 1+550	111.655	111.155	110.078	110.740
- 1+600	111.642	111.142	109.958	110.612
- 1+650	111.630	111.130	109.838	110.484
- 1+700	111.617	111.117	109.718	110.356
- 1+750	111.605	111.105	109.597	110.229
- 1+800	111.592	111.092	109.477	110.101
- 1+850	111.582	111.082	109.358	110.270
- 1+900	109.738	109.238	108.673	109.338
- 1+950	109.421	108.921	108.557	109.250
- 2+000	109.408	108.908	108.446	109.162
- 2+050	109.396	108.896	108.326	109.073
- 2+100	109.383	108.883	108.212	108.984
- 2+150	109.371	108.871	108.165	108.806
- 2+200	109.358	108.858	107.889	110.033
- 2+250	109.346	108.846	108.025	108.930
- 2+300	109.333	108.833	107.961	108.932
- 2+350	109.321	108.821	107.897	108.923
- 2+400	109.308	108.808	107.833	108.914
- 2+450	109.296	108.796	107.768	108.905
- 2+500	109.283	108.783	107.704	108.896
- 2+550	109.271	108.771	107.639	108.887
- 2+600	109.258	108.758	107.575	108.878
- 2+650	109.248	108.748	106.727	108.459
- 2+700	108.013	107.513	106.579	107.496
- 2+750	108.001	107.501	106.534	107.441
- 2+800	107.989	107.488	106.490	107.384
- 2+850	107.976	107.476	106.446	107.327
- 2+900	107.963	107.463	106.401	107.270
- 2+950	107.951	107.451	106.357	107.213
- 3+000	107.938	107.438	106.313	107.156

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-02 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 3+000 TO 4+500



EXISTING DATA	DESIGN DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level
Bed Level	106.313	107.438	106.338
TOP OF BANK LEVEL	107.156	107.426	106.326
NSL	107.197	107.413	106.313
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 STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

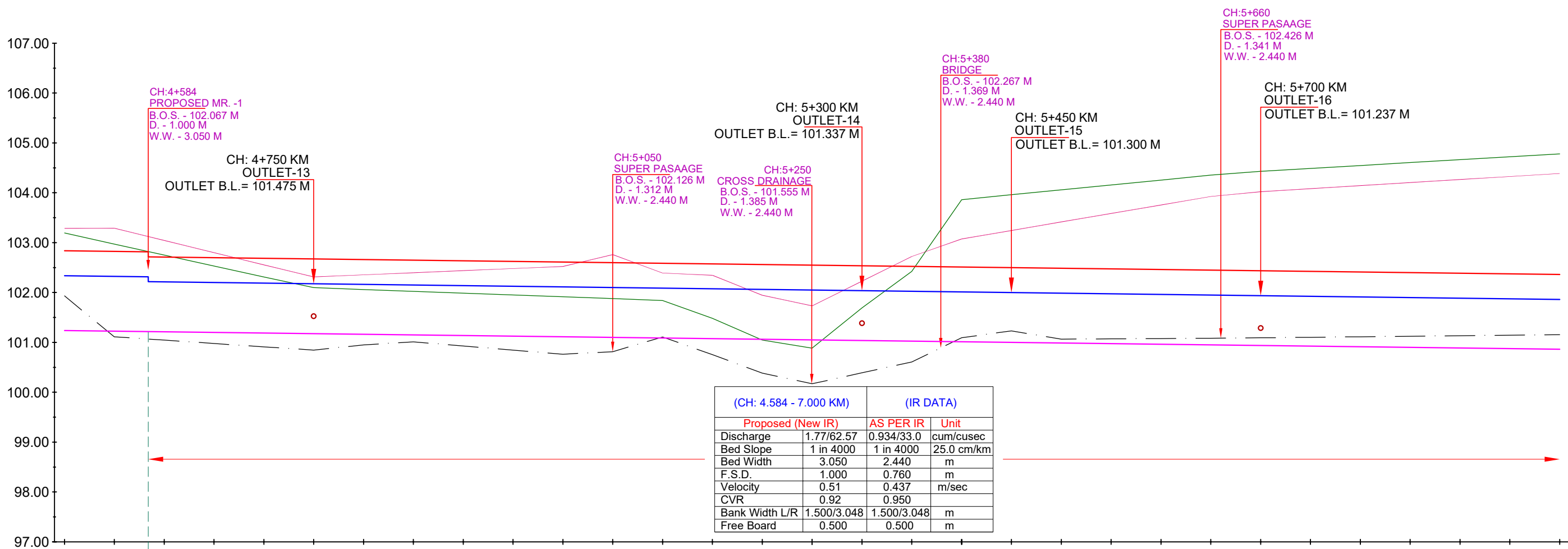
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-03 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 4+500 TO 6+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	
4+500	102.837	102.337	101.237		101.933	103.286	103.193	
4+550	102.825	102.325	101.225		101.113	103.291	102.971	
4+584	102.816	102.316	101.216					
4+600	102.712	102.212	101.212		101.046	103.045	102.750	
4+650	102.700	102.200	101.200		100.978	102.799	102.530	
4+700	102.687	102.187	101.187		100.909	102.554	102.310	
4+750	102.675	102.175	101.175		100.846	102.314	102.097	
4+800	102.662	102.162	101.162		100.949	102.355	102.060	
4+850	102.650	102.150	101.150		101.011	102.397	102.024	
4+900	102.637	102.137	101.137		100.928	102.439	101.988	
4+950	102.625	102.125	101.125		100.846	102.481	101.951	
5+000	102.612	102.112	101.112		100.763	102.523	101.915	
5+050	102.600	102.100	101.100		100.814	102.760	101.879	
5+100	102.587	102.087	101.087		101.109	102.391	101.841	
5+150	102.575	102.075	101.075		100.753	102.345	101.482	
5+200	102.562	102.062	101.062		100.384	101.945	101.045	
5+250	102.550	102.050	101.050		100.170	101.732	100.883	
5+300	102.537	102.037	101.037		100.391	102.227	101.691	
5+350	102.525	102.025	101.025		100.608	102.722	102.422	
5+400	102.512	102.012	101.012		101.092	103.074	103.862	
5+450	102.500	102.000	101.000		101.231	103.244	103.962	
5+500	102.487	101.987	100.987		101.066	103.415	104.059	
5+550	102.475	101.975	100.975		101.071	103.585	104.157	
5+600	102.462	101.962	100.962		101.077	103.756	104.255	
5+650	102.450	101.950	100.950		101.083	103.926	104.353	
5+700	102.437	101.937	100.937		101.092	104.022	104.430	
5+750	102.425	101.925	100.925		101.102	104.083	104.488	
5+800	102.412	101.912	100.912		101.113	104.144	104.547	
5+850	102.400	101.900	100.900		101.123	104.204	104.606	
5+900	102.387	101.887	100.887		101.134	104.265	104.664	
5+950	102.375	101.875	100.875		101.144	104.326	104.723	
6+000	102.362	101.862	100.862		101.154	104.387	104.781	

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

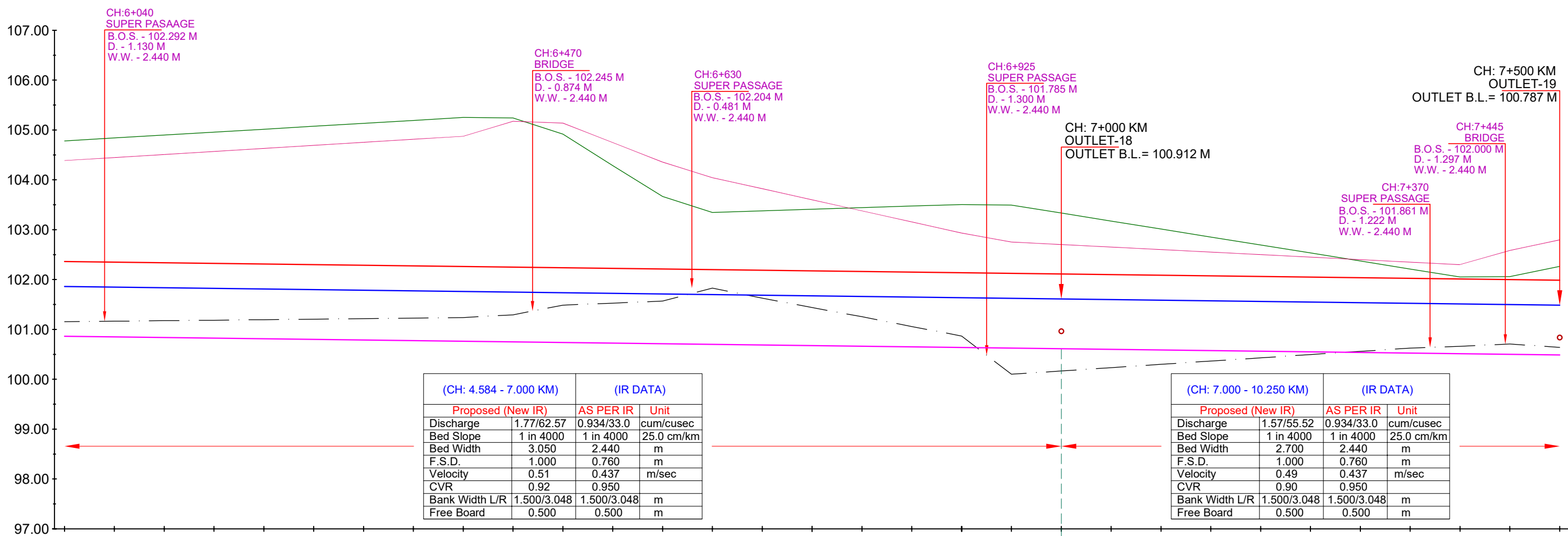
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-

04 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 6+000 TO 7+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
	102.362	101.862	100.862	101.154	104.387	104.781
6+000	102.350	101.850	100.850	101.164	104.448	104.840
6+050	102.337	101.837	100.837	101.175	104.509	104.898
6+100	102.325	101.825	100.825	101.185	104.569	104.957
6+150	102.312	101.812	100.812	101.196	104.630	105.015
6+200	102.300	101.800	100.800	101.206	104.692	105.074
6+250	102.287	101.787	100.787	101.216	104.752	105.132
6+300	102.275	101.775	100.775	101.226	104.813	105.191
6+350	102.262	101.762	100.762	101.237	104.874	105.250
6+400	102.250	101.750	100.750	101.293	105.174	105.241
6+450	102.237	101.737	100.737	101.487	105.138	104.915
6+500	102.225	101.725	100.725	101.527	104.747	104.286
6+550	102.212	101.712	100.712	101.568	104.356	103.665
6+600	102.200	101.700	100.700	101.827	104.043	103.346
6+650	102.187	101.687	100.687	101.628	103.822	103.378
6+700	102.175	101.675	100.675	101.439	103.600	103.410
6+750	102.162	101.662	100.662	101.254	103.378	103.442
6+800	102.150	101.650	100.650	101.059	103.156	103.474
6+850	102.137	101.637	100.637	100.868	102.934	103.505
6+900	102.125	101.625	100.625	100.102	102.752	103.494
6+950	102.112	101.612	100.612	100.167	102.702	103.335
7+000	102.100	101.600	100.600	100.233	102.652	103.173
7+050	102.087	101.587	100.587	100.299	102.602	103.014
7+100	102.075	101.575	100.575	100.366	102.551	102.862
7+150	102.062	101.562	100.562	100.429	102.501	102.692
7+200	102.050	101.550	100.550	100.496	102.451	102.533
7+250	102.037	101.537	100.537	100.560	102.400	102.371
7+300	102.025	101.525	100.525	100.625	102.350	102.212
7+350	102.012	101.512	100.512	100.661	102.300	102.062
7+400	102.000	101.500	100.500	100.708	102.585	102.060
7+450	101.987	101.487	100.487	100.640	102.797	102.263
7+500						

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-05 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 7+500 TO 9+000

CH: 7+500 KM
OUTLET-19
OUTLET B.L.= 100.787 M

CH:7+590
SUPER PASSAGE
B.O.S. - 101.853 M
D. - 1.313 M
W.W. - 2.440 M

CH:7+755
SUPER PASSAGE
B.O.S. - 100.559 M
D. - 1.120 M
W.W. - 2.440 M

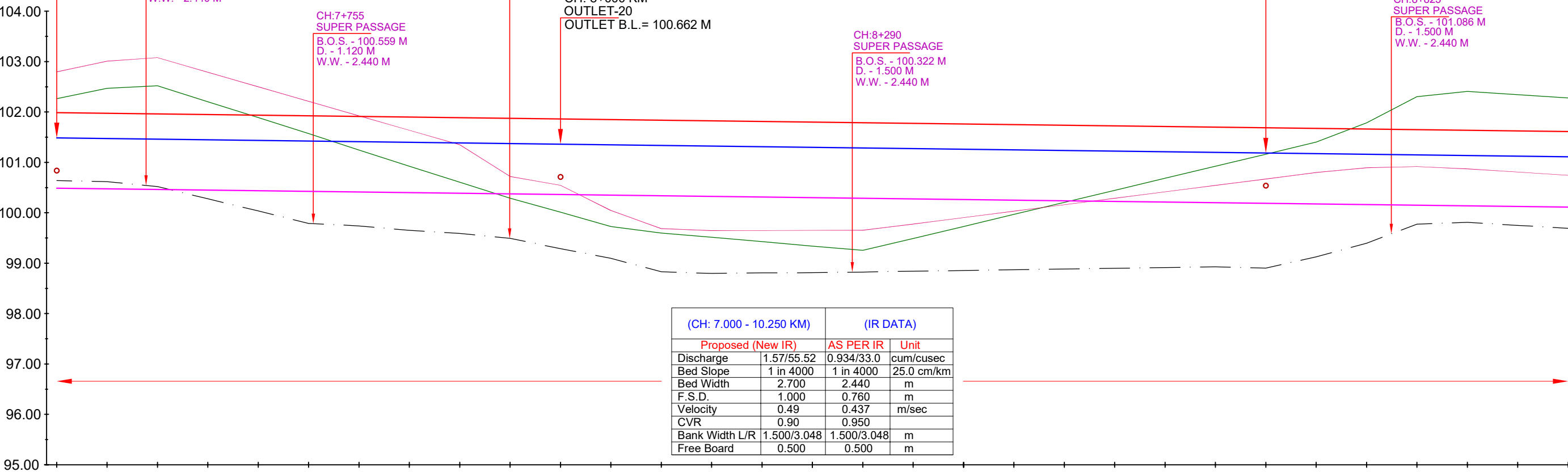
CH:7+950
BRIDGE
B.O.S. - 100.322 M
D. - 1.500 M
W.W. - 2.440 M

CH: 8+000 KM
OUTLET-20
OUTLET B.L.= 100.662 M

CH:8+290
SUPER PASSAGE
B.O.S. - 100.322 M
D. - 1.500 M
W.W. - 2.440 M

CH: 8+700 KM
OUTLET-21
OUTLET B.L.= 100.487 M

CH:8+825
SUPER PASSAGE
B.O.S. - 101.086 M
D. - 1.500 M
W.W. - 2.440 M



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
7+500	102.263	102.797	100.640	100.487	101.487	101.987
7+550	102.468	103.010	100.616	100.475	101.475	101.975
7+600	102.522	103.079	100.521	100.462	101.462	101.962
7+650	102.204	102.790	100.278	100.450	101.450	101.950
7+700	101.889	102.501	100.038	100.437	101.437	101.937
7+750	101.572	102.211	99.790	100.425	101.425	101.925
7+800	101.243	101.924	99.740	100.412	101.412	101.912
7+850	100.924	101.638	99.651	100.400	101.400	101.900
7+900	100.607	101.352	99.589	100.387	101.387	101.887
7+950	100.291	100.722	99.493	100.375	101.375	101.875
8+000	100.013	100.546	99.289	100.362	101.362	101.862
8+050	99.727	100.047	99.098	100.350	101.350	101.850
8+100	99.597	99.686	98.829	100.337	101.337	101.837
8+150	99.516	99.646	98.797	100.325	101.325	101.825
8+200	99.427	99.649	98.807	100.312	101.312	101.812
8+250	99.337	99.652	98.812	100.300	101.300	101.800
8+300	99.257	99.655	98.824	100.287	101.287	101.787
8+350	99.490	99.777	98.841	100.275	101.275	101.775
8+400	99.729	99.905	98.854	100.262	101.262	101.762
8+450	99.968	100.033	98.870	100.250	101.250	101.750
8+500	100.207	100.160	98.884	100.237	101.237	101.737
8+550	100.446	100.288	98.899	100.225	101.225	101.725
8+600	100.685	100.416	98.914	100.212	101.212	101.712
8+650	100.924	100.543	98.929	100.200	101.200	101.700
8+700	101.162	100.671	98.901	100.187	101.187	101.687
8+750	101.402	100.799	99.126	100.175	101.175	101.675
8+800	101.785	100.895	99.396	100.162	101.162	101.662
8+850	102.304	100.917	99.776	100.150	101.150	101.650
8+900	102.410	100.872	99.809	100.137	101.137	101.637
8+950	102.344	100.809	99.751	100.125	101.125	101.625
9+000	102.278	100.744	99.693	100.112	101.112	101.612

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

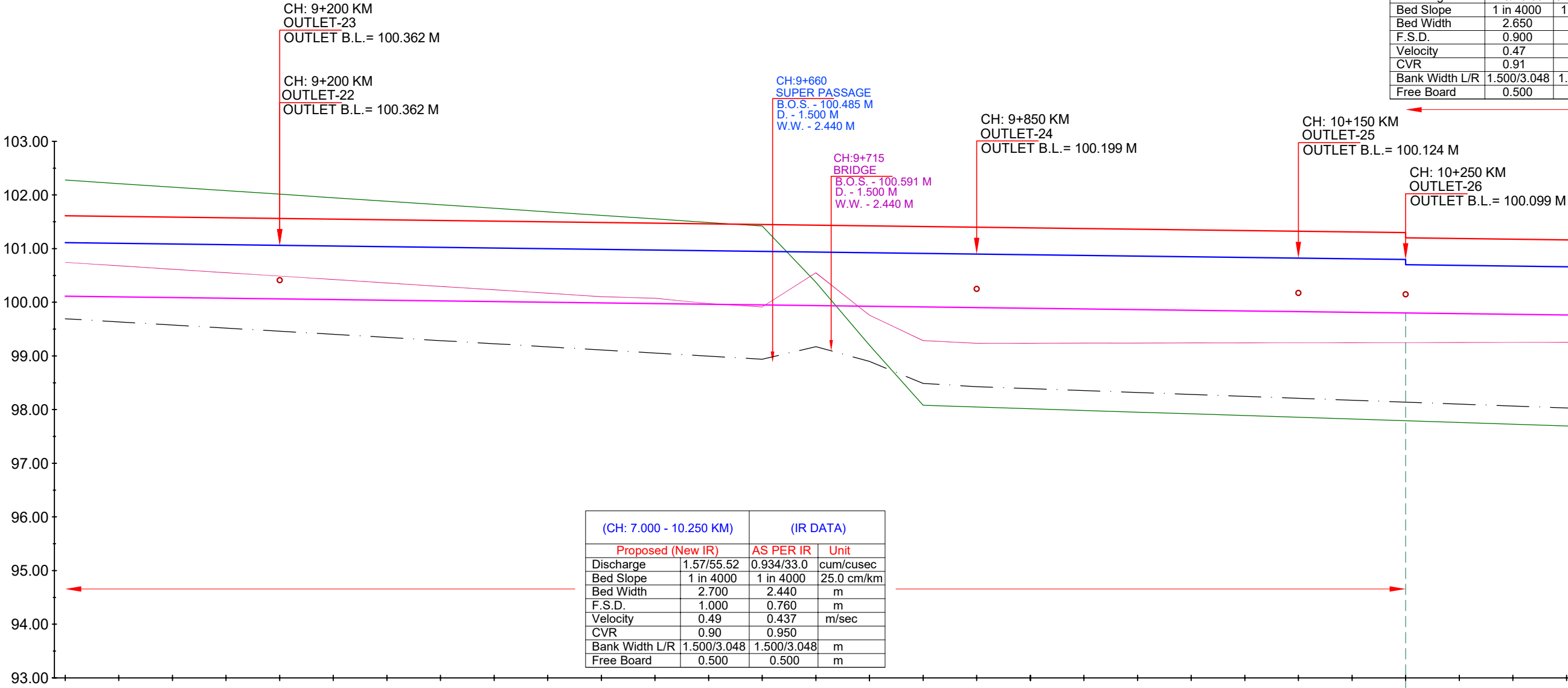
L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 9+000 TO 10+500

(CH: 10.250 - 12.550 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.29/45.59	0.934/33.0	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	2.650	2.440	m
F.S.D.	0.900	0.760	m
Velocity	0.47	0.437	m/sec
CVR	0.91	0.950	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
9+000	102.278	100.744	99.693	100.112	101.112	101.612
9+050	102.212	100.680	99.635	100.099	101.099	101.599
9+100	102.146	100.616	99.577	100.087	101.087	101.587
9+150	102.080	100.552	99.519	100.074	101.074	101.574
9+200	102.014	100.488	99.461	100.062	101.062	101.562
9+250	101.948	100.424	99.403	100.049	101.049	101.549
9+300	101.882	100.361	99.345	100.037	101.037	101.537
9+350	101.816	100.296	99.286	100.024	101.024	101.524
9+400	101.751	100.233	99.228	100.012	101.012	101.512
9+450	101.684	100.168	99.170	99.999	100.999	101.499
9+500	101.619	100.105	99.112	99.987	100.987	101.487
9+550	101.553	100.076	99.054	99.974	100.974	101.474
9+600	101.487	99.977	98.996	99.962	100.962	101.462
9+650	101.421	99.912	98.938	99.949	100.949	101.449
9+700	100.372	100.549	99.173	99.937	100.937	101.437
9+750	99.200	99.761	98.899	99.924	100.924	101.424
9+800	98.080	99.287	98.488	99.912	100.912	101.412
9+850	98.048	99.235	98.427	99.899	100.899	101.399
9+900	98.016	99.237	98.390	99.887	100.887	101.387
9+950	97.984	99.238	98.355	99.874	100.874	101.374
10+000	97.952	99.240	98.319	99.862	100.862	101.362
10+050	97.921	99.242	98.283	99.849	100.849	101.349
10+100	97.889	99.243	98.247	99.837	100.837	101.337
10+150	97.857	99.245	98.211	99.824	100.824	101.324
10+200	97.825	99.247	98.174	99.812	100.812	101.312
10+250	97.793	99.249	98.139	99.799	100.799	101.299
10+300	97.761	99.250	98.103	99.787	100.687	101.187
10+350	97.729	99.252	98.067	99.774	100.674	101.174
10+400	97.697	99.253	98.032	99.762	100.662	101.162
10+450	97.666	99.255	97.995	99.749	100.649	101.149
10+500	97.684	99.257	97.961	99.737	100.637	101.137

LEGEND

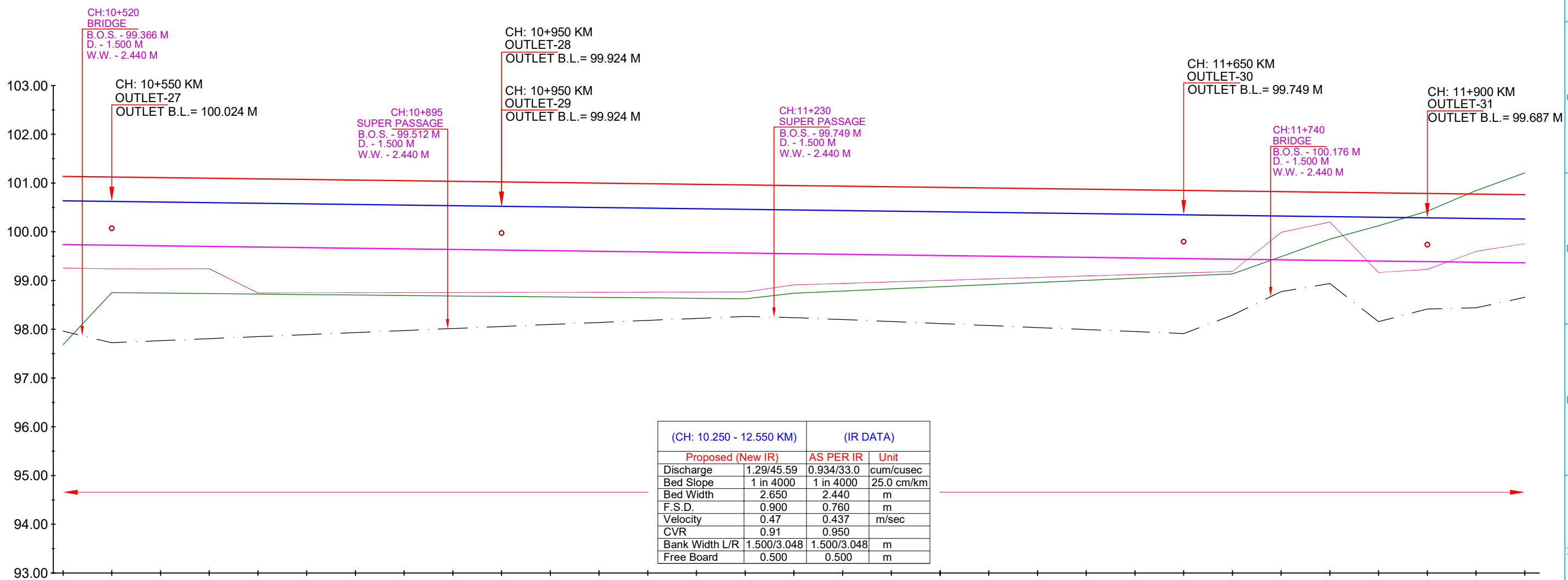
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING STRUCTURE		PROPOSED FSL
	MODIFIED STRUCTURE		PROPOSED TOP OF BANK LEVEL
	NEW STRUCTURE		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-07 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 10+500 TO 12+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
-10+500	97.684	99.257	97.961	99.737	100.637	101.137
-10+550	98.752	99.238	97.724	99.724	100.624	101.124
-10+600	98.743	99.241	97.767	99.712	100.612	101.112
-10+650	98.733	99.243	97.807	99.699	100.599	101.099
-10+700	98.723	98.745	97.850	99.687	100.587	101.087
-10+750	98.713	98.747	97.891	99.674	100.574	101.074
-10+800	98.703	98.750	97.933	99.662	100.562	101.062
-10+850	98.694	98.752	97.974	99.649	100.549	101.049
-10+900	98.684	98.754	98.016	99.637	100.537	101.037
-10+950	98.674	98.756	98.057	99.624	100.524	101.024
-11+000	98.664	98.759	98.099	99.612	100.512	101.012
-11+050	98.655	98.761	98.140	99.599	100.499	100.999
-11+100	98.645	98.763	98.182	99.587	100.487	100.987
-11+150	98.635	98.765	98.223	99.574	100.474	100.974
-11+200	98.625	98.768	98.264	99.562	100.462	100.962
-11+250	98.740	98.911	98.239	99.549	100.449	100.949
-11+300	98.785	98.942	98.200	99.537	100.437	100.937
-11+350	98.829	98.972	98.159	99.524	100.424	100.924
-11+400	98.873	99.003	98.117	99.512	100.412	100.912
-11+450	98.917	99.033	98.078	99.499	100.399	100.899
-11+500	98.961	99.064	98.035	99.487	100.387	100.887
-11+550	99.005	99.095	97.996	99.474	100.374	100.874
-11+600	99.050	99.125	97.954	99.462	100.362	100.862
-11+650	99.094	99.155	97.913	99.449	100.349	100.849
-11+700	99.138	99.186	98.290	99.437	100.337	100.837
-11+750	99.491	99.988	98.772	99.424	100.324	100.824
-11+800	99.850	100.201	98.937	99.412	100.312	100.812
-11+850	100.125	99.166	98.155	99.399	100.299	100.799
-11+900	100.422	99.229	98.415	99.387	100.287	100.787
-11+950	100.845	99.599	98.441	99.374	100.274	100.774
-12+000	101.209	99.756	98.656	99.362	100.262	100.762

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

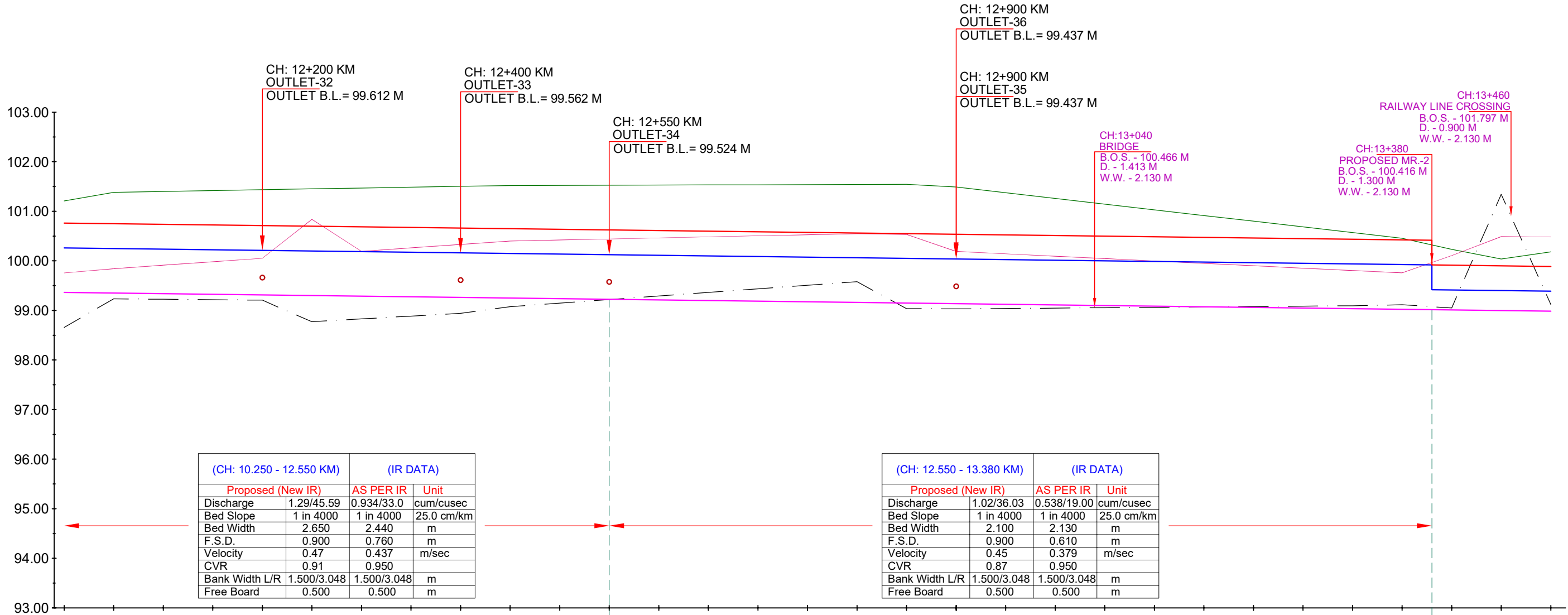
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-08 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 12+000 TO 13+500



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-12+000	101.209	99.756	98.656	99.362	100.262	100.762
-12+050	101.383	99.842	99.235	99.349	100.249	100.749
-12+100	101.400	99.912	99.225	99.337	100.237	100.737
-12+150	101.417	99.982	99.216	99.324	100.224	100.724
-12+200	101.435	100.052	99.207	99.312	100.212	100.712
-12+250	101.452	100.837	98.772	99.299	100.199	100.699
-12+300	101.469	100.192	98.829	99.287	100.187	100.687
-12+350	101.487	100.262	98.886	99.274	100.174	100.674
-12+400	101.504	100.332	98.942	99.262	100.162	100.662
-12+450	101.519	100.399	99.075	99.249	100.149	100.649
-12+500	101.522	100.420	99.147	99.237	100.137	100.637
-12+550	101.525	100.441	99.219	99.224	100.124	100.624
-12+600	101.528	100.463	99.291	99.212	100.112	100.612
-12+650	101.531	100.485	99.363	99.199	100.099	100.599
-12+700	101.534	100.506	99.435	99.187	100.087	100.587
-12+750	101.537	100.527	99.506	99.174	100.074	100.574
-12+800	101.540	100.548	99.579	99.162	100.062	100.562
-12+850	101.543	100.534	99.037	99.149	100.049	100.549
-12+900	101.488	100.190	99.031	99.137	100.037	100.537
-12+950	101.373	100.142	99.039	99.124	100.024	100.524
-13+000	101.258	100.094	99.047	99.112	100.012	100.512
-13+050	101.144	100.046	99.055	99.099	99.999	100.499
-13+100	101.029	99.998	99.062	99.087	99.987	100.487
-13+150	100.914	99.950	99.070	99.074	99.974	100.474
-13+200	100.800	99.902	99.078	99.062	99.962	100.462
-13+250	100.685	99.853	99.086	99.049	99.949	100.449
-13+300	100.570	99.806	99.094	99.037	99.937	100.437
-13+350	100.455	99.758	99.116	99.024	99.924	100.424
-13+380	---	---	---	99.017	99.917	100.417
-13+400	100.232	100.106	99.049	99.012	99.912	99.912
-13+450	100.037	100.489	101.341	98.999	99.399	99.899
-13+500	100.182	100.481	99.120	98.987	99.387	99.887

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

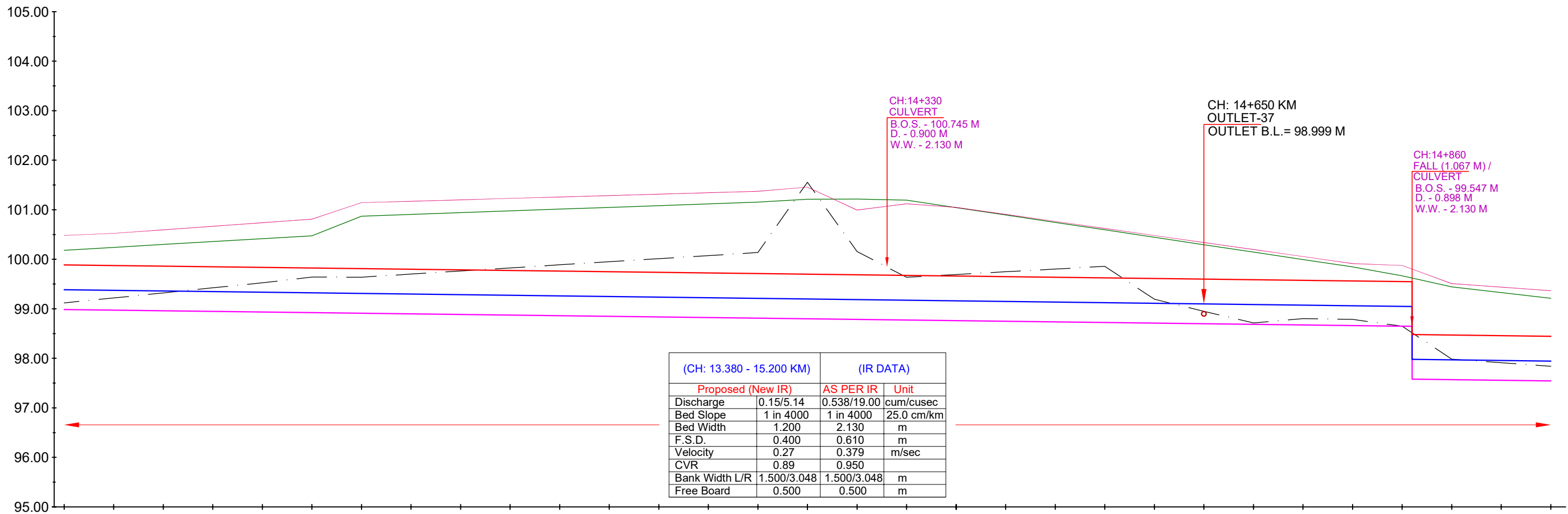
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-09 of 12

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 13+500 TO 15+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
-13+500	100.182	100.481	99.120	98.987	99.387	99.887
-13+550	100.241	100.524	99.219	98.974	99.374	99.874
-13+600	100.299	100.595	99.321	98.962	99.362	99.862
-13+650	100.357	100.667	99.425	98.949	99.349	99.849
-13+700	100.416	100.739	99.525	98.937	99.337	99.837
-13+750	100.474	100.810	99.640	98.924	99.324	99.824
-13+800	100.870	101.144	99.639	98.912	99.312	99.812
-13+850	100.906	101.172	99.701	98.899	99.299	99.799
-13+900	100.941	101.201	99.763	98.887	99.287	99.787
-13+950	100.977	101.230	99.826	98.874	99.274	99.774
-14+000	101.013	101.258	99.888	98.862	99.262	99.762
-14+050	101.048	101.287	99.950	98.849	99.249	99.749
-14+100	101.084	101.316	100.012	98.837	99.237	99.737
-14+150	101.119	101.345	100.074	98.824	99.224	99.724
-14+200	101.155	101.373	100.137	98.812	99.212	99.712
-14+250	101.213	101.458	101.556	98.799	99.199	99.699
-14+300	101.216	100.994	100.158	98.787	99.187	99.687
-14+350	101.193	101.120	99.637	98.774	99.174	99.674
-14+400	101.044	101.049	99.692	98.762	99.162	99.662
-14+450	100.894	100.907	99.748	98.749	99.149	99.649
-14+500	100.744	100.765	99.803	98.737	99.137	99.637
-14+550	100.595	100.623	99.858	98.724	99.124	99.624
-14+600	100.445	100.481	99.184	98.712	99.112	99.612
-14+650	100.295	100.340	98.950	98.699	99.099	99.599
-14+700	100.146	100.197	98.715	98.687	99.087	99.587
-14+750	99.996	100.056	98.801	98.674	99.074	99.574
-14+800	99.846	99.914	98.786	98.662	99.062	99.562
-14+850	99.668	99.876	98.649	98.649 99.647 97.580	99.049 99.047 97.980	99.549 99.547 98.480
-14+900	99.443	99.511	97.985	97.570	97.970	98.470
-14+950	99.328	99.438	97.911	97.557	97.957	98.457
-15+000	99.213	99.366	97.838	97.545	97.945	98.445

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

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

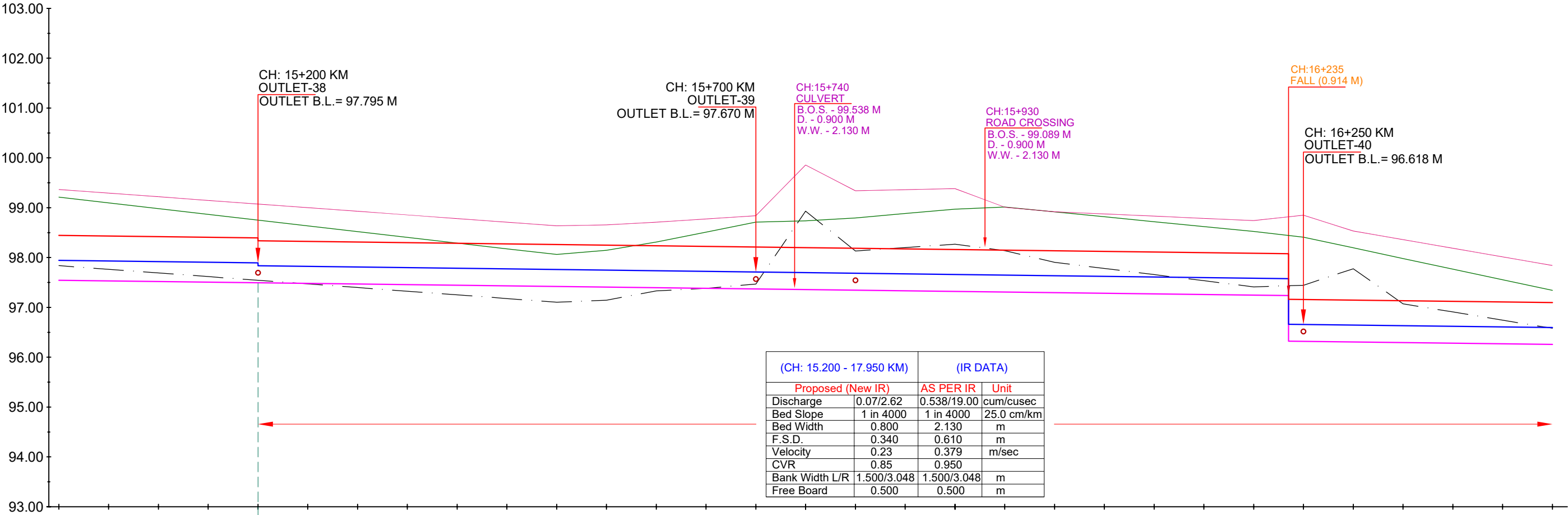
L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-

10 of 12

(CH: 13.380 - 15.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.15/5.14	0.538/19.00	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	1.200	2.130	m
F.S.D.	0.400	0.610	m
Velocity	0.27	0.379	m/sec
CVR	0.89	0.950	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

L- SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 15+000 TO 16+500



(CH: 15.200 - 17.950 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.07/2.62	0.538/19.00	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	0.800	2.130	m
F.S.D.	0.340	0.610	m
Velocity	0.23	0.379	m/sec
CVR	0.85	0.950	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-15+000	99.213	99.366	97.838	97.545	97.945	98.445
-15+050	99.098	99.293	97.764	97.532	97.932	98.432
-15+100	98.983	99.220	97.691	97.520	97.920	98.420
-15+150	98.867	99.147	97.618	97.507	97.907	98.407
-15+200	98.752	99.074	97.544	97.495	97.895 97.885 97.835	98.395 98.385 98.335
-15+250	98.637	99.001	97.471	97.482	97.822	98.322
-15+300	98.522	98.929	97.398	97.470	97.810	98.310
-15+350	98.406	98.856	97.324	97.457	97.797	98.297
-15+400	98.291	98.783	97.251	97.445	97.785	98.285
-15+450	98.176	98.710	97.178	97.432	97.772	98.272
-15+500	98.061	98.638	97.104	97.420	97.760	98.260
-15+550	98.144	98.655	97.144	97.407	97.747	98.247
-15+600	98.310	98.710	97.330	97.395	97.735	98.235
-15+650	98.511	98.775	97.382	97.382	97.722	98.222
-15+700	98.712	98.840	97.468	97.370	97.710	98.210
-15+750	98.735	99.858	98.931	97.357	97.697	98.197
-15+800	98.796	99.341	98.133	97.345	97.685	98.185
-15+850	98.884	99.362	98.200	97.332	97.672	98.172
-15+900	98.972	99.383	98.268	97.320	97.660	98.160
-15+950	99.015	99.010	98.137	97.307	97.647	98.147
-16+000	98.917	98.919	97.904	97.295	97.635	98.135
-16+050	98.819	98.875	97.781	97.282	97.622	98.122
-16+100	98.720	98.831	97.658	97.270	97.610	98.110
-16+150	98.622	98.787	97.535	97.257	97.597	98.097
-16+200	98.523	98.743	97.412	97.245	97.585	98.085
-16+250	98.407	98.850	97.444	97.236 96.322 96.318	97.576 96.662 96.658	98.076 97.162 97.158
-16+300	98.195	98.534	97.776	96.306	96.646	97.146
-16+350	97.981	98.361	97.071	96.293	96.633	97.133
-16+400	97.768	98.187	96.908	96.281	96.621	97.121
-16+450	97.554	98.014	96.744	96.268	96.608	97.108
-16+500	97.341	97.840	96.580	96.256	96.596	97.096

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

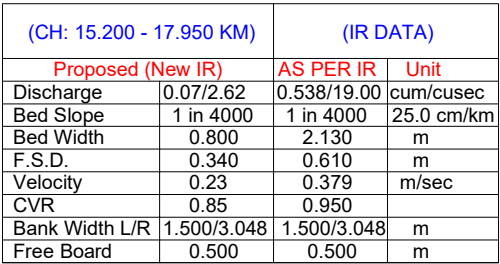
DRAWING TITLE :-

L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC-

FROM CH 16+500 TO 17+950

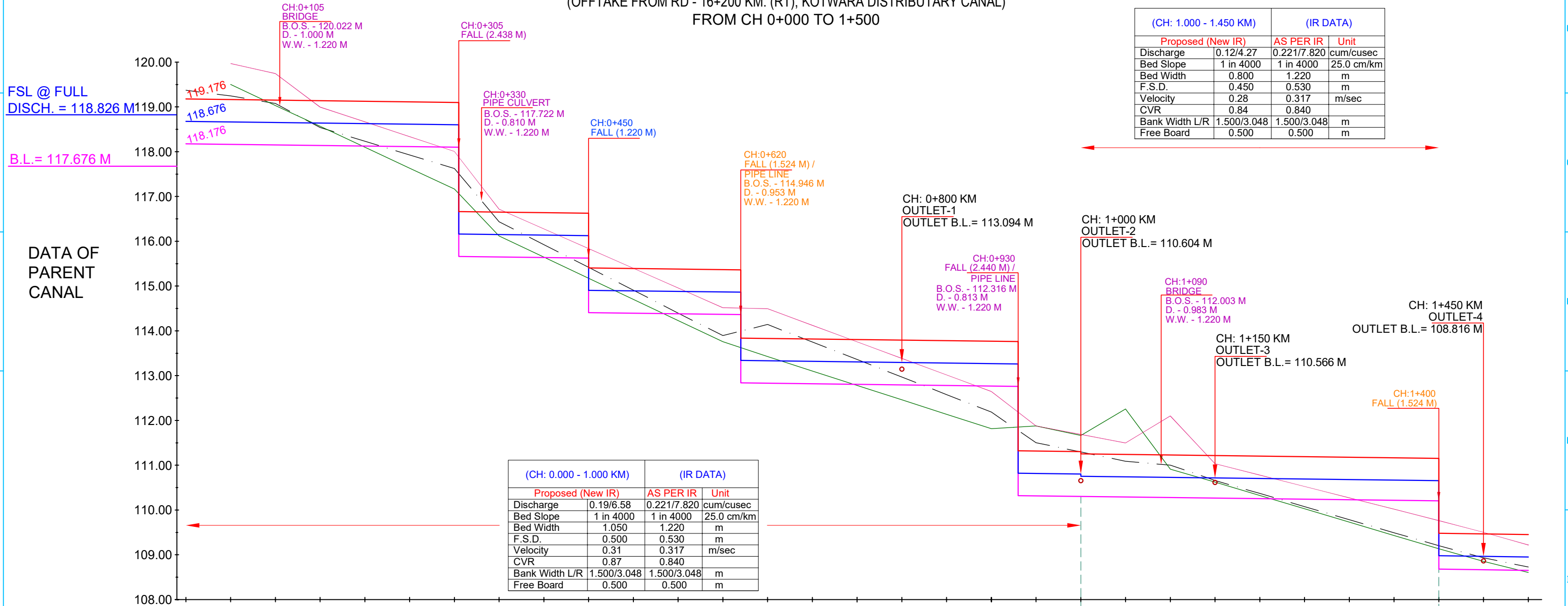


Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-16+500	97.341	97.840	96.580	96.256	96.596	97.096
-16+550	97.127	97.667	96.417	96.243	96.583	97.083
-16+600	96.914	97.493	96.253	96.231	96.571	97.071
-16+650	96.700	97.320	96.089	96.218	96.558	97.058
-16+700	96.487	97.147	95.925	96.206	96.546	97.046
-16+750	96.273	96.973	95.762	96.193	96.533	97.033
-16+800	96.060	96.800	95.598	96.181	96.521	97.021
-16+850	95.846	96.626	95.434	96.168	96.508	97.008
-16+900	95.720	96.574	94.966	96.160 94.330	96.500 94.870	97.000 95.170
-16+950	95.589	96.480	94.688	94.313	94.653	95.153
-17+000	95.451	95.901	94.624	94.301	94.641	95.141
-17+050	95.313	95.821	94.561	94.288	94.628	95.128
-17+100	95.174	95.741	94.498	94.276	94.616	95.116
-17+150	95.036	95.660	94.435	94.263	94.603	95.103
-17+200	94.898	95.580	94.372	94.251	94.591	95.091
-17+250	94.759	95.500	94.309	94.238	94.578	95.078
-17+300	94.621	95.420	94.246	94.226	94.566	95.066
-17+350	94.483	95.340	94.183	94.213	94.553	95.053
-17+400	94.344	95.260	94.120	94.201	94.541	95.041
-17+450	94.206	95.180	94.057	94.188	94.528	95.028
-17+500	94.112	95.037	94.158	94.176	94.516	95.016
-17+550	94.067	94.591	93.351	94.171 92.341	94.511 92.681	95.011 93.181
-17+600	93.745	94.382	93.100	92.321	92.661	93.161
-17+650	93.423	94.173	92.849	92.308	92.648	93.148
-17+700	93.102	93.964	92.598	92.296	92.636	93.136
-17+750	92.780	93.755	92.347	92.283	92.623	93.123
-17+800	92.459	92.437	92.218	92.271 91.051	92.611 91.391	93.111 91.691
-17+850	92.136	92.589	91.372	91.038	91.378	91.878
-17+900	91.665	92.317	91.034	91.026	91.366	91.866
-17+950	---	---	---	91.013	91.353	91.853

LEGEND				IMPLEMENTING AGENCY :- WAPCOS LTD. 	PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
	EXISTING TOP OF BANK		PROPOSED BED LEVEL		DRAWING TITLE :-	L- SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)		
	EXISTING STRUCTURE		PROPOSED FSL		DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-06/ LSEC- 12 of 12		
	MODIFIED STRUCTURE		PROPOSED TOP OF BANK LEVEL					
	NEW STRUCTURE							

SAHOKARMA MINOR

L- SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



EXISTING DATA	DESIGN DATA																											
	TOP OF BANK LEVEL		119.176	119.163	119.151	119.138	119.126	119.113	119.101	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099	119.099
	F.S.L.		118.676	118.663	118.651	118.638	118.626	118.613	118.601	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599	118.599
	Proposed Bed Level		118.176	118.163	118.151	118.138	118.126	118.113	118.101	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099	118.099
	Bed Level		119.371	119.246	119.075	118.541	118.234	117.926	117.624	117.437	117.250	117.063	116.876	116.689	116.502	116.315	116.128	115.941	115.754	115.567	115.380	115.193	115.006	114.819	114.632	114.445	114.258	114.071
Chainage IN KM	TOP OF BANK LEVEL			119.970	119.746	118.997	118.667	118.337	118.007	117.676	117.346	117.015	116.685	116.354	116.024	115.693	115.363	115.032	114.702	114.371	114.041	113.710	113.380	113.049	112.719	112.388	112.058	111.727
	NSL			119.503	119.030	118.557	118.101	117.633	117.167	116.701	116.235	115.769	115.303	114.837	114.371	113.905	113.439	112.973	112.507	112.041	111.575	111.109	110.643	110.177	109.711	109.245	108.779	108.313

LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

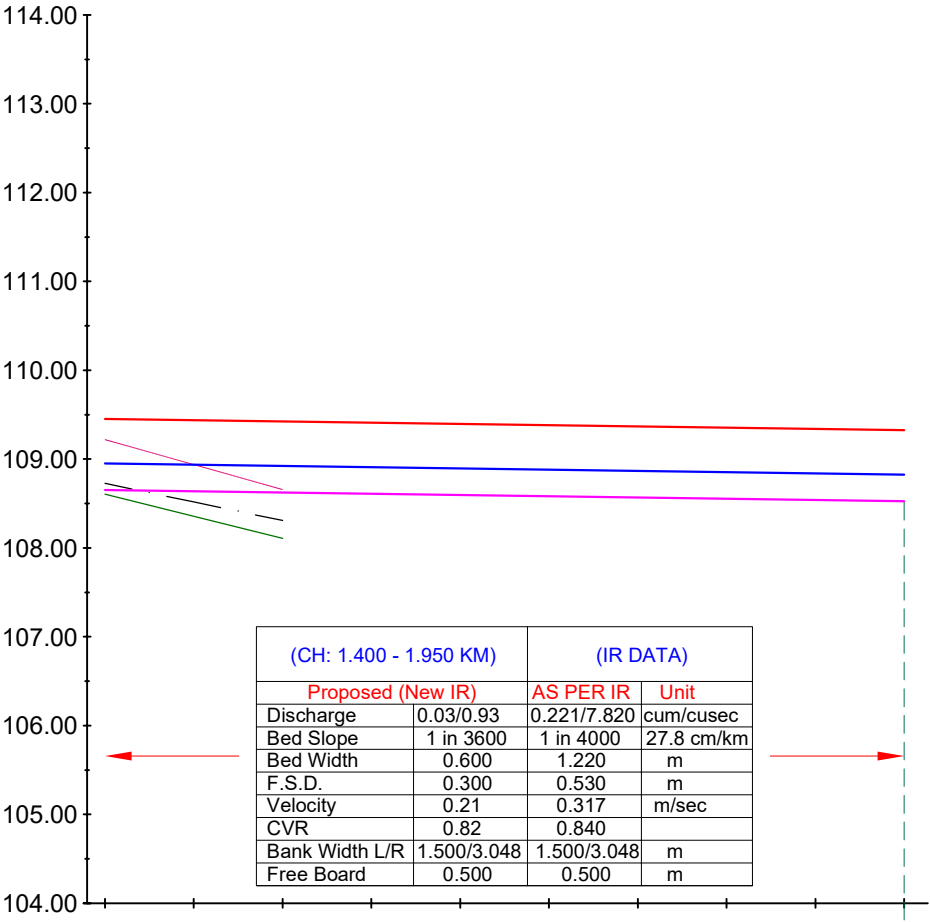
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ LSEC-01 of 02

L- SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 1+650



DESIGN DATA	TOP OF BANK LEVEL	109.452	109.438	109.424	109.410	109.396	109.382	109.368	109.355	109.341	109.327
	F.S.L.	108.952	108.938	108.924	108.910	108.896	108.882	108.868	108.855	108.841	108.827
	Proposed Bed Level	108.652	108.638	108.624	108.610	108.596	108.582	108.568	108.555	108.541	108.527
EXISTING DATA	Bed Level	108.727	108.518	108.309							
	TOP OF BANK LEVEL	109.220	108.938	108.657							
	NSL	108.606	108.357	108.108							
Chainage IN KM		1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950

LEGEND

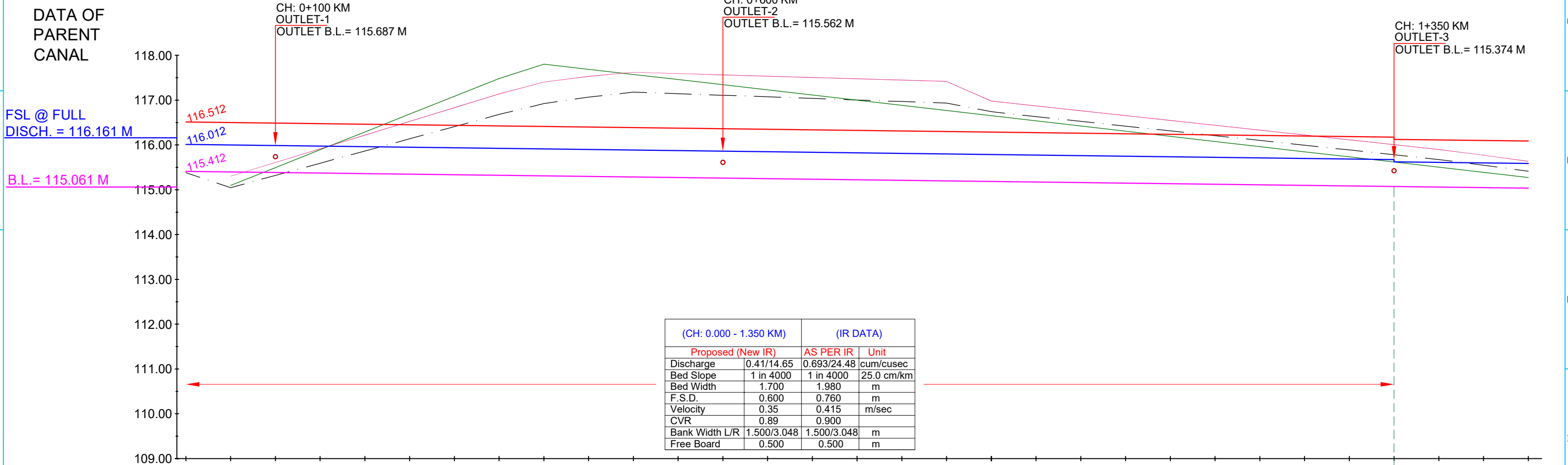
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING STRUCTURE		PROPOSED FSL
	MODIFIED STRUCTURE		PROPOSED TOP OF BANK LEVEL
	NEW STRUCTURE		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ LSEC-02 of 02

DHAMANI MINOR

L- SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 1.350 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.41/14.65	0.693/24.48	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	1.700	1.980	m
F.S.D.	0.600	0.760	m
Velocity	0.35	0.415	m/sec
CVR	0.89	0.900	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

EXISTING DATA	DESIGN DATA			Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	
Bed Level	115.383	116.012	115.412	0+000
TOP OF BANK LEVEL				0+050
NSL	115.096	115.302	115.399	0+050
	115.494	115.608	115.387	0+100
	115.892	115.914	115.374	0+150
	116.290	116.220	115.362	0+200
	116.689	116.526	115.349	0+250
	117.087	116.832	115.337	0+300
	117.484	117.138	115.324	0+350
	117.803	117.403	115.312	0+400
	117.688	117.531	115.299	0+450
	117.574	117.623	115.287	0+500
	117.459	117.594	115.274	0+550
	117.344	117.565	115.262	0+600
	117.229	117.536	115.249	0+650
	117.114	117.506	115.237	0+700
	116.999	117.477	115.224	0+750
	116.884	117.448	115.212	0+800
	116.769	117.418	115.199	0+850
	116.654	116.979	115.187	0+900
	116.539	116.871	115.174	0+950
	116.423	116.763	115.162	1+000
	116.308	116.655	115.149	1+050
	116.193	116.547	115.137	1+100
	116.078	116.439	115.124	1+150
	115.963	116.331	115.112	1+200
	115.848	116.223	115.099	1+250
	115.733	116.116	115.087	1+300
	115.618	116.008	115.074	1+350
	115.503	115.899	115.062	1+400
	115.387	115.771	115.049	1+450
	115.272	115.637	115.037	1+500

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

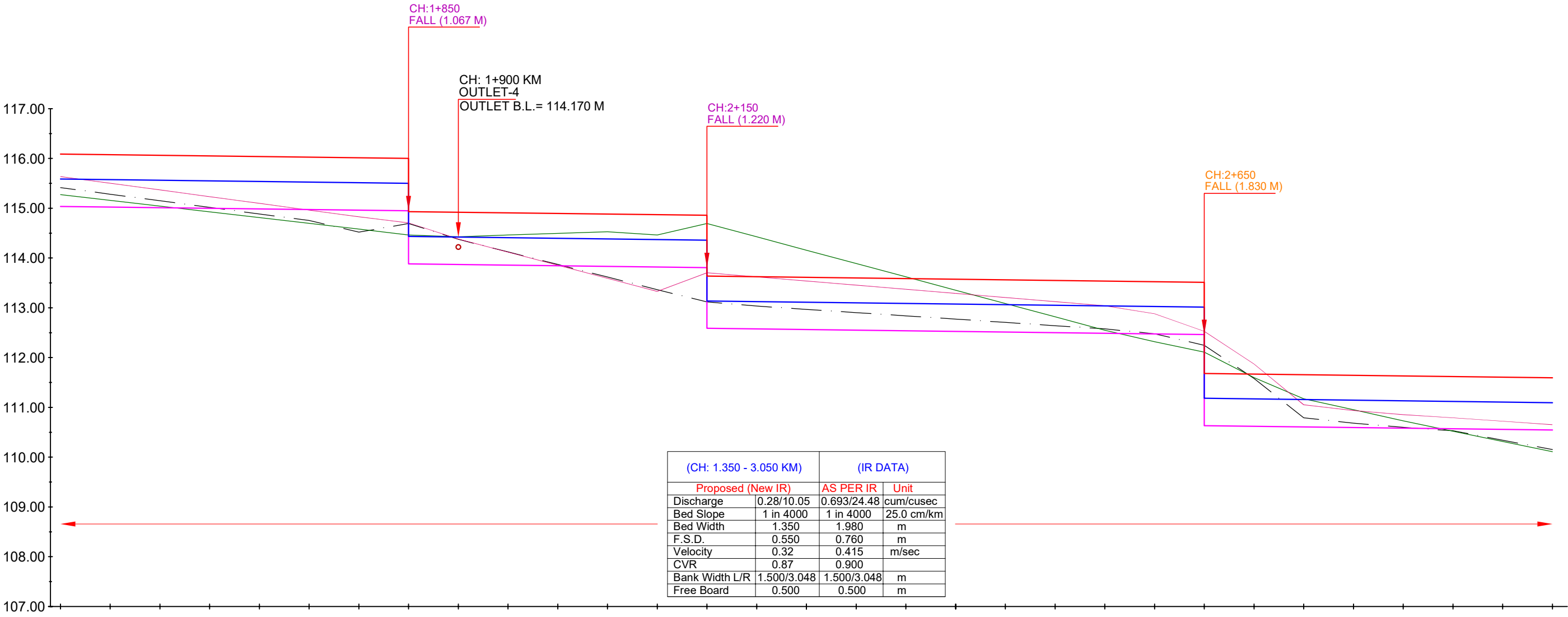
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ LSEC-01 of 04

L- SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+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
- 1+500	116.087	115.587	115.037	115.415	115.637	115.272
- 1+550	116.074	115.574	115.024	115.282	115.502	115.157
- 1+600	116.062	115.562	115.012	115.150	115.368	115.042
- 1+650	116.049	115.549	114.999	115.017	115.233	114.927
- 1+700	116.037	115.537	114.987	114.885	115.098	114.812
- 1+750	116.024	115.524	114.974	114.753	114.963	114.697
- 1+800	116.012	115.512	114.962	114.620	114.829	114.582
- 1+850	115.999	115.499	114.949	114.693	114.707	114.463
- 1+900	114.920	114.420	113.870	114.376	114.383	114.428
- 1+950	114.907	114.407	113.857	114.123	114.119	114.461
- 2+000	114.895	114.395	113.845	113.870	113.856	114.495
- 2+050	114.882	114.382	113.832	113.618	113.592	114.528
- 2+100	114.870	114.370	113.820	113.365	113.329	114.561
- 2+150	114.857	113.357	112.587	113.117	113.704	114.693
- 2+200	113.625	113.125	112.575	113.035	113.621	114.425
- 2+250	113.612	113.112	112.562	112.969	113.538	114.157
- 2+300	113.600	113.100	112.550	112.903	113.455	113.890
- 2+350	113.587	113.087	112.537	112.838	113.372	113.622
- 2+400	113.575	113.075	112.525	112.773	113.290	113.354
- 2+450	113.562	113.062	112.512	112.708	113.207	113.086
- 2+500	113.550	113.050	112.500	112.641	113.124	112.818
- 2+550	113.537	113.037	112.487	112.577	113.041	112.550
- 2+600	113.525	113.025	112.475	112.478	112.881	112.317
- 2+650	113.512	113.012	112.462	112.246	112.527	112.108
- 2+700	111.670	111.170	110.620	111.579	111.872	111.598
- 2+750	111.657	111.157	110.607	110.790	111.052	111.171
- 2+800	111.645	111.145	110.595	110.682	110.938	110.953
- 2+850	111.632	111.132	110.582	110.600	110.853	110.731
- 2+900	111.620	111.120	110.570	110.530	110.791	110.520
- 2+950	111.607	111.107	110.557	110.341	110.722	110.315
- 3+000	111.595	111.095	110.545	110.152	110.653	110.110

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

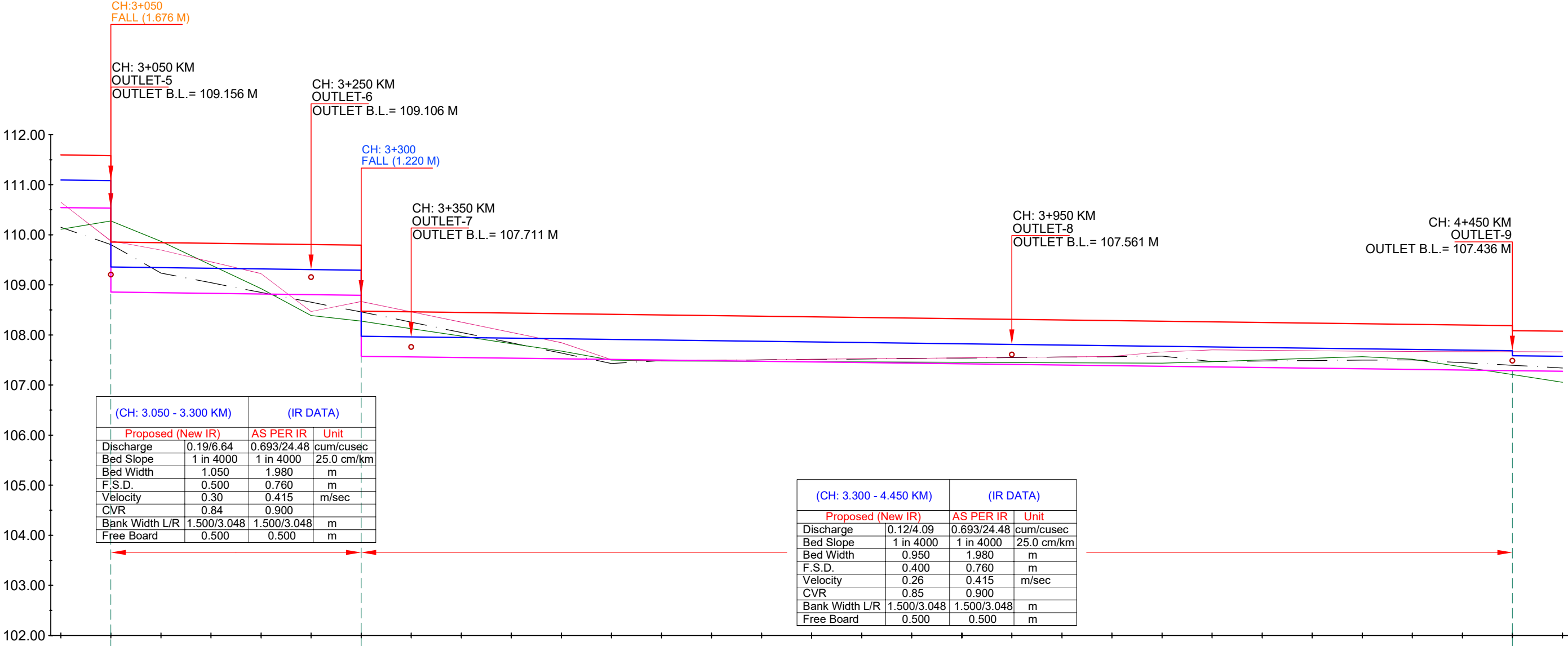
PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.


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

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L),
KOTWARA DISTRIBUTARY CANAL)
WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ LSEC-02 of 04

L- SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 3+000 TO 4+500



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
+ 3+000	110.110	110.653	110.152	110.545	111.095	111.595
+ 3+050	110.276	109.879	109.808	110.532	111.082	111.582
+ 3+100	109.868	109.697	109.235	108.856	109.356	109.856
+ 3+150	109.397	109.461	109.043	108.844	109.344	109.844
+ 3+200	108.927	109.226	108.849	108.831	109.331	109.831
+ 3+250	108.389	108.469	108.654	108.806	109.306	109.806
+ 3+300	108.277	108.668	108.460	108.794	109.294	109.794
+ 3+350	108.127	108.463	108.257	107.574	107.974	108.474
+ 3+400	107.978	108.257	108.050	107.561	107.961	108.461
+ 3+450	107.828	108.051	107.844	107.549	107.949	108.449
+ 3+500	107.678	107.846	107.638	107.536	107.936	108.436
+ 3+550	107.497	107.508	107.431	107.524	107.924	108.424
+ 3+600	107.482	107.488	107.487	107.511	107.911	108.411
+ 3+650	107.477	107.497	107.493	107.499	107.899	108.399
+ 3+700	107.473	107.506	107.502	107.486	107.886	108.386
+ 3+750	107.468	107.516	107.512	107.474	107.874	108.374
+ 3+800	107.464	107.525	107.521	107.461	107.861	108.361
+ 3+850	107.459	107.534	107.531	107.449	107.849	108.349
+ 3+900	107.454	107.544	107.540	107.436	107.836	108.336
+ 3+950	107.450	107.553	107.549	107.424	107.824	108.324
+ 4+000	107.445	107.562	107.559	107.411	107.811	108.311
+ 4+050	107.441	107.572	107.568	107.399	107.799	108.299
+ 4+100	107.436	107.581	107.578	107.386	107.786	108.286
+ 4+150	107.432	107.601	107.584	107.374	107.774	108.274
+ 4+200	107.427	107.621	107.599	107.361	107.761	108.261
+ 4+250	107.423	107.641	107.619	107.349	107.749	108.249
+ 4+300	107.418	107.661	107.648	107.336	107.736	108.236
+ 4+350	107.414	107.681	107.678	107.324	107.724	108.224
+ 4+400	107.409	107.701	107.703	107.311	107.711	108.211
+ 4+450	107.405	107.721	107.730	107.299	107.699	108.199
+ 4+500	107.401	107.741	107.750	107.286	107.686	108.186
	107.397	107.761	107.769	107.274	107.674	108.174

LEGEND

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.

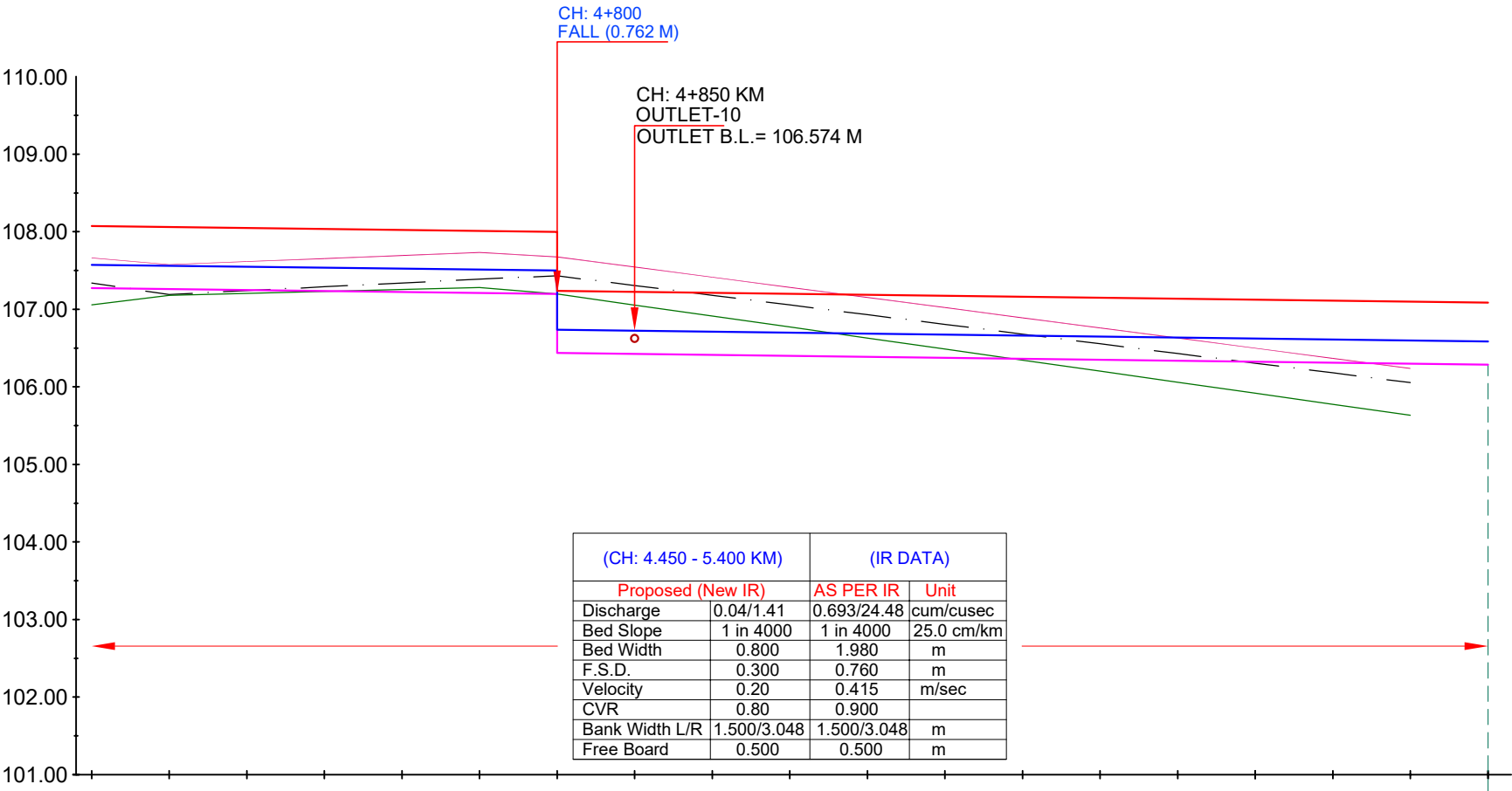
PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ LSEC-03 of 04

L- SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 4+500 TO 5+400



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
+4+500	107.056	107.663	107.340	107.274	107.574	108.074
+4+550	107.181	107.577	107.190	107.261	107.561	108.061
+4+600	107.206	107.616	107.240	107.249	107.549	108.049
+4+650	107.231	107.655	107.290	107.236	107.536	108.036
+4+700	107.255	107.694	107.339	107.224	107.524	108.024
+4+750	107.280	107.733	107.389	107.211	107.511	108.011
+4+800	107.197	107.676	107.431	107.199 106.437	107.499 106.737	107.999 107.237
+4+850	107.055	107.545	107.307	106.424	106.724	107.224
+4+900	106.913	107.414	107.181	106.412	106.712	107.212
+4+950	106.771	107.283	107.057	106.399	106.699	107.199
+5+000	106.629	107.153	106.931	106.387	106.687	107.187
+5+050	106.487	107.022	106.806	106.374	106.674	107.174
+5+100	106.344	106.891	106.680	106.362	106.662	107.162
+5+150	106.202	106.760	106.556	106.349	106.649	107.149
+5+200	106.060	106.630	106.430	106.337	106.637	107.137
+5+250	105.918	106.499	106.305	106.324	106.624	107.124
+5+300	105.776	106.368	106.180	106.312	106.612	107.112
+5+350	105.634	106.238	106.055	106.299	106.599	107.099
+5+400	-----	-----	-----	106.287	106.587	107.087

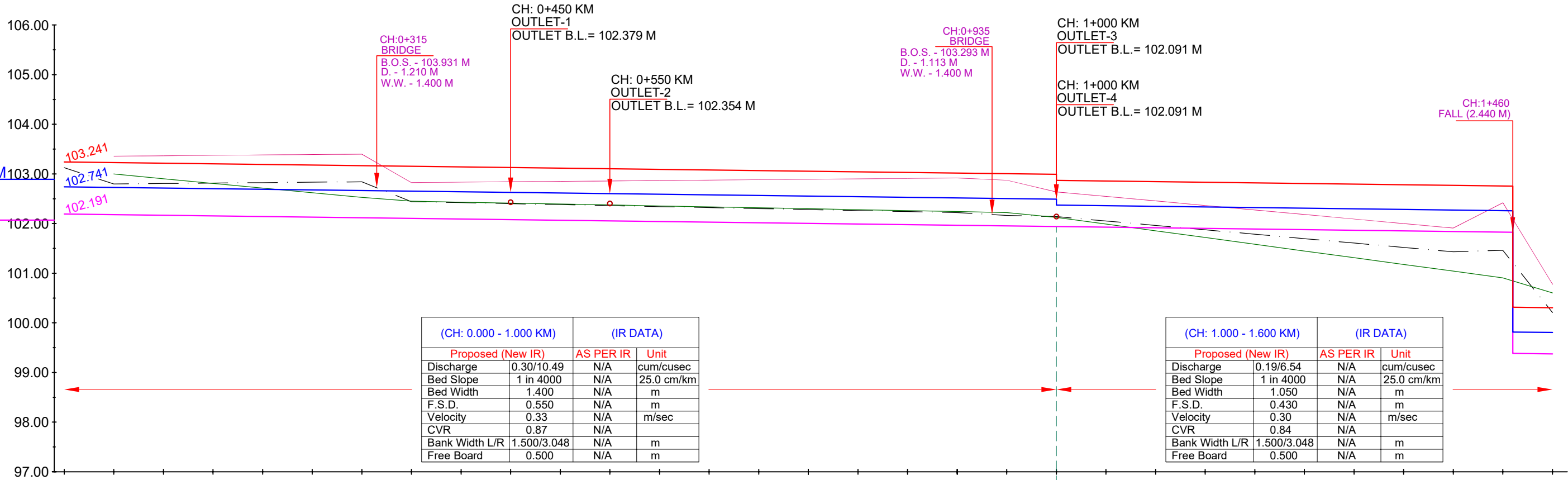
BHADWA MINOR

L- SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500

DATA OF
PARENT
CANAL

FSL @ FULL
DISCH. = 102.891 M

B.L.= 102.071 M



(CH: 0.000 - 1.000 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.30/10.49	N/A	cum/cusec
Bed Slope	1 in 4000	N/A	25.0 cm/km
Bed Width	1.400	N/A	m
F.S.D.	0.550	N/A	m
Velocity	0.33	N/A	m/sec
CVR	0.87	N/A	
Bank Width L/R	1.500/3.048	N/A	m
Free Board	0.500	N/A	m

(CH: 1.000 - 1.600 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.19/6.54	N/A	cum/cusec
Bed Slope	1 in 4000	N/A	25.0 cm/km
Bed Width	1.050	N/A	m
F.S.D.	0.430	N/A	m
Velocity	0.30	N/A	m/sec
CVR	0.84	N/A	
Bank Width L/R	1.500/3.048	N/A	m
Free Board	0.500	N/A	m

EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	103.124	102.741	0+000
TOP OF BANK LEVEL	103.359	102.729	0+050
NSL	102.998	102.716	0+100
	103.367	102.704	0+150
	102.904	102.691	0+200
	102.810	102.679	0+250
	102.716	102.666	0+300
	102.622	102.654	0+350
	102.527	102.641	0+400
	102.432	102.629	0+450
	102.337	102.616	0+500
	102.242	102.604	0+550
	102.147	102.591	0+600
	102.052	102.579	0+650
	101.957	102.566	0+700
	101.862	102.554	0+750
	101.767	102.541	0+800
	101.672	102.529	0+850
	101.577	102.516	0+900
	101.482	102.504	0+950
	101.387	102.491	1+000
	101.292	102.479	1+050
	101.197	102.466	1+100
	101.102	102.454	1+150
	101.007	102.441	1+200
	100.912	102.429	1+250
	100.817	102.416	1+300
	100.722	102.404	1+350
	100.627	102.391	1+400
	100.532	102.379	1+450
	100.437	102.366	1+500

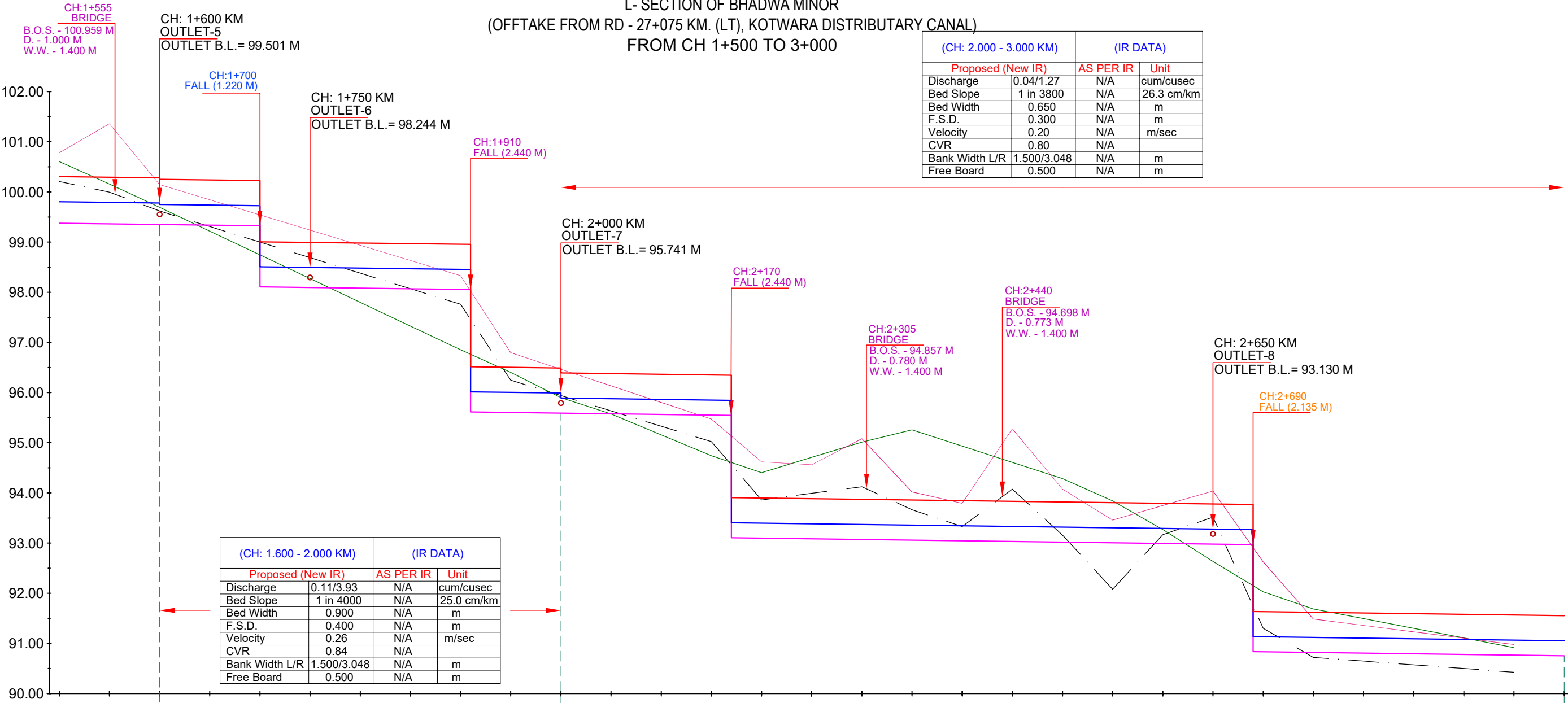
LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING STRUCTURE		PROPOSED FSL
	MODIFIED STRUCTURE		PROPOSED TOP OF BANK LEVEL
	NEW STRUCTURE		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-10/ LSEC- 01 of 02

L- SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000

(CH: 2.000 - 3.000 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.27	N/A	cum/cusec
Bed Slope	1 in 3800	N/A	26.3 cm/km
Bed Width	0.650	N/A	m
F.S.D.	0.300	N/A	m
Velocity	0.20	N/A	m/sec
CVR	0.80	N/A	
Bank Width L/R	1.500/3.048	N/A	m
Free Board	0.500	N/A	m



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL		
	F.S.L.		
	Proposed Bed Level		
EXISTING DATA	Bed Level		Chainage IN KM
	TOP OF BANK LEVEL		
	NSL		
			- 1+500
			- 1+550
			- 1+600
			- 1+650
			- 1+700
			- 1+750
			- 1+800
			- 1+850
			- 1+900
			- 1+950
			- 2+000
			- 2+050
			- 2+100
			- 2+150
			- 2+200
			- 2+250
			- 2+300
			- 2+350
			- 2+400
			- 2+450
			- 2+500
			- 2+550
			- 2+600
			- 2+650
			- 2+700
			- 2+750
			- 2+800
			- 2+850
			- 2+900
			- 2+950
			- 3+000

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

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

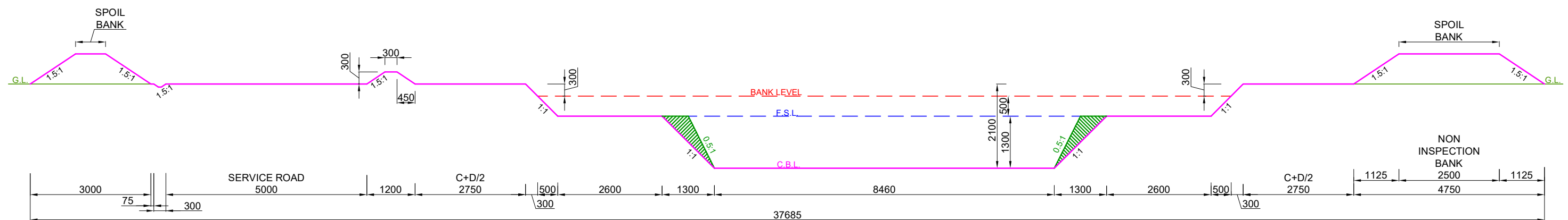
L- SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L),
KOTWARA DISTRIBUTARY CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-10/ LSEC-

TYPICAL X-SECTION

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



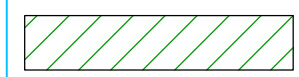
DESIGN SECTION FROM CH: 0.000 KM TO CH: 5.120 KM

- 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 :-

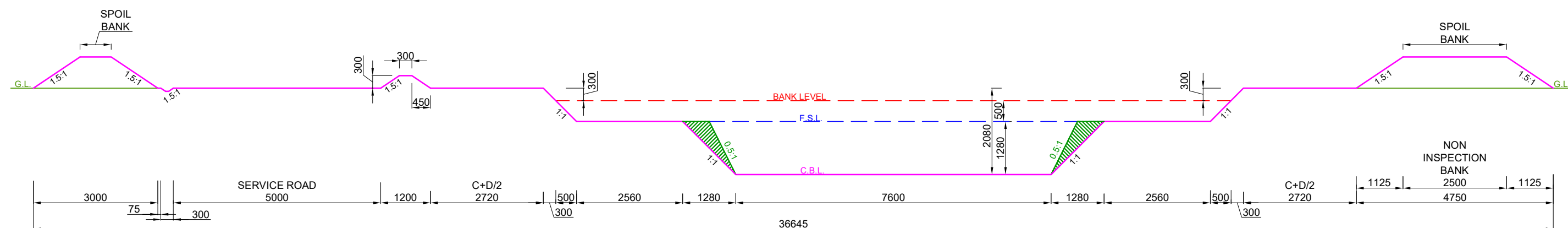
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-34/ XSEC /TYP-(FC)

1 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

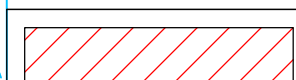


DESIGN SECTION FROM CH: 5.120 KM TO CH: 13.020 KM

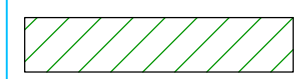
NOTE:-

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 :-

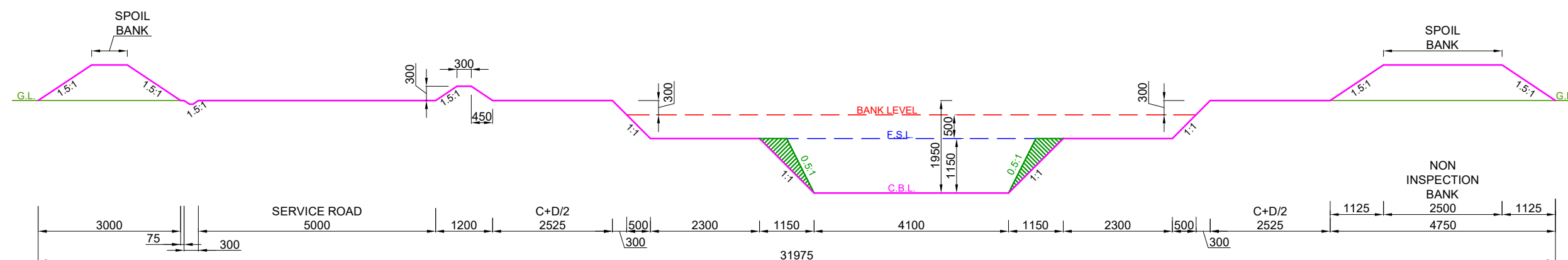
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-34/ XSEC /TYP-(FC)

2 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 13.020 KM TO CH: 16.200 KM

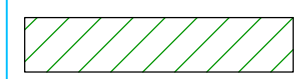
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

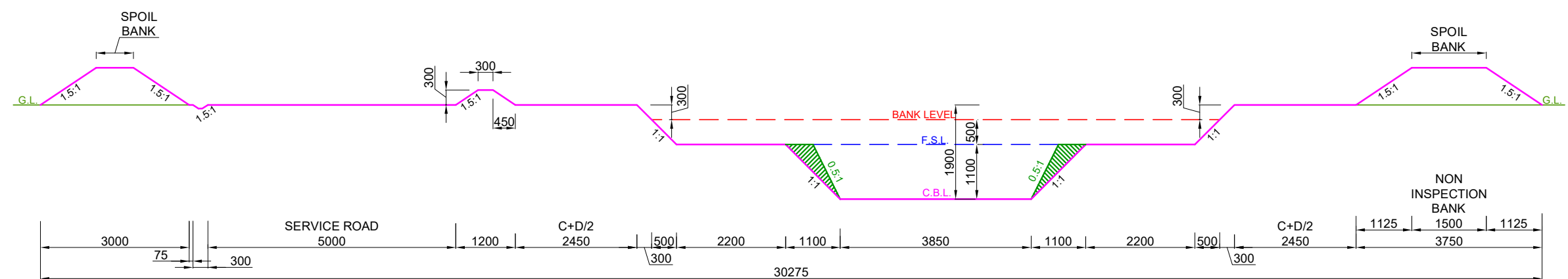
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-34/ XSEC /TYP-(FC)

3 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 16.200 KM TO CH: 17.350 KM

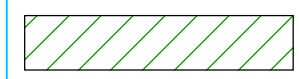
NOTE:-

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 CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-34/ XSEC /TYP-(FC)

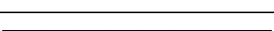
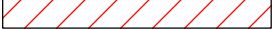
4 of 15

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

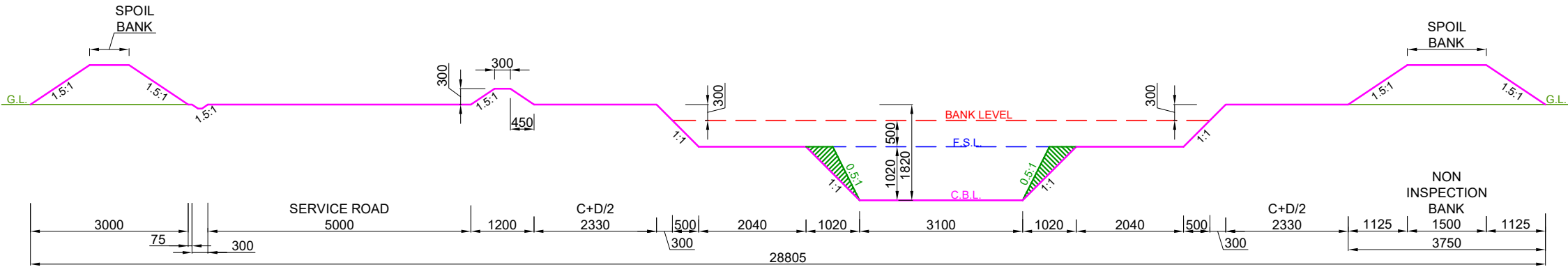
- Ground Level (G.L.):** Represented by a green line.
- Bank Level:** Represented by a red dashed line.
- Existing Surface (E.S.):** Represented by a blue line.
- Centerline (C.B.L.):** Represented by a magenta line.
- Dimensions:**
 - Left side: 3000, 75, 300, 5000, 1200, 500, 2100, 1050, 3400, 1050, 2100, 500, 300.
 - Right side: 1125, 1500, 1125, 3750.
 - Total width: 29375.
- Slopes:** 1.5:1, 1.7:1, and 0.5:1.
- Labels:** SPOIL BANK, SERVICE ROAD, C+D/2, and NON INSPECTION BANK.

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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)5 of 15	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

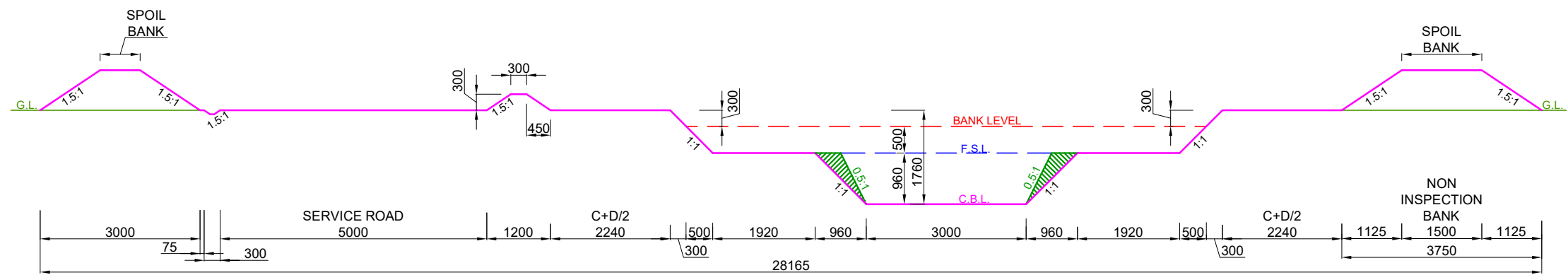


DESIGN SECTION FROM CH: 20.200 KM TO CH: 21.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 21.350 KM TO CH: 23.830 KM

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

LEGEND CUT AREA FILL AREA	Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

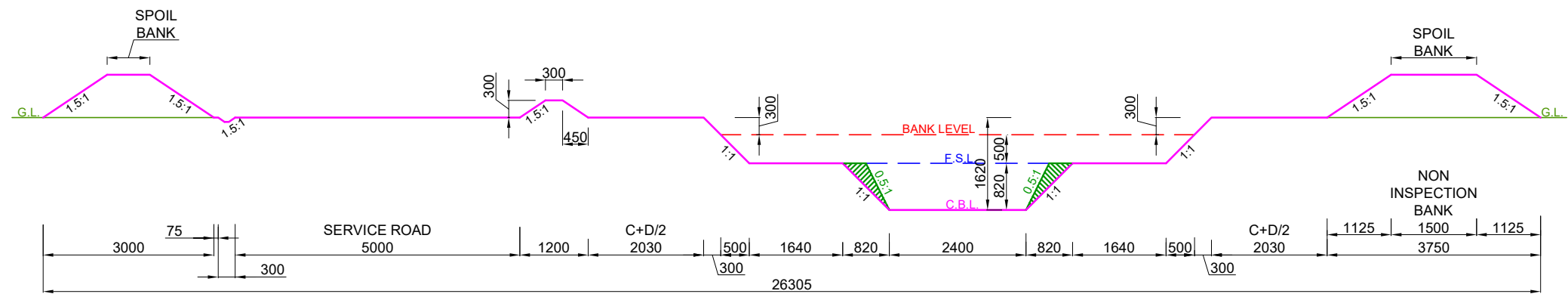
7 of 15

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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)8 of 15	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



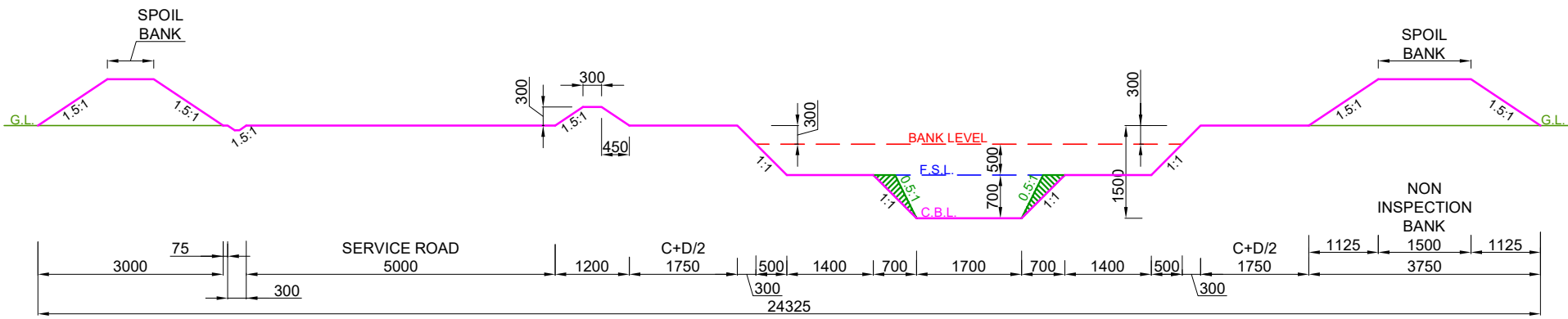
DESIGN SECTION FROM CH: 26.400 KM TO CH: 27.075 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

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TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



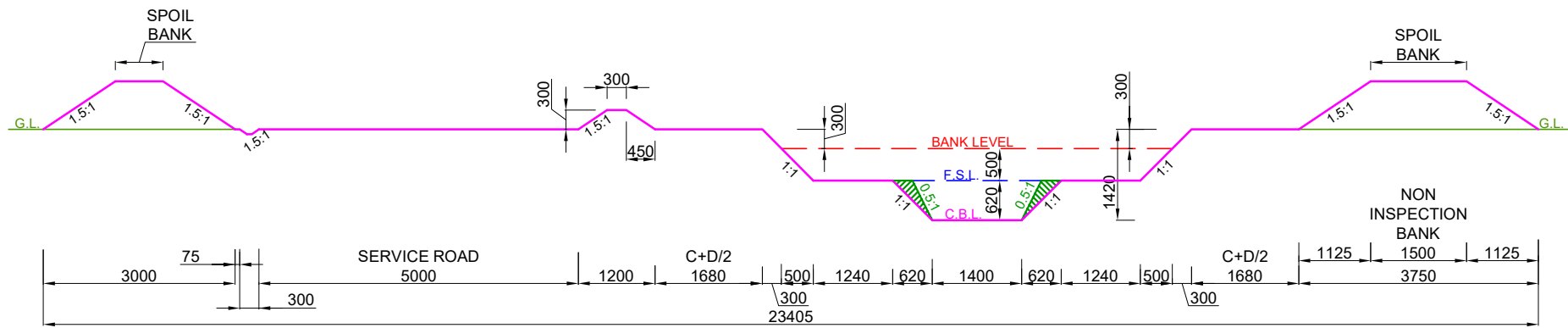
DESIGN SECTION FROM CH: 27.075 KM TO CH: 28.800 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

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TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

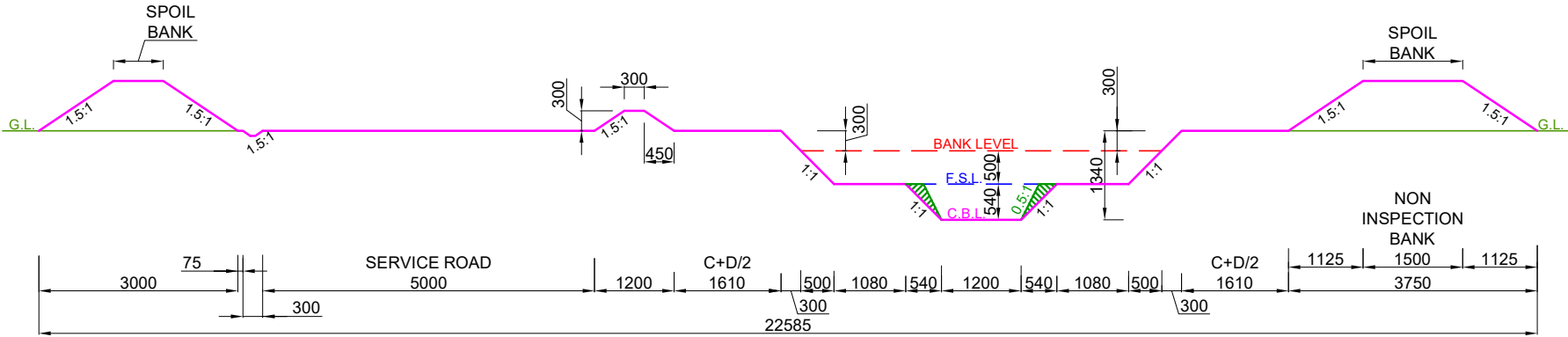


DESIGN SECTION FROM CH: 28.800 KM TO CH: 29.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

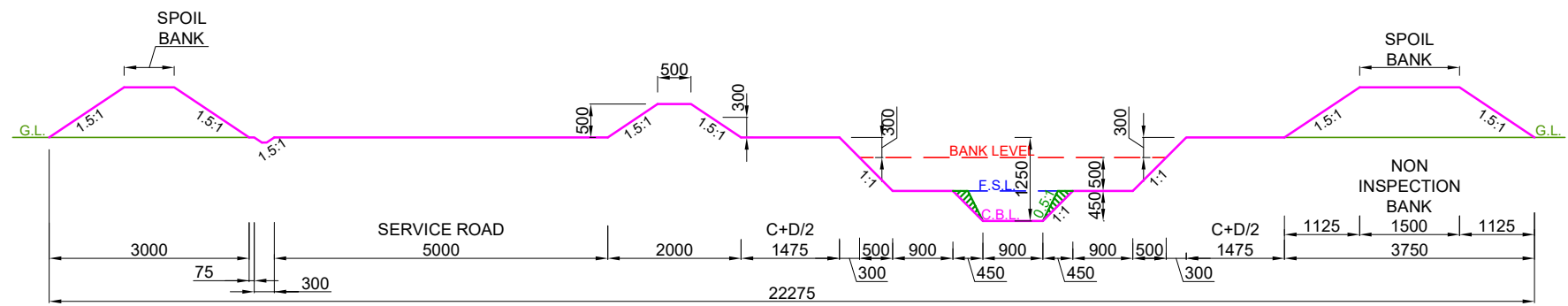


DESIGN SECTION FROM CH: 29.000 KM TO CH: 30.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)			

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

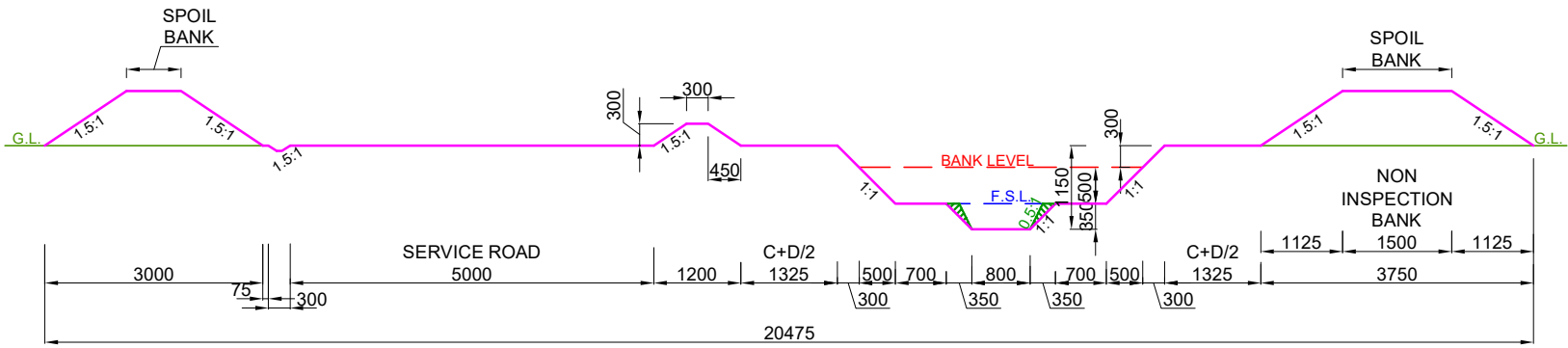


DESIGN SECTION FROM CH: 30.000 KM TO CH: 30.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

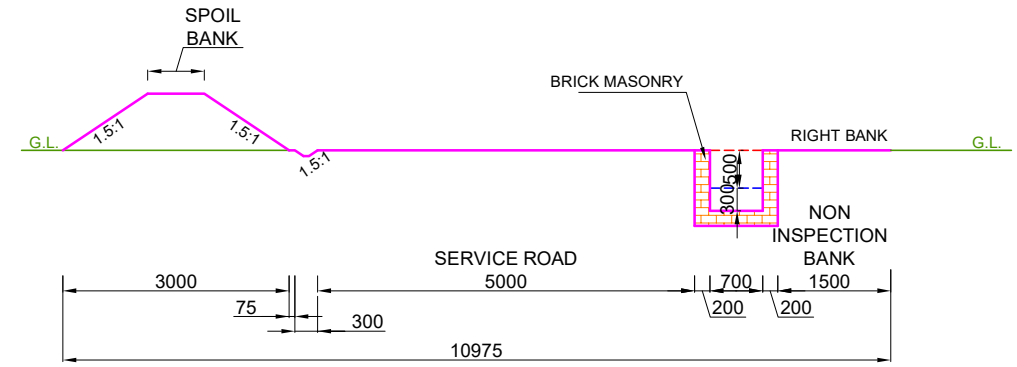


DESIGN SECTION FROM CH: 30.350 KM TO CH: 30.650 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC) 14 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

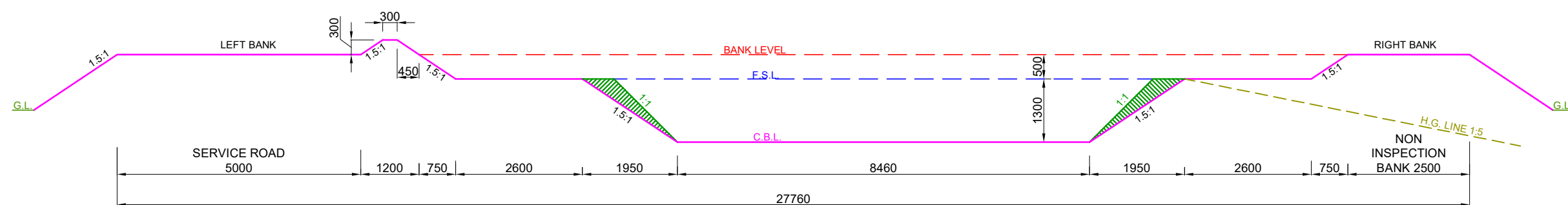


DESIGN SECTION FROM CH: 30.650 KM TO CH: 30.800 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

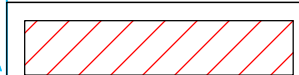


DESIGN SECTION FROM CH: 0.000 KM TO CH: 5.120 KM

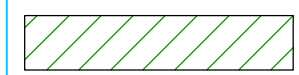
NOTE:-

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 :-

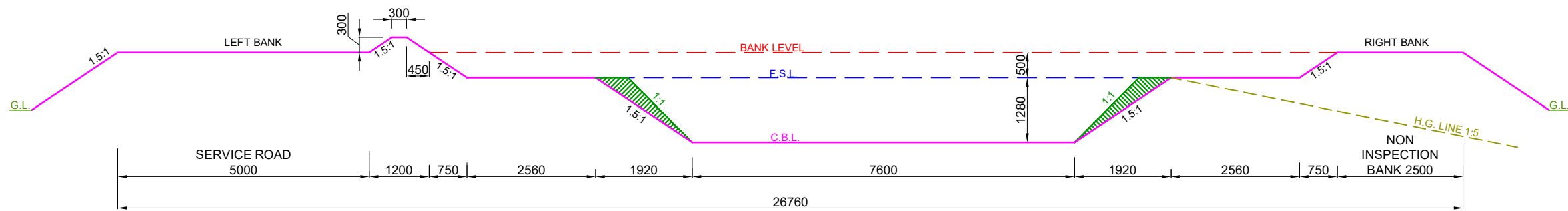
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

1 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

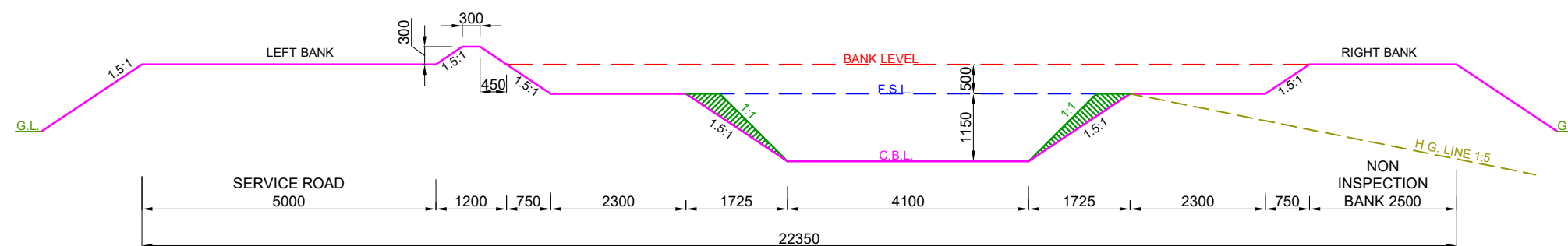


DESIGN SECTION FROM CH: 5.120 KM TO CH: 13.020 KM

- 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 CHAIN NAWADA SUB-DY. (OFFTAKE FROM RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

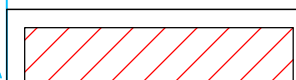


DESIGN SECTION FROM CH: 13.020 KM TO CH: 16.200 KM

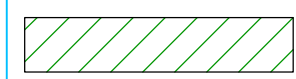
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

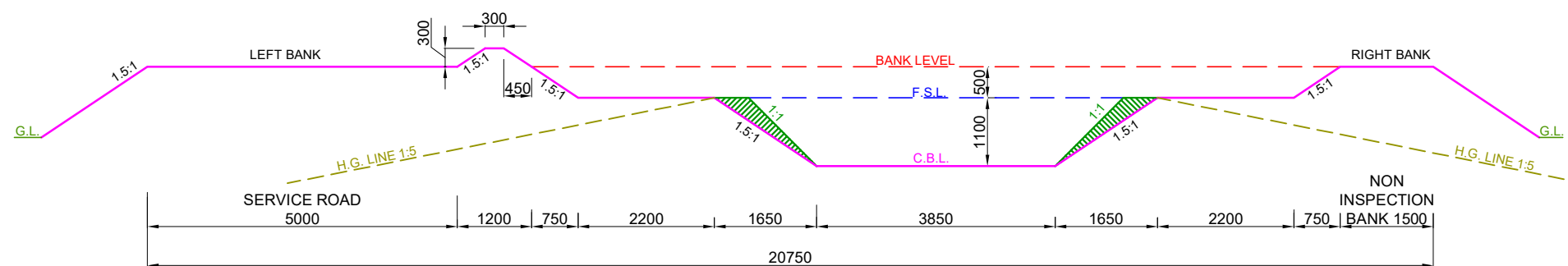
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

3 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

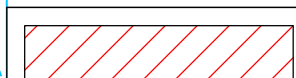


DESIGN SECTION FROM CH: 16.200 KM TO CH: 17.350 KM

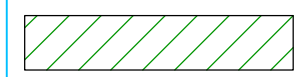
NOTE:-

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 CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

4 of 15

A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.



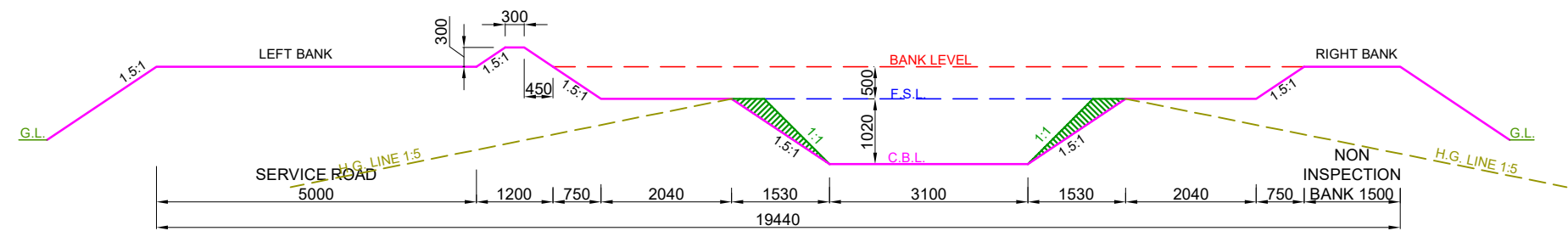
A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.

A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.

-
- A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.

A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

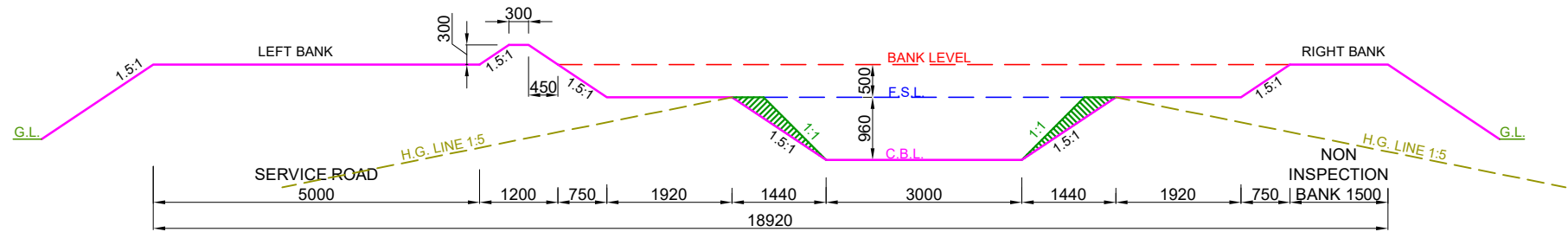


DESIGN SECTION FROM CH: 20.200 KM TO CH: 21.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

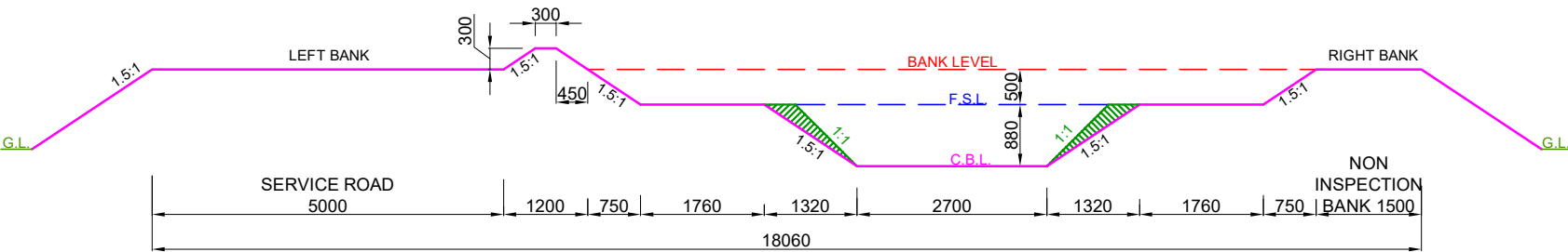


DESIGN SECTION FROM CH: 21.350 KM TO CH: 23.830 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
			Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)7 of 15	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

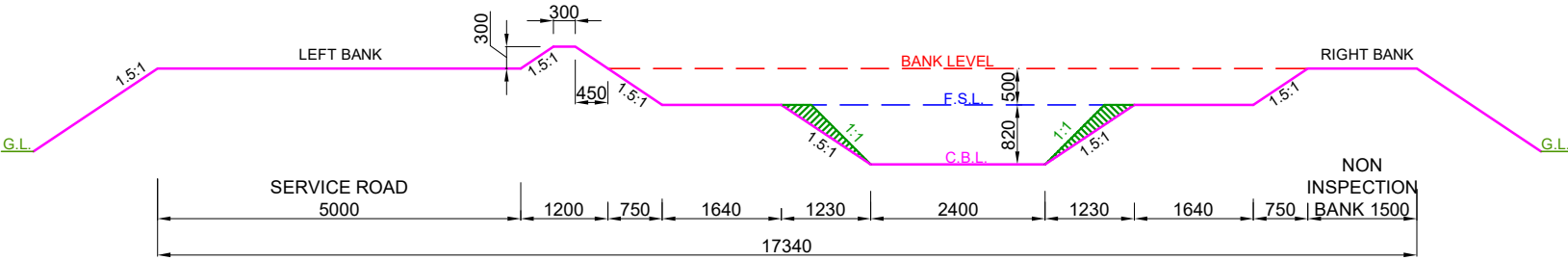


DESIGN SECTION FROM CH: 23.830 KM TO CH: 26.400 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)			

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

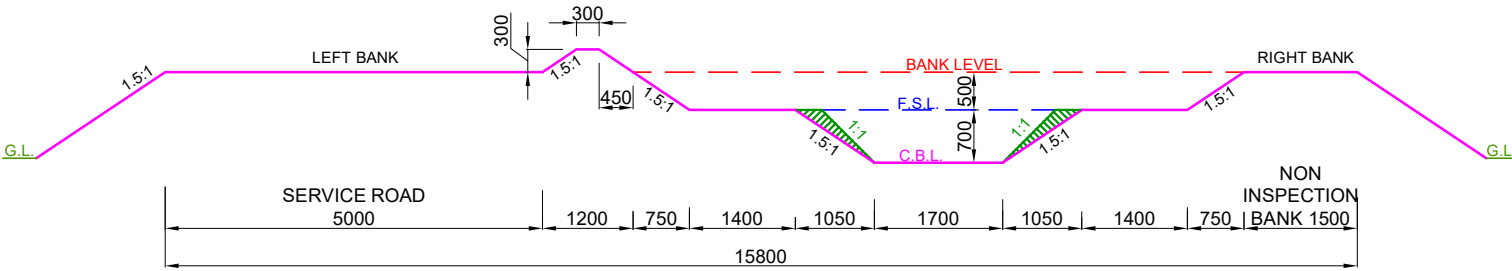


DESIGN SECTION FROM CH: 26.400 KM TO CH: 27.075 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)			

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

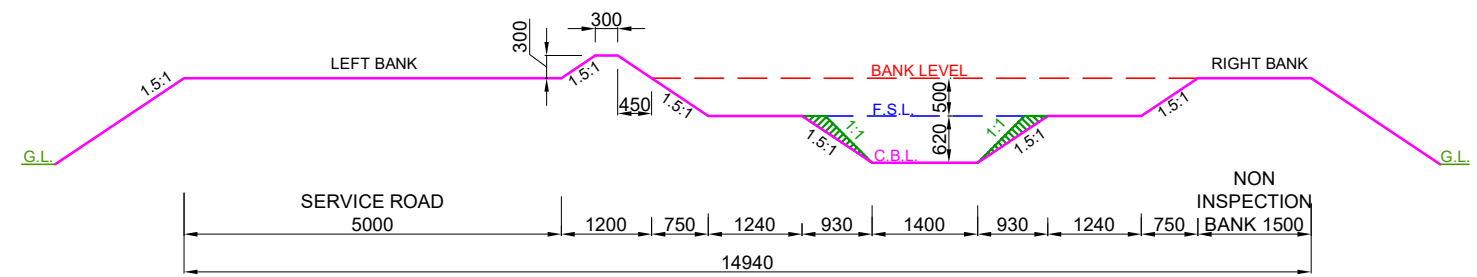


DESIGN SECTION FROM CH: 27.075 KM TO CH: 28.800 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)				

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

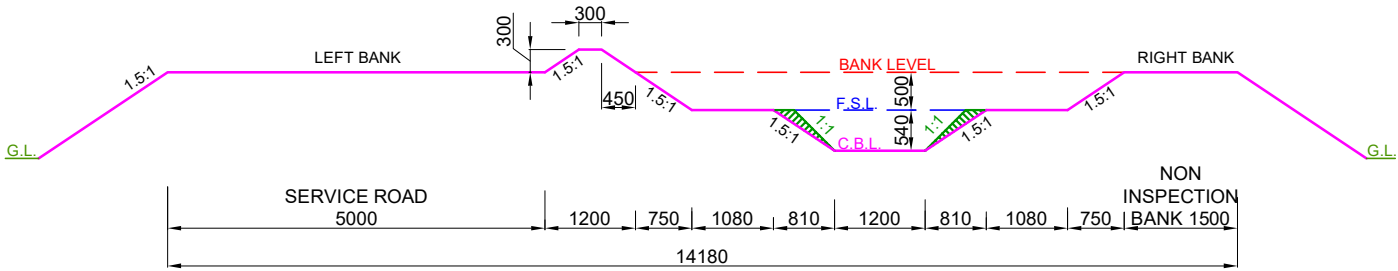


DESIGN SECTION FROM CH: 28.800 KM TO CH: 29.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
			Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)	

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

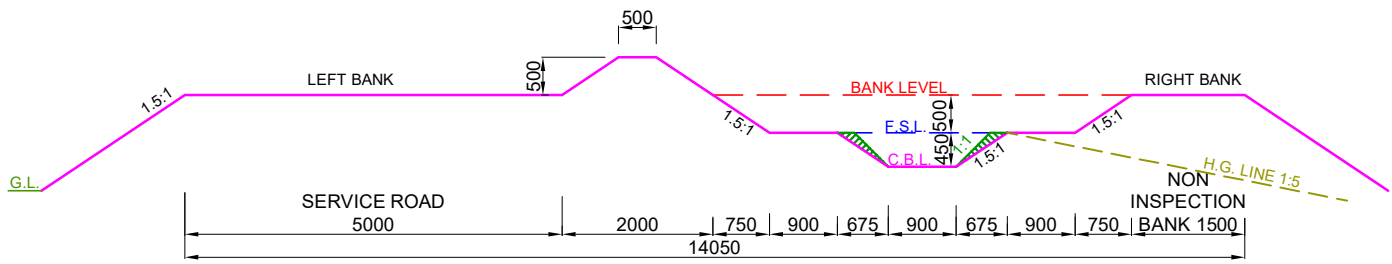


DESIGN SECTION FROM CH: 29.000 KM TO CH: 30.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

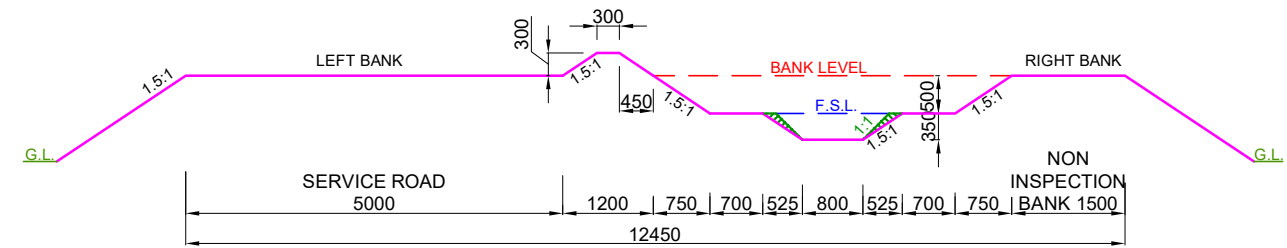


DESIGN SECTION FROM CH: 30.000 KM TO CH: 30.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)			

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



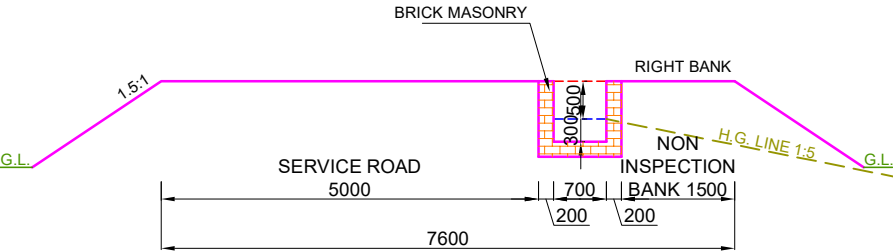
DESIGN SECTION FROM CH: 30.350 KM TO CH: 30.650 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

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TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

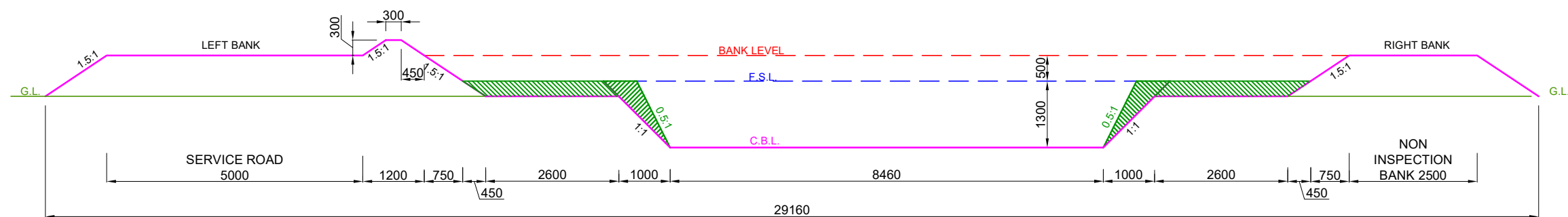


DESIGN SECTION FROM CH: 30.650 KM TO CH: 30.800 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 5.120 KM

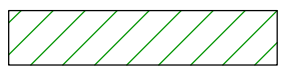
NOTE:-

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 :-

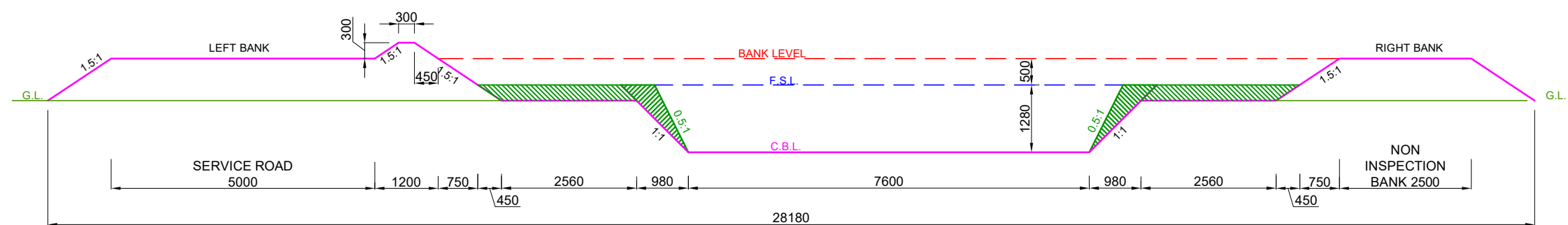
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

1 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 5.120 KM TO CH: 13.020 KM

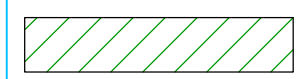
NOTE:-

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 :-

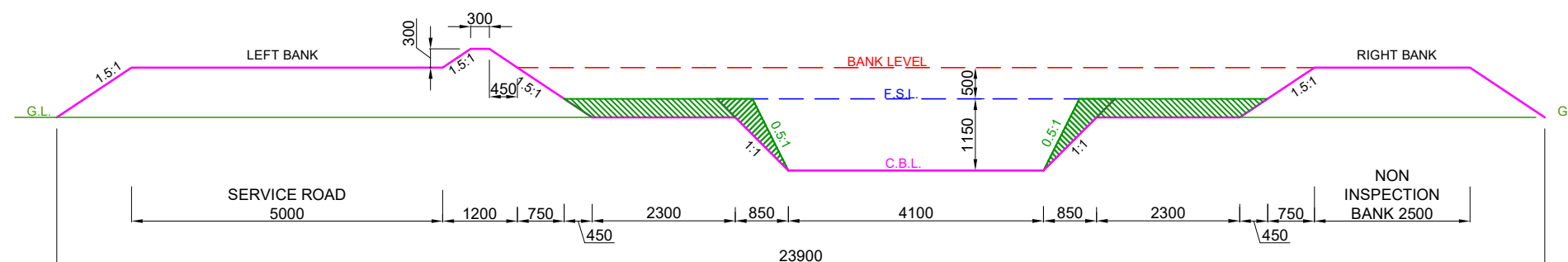
X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM
RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

2 of 15

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 13.020 KM TO CH: 16.200 KM

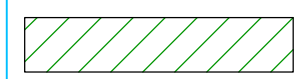
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

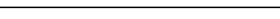
WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

3 of 15

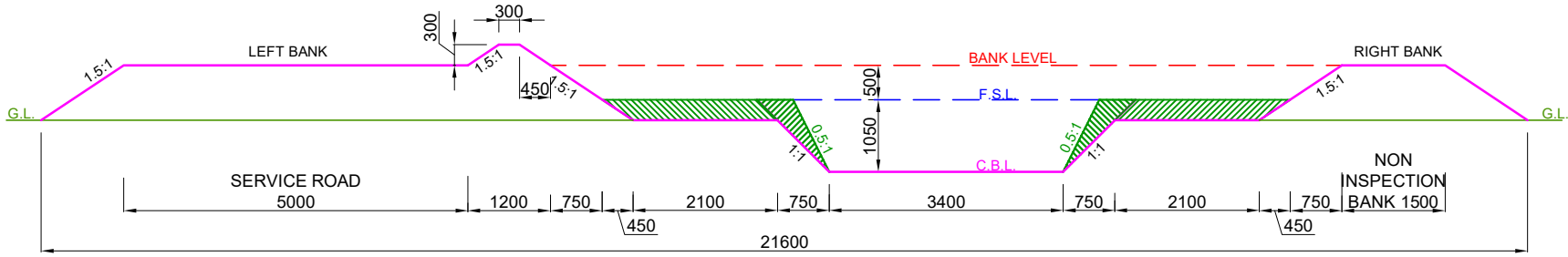
The diagram illustrates the cross-section of a canal. On the left, a service road (5000m wide) is adjacent to the canal. The canal has a top width of 450m and a bottom width of 2200m. The slopes are 1.5:1 on the left and 0.5:1 on the right. The canal bed level (C.B.L.) is 1100m below the full supply level (F.S.L.). The right bank is a non-inspection bank (1500m wide) with a 1.5:1 slope. The total width of the canal and its immediate surroundings is 19950m.

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.

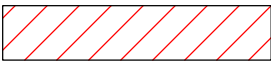
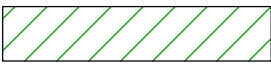
LEGEND  CUT AREA  FILL AREA	Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF CHAIN NAWADA SUB-DY. (OFFTAKE FROM RD - 94+494 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

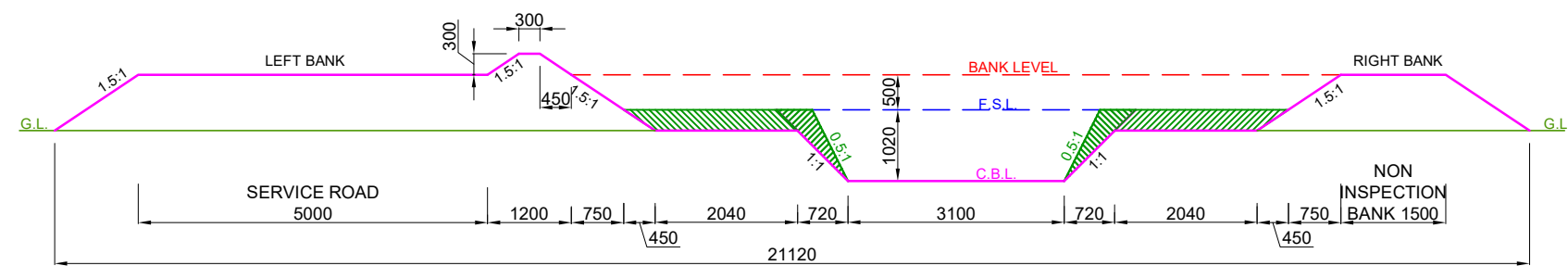


DESIGN SECTION FROM CH: 17.350 KM TO CH: 20.200 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

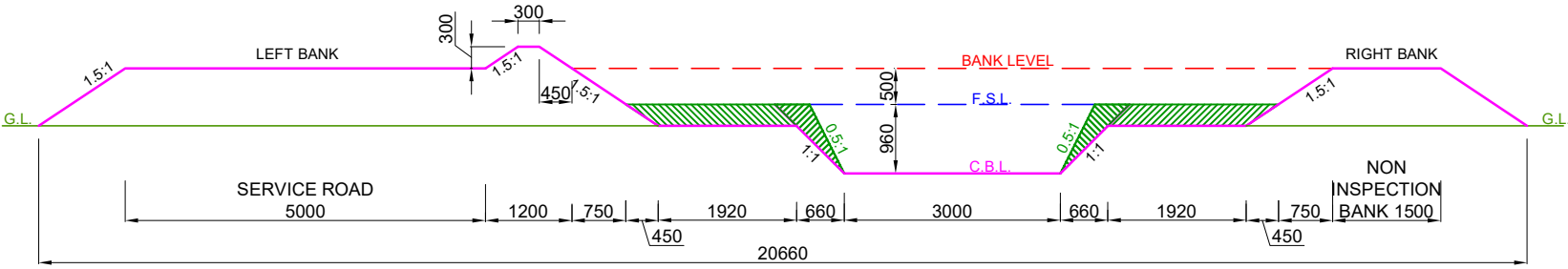


DESIGN SECTION FROM CH: 20.200 KM TO CH: 21.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				
	CUT AREA							
	FILL AREA							

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

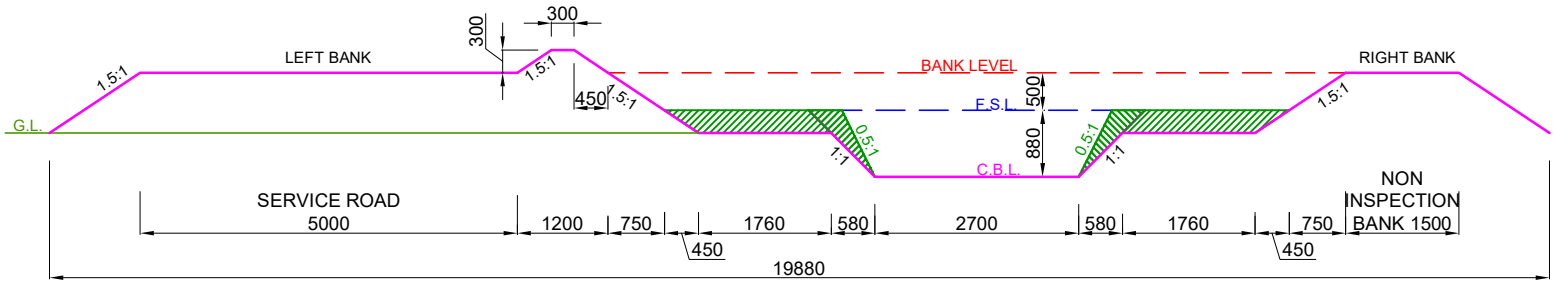


DESIGN SECTION FROM CH: 21.350 KM TO CH: 23.830 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 23.830 KM TO CH: 26.400 KM

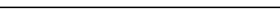
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

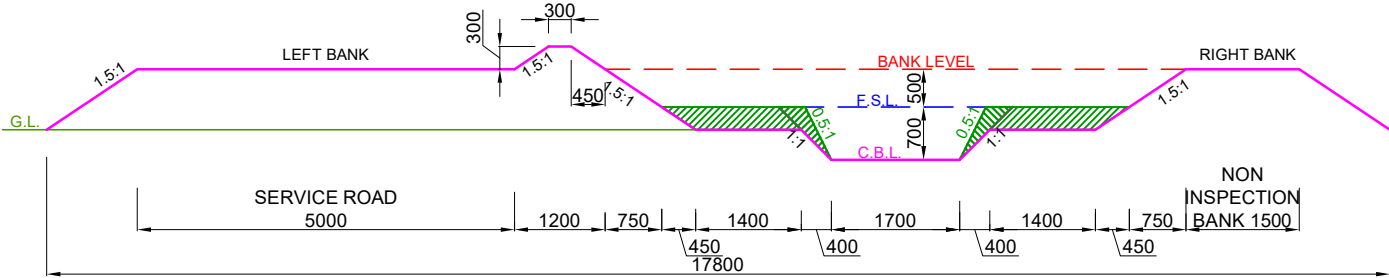
[illegible]

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  CUT AREA  FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- Drawing Title :- Drawing No. :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL) WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF) 9 of 15
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TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

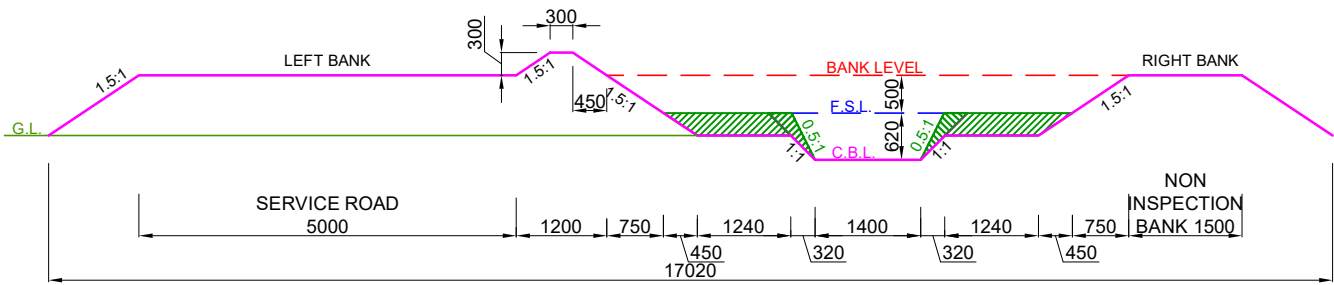


DESIGN SECTION FROM CH: 27.075 KM TO CH: 28.800 KM

- 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		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

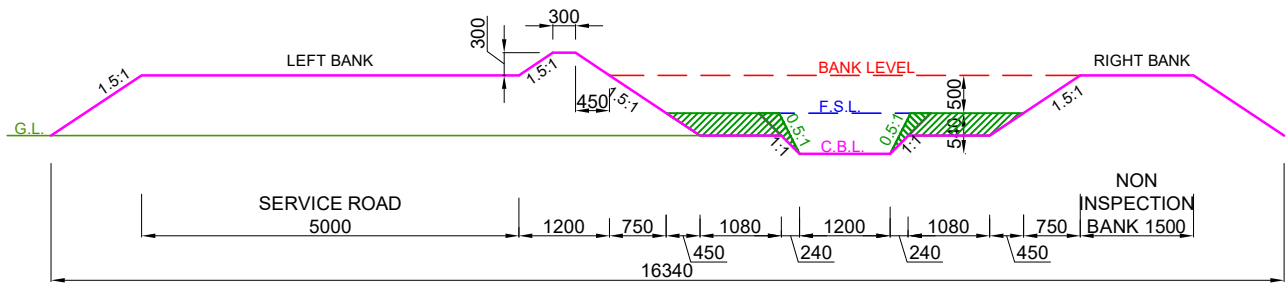


DESIGN SECTION FROM CH: 28.800 KM TO CH: 29.000 KM

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

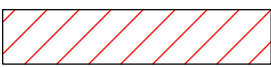
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

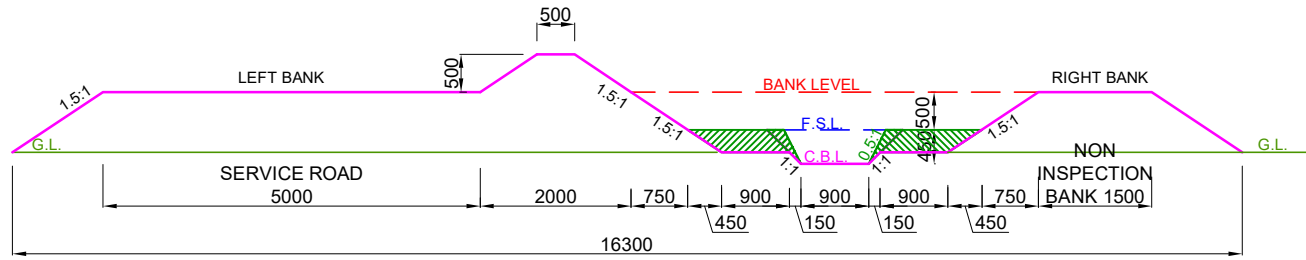


DESIGN SECTION FROM CH: 29.000 KM TO CH: 30.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

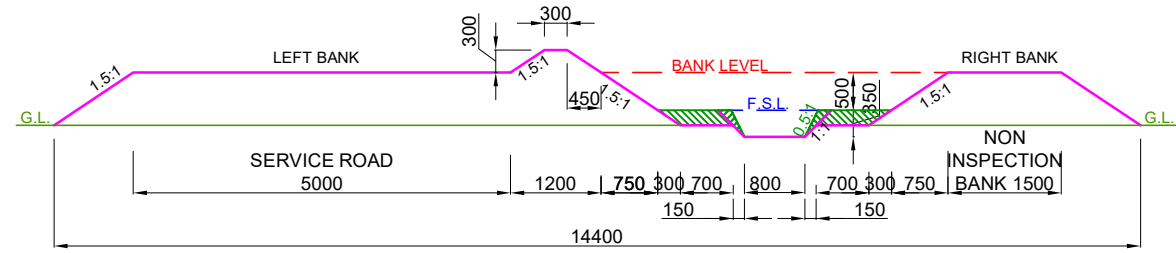


DESIGN SECTION FROM CH: 30.000 KM TO CH: 30.350 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)			

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

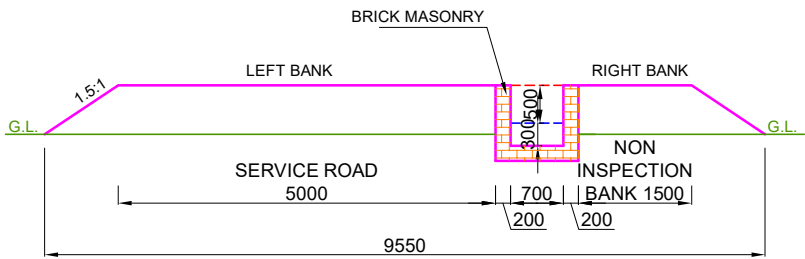


DESIGN SECTION FROM CH: 30.350 KM TO CH: 30.650 KM

- 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KOTWARA DISTRIBUTARY
(OFFTAKE FROM RD - 96+810 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 30.650 KM TO CH: 30.800 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 KOTWARA DY. (OFFTAKE FROM RD - 96+810 KM. (L), NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35/ XSEC /TYP-(PCF)				

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

- Levels:** G.L. (Ground Level), BANK LEVEL, F.S.L. (Full Supply Level), and C.B.L. (Center Bank Level).
- Slopes:** 1.5:1 for the main side slopes and 0.5:1 for the inner ditch slopes.
- Dimensions:**
 - Horizontal distances: 3000, 75, 300, 5000, 1200, 1520, 500, 480, 1100, 480, 500, 1520, 1125, 1500, 1125.
 - Vertical distances: 300, 450, 1280.
- Labels:** SPOIL BANK, SERVICE ROAD, C+D/2, NON INSPECTION BANK.

NOTE:-

- ## LEGEND

WAPCOS LTD.



Drawing Title :-

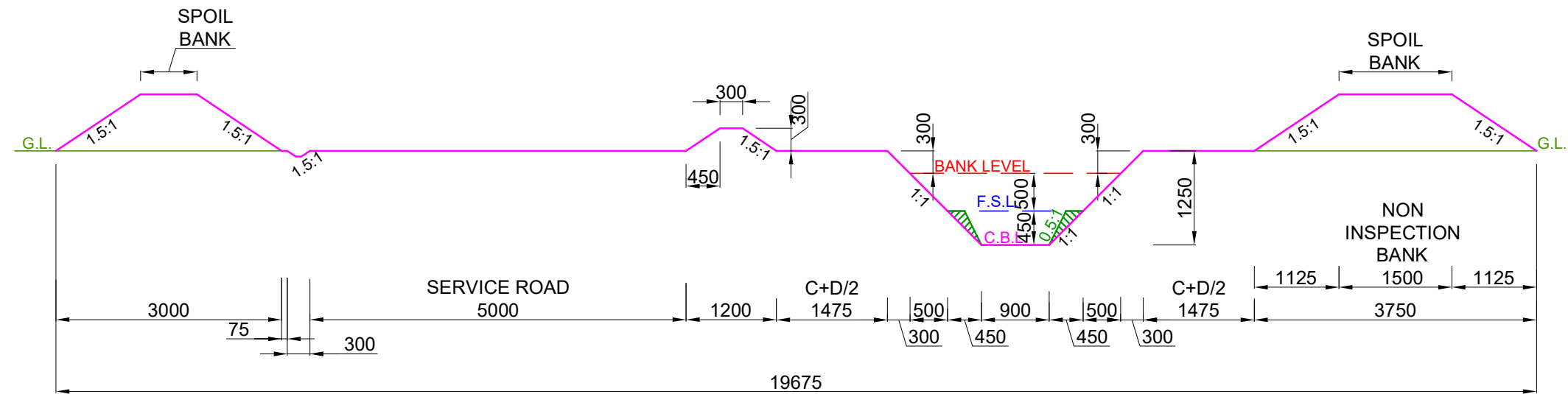
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

1 of 4

CUT AREA

FILL AREA

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

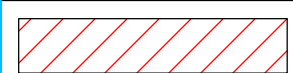


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.500 KM

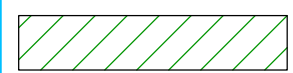
NOTE:-

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 :-

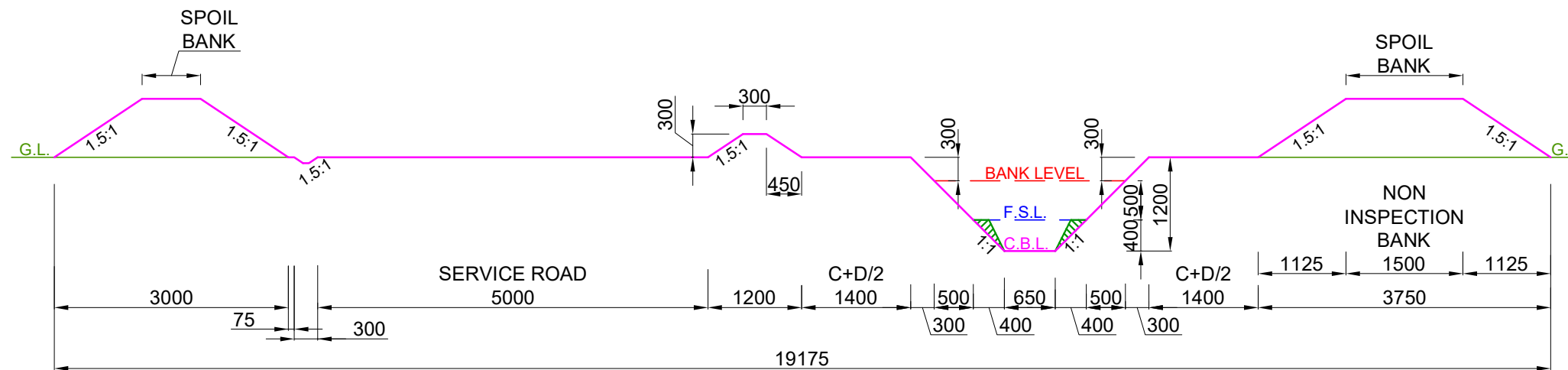
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FC)

2 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.200 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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

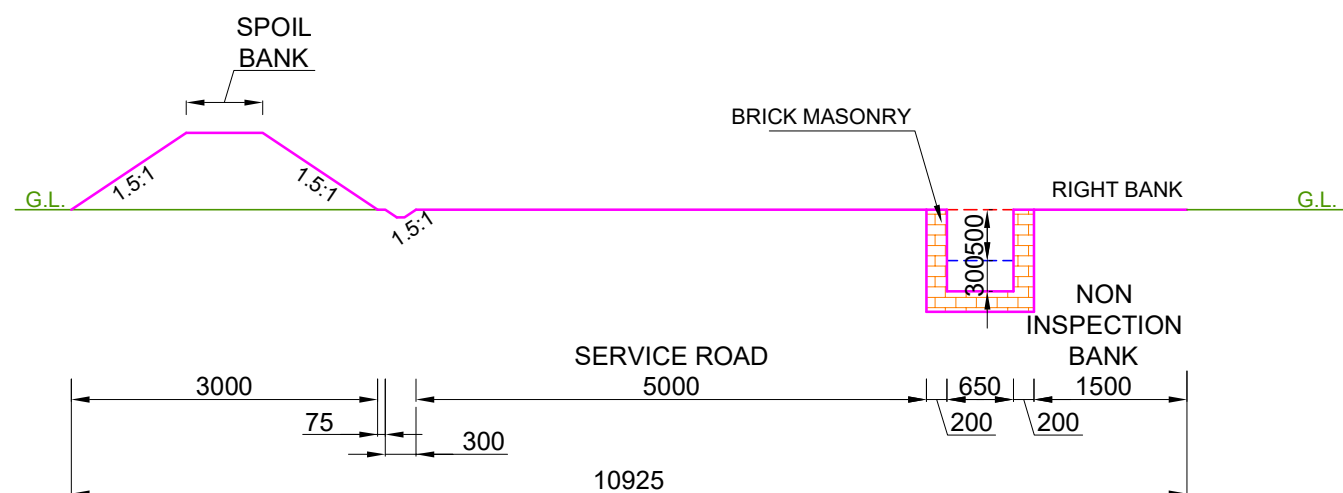
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FC)

3 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

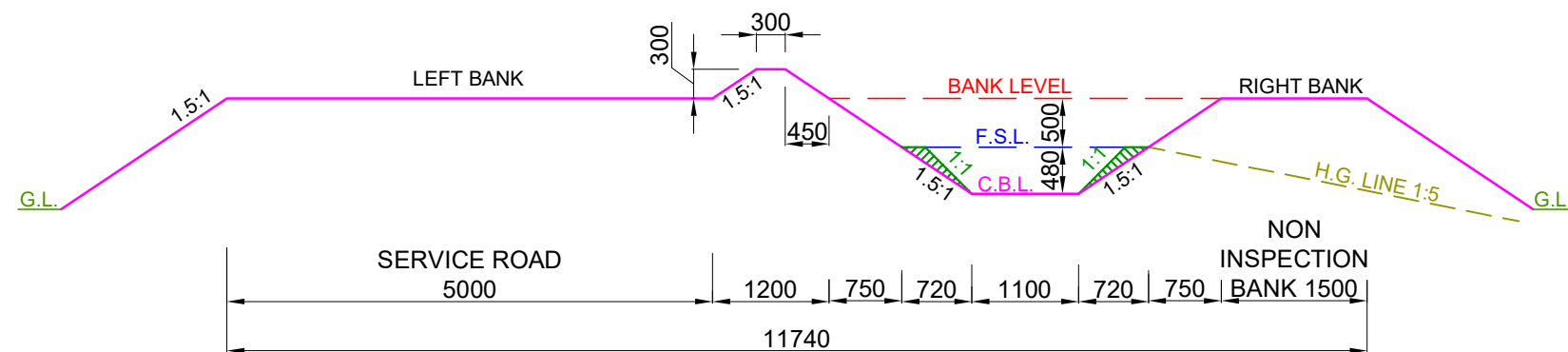


DESIGN SECTION FROM CH: 2.200 KM TO CH: 2.850 KM

- 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 GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FC) 4 of 4				

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



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

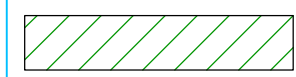
NOTE:-

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

LEGEND



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

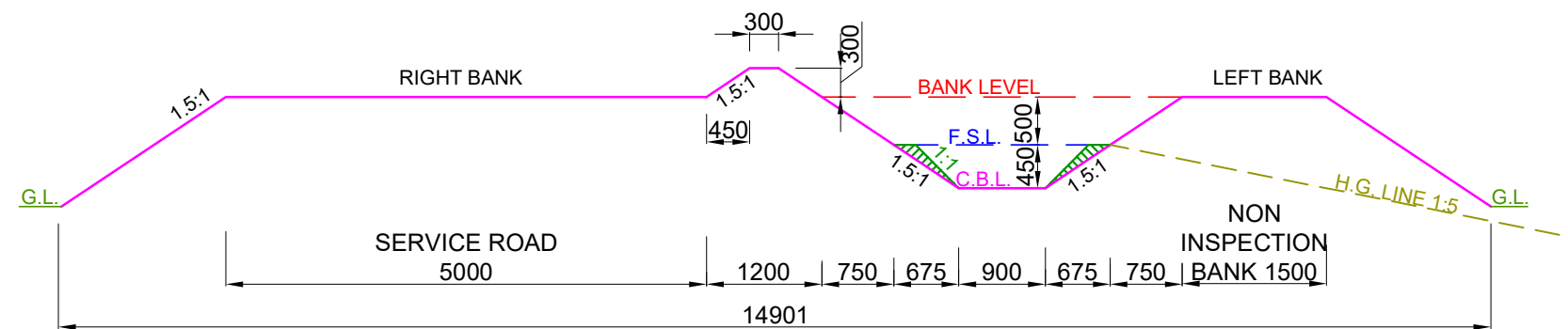
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FF)

1 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

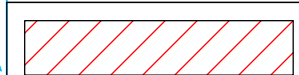


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.500 KM

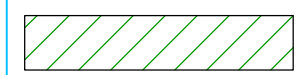
NOTE:-

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 :-

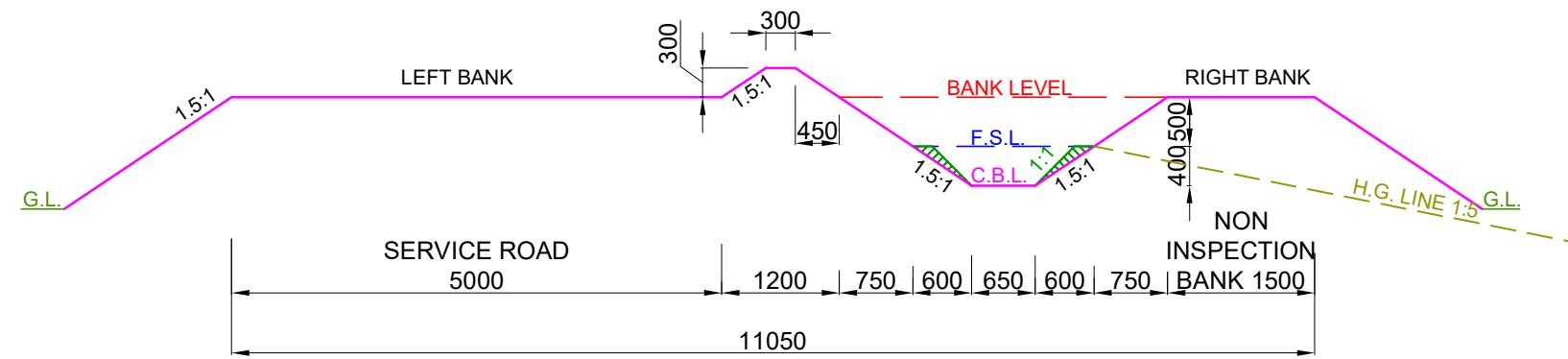
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FF)

2 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.200 KM

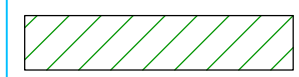
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

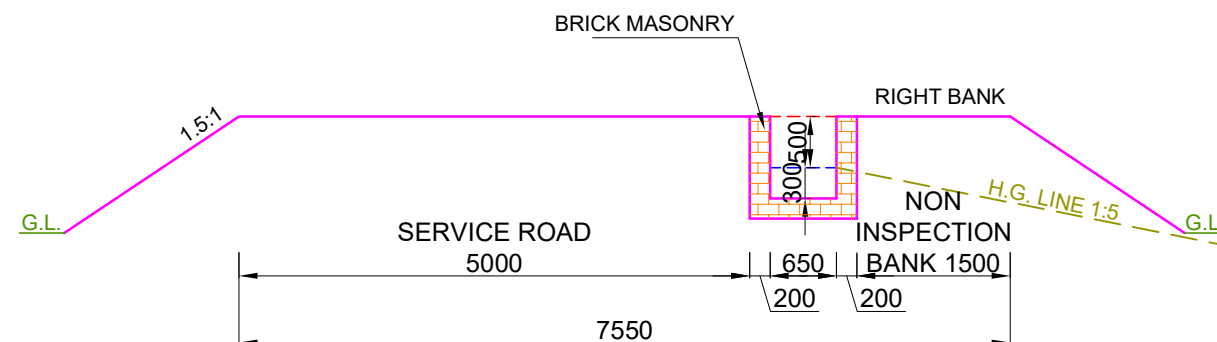
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FF)

3 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.200 KM TO CH: 2.850 KM

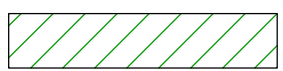
NOTE:-

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 :-

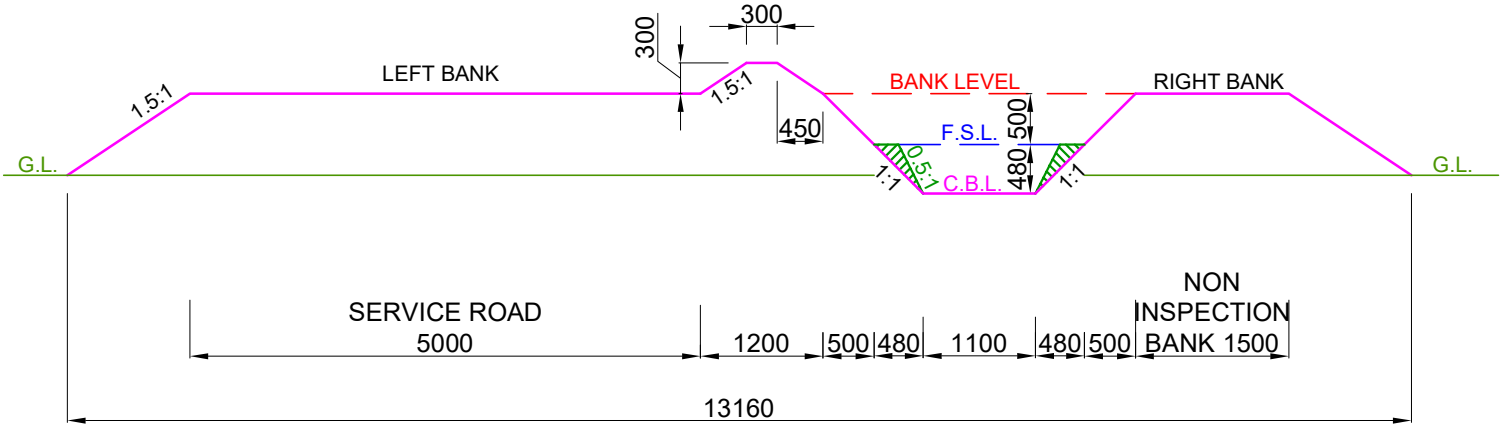
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(FF)

4 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

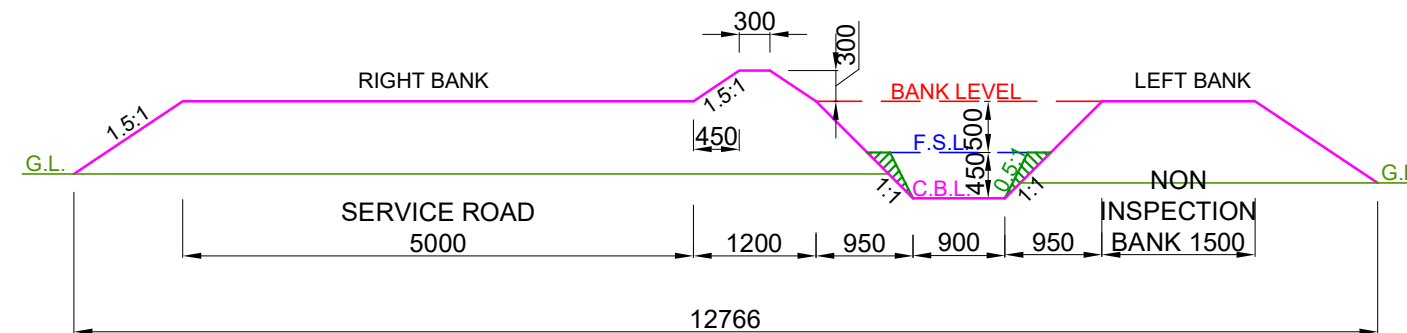


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(PCF) 1 of 4			

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

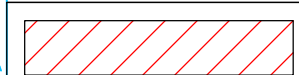


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.500 KM

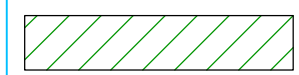
NOTE:-

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 :-

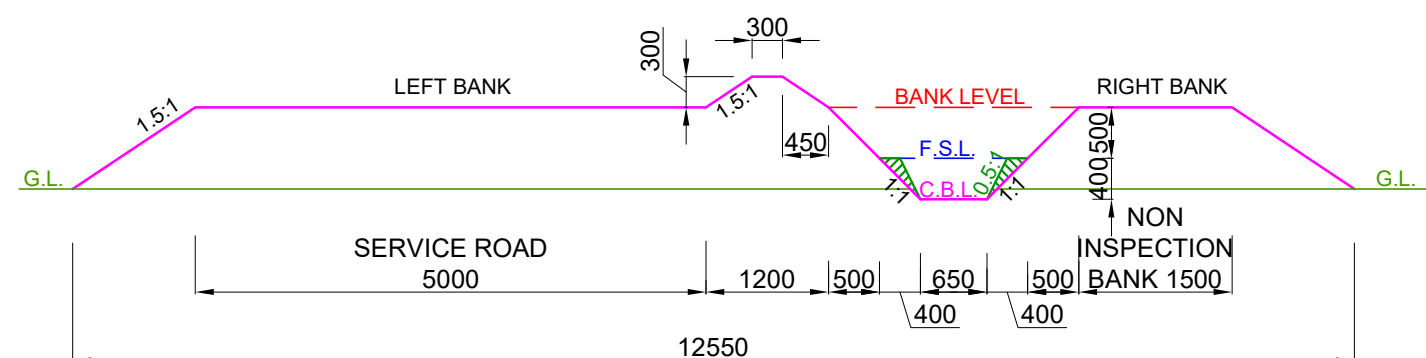
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(PCF)

2 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.200 KM

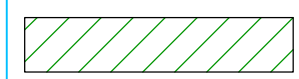
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

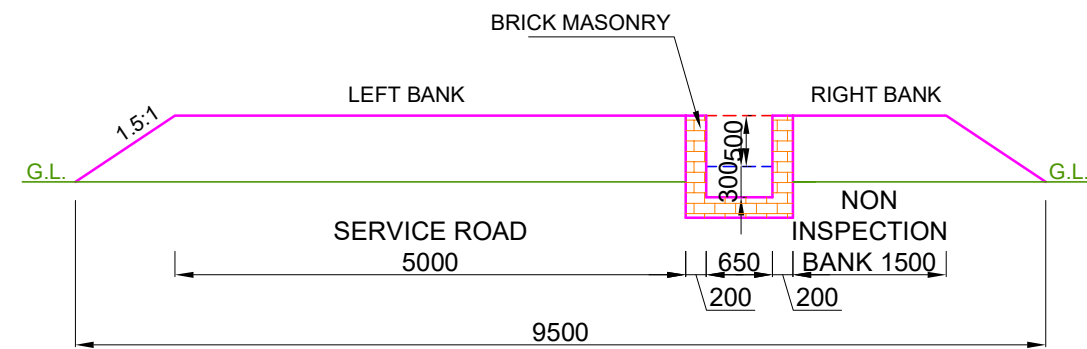
X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(PCF)

3 of 4

TYPICAL X - SECTION OF GAMHARIA MINOR
(OFFTAKE FROM RD - 0+005 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.200 KM TO CH: 2.850 KM

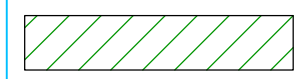
NOTE:-

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

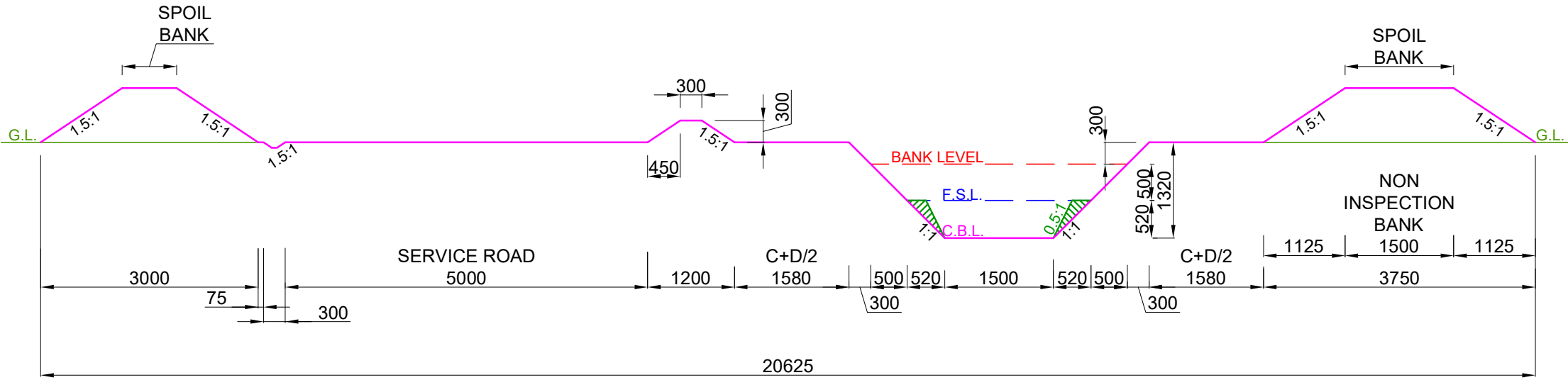
Drawing Title :-

X - SECTION OF GAMHARIA MR. (OFFTAKE FROM RD - 0+005 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-01/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

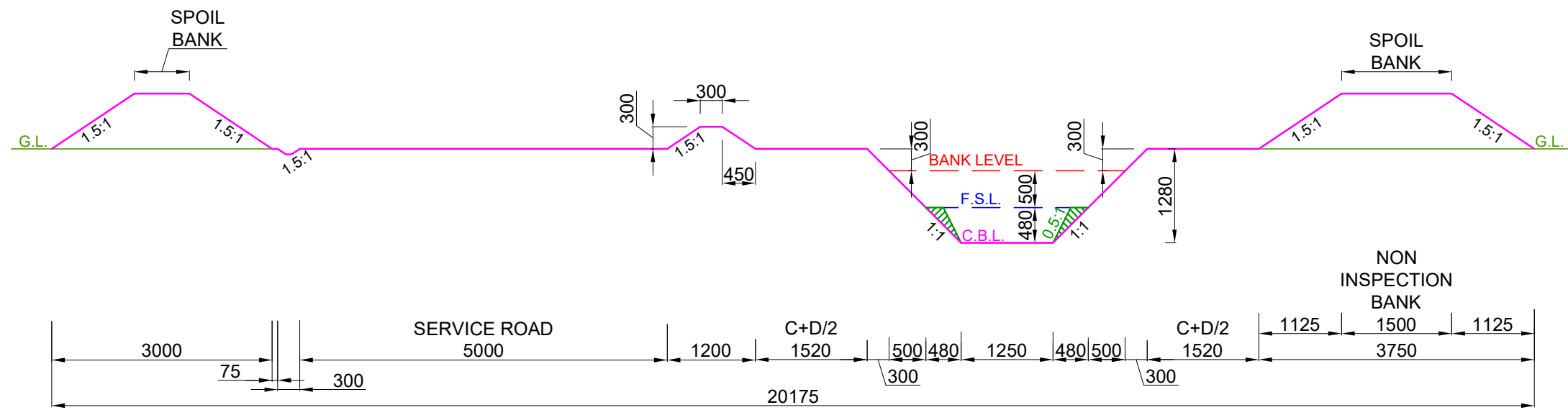


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.150 KM TO CH: 1.150 KM

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

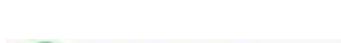
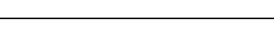
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FC) 2 of 4				

The diagram illustrates a cross-section of a road profile with the following features and dimensions:

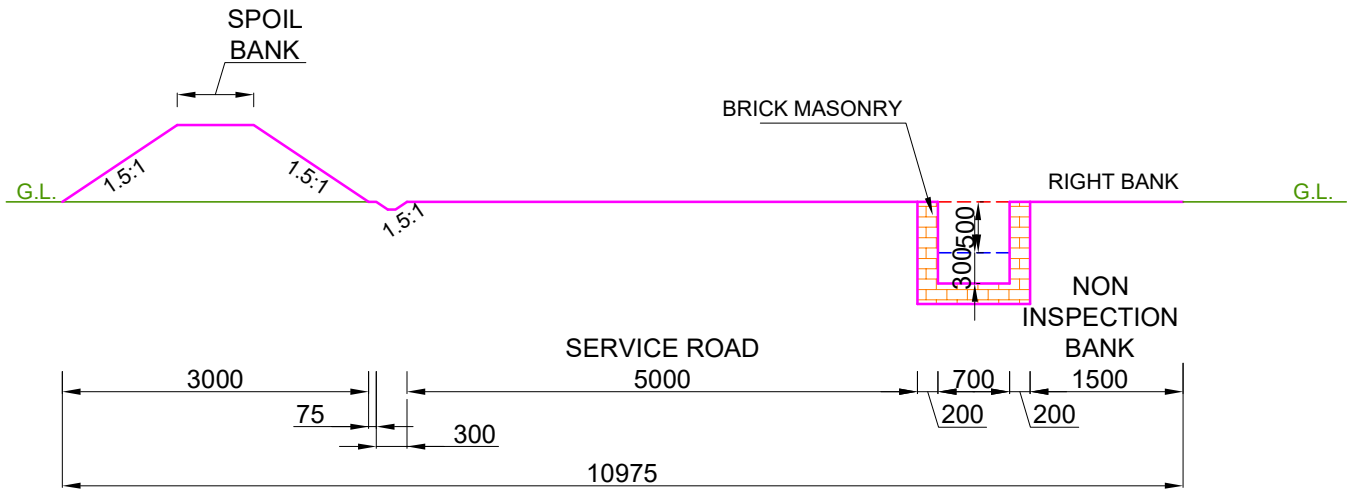
- Top Profile:** A magenta line representing the ground surface. It starts with a 1.5:1 slope, followed by a flat section, another 1.5:1 slope, a small dip, and then a series of steps and slopes. The final section on the right is a 1.5:1 slope.
- Ground Level (G.L.):** Indicated by a green line at the base of the profile.
- Bank Level:** A red line indicating the top of the embankment in the central section.
- F.S.L. (Finished Surface Level):** A blue line indicating the road surface level.
- C.B.L. (Centerline Bank Level):** A green line indicating the level at the centerline of the road.
- Dimensions and Distances:**
 - Horizontal Distances:**
 - 3000 (from left edge to start of first 1.5:1 slope)
 - 75 (width of the first dip)
 - 300 (width of the first flat section)
 - 5000 (length of the SERVICE ROAD)
 - 1200 (distance from end of service road to start of next slope)
 - 1400 (C+D/2 distance)
 - 500 (width of the first step)
 - 1000 (distance between steps)
 - 500 (width of the second step)
 - 1400 (C+D/2 distance)
 - 1125 (width of the non-inspection bank)
 - 1500 (width of the non-inspection bank)
 - 1125 (width of the non-inspection bank)
 - 3750 (total width of the non-inspection bank section)
 - Vertical Dimensions:**
 - 300 (height of the first step)
 - 450 (height of the second step)
 - 300 (height of the third step)
 - 500 (height of the fourth step)
 - 400 (height of the fifth step)
 - 1200 (height of the sixth step)
 - Gradients:** 1.5:1 slopes are indicated at several points.
 - Other Labels:** "SPOIL BANK" is labeled at the top left and right. "NON INSPECTION BANK" is labeled on the right side.

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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FC) 3 of 4	

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

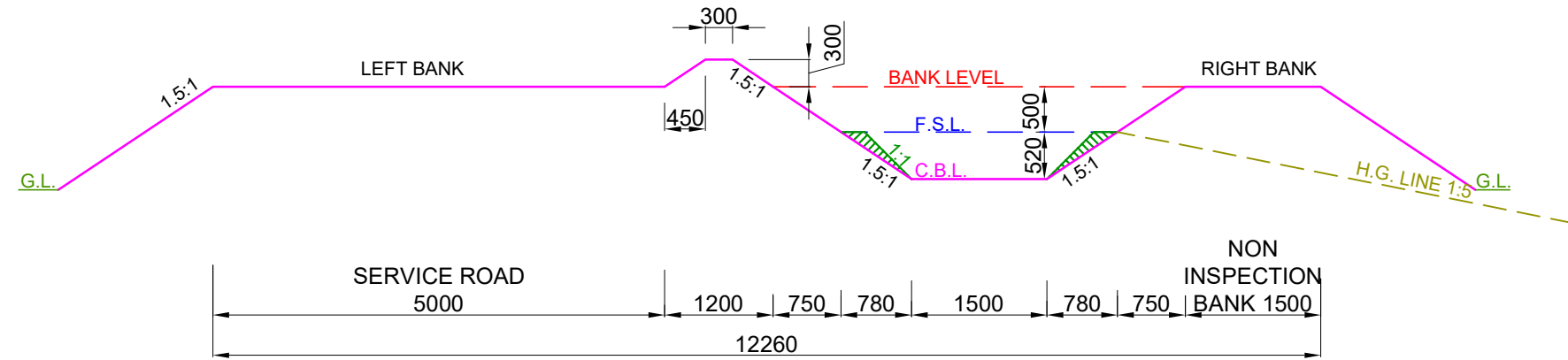


DESIGN SECTION FROM CH: 1.450 KM TO CH: 1.950 KM

- 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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FF)			

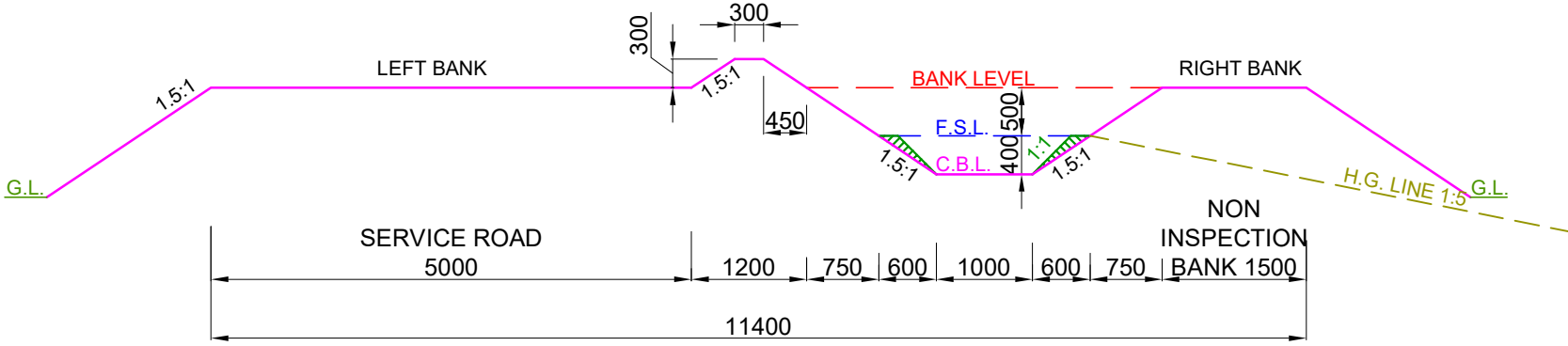
The diagram illustrates a cross-section of a road with a central 11890mm width. The left side features a 1.5:1 slope leading to a 300mm wide top, followed by a 450mm high embankment. The right side shows a 7:1 slope leading to a 1500mm wide non-inspection bank. The diagram also indicates the ground level (G.L.), bank level, and the horizontal ground line (H.G. LINE 1:5).

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.

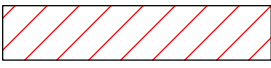
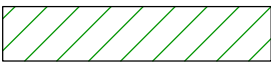
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	CUT AREA		Drawing Title :-	X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FF)2 of 4	

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

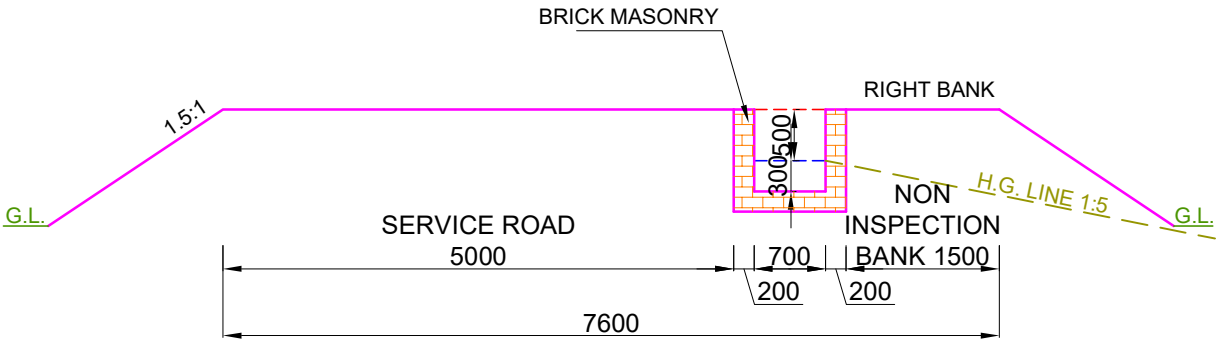


DESIGN SECTION FROM CH: 1.150 KM TO CH: 1.450 KM

- 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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FF) 3 of 4			

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

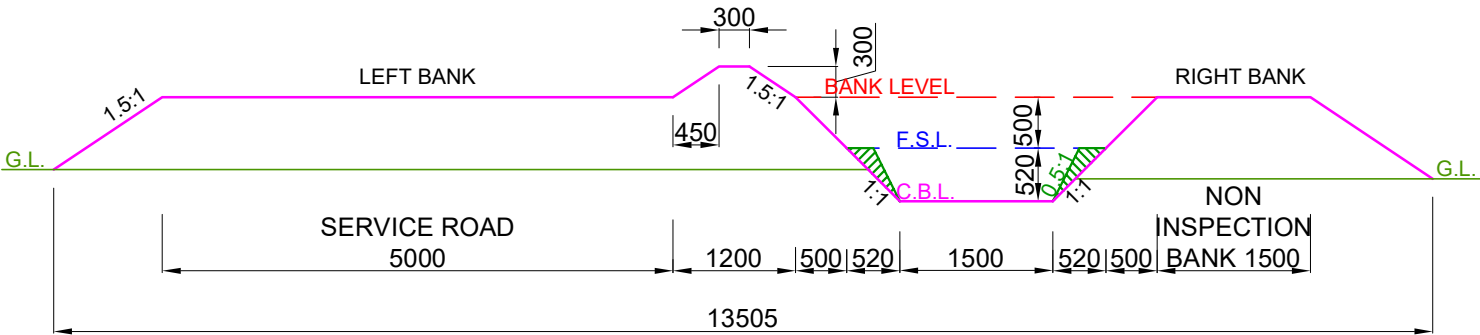


DESIGN SECTION FROM CH: 1.450 KM TO CH: 1.950 KM

- 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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



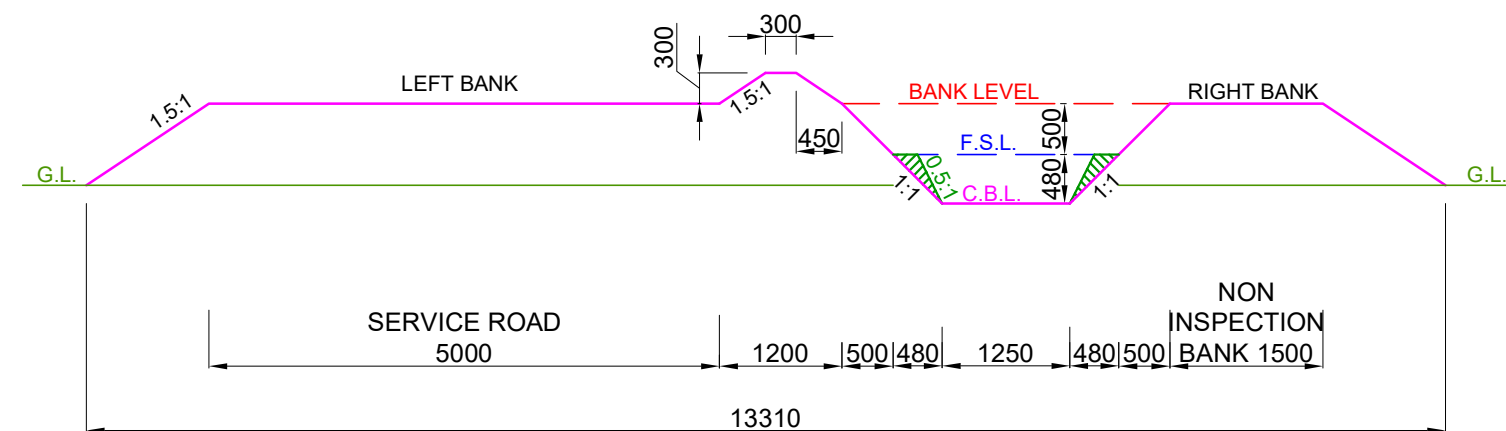
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

NOTE:-

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(PCF) 1 of 4			

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

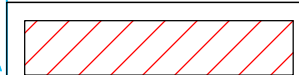


DESIGN SECTION FROM CH: 0.150 KM TO CH: 1.150 KM

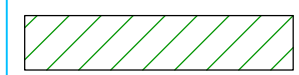
NOTE:-

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

LEGEND



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

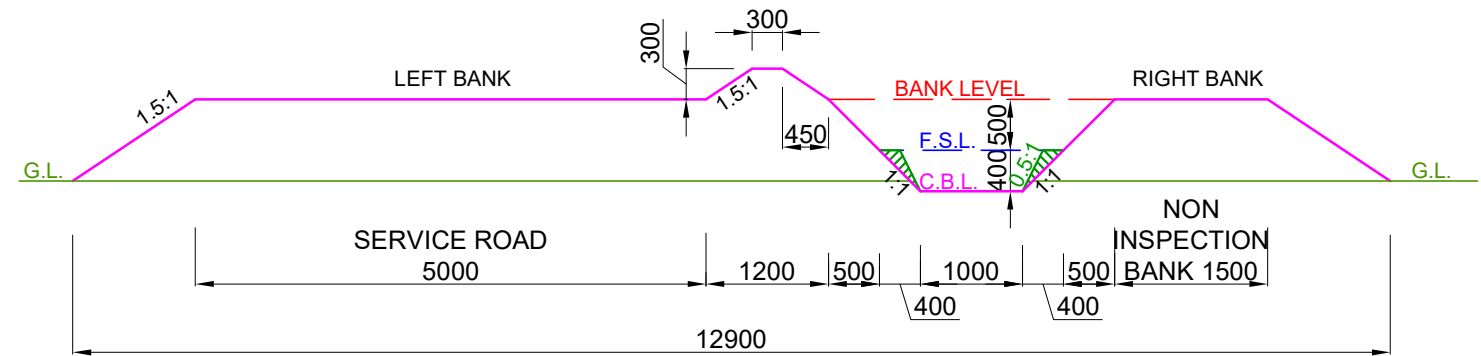
X - SECTION OF NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(PCF)

2 of 4

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

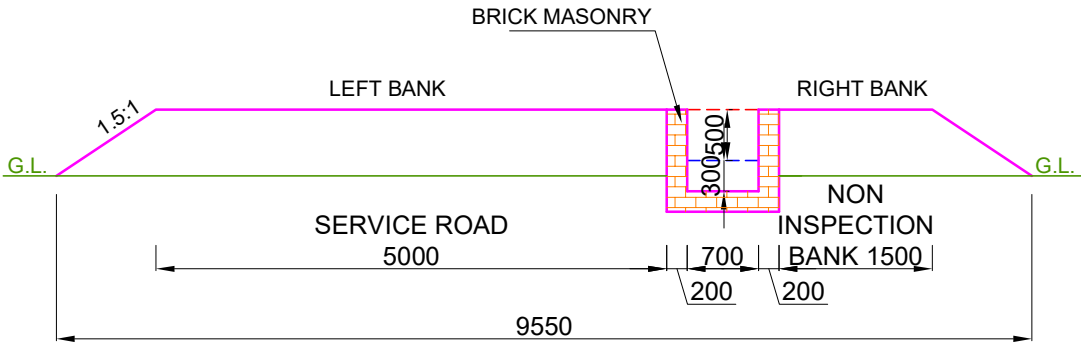


DESIGN SECTION FROM CH: 1.150 KM TO CH: 1.450 KM

- 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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(PCF) 3 of 4			

TYPICAL X - SECTION OF NAGWA MINOR
(OFFTAKE FROM RD - 1+140 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.450 KM TO CH: 1.950 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 NAGWA MR. (OFFTAKE FROM RD - 1+140 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-02/ XSEC /TYP-(PCF)			
	CUT AREA						
	FILL AREA						

The diagram illustrates a cross-section of a road with a central service road and inspection bank. The total width of the section is 20275mm. The left side features a 3000mm wide spoil bank with 1.5:1 slopes. A 5000mm wide service road follows, with a 75mm wide drainage ditch on its left and a 300mm wide ditch on its right. The road surface is 1200mm wide, with a 1475mm C+D/2 section. This is followed by a 1500mm wide section with a 300mm wide ditch on the left and a 450mm wide ditch on the right. The road surface is 1500mm wide, with a 1475mm C+D/2 section. On the right is a 3750mm wide non-inspection bank with 1.5:1 slopes. The diagram also shows the ground level (G.L.), bank level, and center line (C.B.L.) with various vertical dimensions.

NOTE:-

- ## LEGEND

CUT AREA

FILL AREA

WAPCOS LTD.



Drawing Title :-

Drawing No. :-

X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FC)

The diagram illustrates a cross-section of a road with a central ditch. The road surface is 5000mm wide. The ditch is 300mm wide at the top, 450mm deep, and has a 7:1 slope. The ditch is flanked by 1.5:1 slopes. The total width of the road including the ditch is 19875mm. The diagram also shows a 'SPOIL BANK' on the left and a 'NON INSPECTION BANK' on the right. The ditch is labeled 'C.B.L.' (Center Bottom Level) and the road surface is labeled 'F.S.L.' (Finished Surface Level). The ditch is also labeled 'BANK LEVEL'.

NOTE:-

- ## LEGEND

CUT AREA

FILL AREA

WAPCOS LTD.



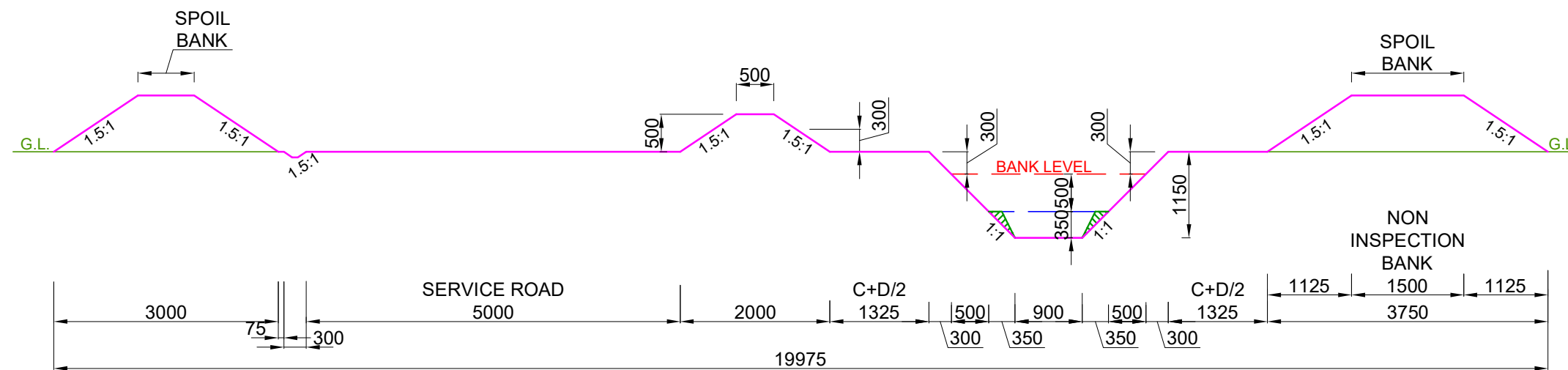
Drawing Title :-

Drawing No. :-

X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

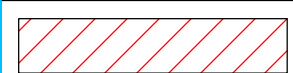


DESIGN SECTION FROM CH: 1.100 KM TO CH: 1.400 KM

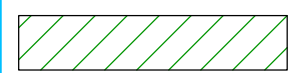
NOTE:-

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 :-

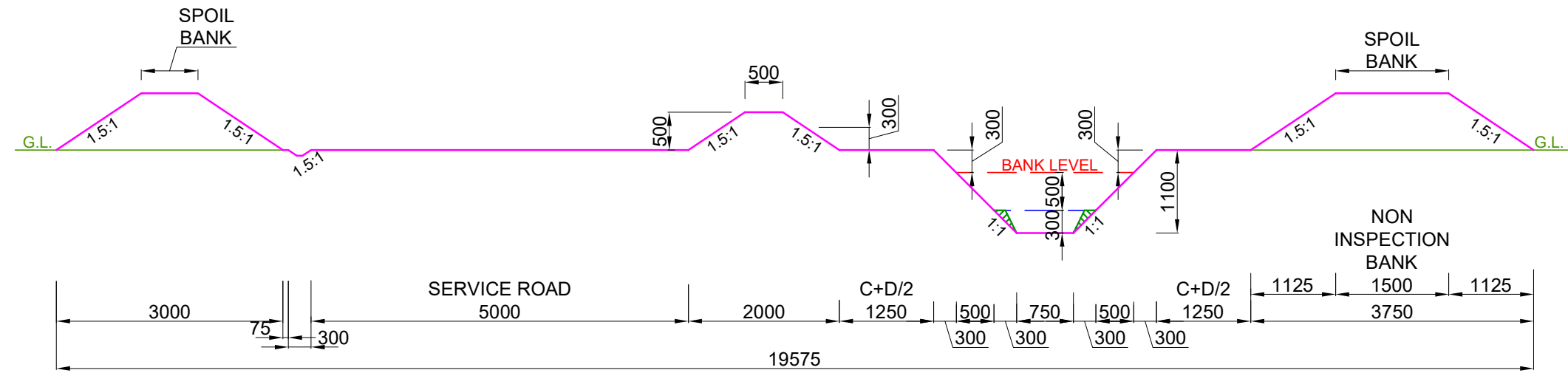
X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FC)

3 of 4

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

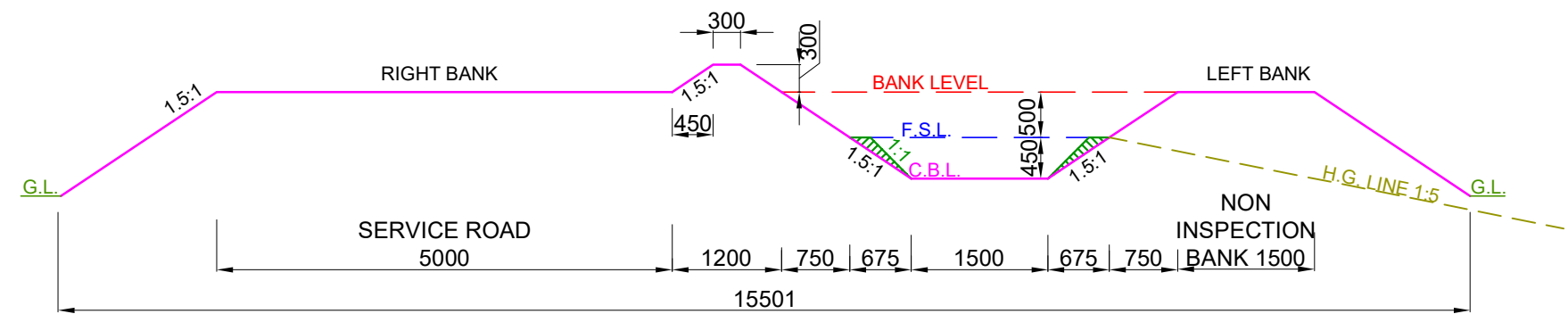


DESIGN SECTION FROM CH: 1.400 KM TO CH: 1.900 KM

- 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 PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FC) 4 of 4			

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



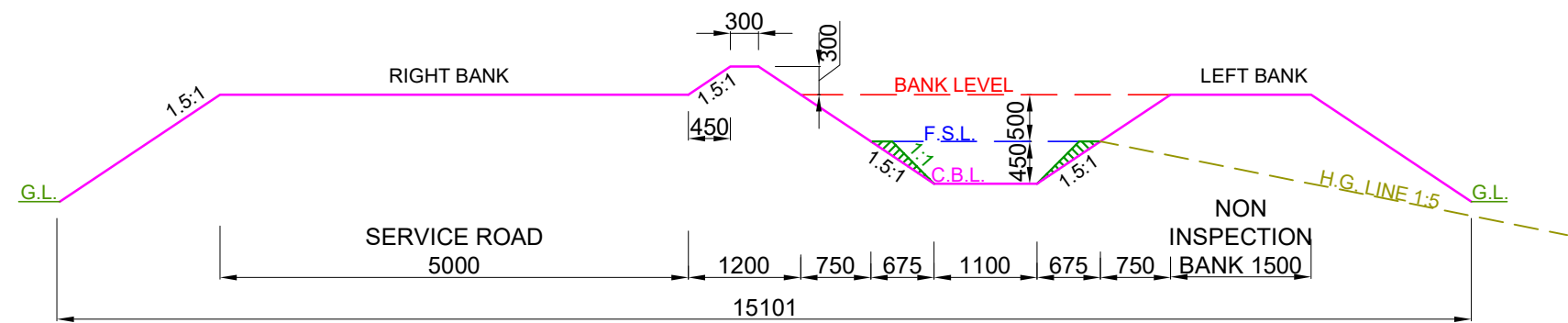
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.450 KM

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 PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FF) 1 of 4			

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

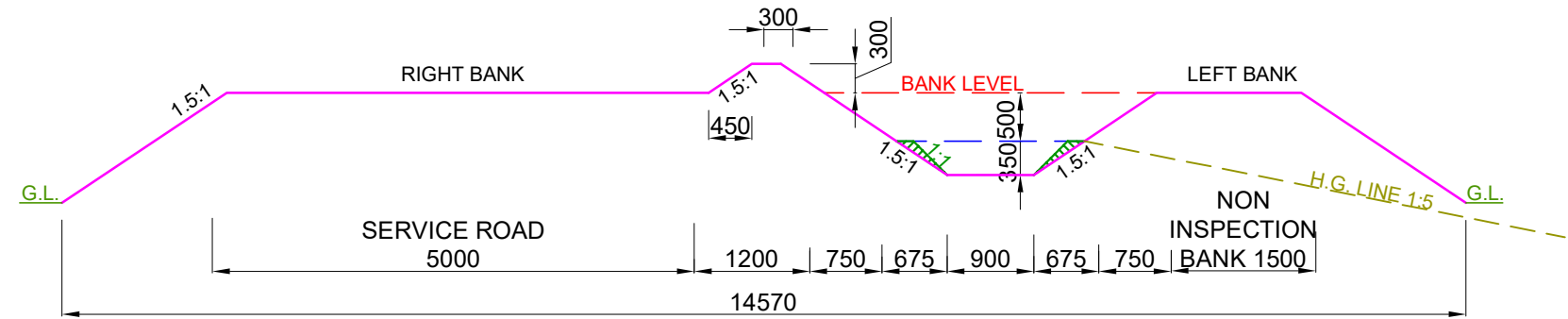


DESIGN SECTION FROM CH: 0.450 KM TO CH: 1.100 KM

- 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.

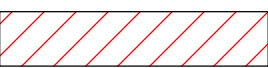
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FF) 2 of 4

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.100 KM TO CH: 1.400 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 PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FF) 3 of 4			

The diagram illustrates a cross-section of a road with a central service road and side inspection banks. The total width is 14270mm. The central section consists of a 5000mm wide service road, 1200mm wide inspection banks on both sides, and a 1500mm wide non-inspection area on the right. The slopes are 1.5:1. Key dimensions include 300mm top width, 300mm height, 450mm base width, and 500mm height for the central section. The right side shows a 1500mm non-inspection area and a 1500mm inspection bank. The ground level (G.L.) is indicated on both ends.

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 PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(FF)4 of 4	

Diagram illustrating the cross-section of a road with a total width of 13366mm. The road is divided into several sections:

- Service Road:** 5000mm wide on the left side.
- Main Road:** 1200mm wide in the center.
- Right Bank:** 1.5:1 slope, 450mm wide.
- Left Bank:** 1.5:1 slope, 450mm wide.
- Non-Inspection Bank:** 1500mm wide on the right side.
- Inspection Bank:** 1500mm wide on the right side.
- Bank Level:** 1:1 slope, 450mm wide.
- F.S.L. (Finished Surface Level):** Indicated by a blue line.
- C.B.L. (Centerline Level):** Indicated by a red line.
- G.L. (Ground Level):** Indicated by a green line.

The total width of the road is 13366mm.

NOTE:-

- ## LEGEND

FILL AREA

WAPCOS LTD.



Drawing Title :-

X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(PCF)

The diagram illustrates a cross-section of a canal system. Key features include:

- RIGHT BANK:** A magenta line representing the right bank, sloping at 1.5:1.
- LEFT BANK:** A magenta line representing the left bank, sloping at 1:1.
- SERVICE ROAD:** A horizontal section of the right bank with a width of 5000.
- INSPECTION BANK:** A horizontal section of the left bank with a width of 1500.
- Canal Bed:** A magenta line representing the canal bed, sloping at 1.5:1 on the right and 1:1 on the left.
- Bank Level:** A red line indicating the top of the bank.
- F.S.L. (Full Supply Level):** A blue line indicating the water level.
- C.B.L. (Canal Bed Level):** A green line indicating the bottom of the canal.
- Dimensions:**
 - Top width of the right bank: 300
 - Top width of the left bank: 300
 - Height of the right bank: 450
 - Height of the left bank: 450
 - Width of the service road: 5000
 - Width of the inspection bank: 1500
 - Width of the canal bed: 1200
 - Width of the canal bed: 950
 - Width of the canal bed: 1100
 - Width of the canal bed: 950
 - Total width: 12966

NOTE:-

- ## LEGEND

CUT AREA

FILL AREA

WAPCOS LTD.



Drawing Title :-

Drawing No. :-

X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(PCF)

The diagram illustrates a cross-section of a road and ditch system. The total width of the service road is 5000 units. The ditch is 350 units wide at the base and 300 units wide at the top. The right bank has a 1.5:1 slope. The ditch is labeled 'NON INSPECTION BANK 1500'.

NOTE:-

- ## LEGEND

FILL AREA

WAPCOS LTD.



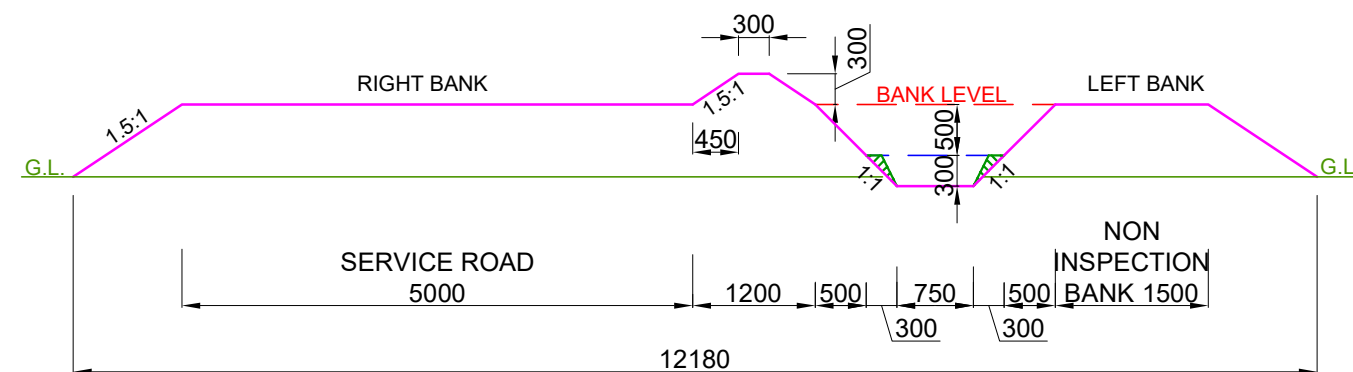
Drawing Title :-

Drawing No. :-

X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF PAWAI MINOR
(OFFTAKE FROM RD - 5+120 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



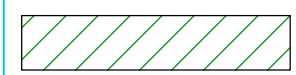
DESIGN SECTION FROM CH: 1.400 KM TO CH: 1.900 KM

- 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 :-

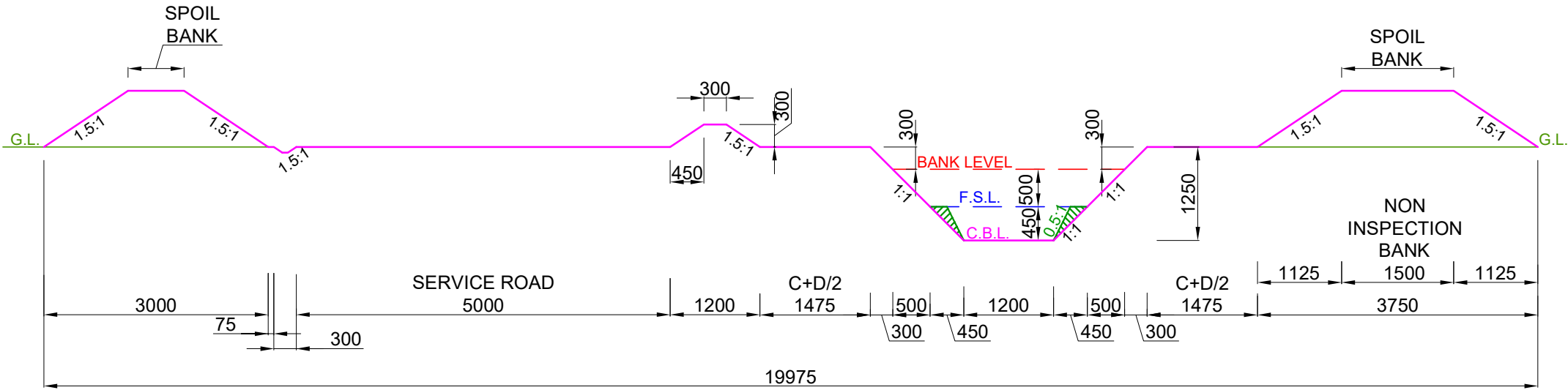
X - SECTION OF PAWAI MR. (OFFTAKE FROM RD - 5+120 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-03/ XSEC /TYP-(PCF)

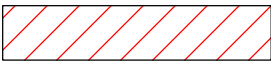
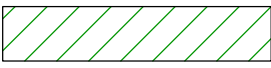
4 of 4

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

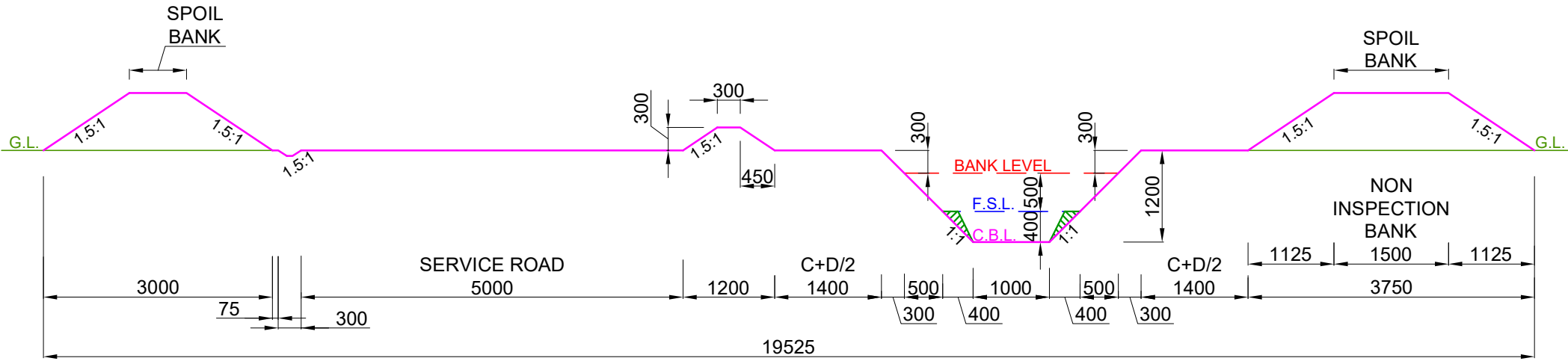


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.650 KM

- 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 BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)		
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FC)		

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

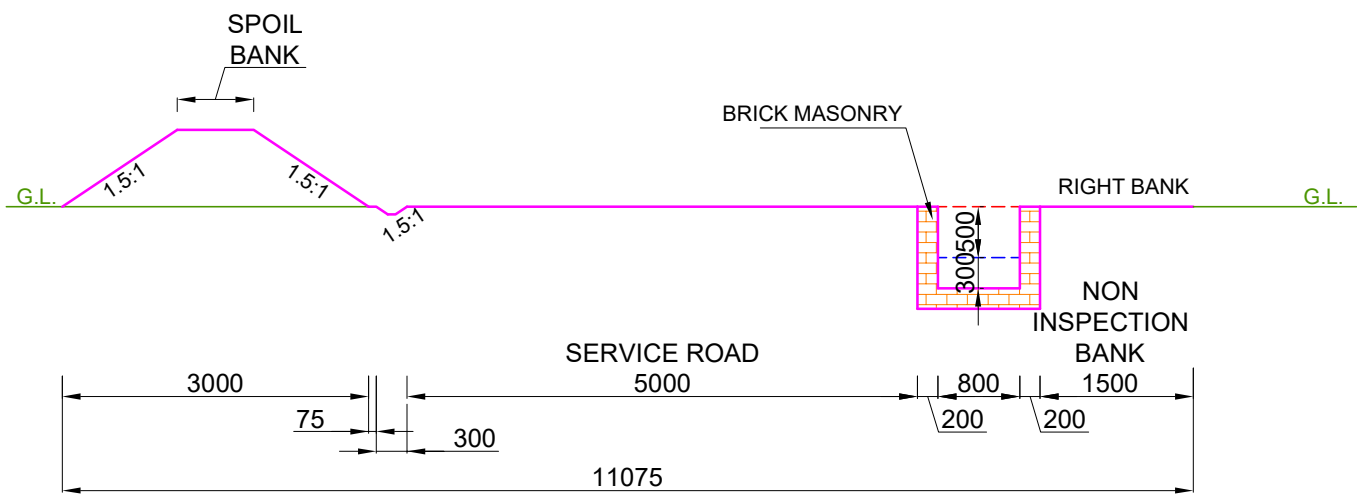


DESIGN SECTION FROM CH: 0.650 KM TO CH: 1.625 KM

- 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.

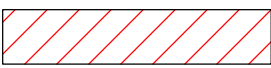
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FC) 2 of 3				

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

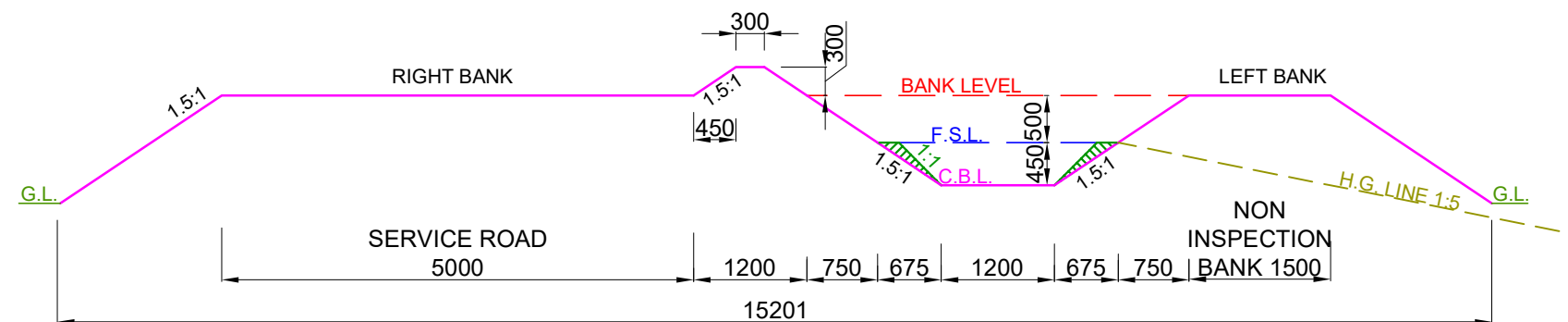


DESIGN SECTION FROM CH: 1.625 KM TO CH: 2.050 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FC) 3 of 3				

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.650 KM

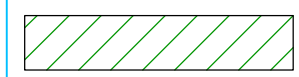
NOTE:-

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 :-

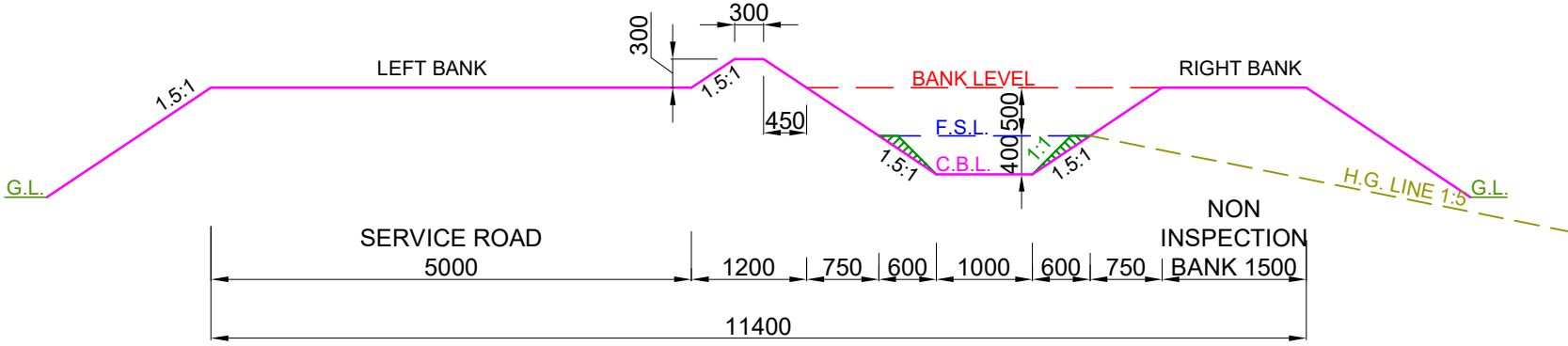
X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FF)

1 of 3

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

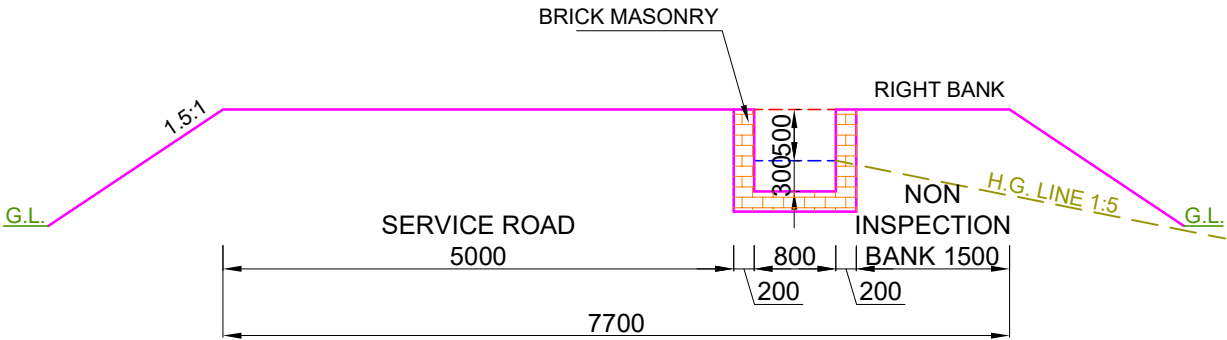


DESIGN SECTION FROM CH: 0.650 KM TO CH: 1.625 KM

- 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 BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

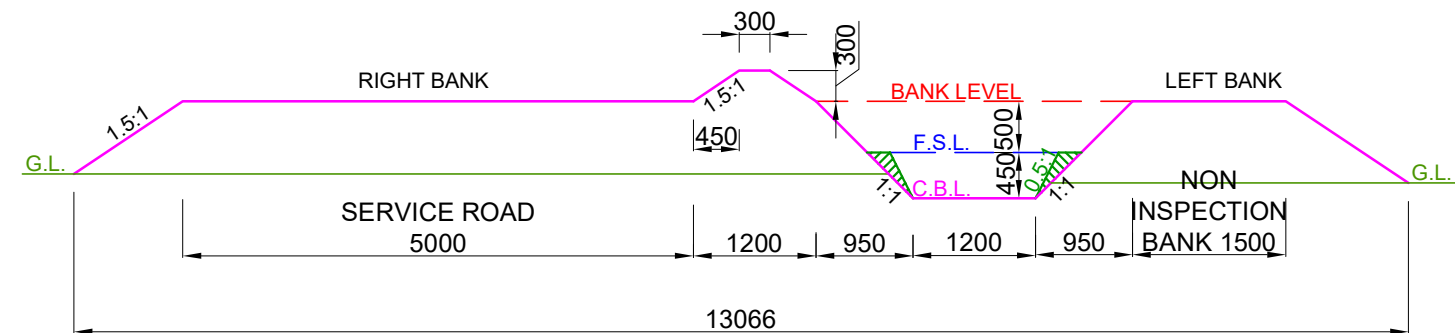


DESIGN SECTION FROM CH: 1.625 KM TO CH: 2.050 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.650 KM

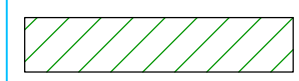
NOTE:-

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 :-

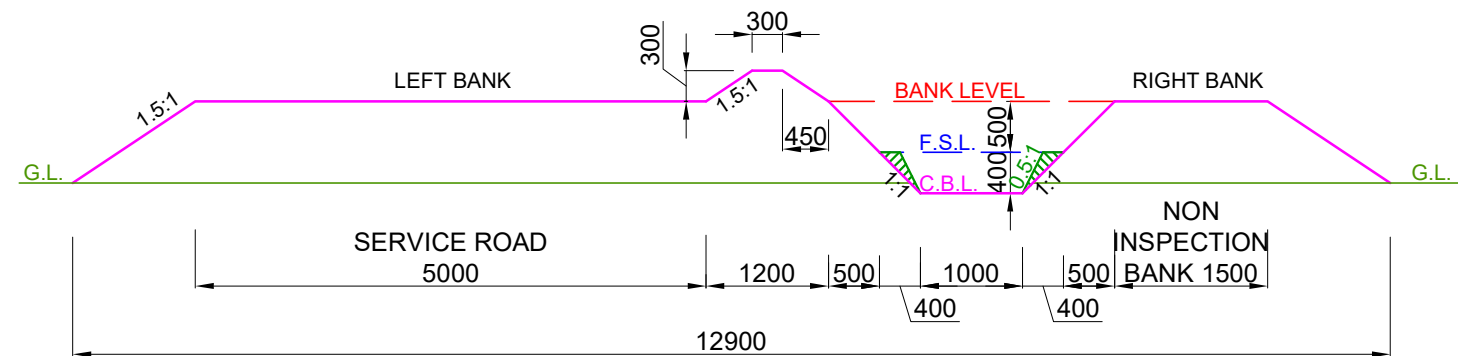
X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(PCF)

1 of 3

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

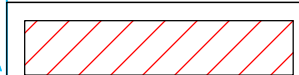


DESIGN SECTION FROM CH: 0.650 KM TO CH: 1.625 KM

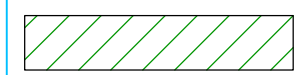
NOTE:-

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 :-

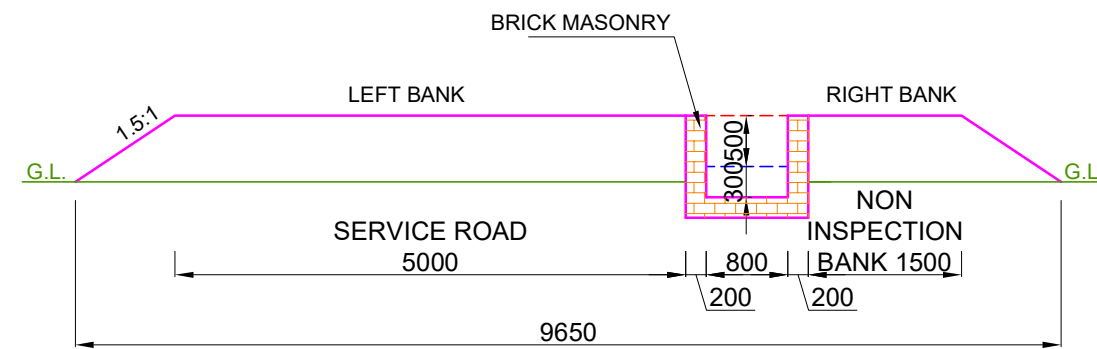
X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(PCF)

2 of 3

TYPICAL X - SECTION OF BHUTAILI MINOR
(OFFTAKE FROM RD - 9+875 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.625 KM TO CH: 2.050 KM

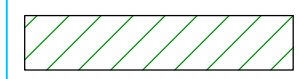
NOTE:-

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

LEGEND



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

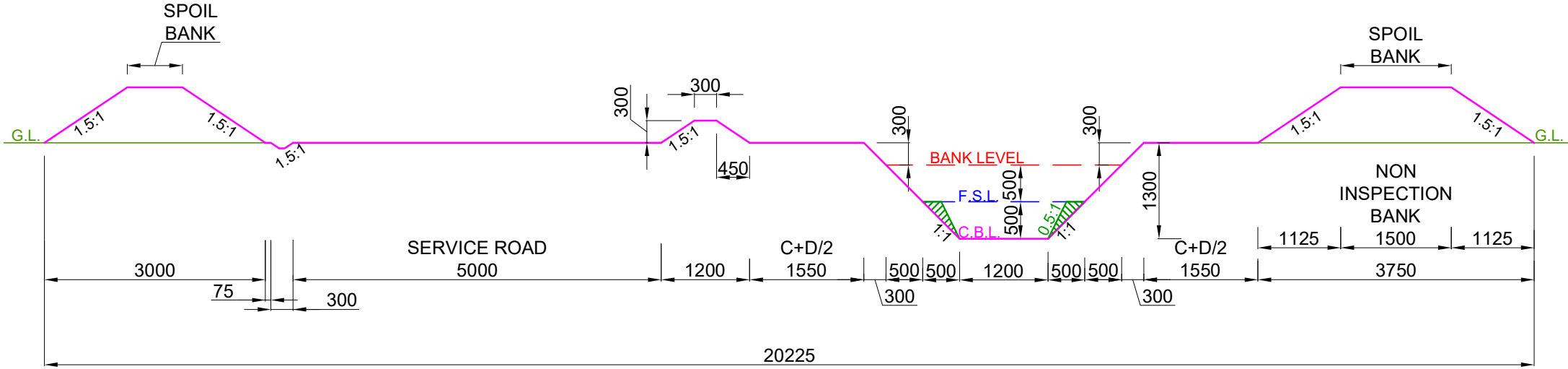
X - SECTION OF BHUTAILI MR. (OFFTAKE FROM RD - 9+875 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-04/ XSEC /TYP-(PCF)

3 of 3

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

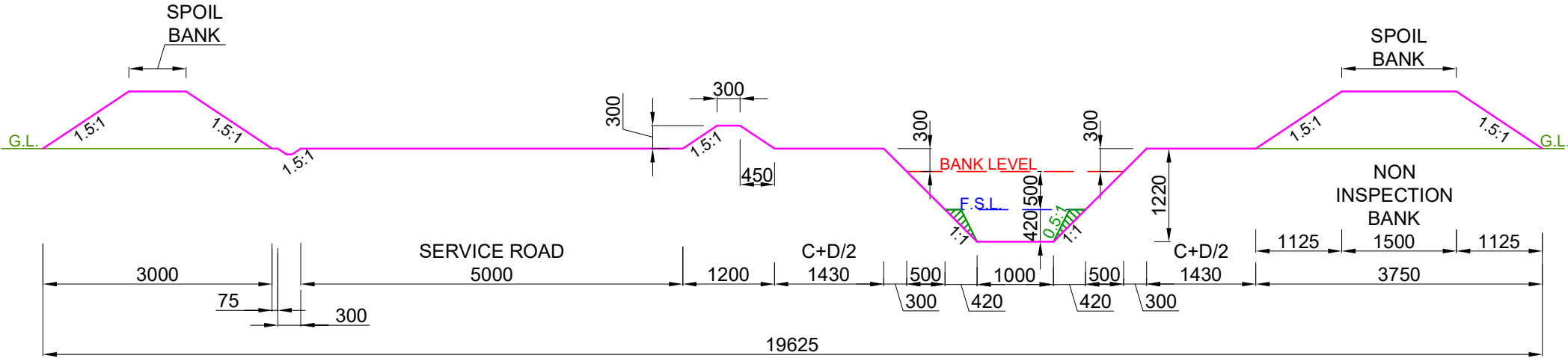


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.710 KM

- 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

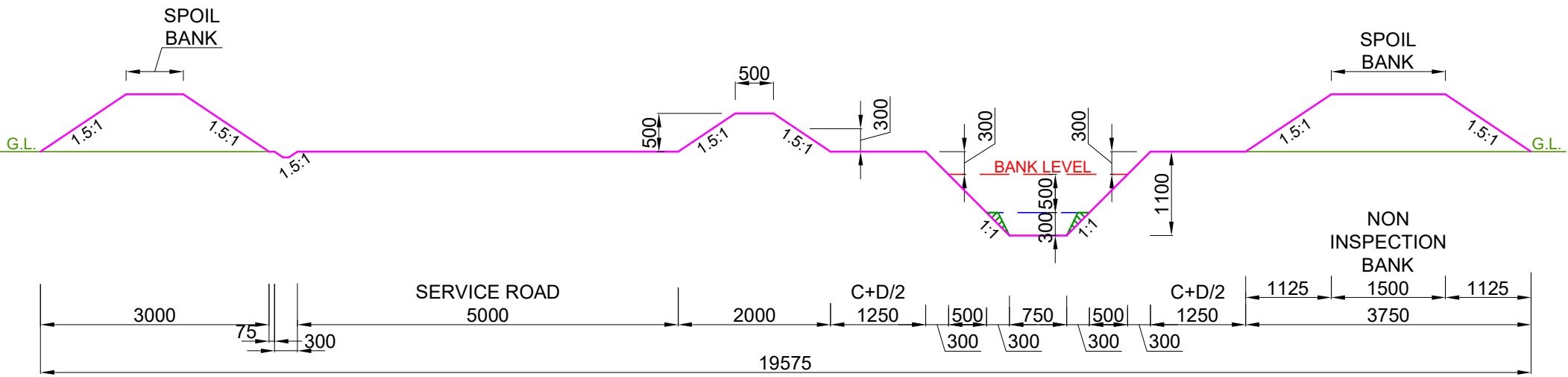


DESIGN SECTION FROM CH: 0.710 KM TO CH: 1.350 KM

- 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FC) 2 of 3				

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

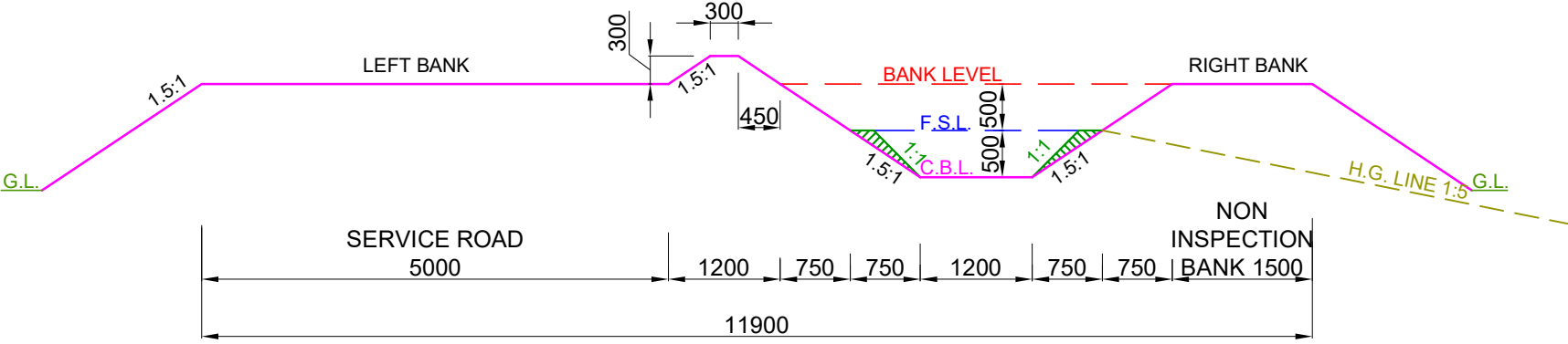


DESIGN SECTION FROM CH: 1.350 KM TO CH: 3.100 KM

- 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FC) 3 of 3

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



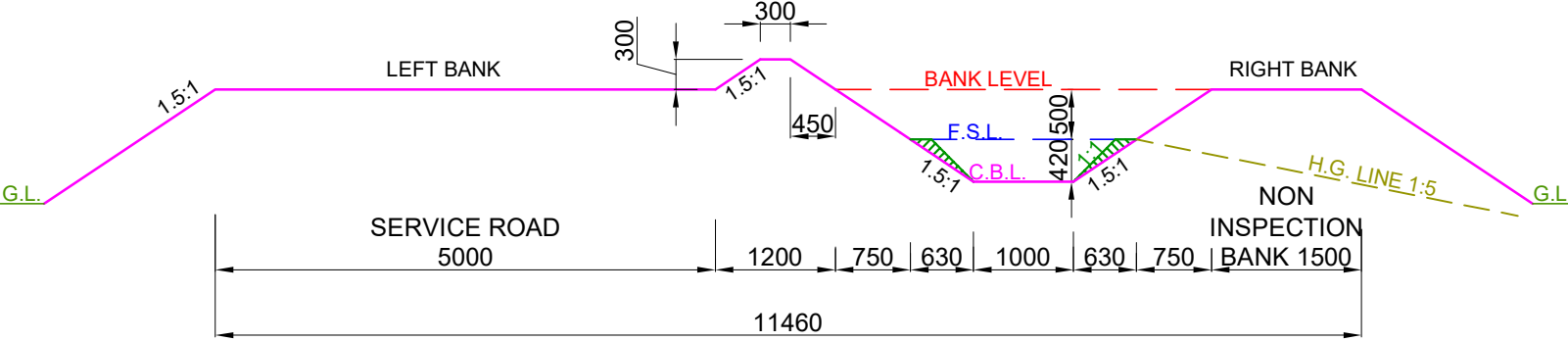
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.710 KM

- 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FF)

1 of 3

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

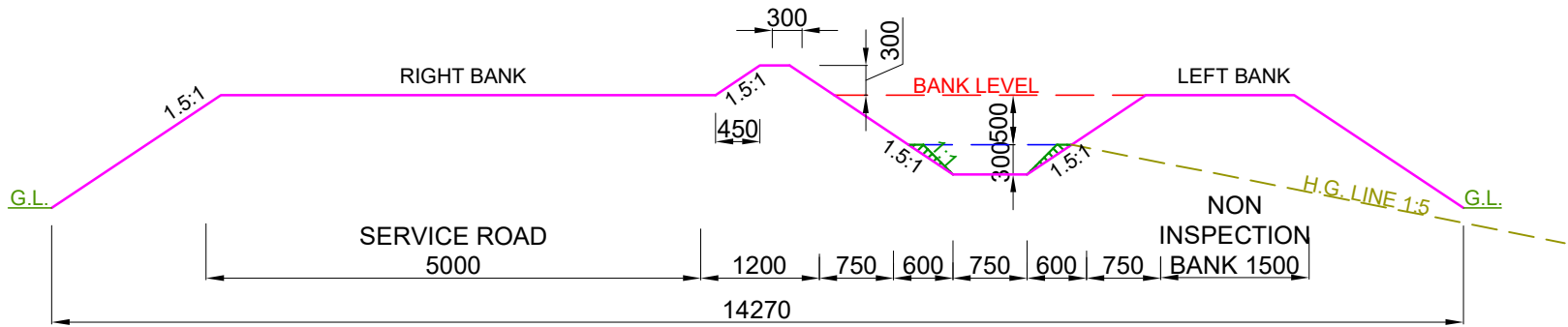


DESIGN SECTION FROM CH: 0.710 KM TO CH: 1.350 KM

- 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

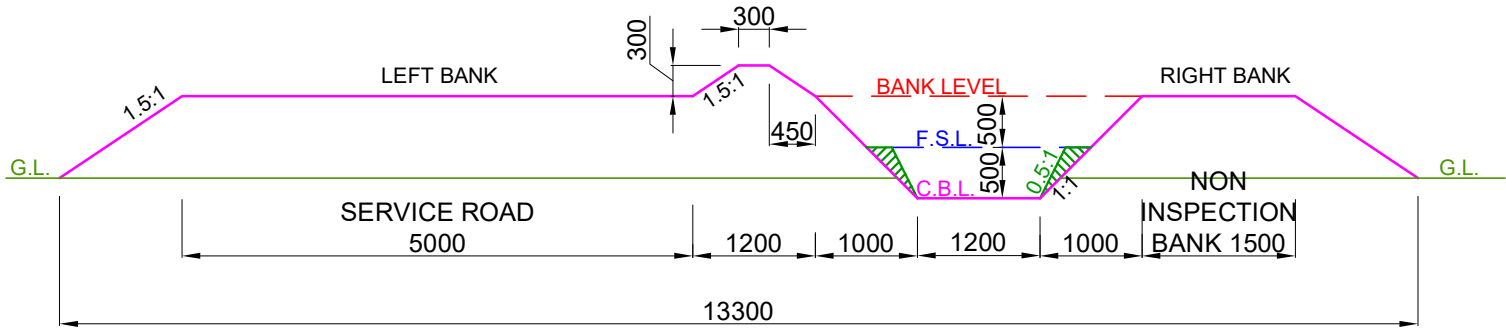


DESIGN SECTION FROM CH: 1.350 KM TO CH: 3.100 KM

- 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.

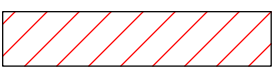
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X - SECTION OF SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(FF) 3 of 3			

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.710 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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(PCF) 1 of 3	

[illegible]

NOTE:-

- ## LEGEND

CUT AREA

FILL AREA

WAPCOS LTD.



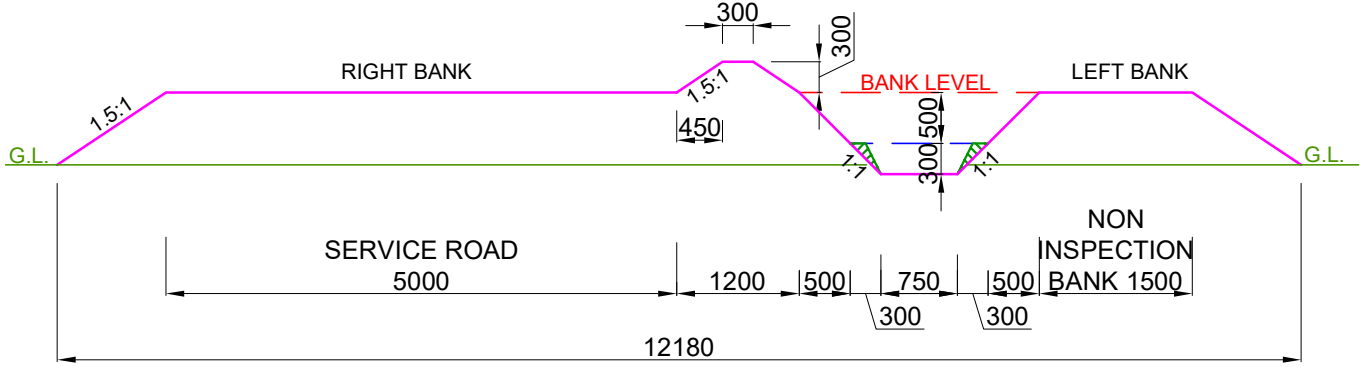
Drawing Title :-

Drawing No. :-

X - SECTION OF SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF SALOPURA MINOR
(OFFTAKE FROM RD - 10+660 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



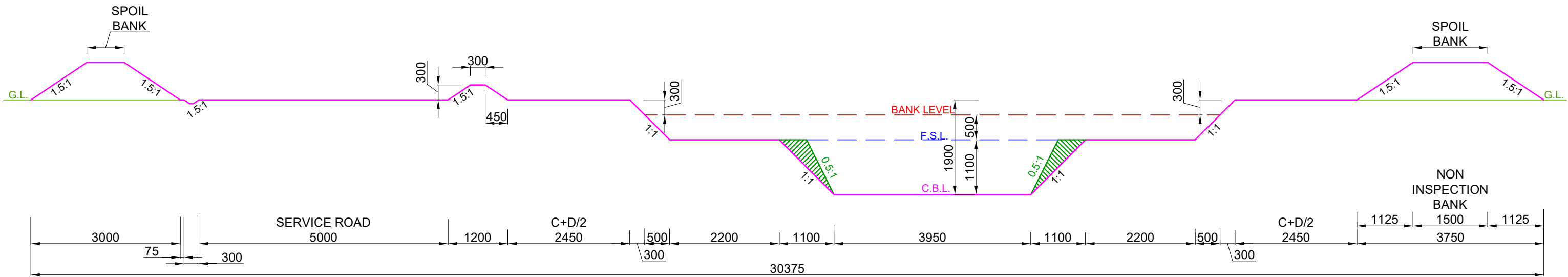
DESIGN SECTION FROM CH: 1.350 KM TO CH: 3.100 KM

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 SALOPURA MR. (OFFTAKE FROM RD - 10+660 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-05/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

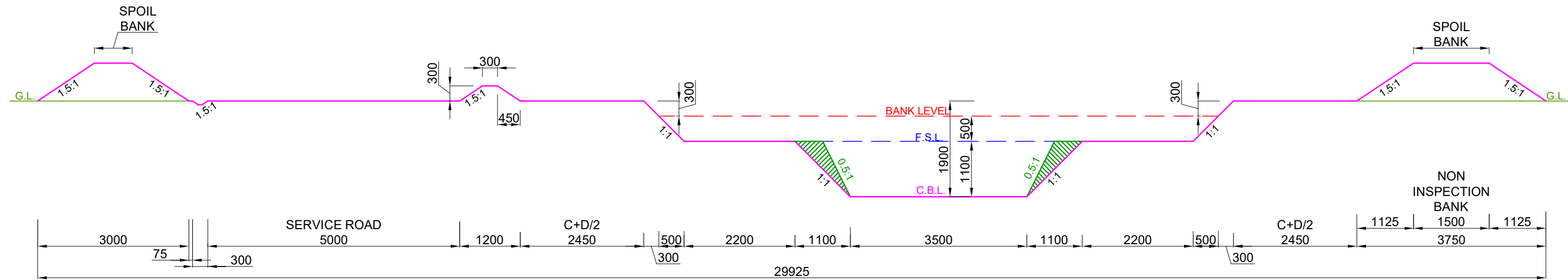


DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.800 KM

- 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.

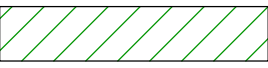
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC) 1 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

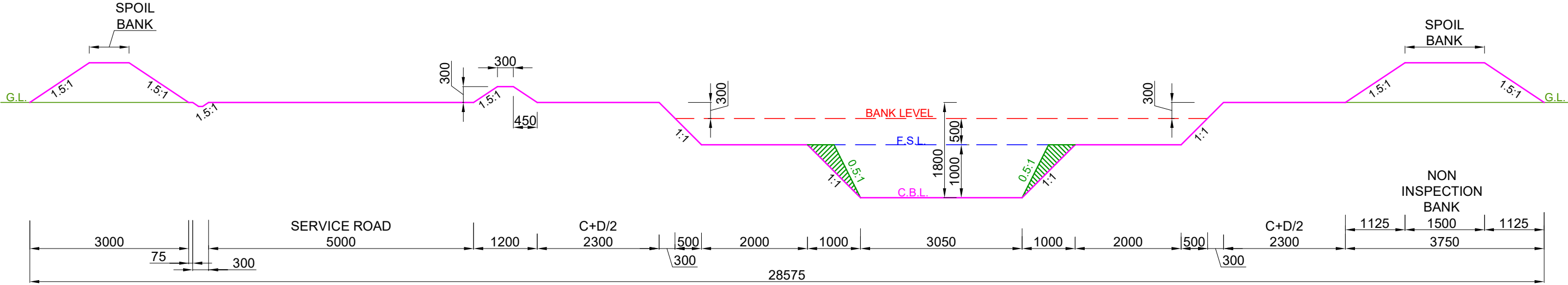


DESIGN SECTION FROM CH: 2.800 KM TO CH: 4.584 KM

- 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.

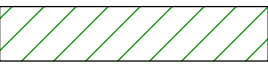
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC) 2 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

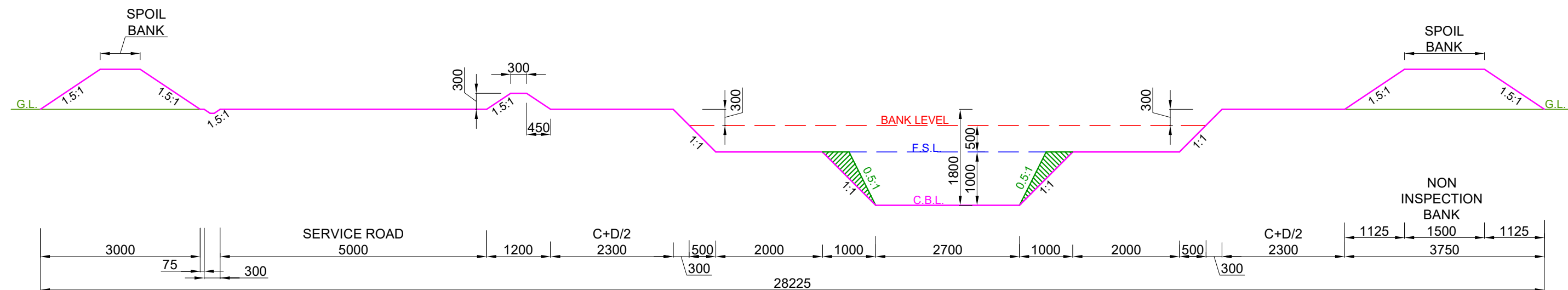


DESIGN SECTION FROM CH: 4.584 KM TO CH: 7.000 KM

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

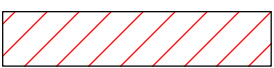
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC) 3 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

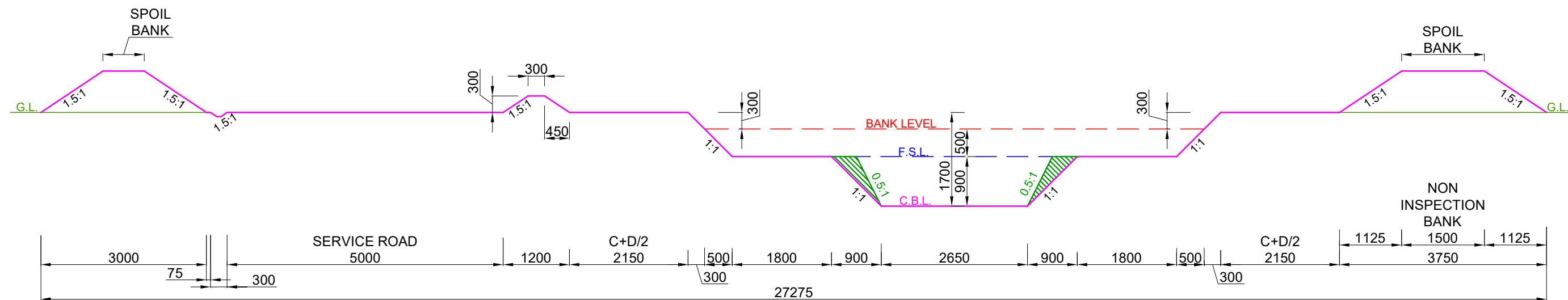


DESIGN SECTION FROM CH: 7.000 KM TO CH: 10.250 KM

- 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC) 4 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

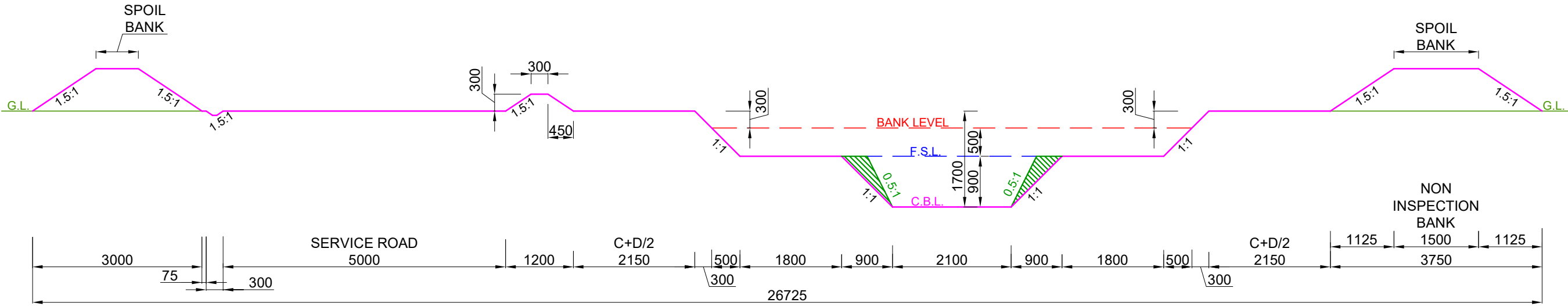


DESIGN SECTION FROM CH: 10.250 KM TO CH: 12.550 KM

- 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.

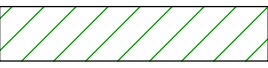
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC)			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

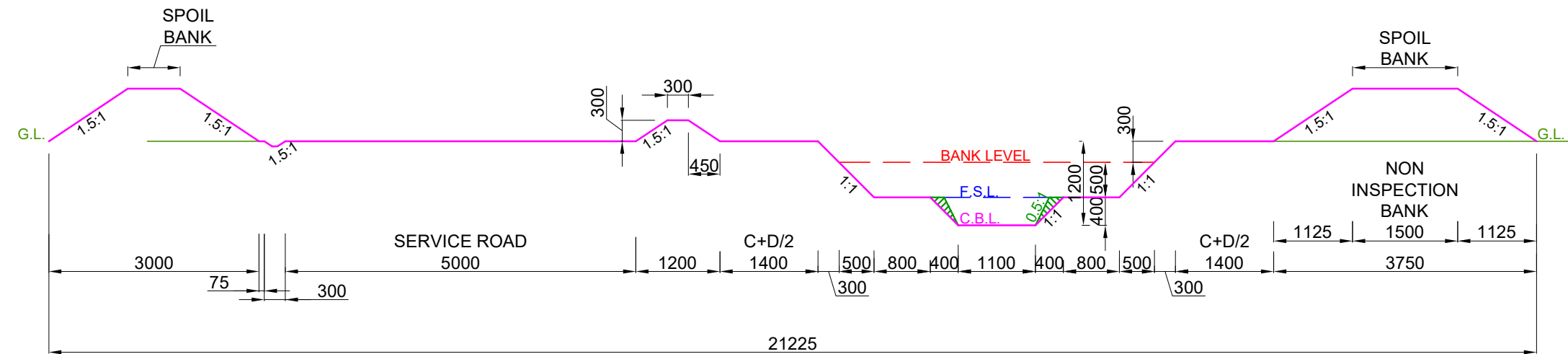


DESIGN SECTION FROM CH: 12.550 KM TO CH: 13.380 KM

- 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)		
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC)		

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

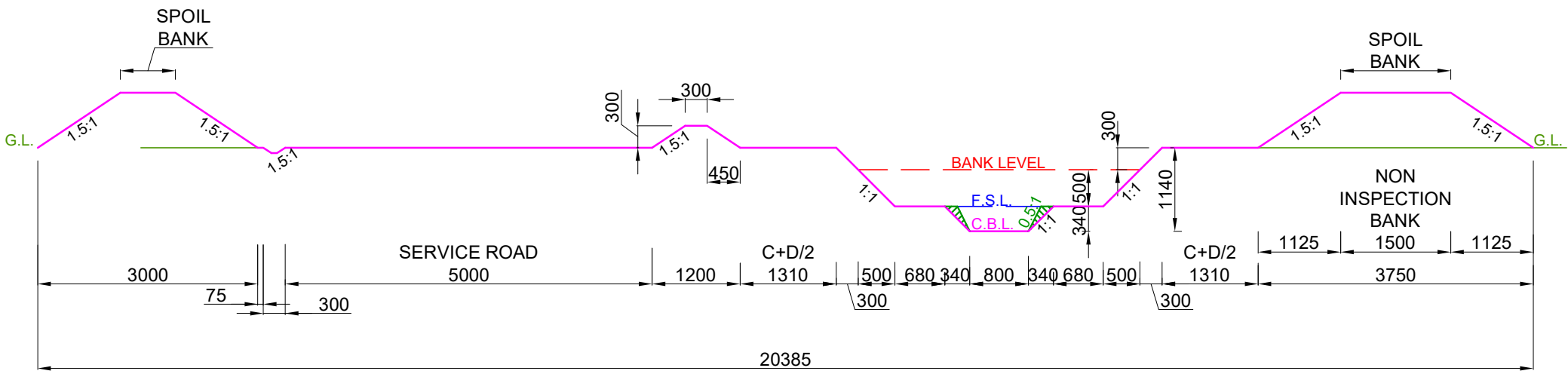


DESIGN SECTION FROM CH: 13.380 KM TO CH: 15.200 KM

- 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC) 7 of 8	

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

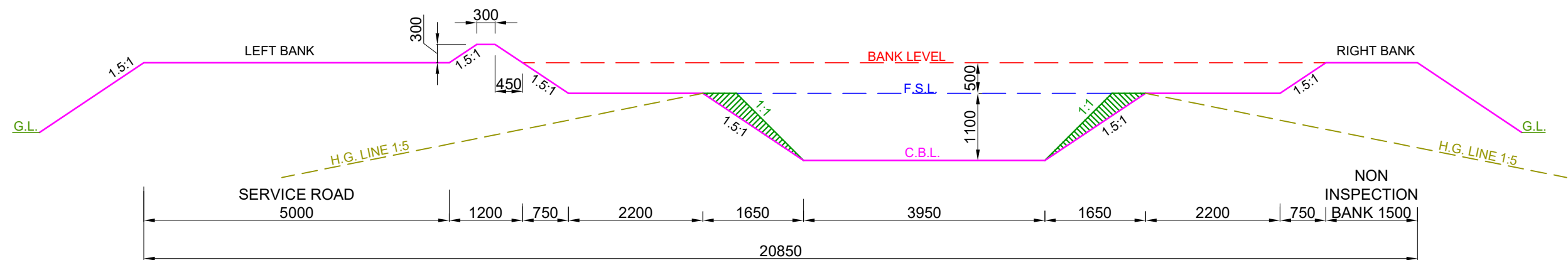


DESIGN SECTION FROM CH: 15.200 KM TO CH: 17.950 KM

- 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-13-06/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.800 KM

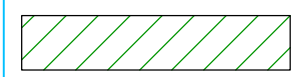
NOTE:-

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 :-

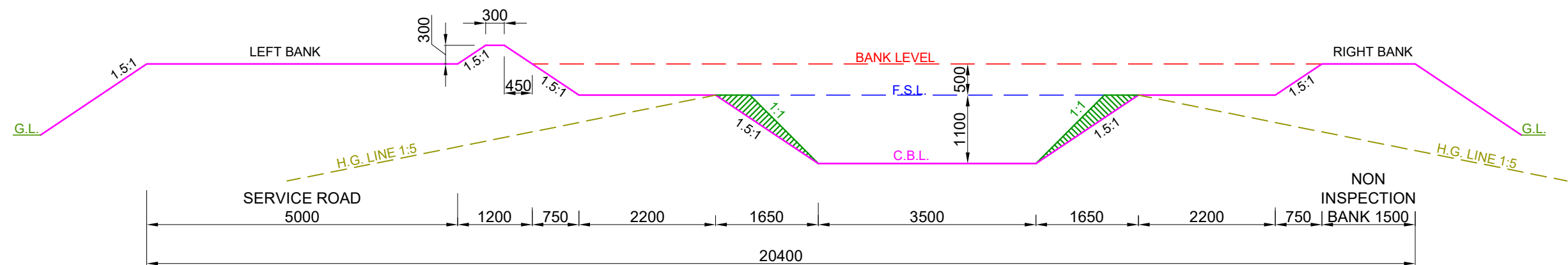
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF)

1 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.800 KM TO CH: 4.584 KM

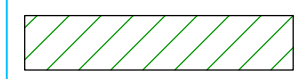
NOTE:-

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 :-

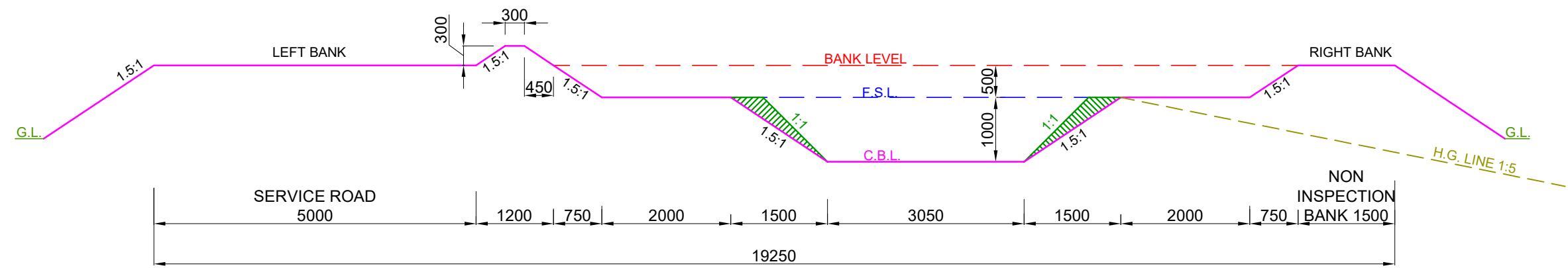
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF)

2 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

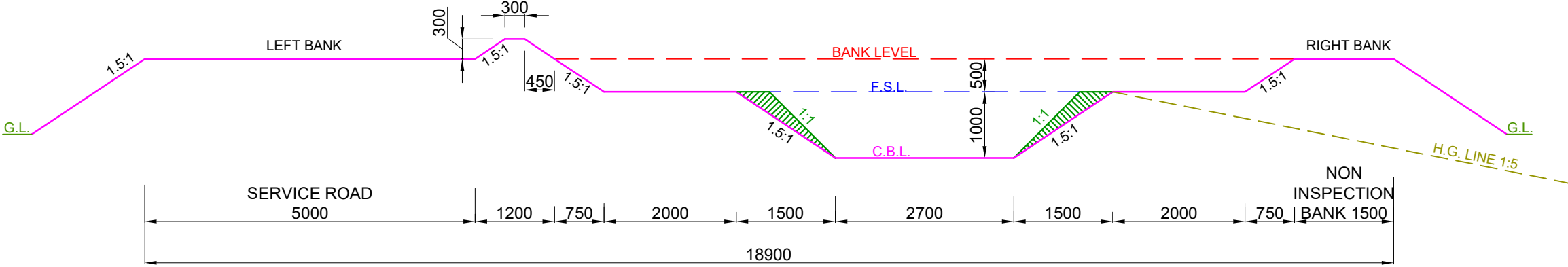


DESIGN SECTION FROM CH: 4.584 KM TO CH: 7.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF) 3 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

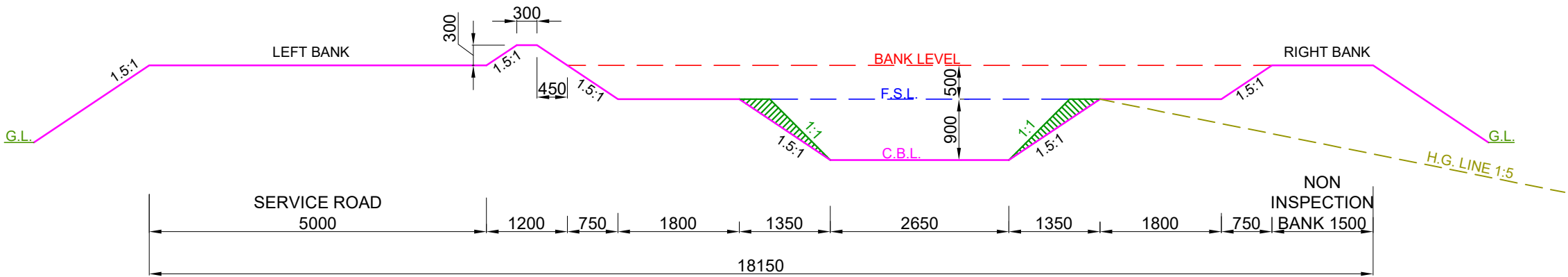


DESIGN SECTION FROM CH: 7.000 KM TO CH: 10.250 KM

- 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF) 4 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 10.250 KM TO CH: 12.550 KM

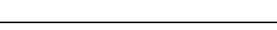
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF) 5 of 8			

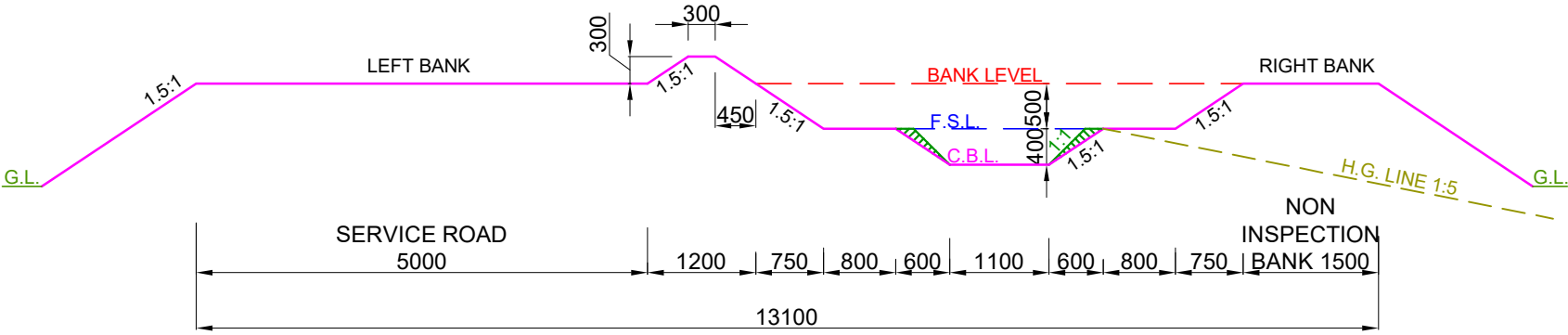
The diagram illustrates the cross-section of a road with a central drainage ditch. The left bank has a 1.5:1 slope and a 300mm high shoulder. The right bank also has a 1.5:1 slope. The central ditch has a 1:1 slope and a 1500mm wide bottom. The total width of the road is 17600m, including a 5000m service road and a 1500m non-inspection bank. The diagram also shows the ground level (G.L.), full surface level (F.S.L.), and center bank level (C.B.L.).

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.

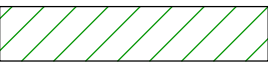
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF)6 of 8	

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

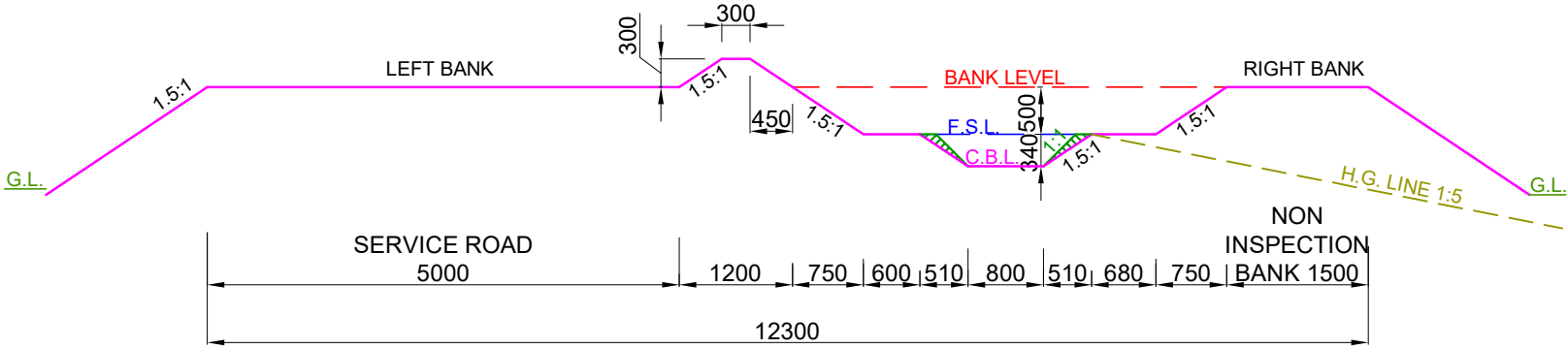


DESIGN SECTION FROM CH: 13.380 KM TO CH: 15.200 KM

- 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.

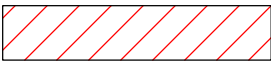
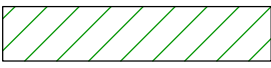
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF)			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 15.200 KM TO CH: 17.950 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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(FF) 8 of 8			

NOTE:-

- ## LEGEND

WAPCOS LTD.

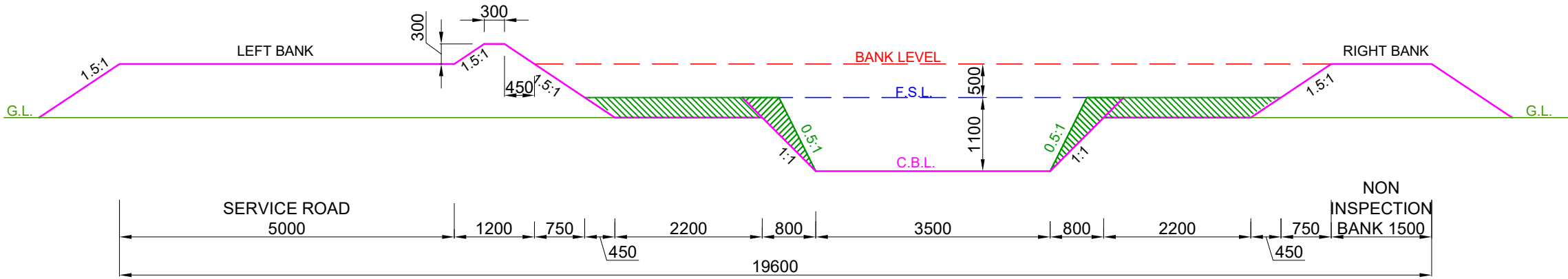


Drawing Title :-

X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

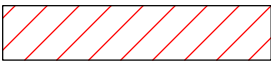
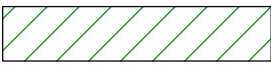
TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



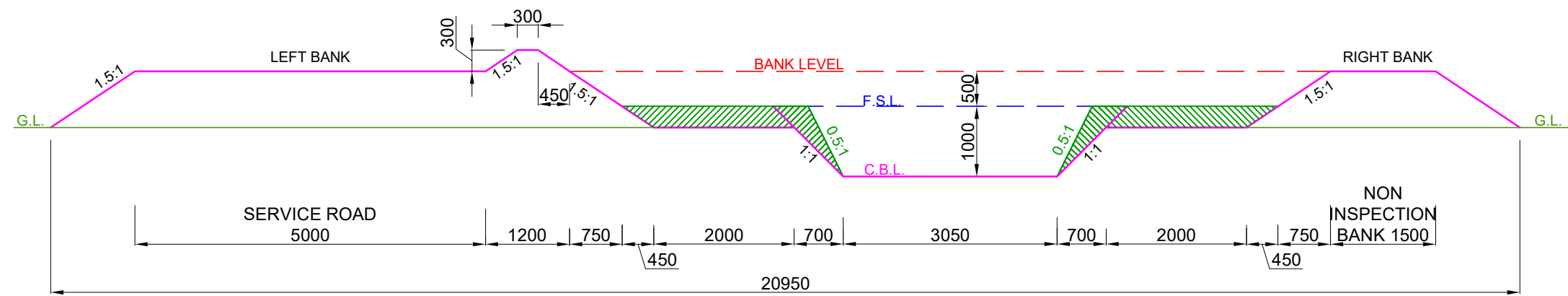
DESIGN SECTION FROM CH: 2.800 KM TO CH: 4.584 KM

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 SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF) 2 of 8			

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 4.584 KM TO CH: 7.000 KM

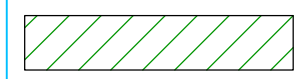
NOTE:-

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

LEGEND



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

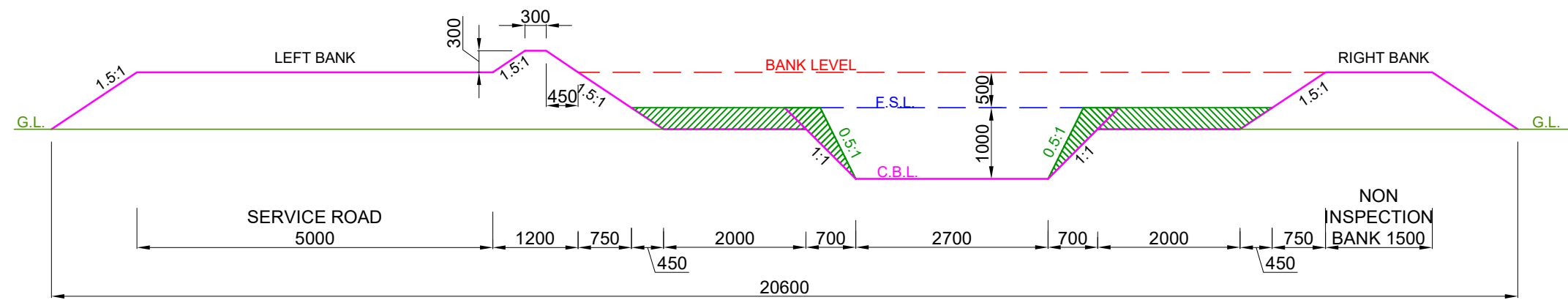
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

3 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 7.000 KM TO CH: 10.250 KM

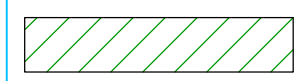
NOTE:-

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 :-

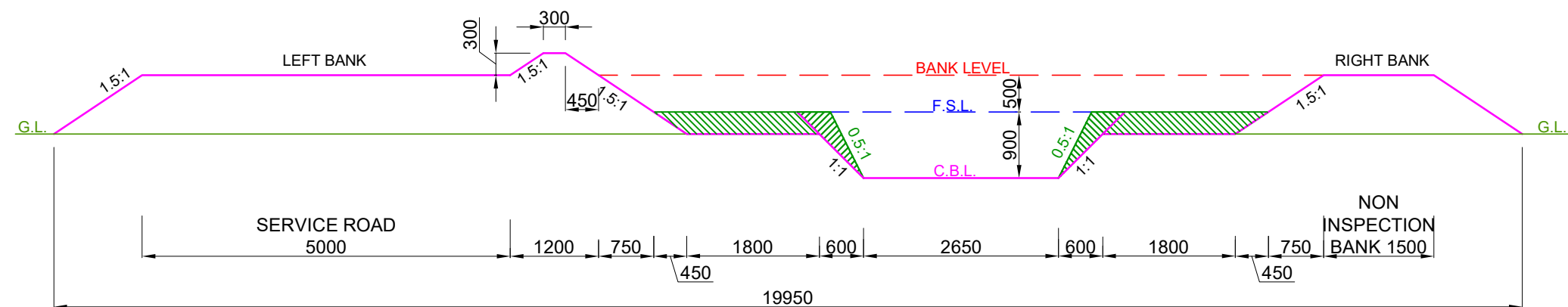
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

4 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 10.250 KM TO CH: 12.550 KM

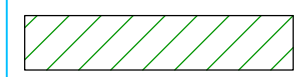
NOTE:-

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 :-

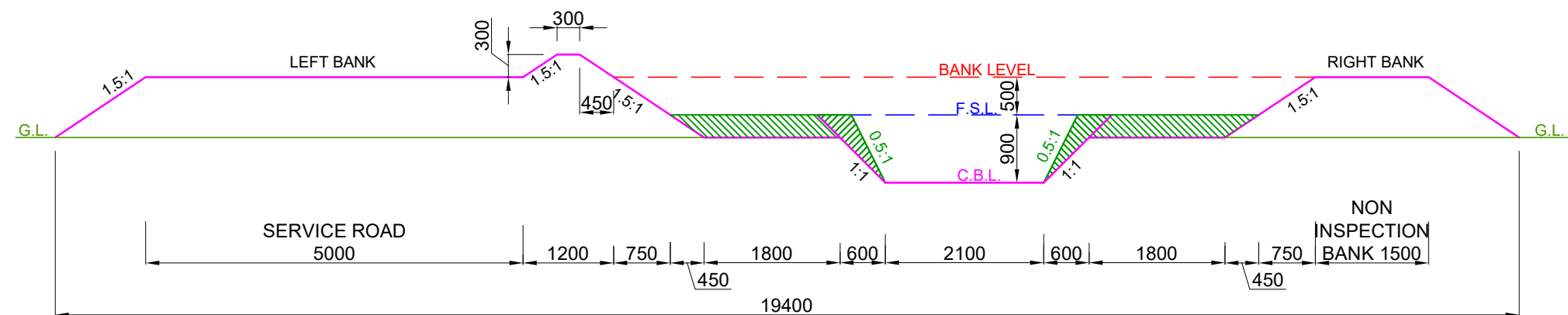
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

5 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 12.550 KM TO CH: 13.380 KM

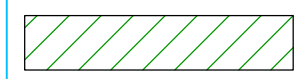
NOTE:-

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 :-

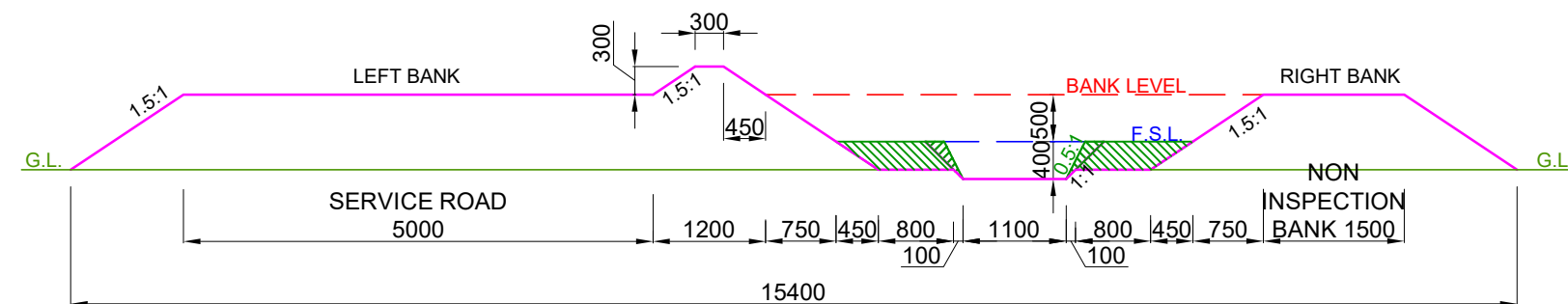
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

6 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 13.380 KM TO CH: 15.200 KM

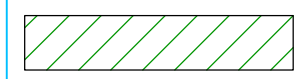
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

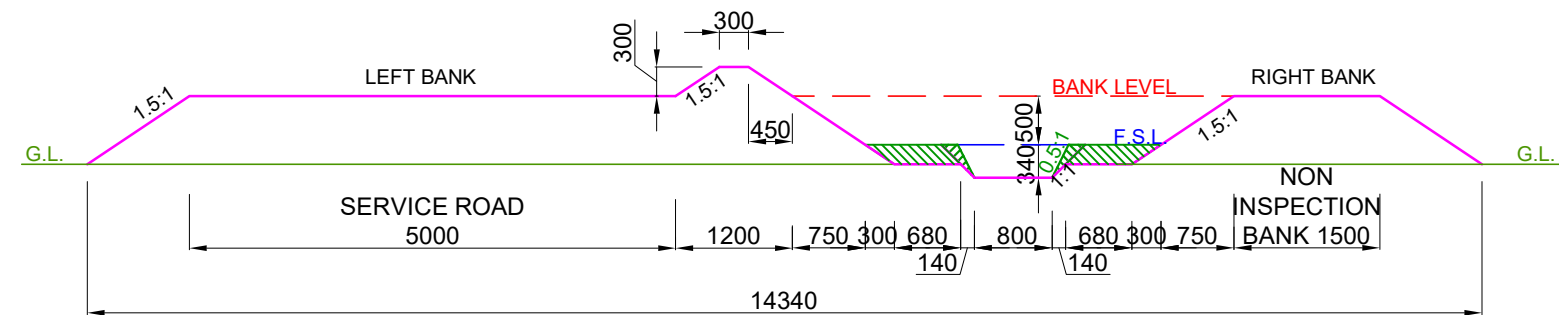
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

7 of 8

TYPICAL X - SECTION OF SINGHI SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 13+020 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 15.200 KM TO CH: 17.950 KM

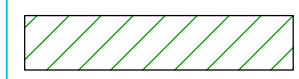
NOTE:-

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 :-

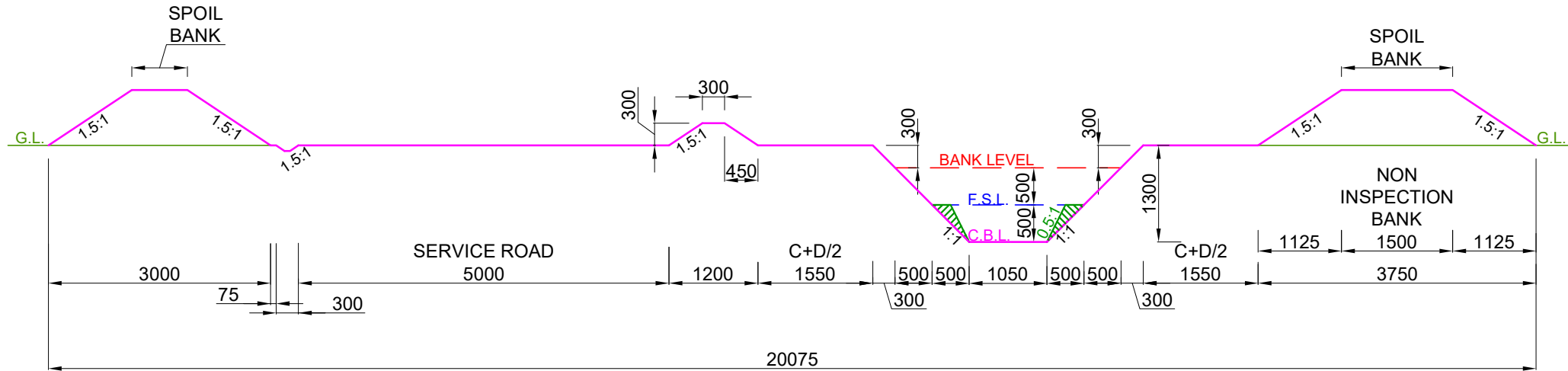
X SECTION OF SINGHI SUB-DY.(OFFTAKE FROM RD - 13+020 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-06/ XSEC /TYP-(PCF)

8 of 8

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

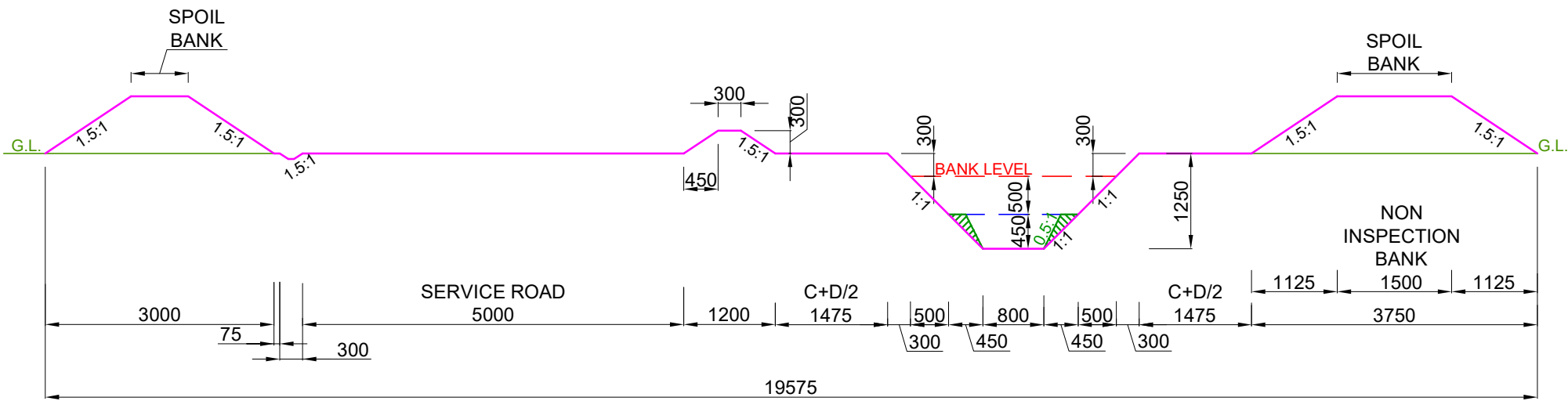


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FC)			

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

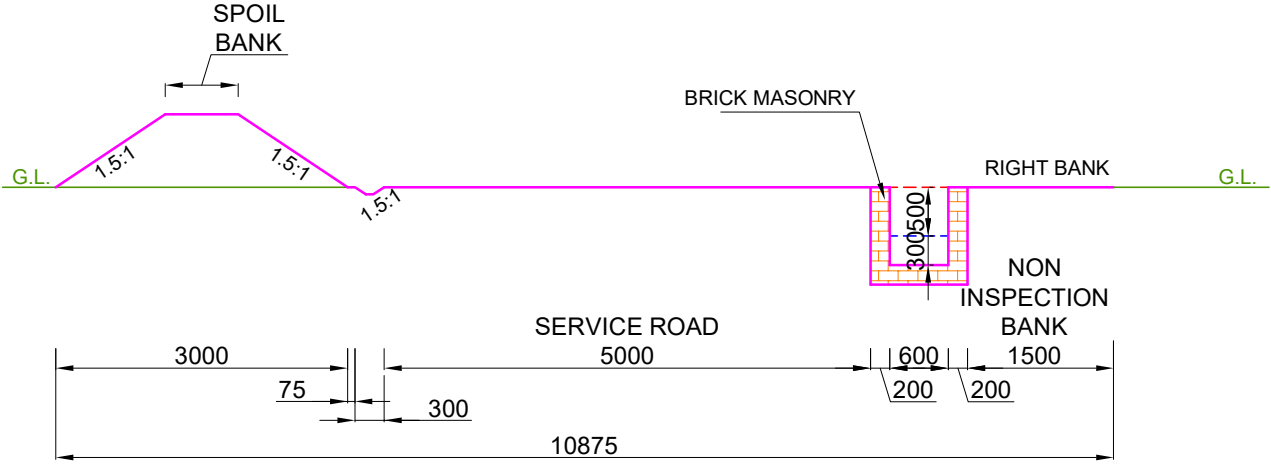


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.400 KM

- 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.400 KM TO CH: 1.950 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FC) 3 of 3

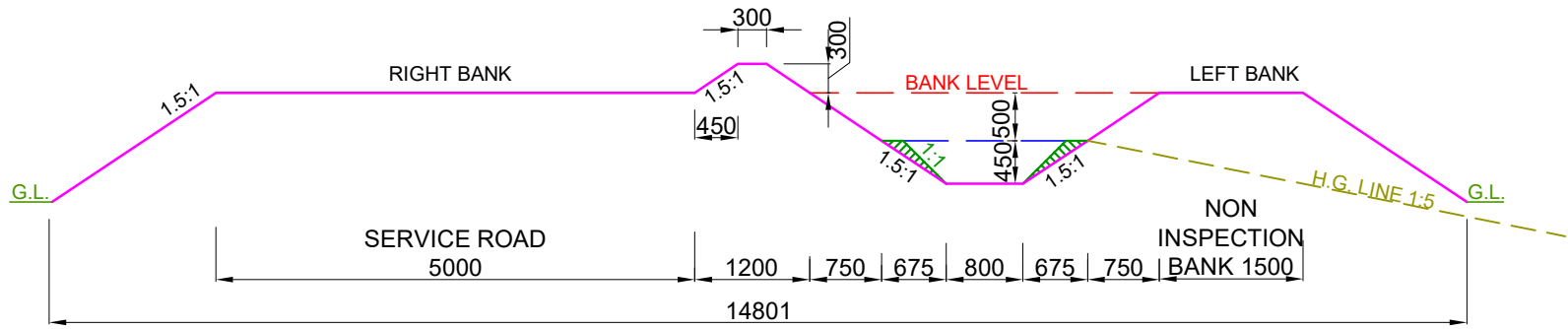
The diagram illustrates a cross-section of a road and ditch system. The left side features a 5000-unit wide service road with a 1.5:1 slope leading to a 300-unit wide top and 450-unit high ditch. The ditch has 1:1 side slopes. The right side consists of a 1500-unit wide non-inspection bank with a 1.5:1 slope. The central ditch is 1050 units wide at its base. Key levels are marked: G.L. (Ground Level), F.S.L. (Full Supply Level), C.B.L. (Canal Bank Level), and H.G. LINE (High Ground Line). The total width of the service road and non-inspection bank is 11750 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FF)1 of 3	

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

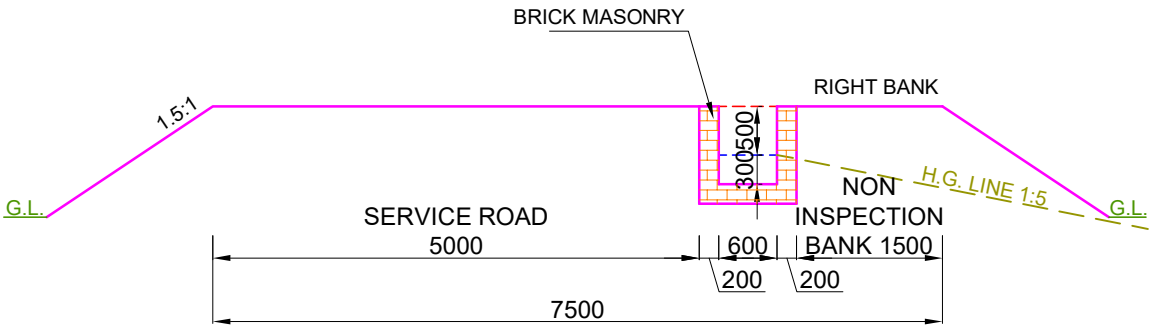


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.400 KM

- 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

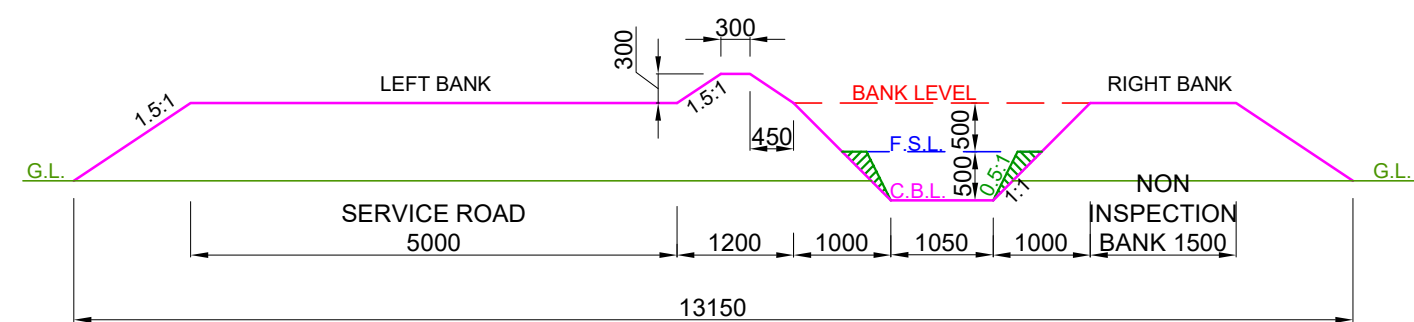


DESIGN SECTION FROM CH: 1.400 KM TO CH: 1.950 KM

- 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



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

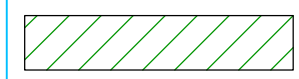
NOTE:-

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

LEGEND



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

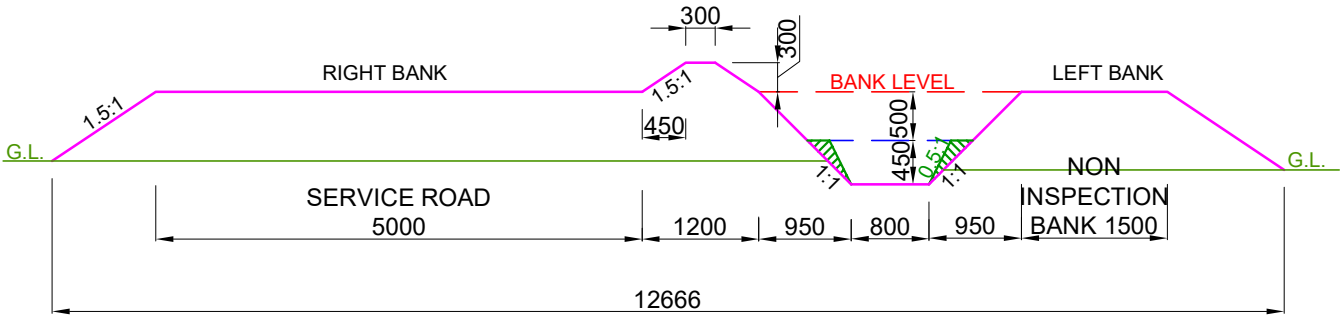
X - SECTION OF SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(PCF)

1 of 3

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

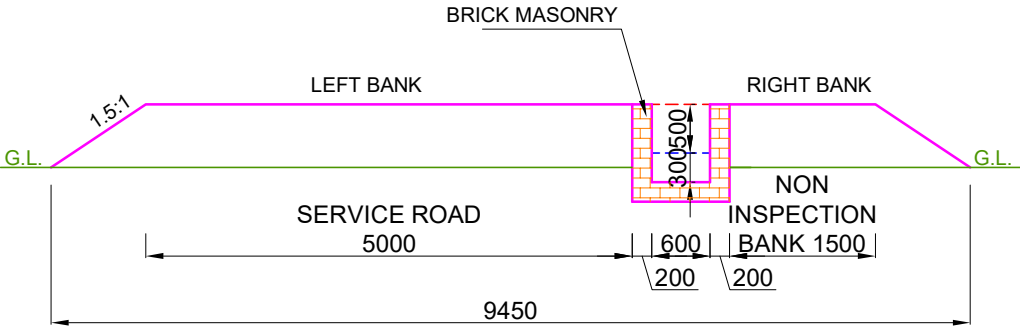


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.400 KM

- 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF SAHOKARMA MINOR
(OFFTAKE FROM RD - 16+200 KM. (RT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.400 KM TO CH: 1.950 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 SAHOKARMA MR. (OFFTAKE FROM RD - 16+200 KM. (R), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-07/ XSEC /TYP-(PCF)

The diagram illustrates a cross-section of a road profile with the following features and dimensions:

- SPOIL BANK**: Located at both ends of the section.
- G.L.**: Ground Level, indicated by green lines.
- SERVICE ROAD**: A horizontal section with a width of 5000 units.
- C+D/2**: Centerline and Ditch Line, indicated by blue lines.
- BANK LEVEL**: Indicated by a red line.
- F.S.L.**: Full Supply Level, indicated by a blue line.
- C.B.L.**: Canal Bank Level, indicated by a pink line.
- NON INSPECTION BANK**: A section on the right side of the profile.
- Dimensions**: Various vertical and horizontal measurements are provided, including slopes of 1.5:1, 1:1, and 0.5:1, and specific heights like 300, 450, 600, 1400, and 1700.
- Total Length**: The overall length of the section is 21225 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FC) 1 of 5	

The diagram illustrates a cross-section of a road profile with the following features and dimensions:

- SPOIL BANK**: Located at the top left and right edges of the profile.
- G.L.** (Ground Level): Indicated by green lines at the base of the spoil banks.
- BANK LEVEL**: A red dashed line representing the level of the embankment.
- F.S.L.** (Full Supply Level): A blue solid line representing the water level.
- C.B.L.** (Canal Bank Level): A pink solid line representing the bank level of the canal.
- SERVICE ROAD**: A horizontal section with a width of 5000 units.
- C+D/2**: The centerline of the main canal, located 1625 units from the service road edge.
- NON INSPECTION BANK**: A horizontal section on the right side of the canal.
- Dimensions**: Various vertical and horizontal measurements are provided, including 3000, 75, 300, 1200, 500, 550, 1350, 550, 500, 1125, 1500, 1125, 3750, and 20625.
- Slopes**: Slopes of 1.5:1 and 0.5:1 are indicated for different sections of the profile.

NOTE:-

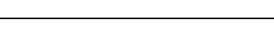
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

2 of 5

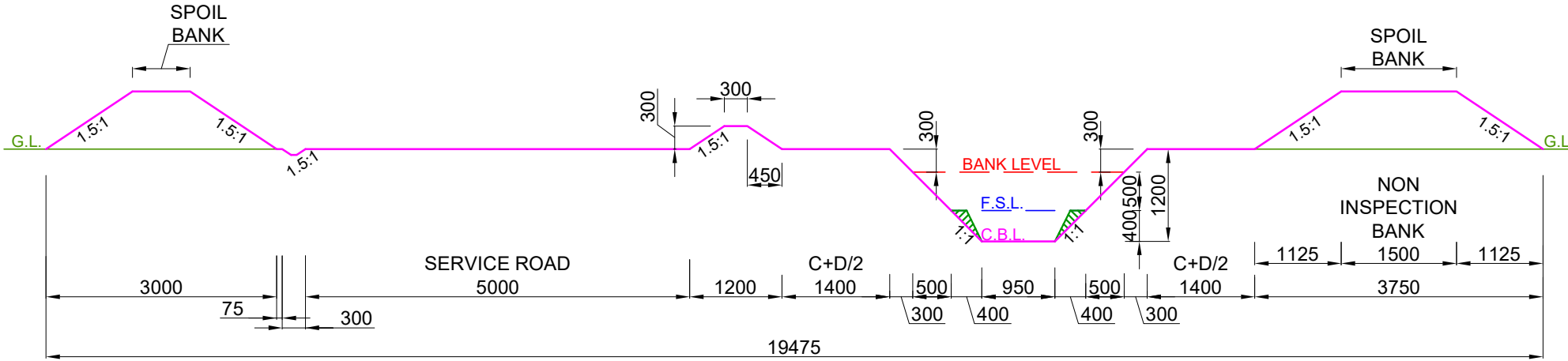
The diagram illustrates a cross-section of a road with a central ditch. The total width of the road is 20075 units. The central ditch has a bottom width of 1050 units and a depth of 500 units. The ditch is flanked by 1:1 slopes. The road is flanked by 1.5:1 slopes. The diagram includes labels for 'SPOIL BANK', 'NON INSPECTION BANK', 'SERVICE ROAD', 'C+D/2', 'BANK LEVEL', 'F.S.L.', 'C.B.L.', 'G.L.', and 'G.'.

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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FC) 3 of 5	

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

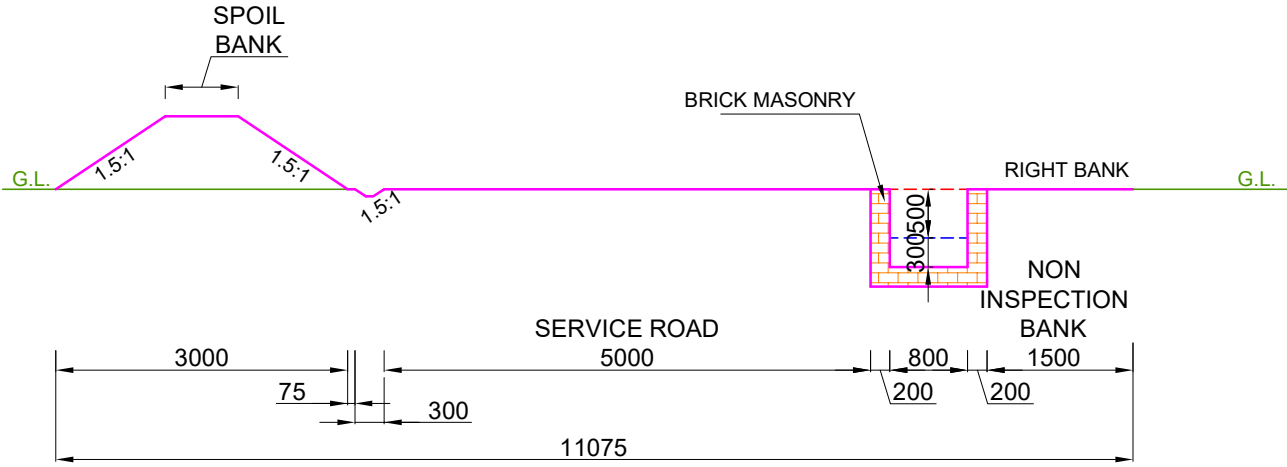


DESIGN SECTION FROM CH: 3.300 KM TO CH: 4.450 KM

- 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

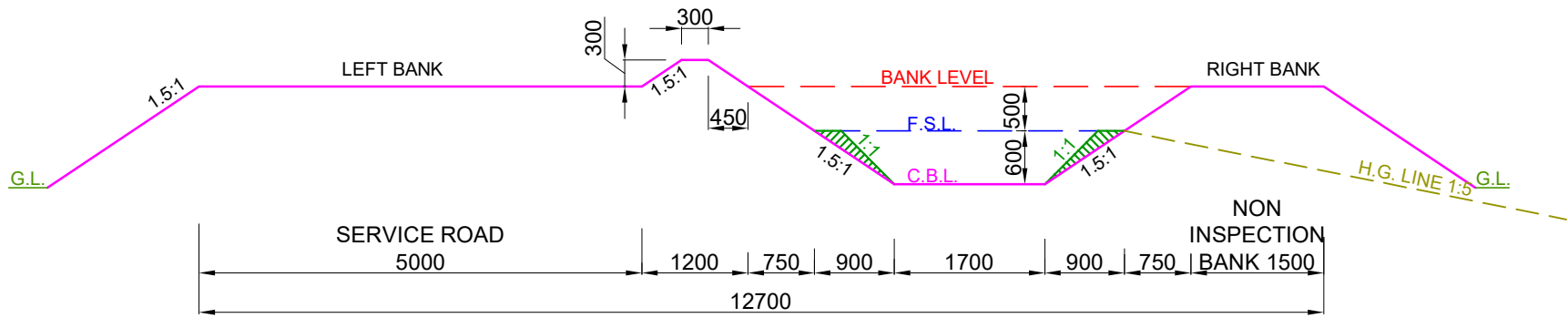


DESIGN SECTION FROM CH: 4.450 KM TO CH: 5.400 KM

- 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



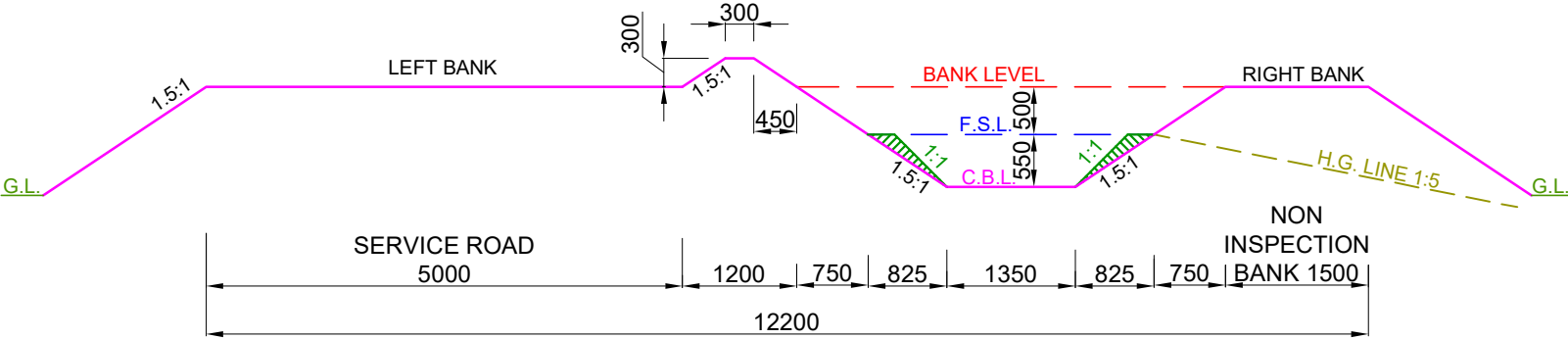
DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.350 KM

- 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FF)

1 of 5

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

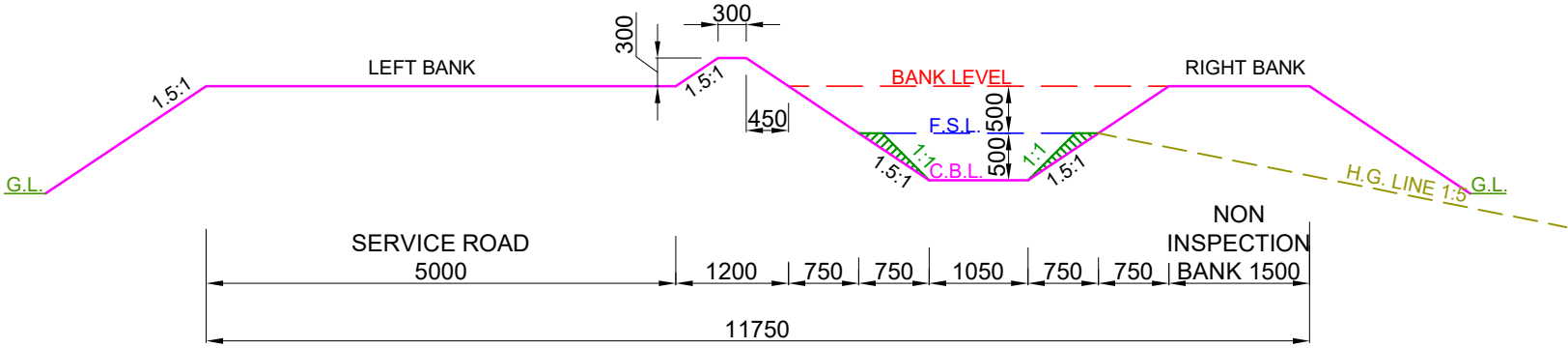


DESIGN SECTION FROM CH: 1.350 KM TO CH: 3.050 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 3.050 KM TO CH: 3.300 KM

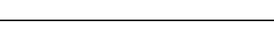
- NOTE:-
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FF)

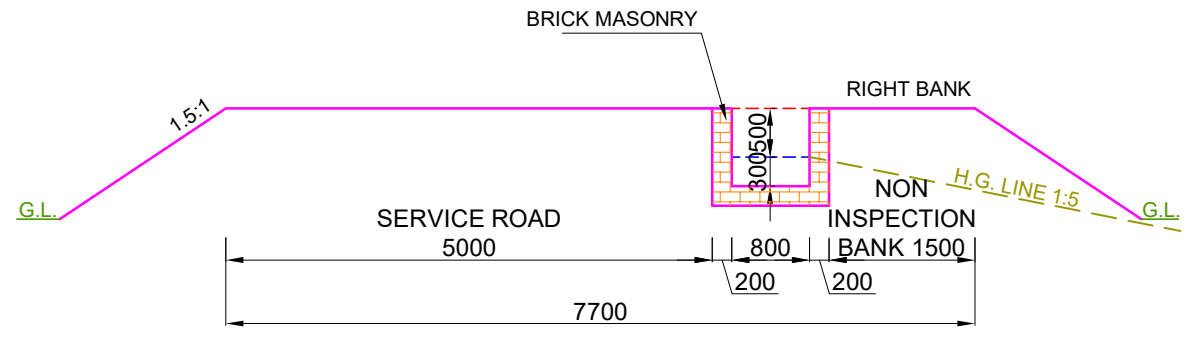
The diagram illustrates a cross-section of a road with a 5000mm service road and a 11350mm inspection bank. The left side features a 1.5:1 slope and a 300mm wide top. The right side includes a 400mm high embankment, a 1.5:1 slope, and a 1500mm inspection bank. The total width is 11350mm. The diagram also shows the G.L. (Ground Level), F.S.L. (Finished Surface Level), C.B.L. (Center Bank Level), and H.G. (Highway) line.

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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FF)4 of 5	

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 4.450 KM TO CH: 5.400 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(FF)

The diagram illustrates a cross-section of a road with a central ditch and side banks. The total width is 13865 units. The components and their dimensions are as follows:

- Service Road:** 5000 units wide.
- Ditch:** 1200 units wide at the top, with 1:1 slopes on both sides.
- Inspection Bank:** 1500 units wide, with a 0.5:1 slope on the left and a 1:1 slope on the right.
- Center Line (C.B.L.):** Indicated by a dashed line.
- Bank Level:** Indicated by a solid line.
- Ground Level (G.L.):** Indicated by a solid line.

The diagram also shows the following dimensions and slopes:

- Slopes:** 1.5:1 for the left bank, 0.5:1 for the ditch and inspection bank, and 1:1 for the ditch and inspection bank.
- Vertical Dimensions:** 300 units for the ditch depth, 450 units for the ditch width at the bottom, 600 units for the ditch width at the top, and 1500 units for the inspection bank width.

NOTE:-

- ## LEGEND

FILL AREA

WAPCOS LTD.



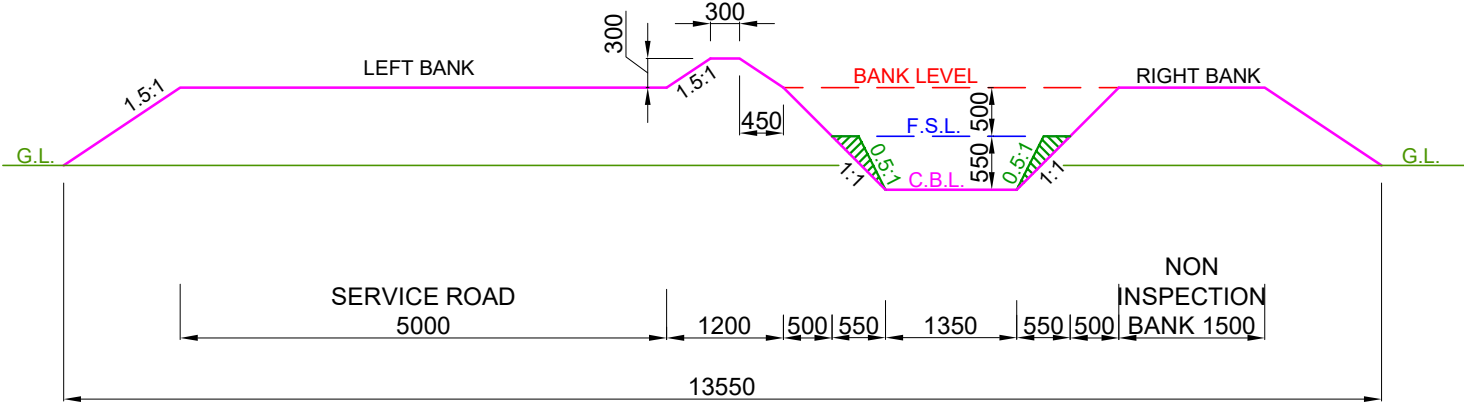
Drawing Title :-

Drawing No. :-

X - SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L),
KOTWARA DISTRIBUTARY CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

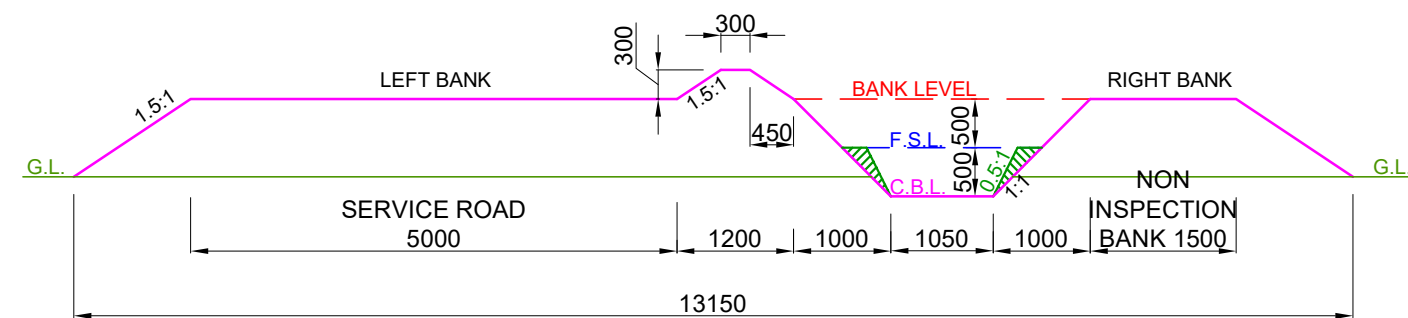


DESIGN SECTION FROM CH: 1.350 KM TO CH: 3.050 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X - SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(PCF) 2 of 5				

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

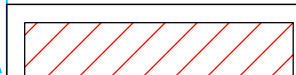


DESIGN SECTION FROM CH: 3.050 KM TO CH: 3.300 KM

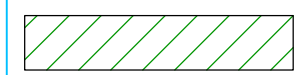
NOTE:-

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 :-

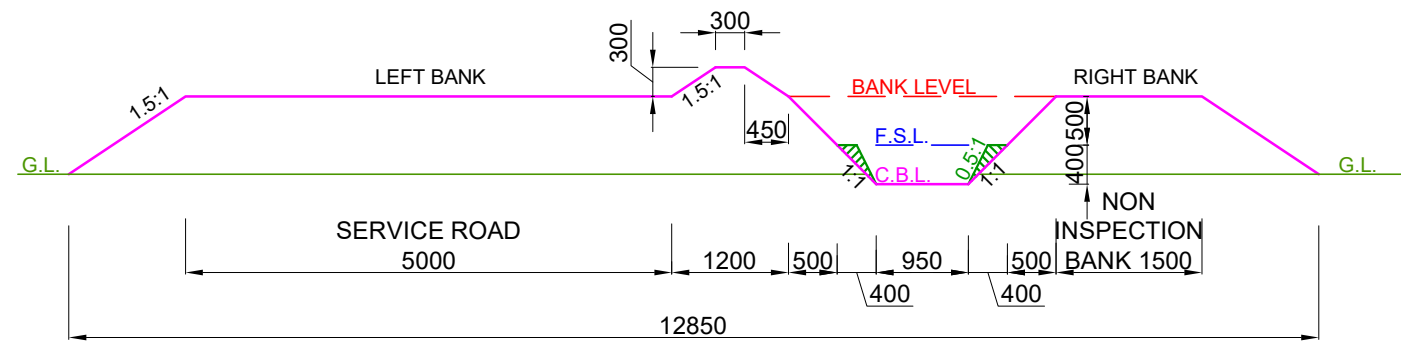
X - SECTION OF DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(PCF)

3 of 5

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

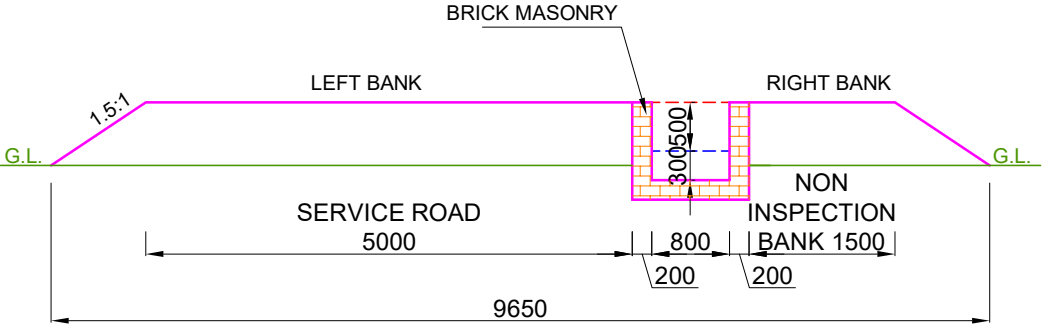


DESIGN SECTION FROM CH: 3.300 KM TO CH: 4.450 KM

- 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF DHAMNI MINOR
(OFFTAKE FROM RD - 17+300 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

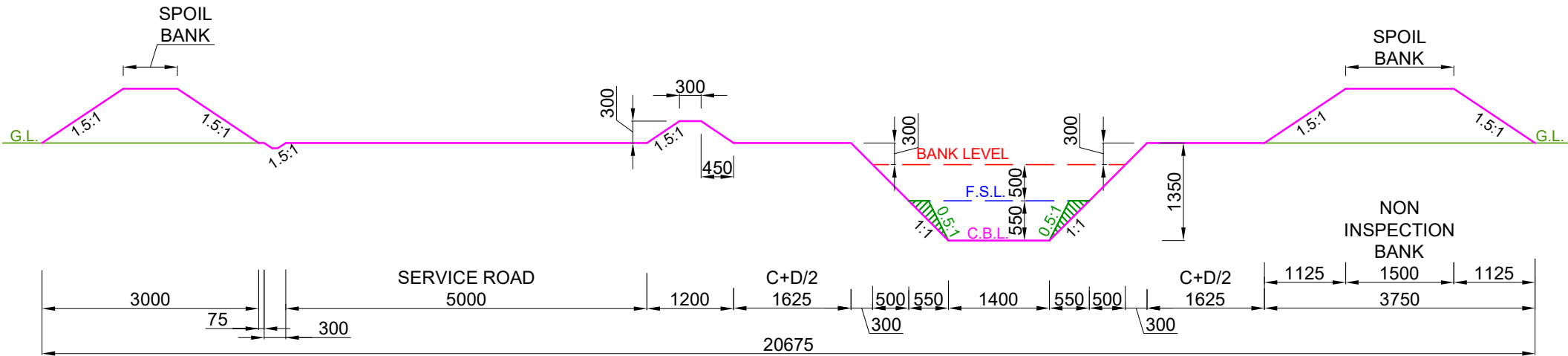


DESIGN SECTION FROM CH: 4.450 KM TO CH: 5.400 KM

- 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 DHAMNI MR. (OFFTAKE FROM RD - 17+300 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-35-08/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



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

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

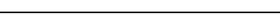
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FC)

1 of 4

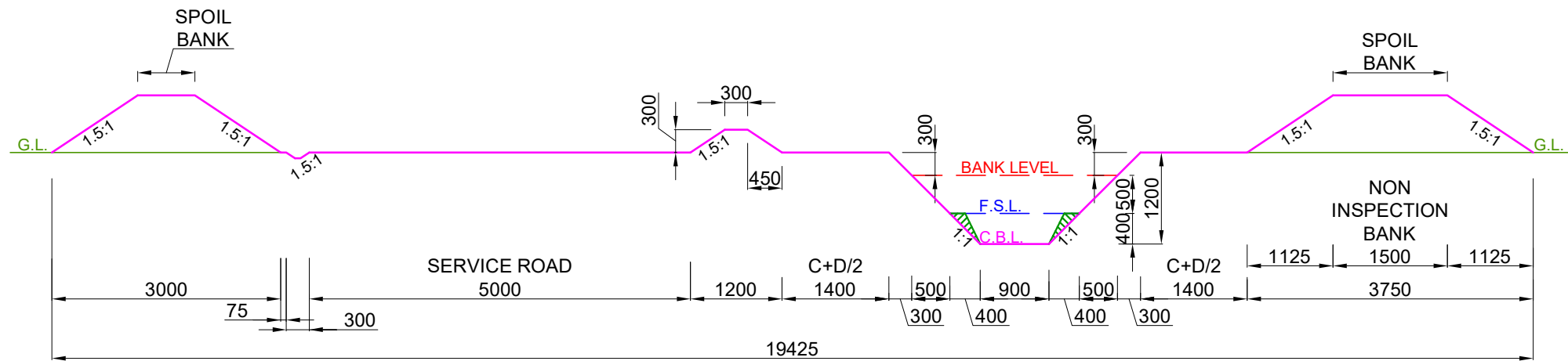
The diagram shows a cross-section of a canal with a service road on top. The canal has a bottom width of 430 units and a depth of 1230 units. The side slopes are 1:1. The top width of the canal is 19875 units. The service road is 5000 units wide. The total width of the structure is 3750 units. The diagram includes labels for 'SPOIL BANK', 'G.L.' (Ground Level), 'BANK LEVEL', 'F.S.L.' (Full Supply Level), 'C.B.L.' (Canal Bottom Level), 'SERVICE ROAD', 'C+D/2', 'NON INSPECTION BANK', and various dimensions in feet and inches.

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.

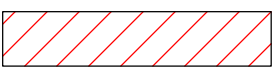
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	CUT AREA		Drawing Title :-	X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FC)2 of 4	

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

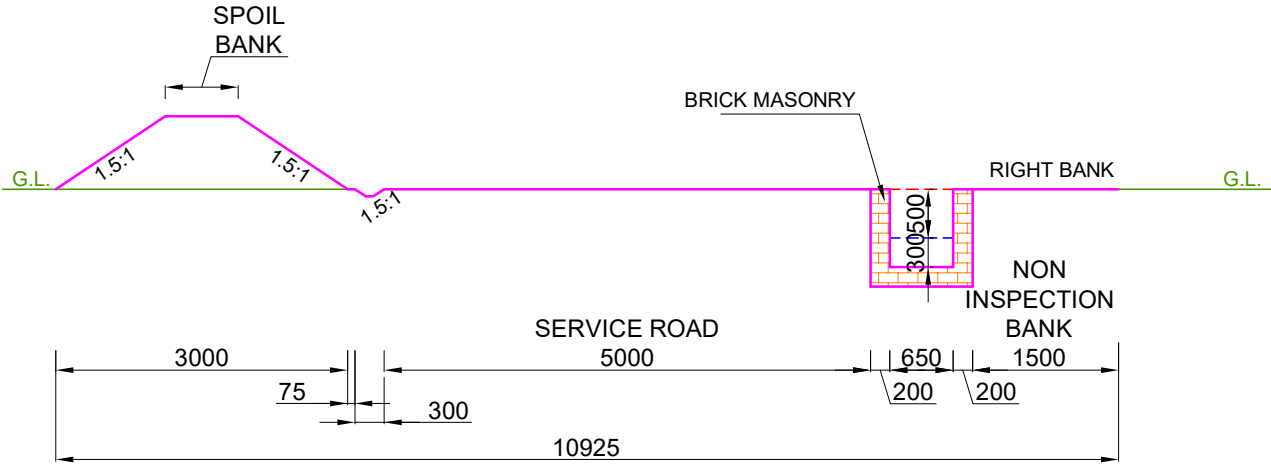


DESIGN SECTION FROM CH: 1.600 KM TO CH: 2.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FC) 3 of 4			

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

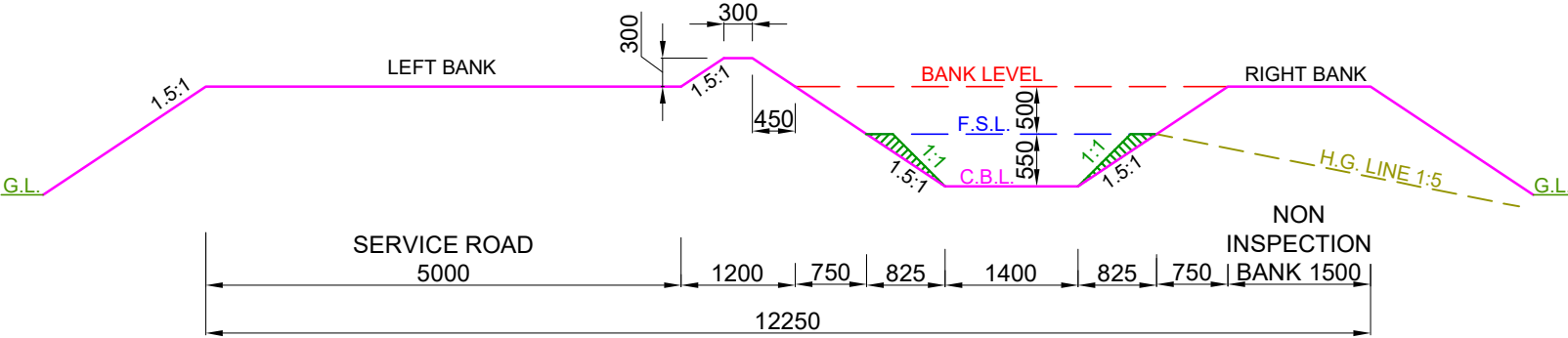


DESIGN SECTION FROM CH: 2.000 KM TO CH: 3.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



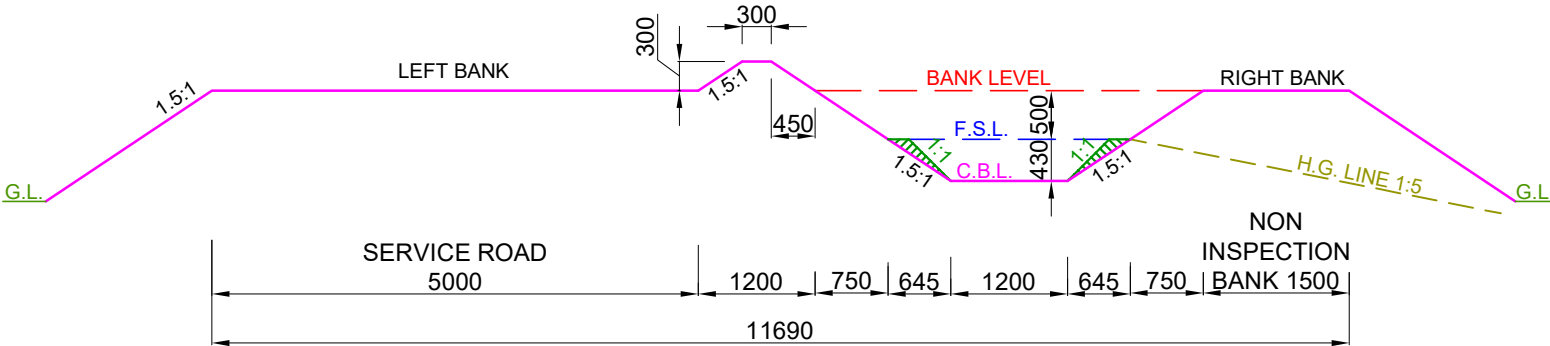
DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FF)

1 of 4

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

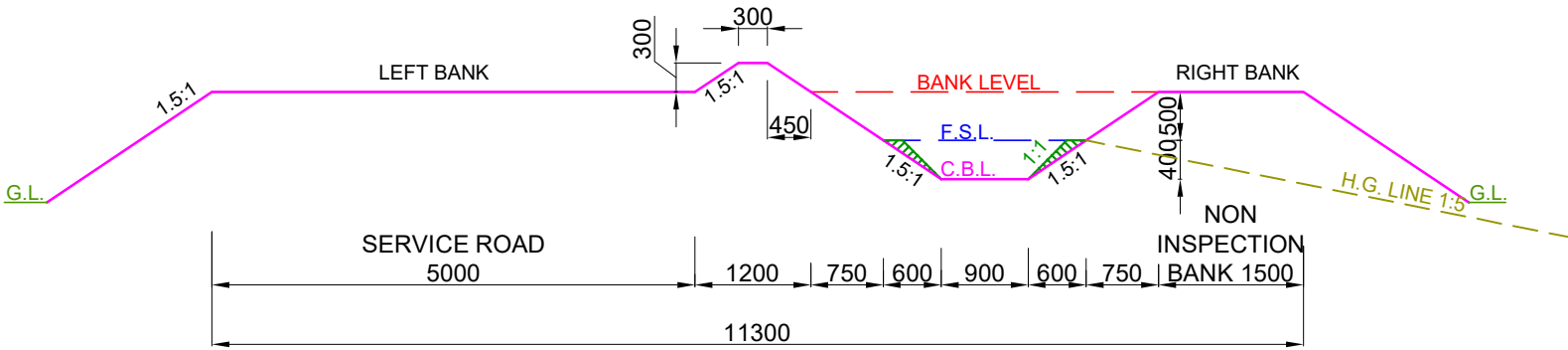


DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.600 KM

- 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.

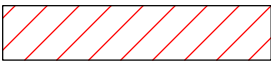
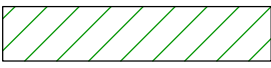
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FF) 2 of 4

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

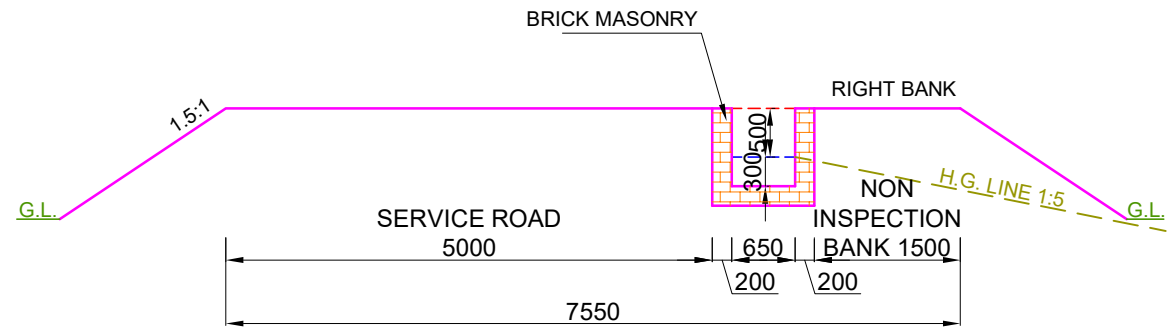


DESIGN SECTION FROM CH: 1.600 KM TO CH: 2.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FF) 3 of 4			

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

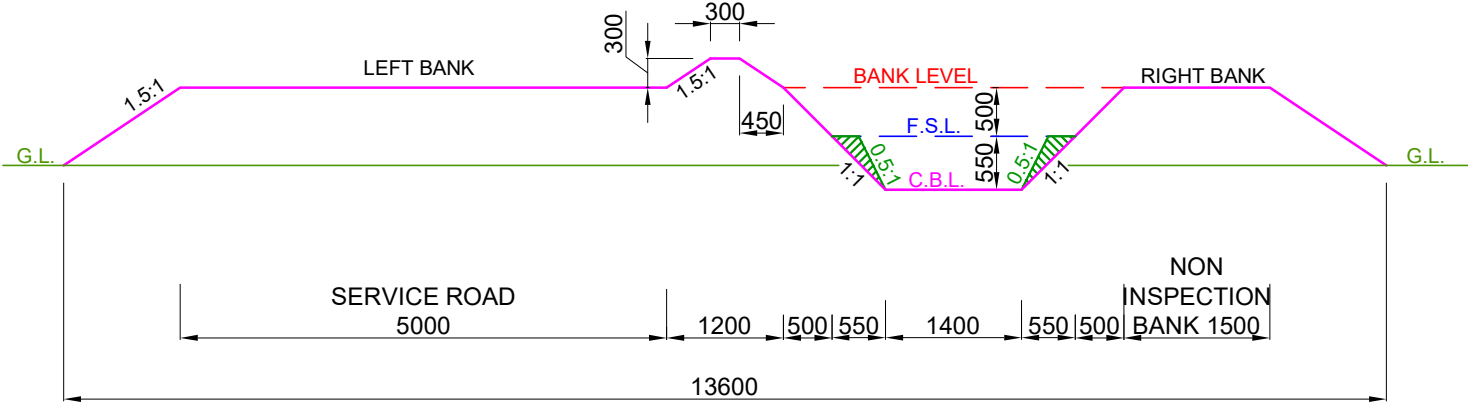


DESIGN SECTION FROM CH: 2.000 KM TO CH: 3.000 KM

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

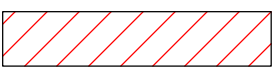
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

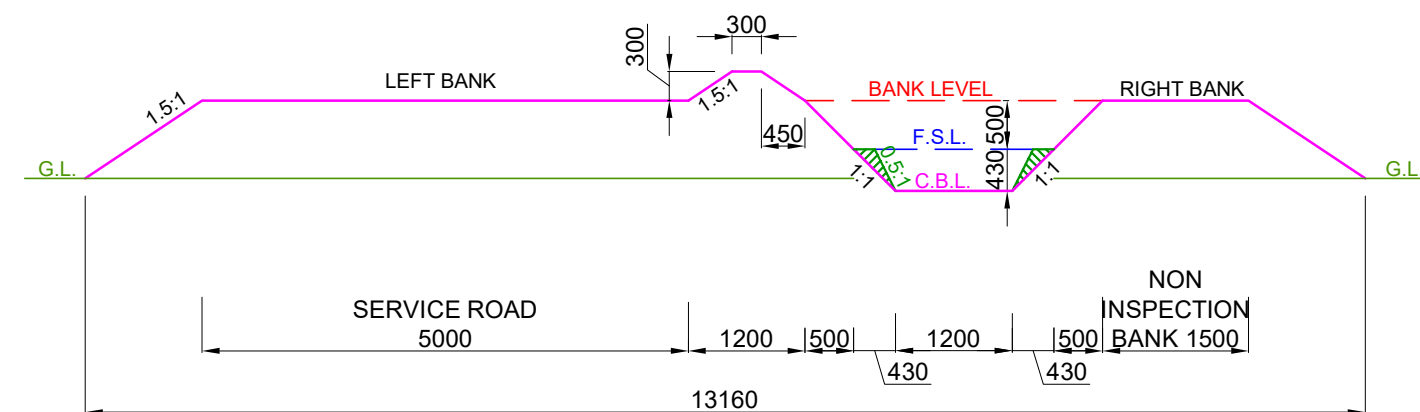


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(PCF) 1 of 4			

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.600 KM

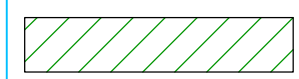
NOTE:-

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 :-

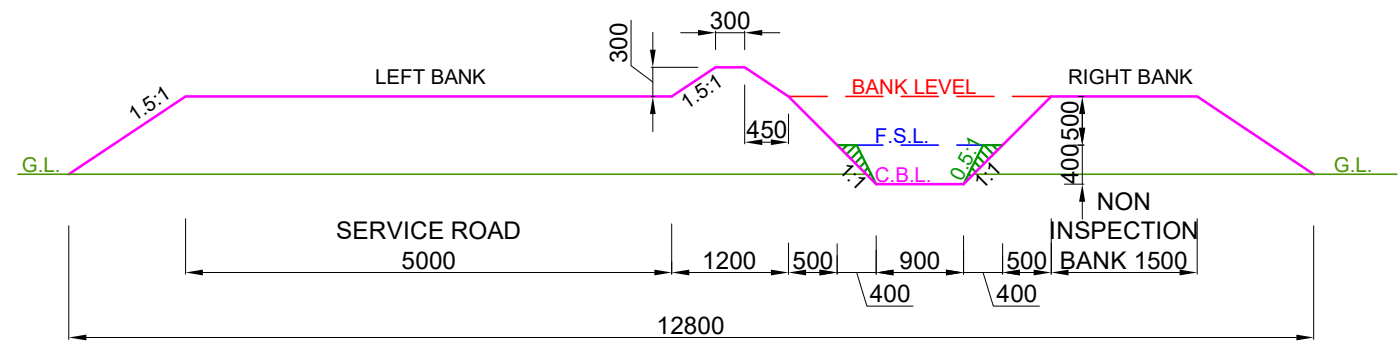
X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(PCF)

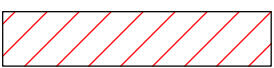
2 of 4

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

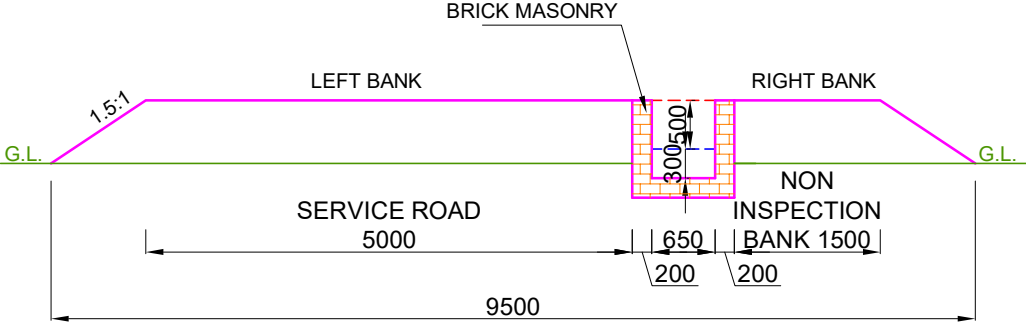


DESIGN SECTION FROM CH: 1.600 KM TO CH: 2.000 KM

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

LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF BHADWA MINOR
(OFFTAKE FROM RD - 27+075 KM. (LT), KOTWARA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.000 KM TO CH: 3.000 KM

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

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF BHADWA MR. (OFFTAKE FROM RD - 27+075 KM. (L), KOTWARA DISTRIBUTARY CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-035-10/ XSEC /TYP-(PCF)