

# **TENDER DOCUMENT**

## **FOR**

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

**Estimated Cost (Rs. 64.12 Crores)**

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

## **TENDER DRAWINGS**

**Issued to M/s**

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

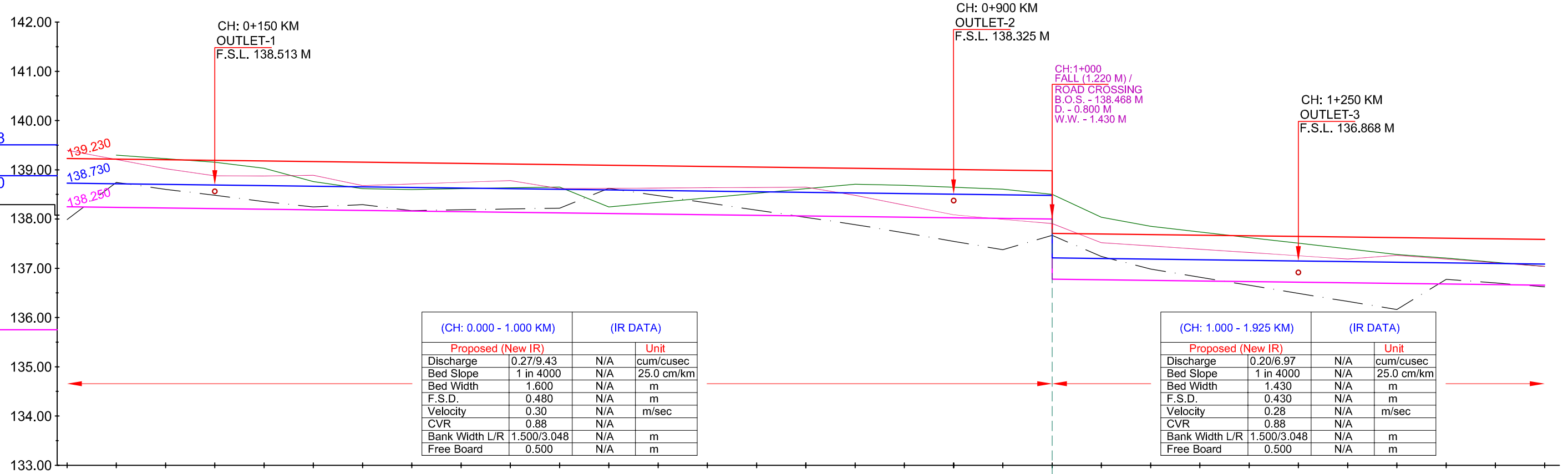


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# ***L-SECTION***

FROM CH 0+000 TO 1+500

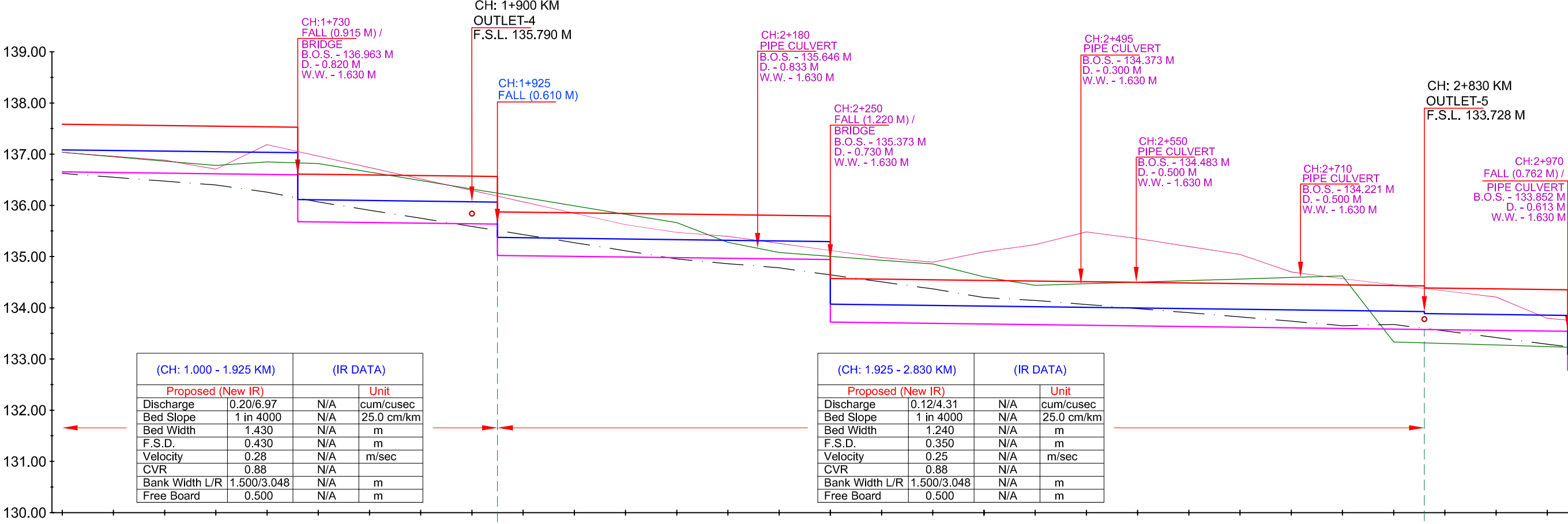
B.L. = 135.751 M    136



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		139.398	137.990	138.250	138.730	139.230
0+050		139.297	139.210	138.744	138.238	139.218
0+100		139.224	139.022	138.604	138.225	139.205
0+150		139.152	138.878	138.485	138.213	139.193
0+200		139.032	138.874	138.352	138.200	139.180
0+250		138.761	138.888	138.246	138.188	139.168
0+300		138.617	138.680	138.293	138.175	139.155
0+350		138.600	138.713	138.171	138.163	139.143
0+400		138.617	138.747	138.188	138.150	139.130
0+450		138.634	138.780	138.205	138.138	139.118
0+500		138.651	138.618	138.221	138.125	139.105
0+550		138.247	138.624	138.623	138.113	139.093
0+600		138.339	138.630	138.476	138.100	139.080
0+650		138.431	138.636	138.328	138.088	139.068
0+700		138.523	138.642	138.181	138.075	139.055
0+750		138.615	138.648	138.034	138.063	139.043
0+800		138.706	138.481	137.887	138.050	139.030
0+850		138.685	138.284	137.721	138.038	139.018
0+900		138.645	138.088	137.548	138.025	139.005
0+950		138.605	137.994	137.377	138.013	138.993
1+000		138.500	137.998	137.668	138.000	138.980
1+050		138.037	137.521	137.242	136.768	137.698
1+100		137.853	137.454	136.983	136.755	137.685
1+150		137.738	137.387	136.819	136.743	137.673
1+200		137.623	137.321	136.655	136.730	137.660
1+250		137.509	137.255	136.491	136.718	137.648
1+300		137.394	137.188	136.327	136.705	137.635
1+350		137.279	137.265	136.164	136.693	137.623
1+400		137.208	137.189	136.777	136.680	137.610
1+450		137.122	137.113	136.702	136.668	137.598
1+500		137.037	137.037	136.625	136.655	137.585

LEGEND				IMPLEMENTING AGENCY :- WAPCOS LTD.  	PROJECT TITLE :-		NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND					
		NSL			EXISTING BED LEVEL		DRAWING TITLE :-		L- SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)			
		EXISTING TOP OF BANK			PROPOSED BED LEVEL		DRAWING NO. :-		WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ LSEC-01 of 03			
		EXISTING STRUCTURE			PROPOSED FSL		Drawn By:-		Checked By:-		Approved By:-	
		MODIFIED STRUCTURE			PROPOSED TOP OF BANK LEVEL							
		NEW STRUCTURE										

L- SECTION OF AMBA MINOR  
(OFFTAKE FROM RD - 53+645 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	Proposed Bed Level	F.S.L.
1+500	137.037	137.037	136.655	137.085
1+550	136.951	136.960	136.643	137.073
1+600	136.865	136.884	136.630	137.060
1+650	136.779	136.706	136.618	137.048
1+700	136.849	137.185	136.605	137.035
1+750	136.816	136.962	136.598 136.683 135.678	137.028 136.113 136.613 136.608
1+800	136.651	136.739	135.906	136.595
1+850	136.486	136.516	135.749	136.583
1+900	136.321	136.293	135.589	136.570
1+925			135.634 135.024 135.874	136.564 135.374 135.874
1+950	136.157	136.070	135.431	135.868
2+000	135.992	135.848	135.272	135.855
2+050	135.827	135.624	135.113	135.843
2+100	135.662	135.473	134.954	135.830
2+150	135.279	135.396	134.861	135.818
2+200	135.079	135.258	134.781	135.805
2+250	135.004	135.120	134.643	135.793
2+300	134.930	134.982	134.506	134.560
2+350	134.856	134.890	134.370	134.548
2+400	134.603	135.092	134.199	134.535
2+450	134.439	135.233	134.144	134.523
2+500	134.470	135.482	134.065	134.510
2+550	134.501	135.353	133.983	134.498
2+600	134.531	135.198	133.905	134.485
2+650	134.562	135.043	133.822	134.473
2+700	134.593	134.699	133.739	134.460
2+750	134.623	134.569	133.650	134.448
2+800	133.333	134.449	133.675	134.435
2+830			133.578 133.888 134.388	134.428 134.388 134.383
2+850	133.303	134.330	133.547	134.383
2+900	133.273	134.210	133.419	134.370
2+950	133.243	133.794	133.290	134.358
3+000	133.214	133.707	133.162	133.583

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. :-

Drawn By:-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

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

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

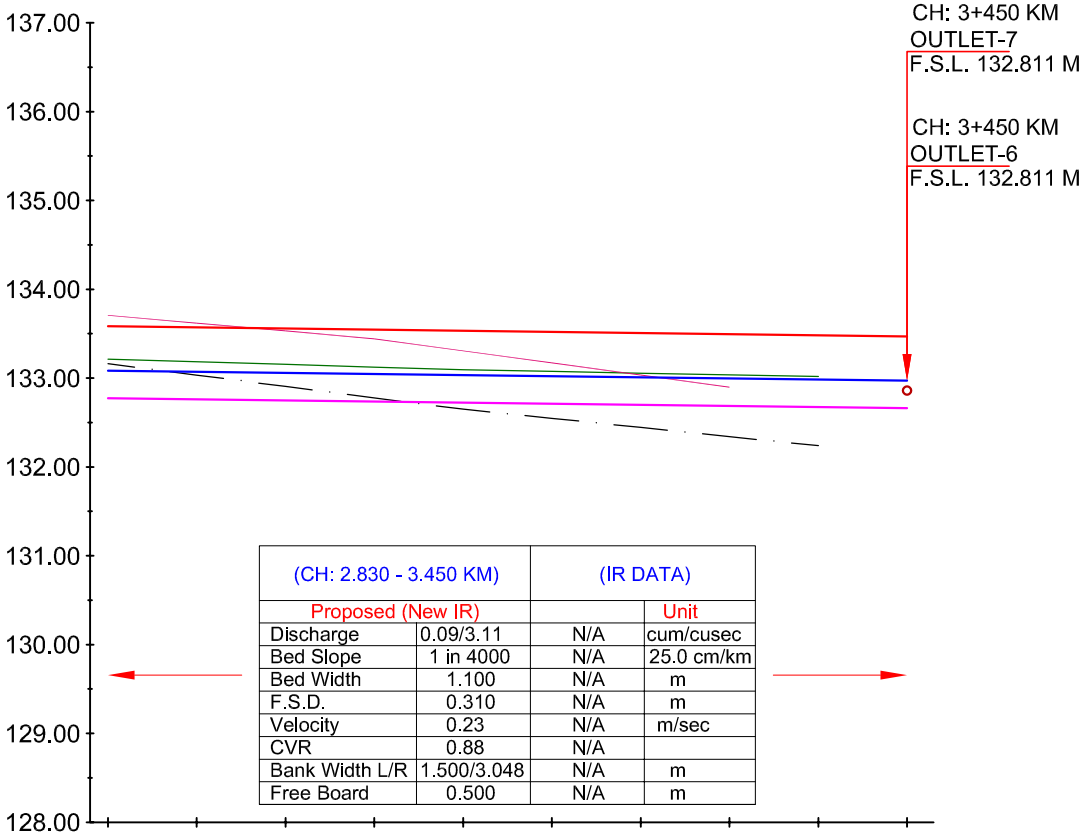
Checked By:-

Approved By:-

02 of 03



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



DESIGN DATA	TOP OF BANK LEVEL	133.583	133.571	133.558	133.546	133.533	133.521	133.508	133.496	133.483	133.471
	F.S.L.	133.083	133.071	133.058	133.046	133.033	133.021	133.008	132.996	132.983	132.971
	Proposed Bed Level	132.773	132.761	132.748	132.736	132.723	132.711	132.698	132.686	132.673	132.661
EXISTING DATA	Bed Level	133.162	133.034	132.906	132.777	132.650	132.547	132.444	132.341	132.239	
	TOP OF BANK LEVEL	133.707	133.619	133.531	133.443	133.307	133.171	133.035	132.899		
	NSL	133.214	133.184	133.154	133.124	133.095	133.075	133.056	133.036	133.017	
Chainage IN KM		3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400	3+450

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

WAPCOS LTD.

WAPCOS

PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

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

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ LSEC-03 of 03

Drawn By:-

Checked By:-

Approved By:-

# ***TYPICAL X-SECTION***



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

- G.L.**: Ground Level (green line)
- SPOIL BANK**: Located at both ends of the section.
- Service Road**: A horizontal section with a width of 5000 units.
- C+D/2**: Centerline and Ditch Halfway points, each 1520 units from the centerline.
- BANK LEVEL**: Indicated by a red dashed line.
- F.S.L.**: Finished Surface Level (blue line).
- C.B.L.**: Centerline Bank Level (purple line).
- NON INSPECTION BANK**: A bank area on the right side, 3750 units wide.
- Dimensions**: Various vertical and horizontal measurements are provided, including 3000, 75, 300, 1200, 500, 480, 1600, 480, 500, 1520, 1125, 1500, 1125, and a total length of 20525.
- Slopes**: Indicated by ratios such as 1.5:1, 0.5:1, and 1:1.

**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.

1 of 4

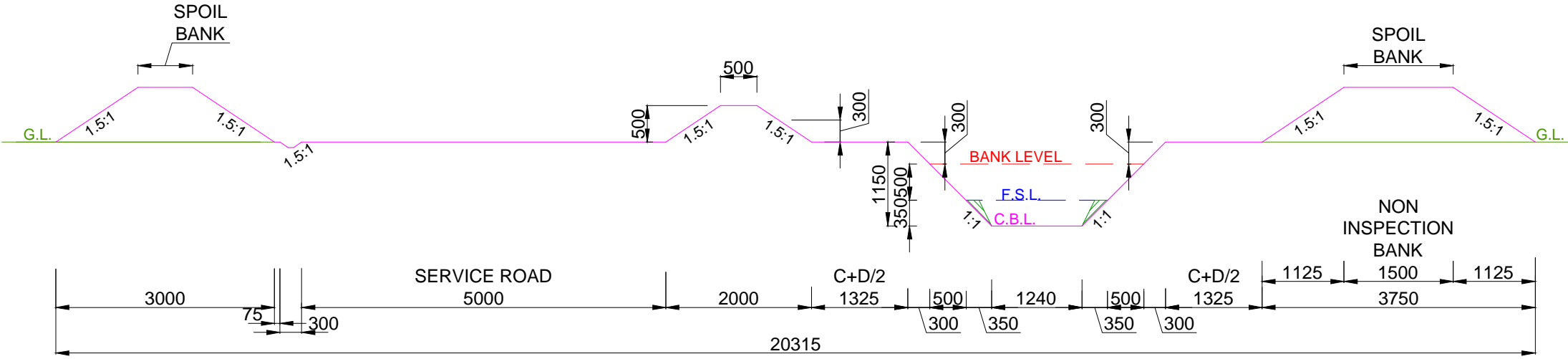
The diagram illustrates a cross-section of a road with a central ditch. The top part shows the profile with ground level (G.L.), bank level, finished surface level (F.S.L.), and centerline level (C.B.L.). Slopes are indicated as 1.5:1 and 0.5:1. Dimensions include 3000, 75, 300, 5000, 1200, 1445, 500, 300, 430, 1430, 500, 430, 300, 1445, 1125, 1500, 1125, and 3750. Labels include 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.


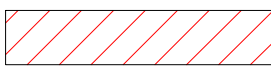

2 of 4

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

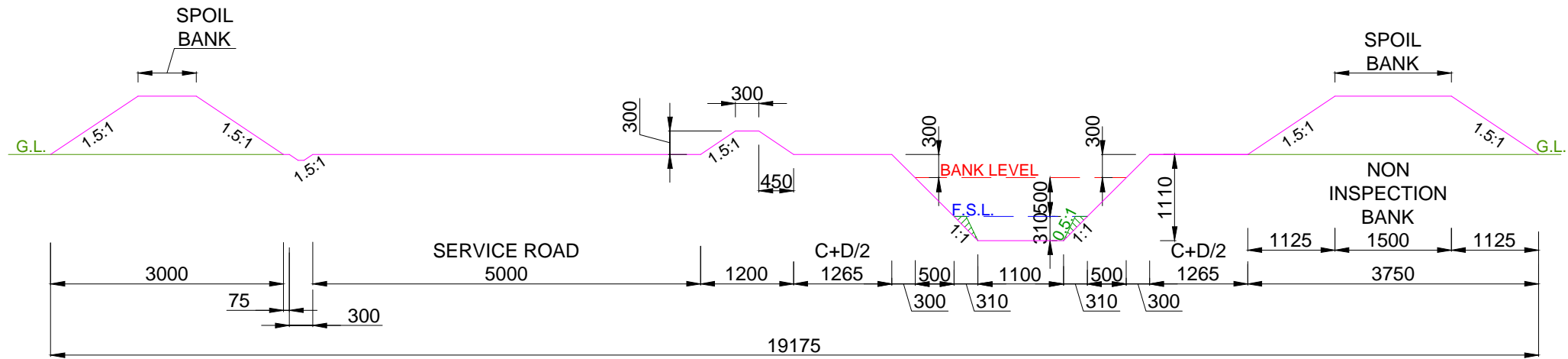


DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

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

LEGEND		Prepared by :- <div>WAPCOS LTD.</div> <div></div>	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :- <sup>8</sup>	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)				

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

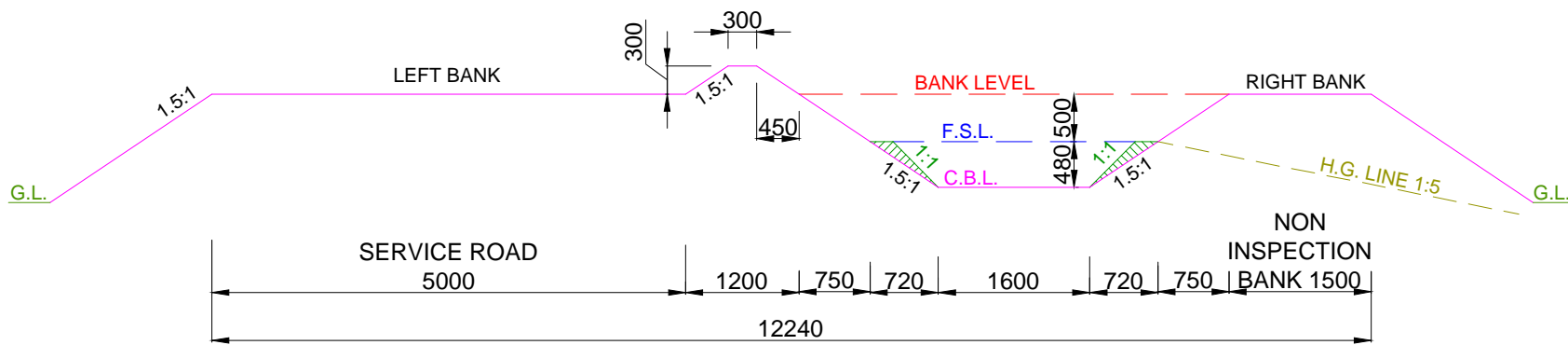


DESIGN SECTION FROM CH: 2.830 KM TO CH: 3.450 KM

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


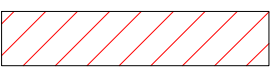

<div>LEGEND</div> <div><div><div></div><div>CUT AREA</div></div><div><div></div><div>FILL AREA</div></div></div>		<div>Prepared by :-</div> <div>WAPCOS LTD.</div> <div></div>	<div>Project Title :-</div> <div>NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND</div>
			<div>Drawing Title :-</div> <div>X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)</div>
			<div>Drawing No. :-<sup>9</sup></div> <div>WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FC)</div> <div>4 of 4</div>

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

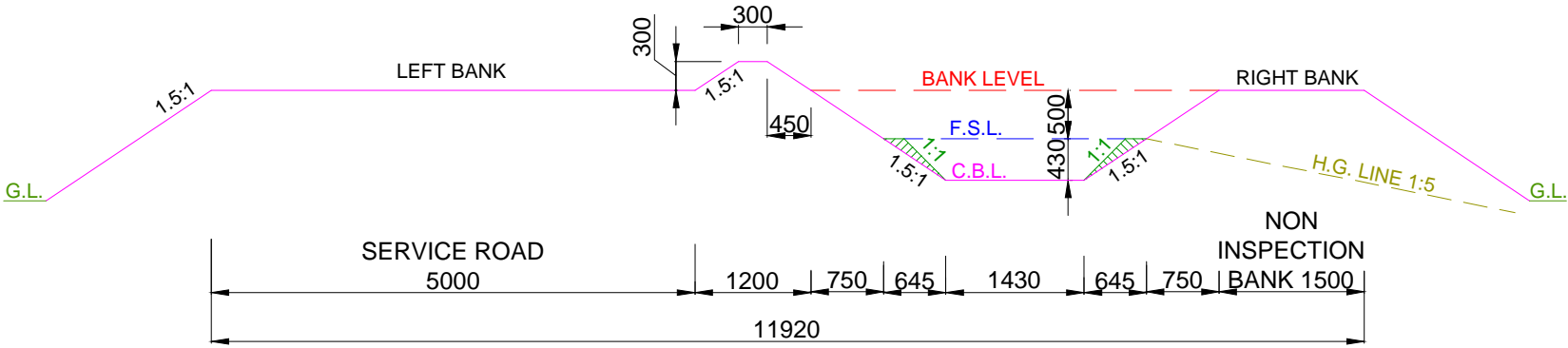


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.000 KM

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

LEGEND		Prepared by :- <b>WAPCOS LTD.</b> 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :- <sup>10</sup>	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF) <span>1 of 4</span>				

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



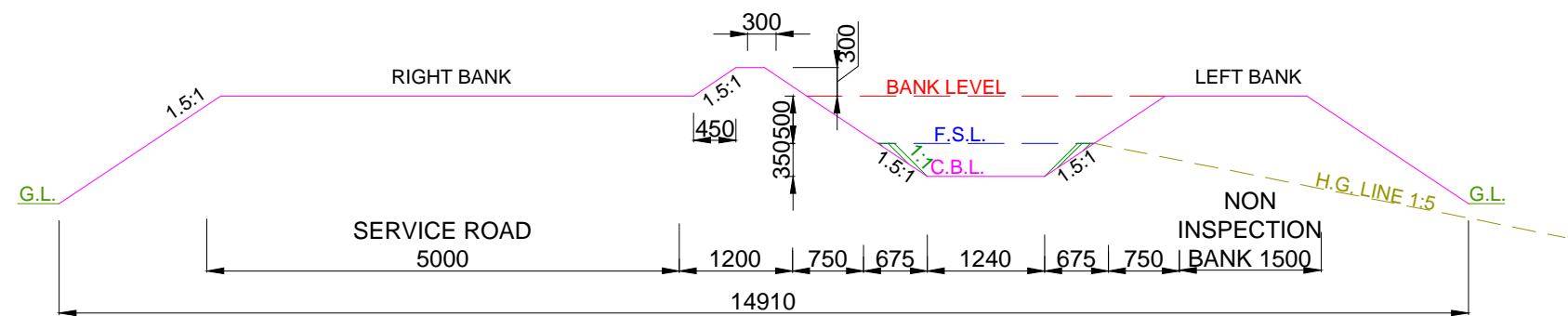
DESIGN SECTION FROM CH: 1.000 KM TO CH: 1.925 KM

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

<div>LEGEND</div> <div><div><div></div><div>CUT AREA</div></div><div><div></div><div>FILL AREA</div></div></div>	<div>Prepared by :-</div> <div>WAPCOS LTD.</div> <div></div>	<div>Project Title :-</div> <div>NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND</div>	<div>2 of 4</div>
		<div>Drawing Title :-</div> <div>X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)</div>	
		<div>Drawing No. :-<sup>11</sup></div> <div>WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)</div>	


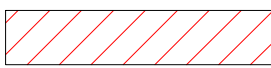



TYPICAL X - SECTION OF AMBA MINOR  
(OFFTAKE FROM RD - 53+645 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)  
DESIGN SECTION FOR FULL FILLING

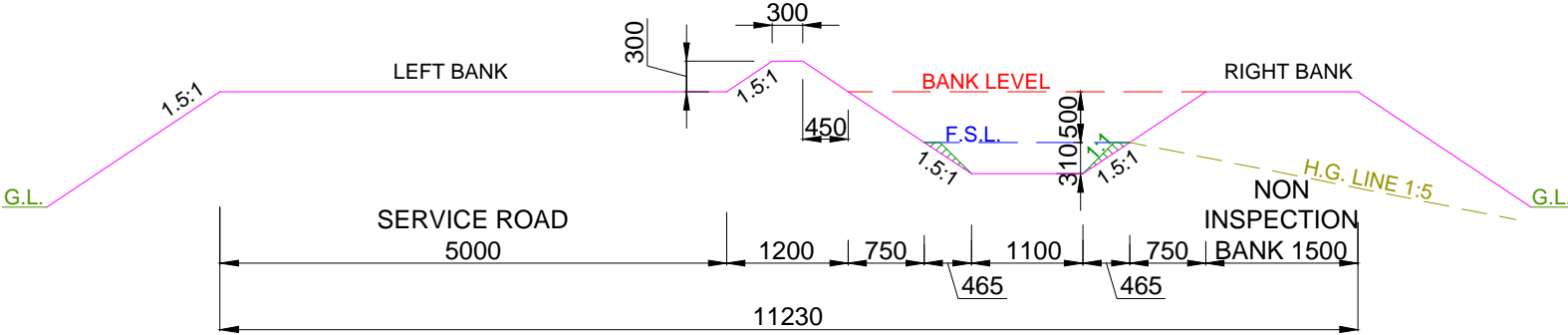


DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

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

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

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

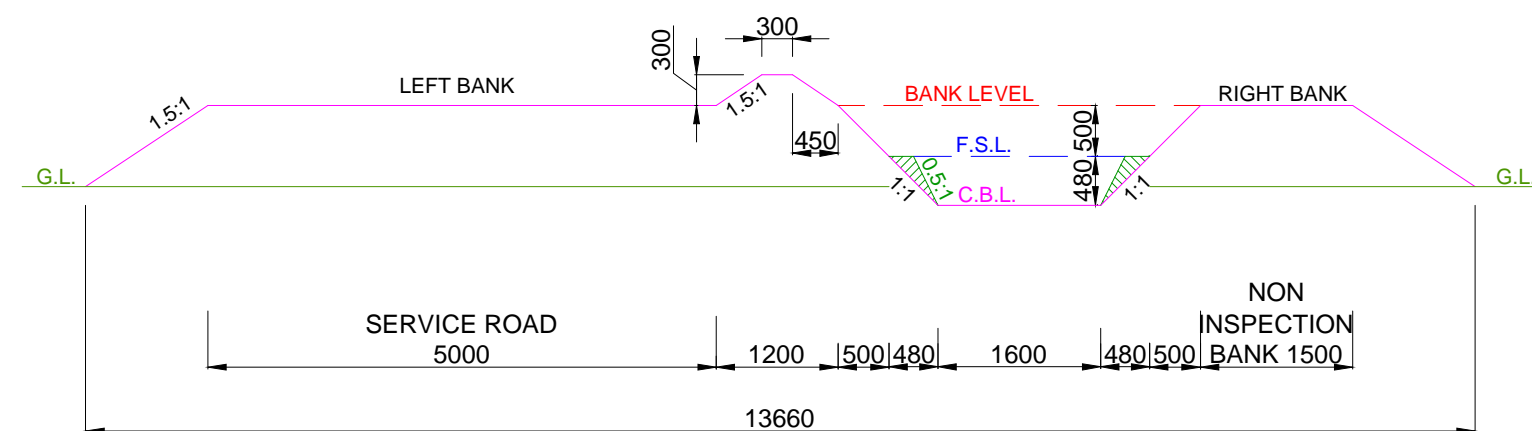


DESIGN SECTION FROM CH: 2.830 KM TO CH: 3.450 KM

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

<div>LEGEND</div> <div><div><div></div><div>CUT AREA</div></div><div><div></div><div>FILL AREA</div></div></div>		<div>Prepared by :-</div> <div>WAPCOS LTD.</div> <div></div>	<div>Project Title :-</div> <div>NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND</div>
			<div>Drawing Title :-</div> <div>X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)</div>
			<div>Drawing No. :-<sup>13</sup></div> <div>WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(FF)</div> <div>4 of 4</div>




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



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




NOTE:-

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

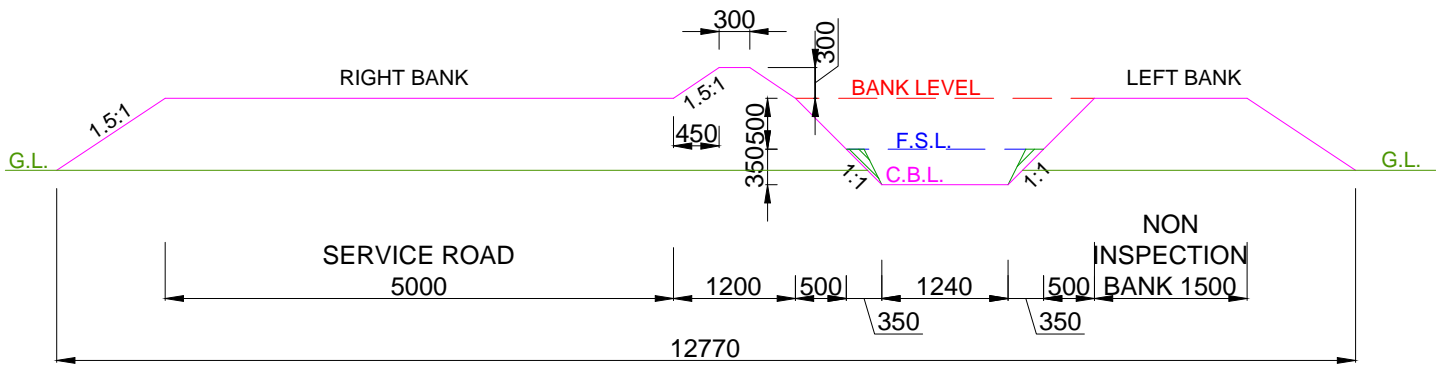
LEGEND		Prepared by :- <b>WAPCOS LTD.</b> 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :- <sup>14</sup>	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF) <span>1 of 4</span>				

[illegible]

**NOTE:-**


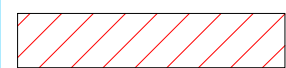
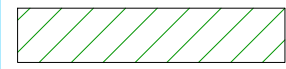
- |   |  |   |  |
|---|--|---|--|
| <div>LEGEND</div> <div> <div>  <div>CUT AREA</div> </div> <div>  <div>FILL AREA</div> </div> </div> |  | <div>Prepared by :-</div> <div> <div>WAPCOS LTD.</div> <div>  </div> </div> | <div>Project Title :-</div> <div>NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND</div> |
|   |  | <div>Drawing Title :-</div> <div>X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)</div>                                  |  |
|   |  | <div>Drawing No. :-<sup>15</sup></div> <div>WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)</div>  | <div>2 of 4</div>  |

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

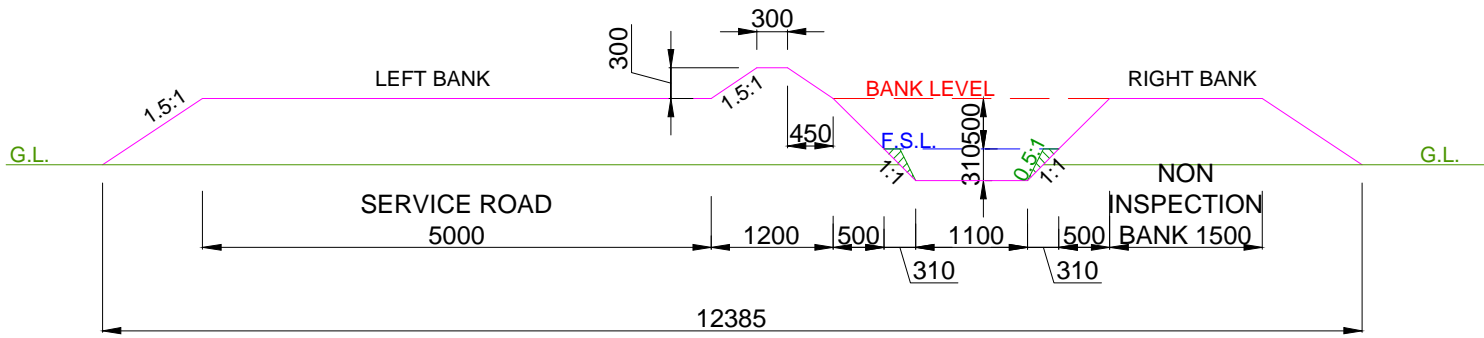


DESIGN SECTION FROM CH: 1.925 KM TO CH: 2.830 KM

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


LEGEND		Prepared by :-  WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :- <sup>16</sup>	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)				

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



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

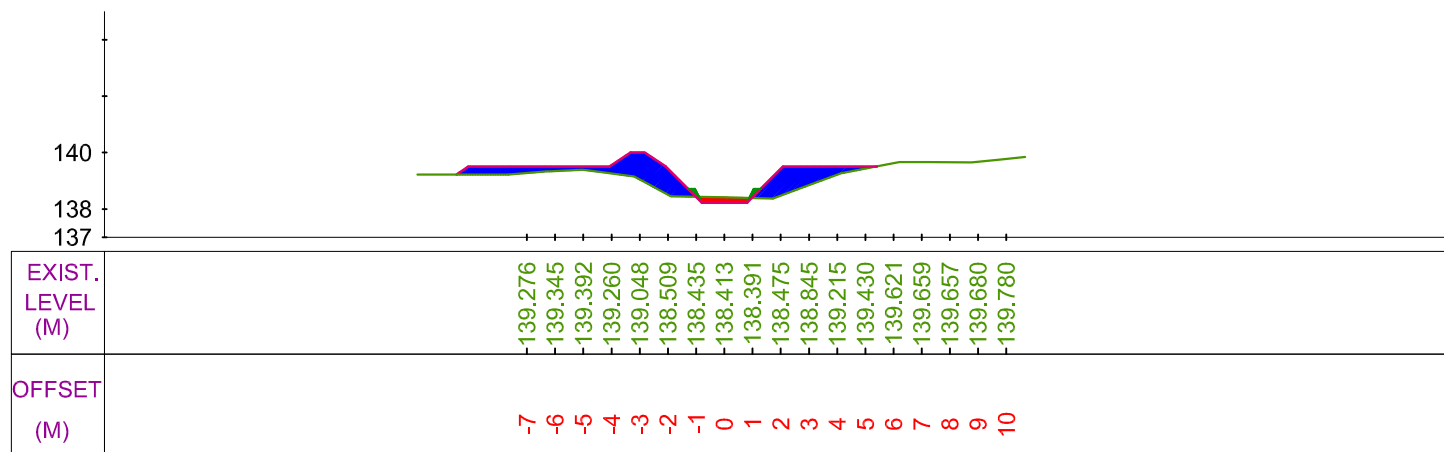
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
  - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
  - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

<div>LEGEND</div> <div><div><div></div><div>CUT AREA</div></div><div><div></div><div>FILL AREA</div></div></div>		<div>Prepared by :-</div> <div>WAPCOS LTD.</div> <div></div>	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X - SECTION OF AMBA MR. (OFFTAKE FROM RD - 53+645 KM. (L). NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :- <sup>17</sup>	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC /TYP-(PCF)				

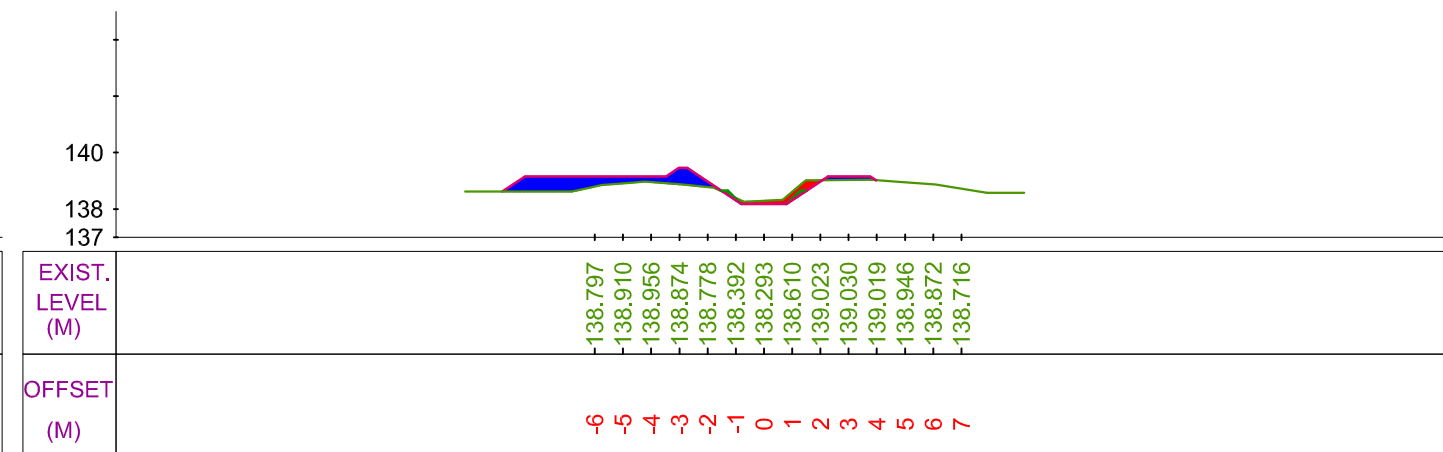


# ***CROSS-SECTION***

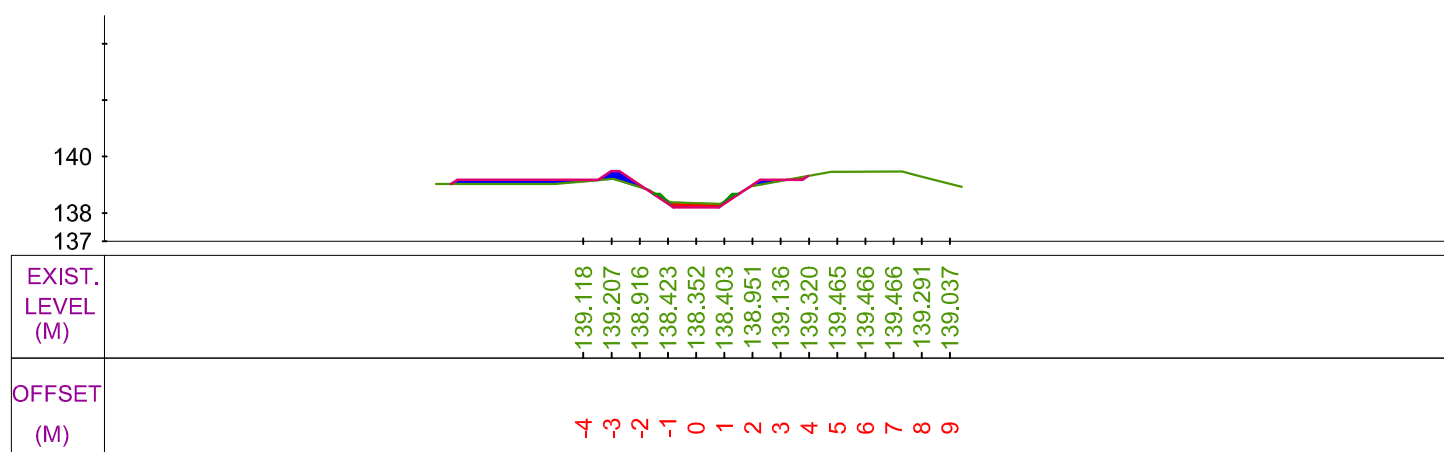
X SECTION OF AMBA MINOR



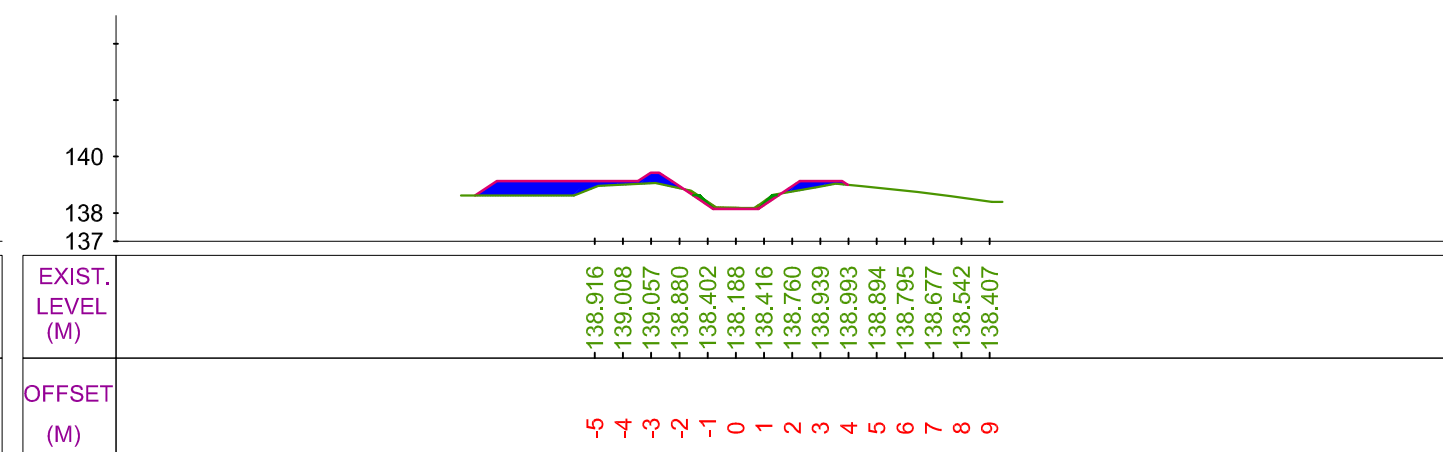
CUTTING AREA (SQ.M) = 0.318 CH. (KM):- 0+100  
FILLING AREA (SQ.M) = 5.322 DESIGNED BED LEVEL = 138.225 M



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



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



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

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

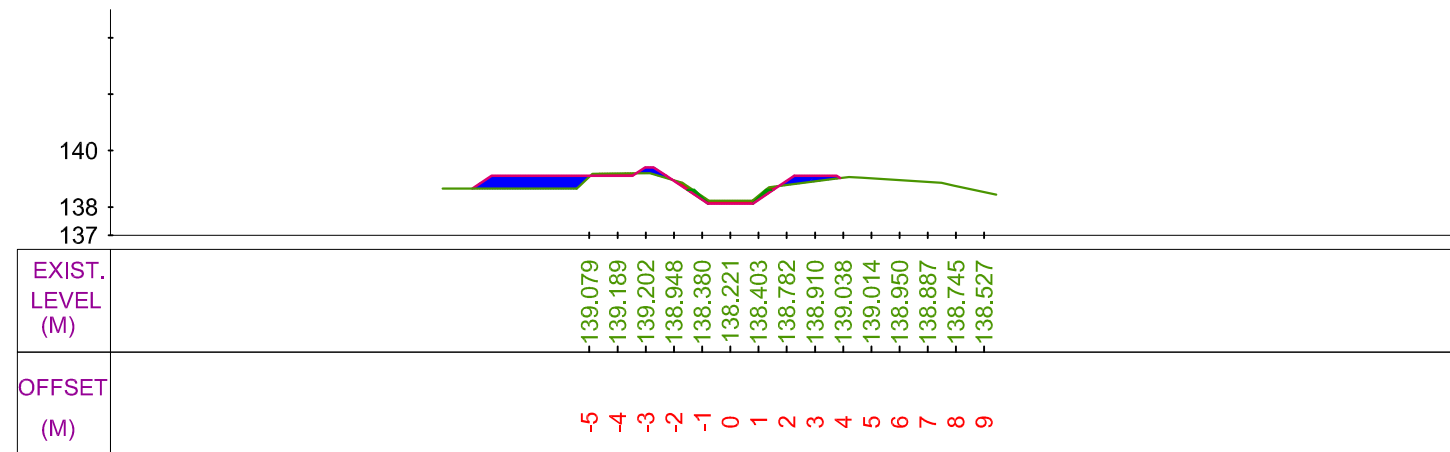
Prepared by :-

WAPCOS LTD.

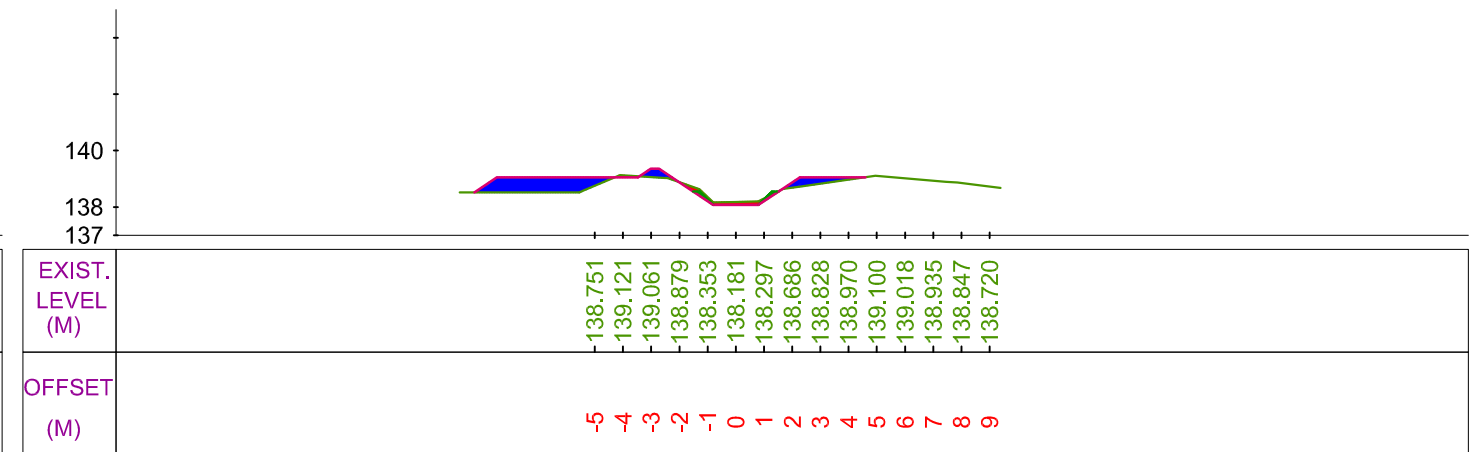


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 1 of 9

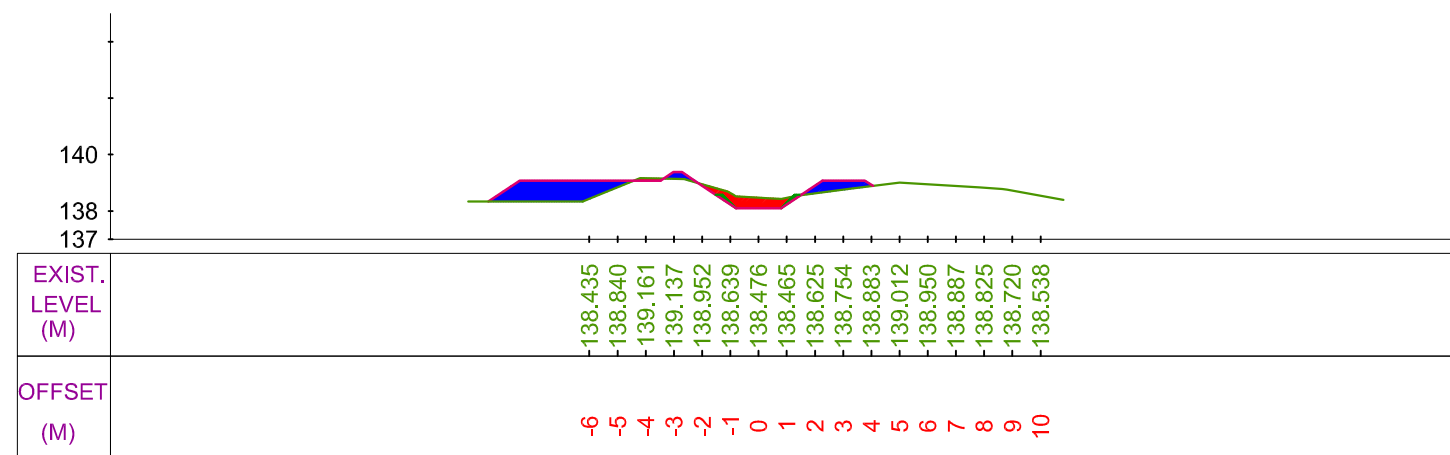
X SECTION OF AMBA MINOR



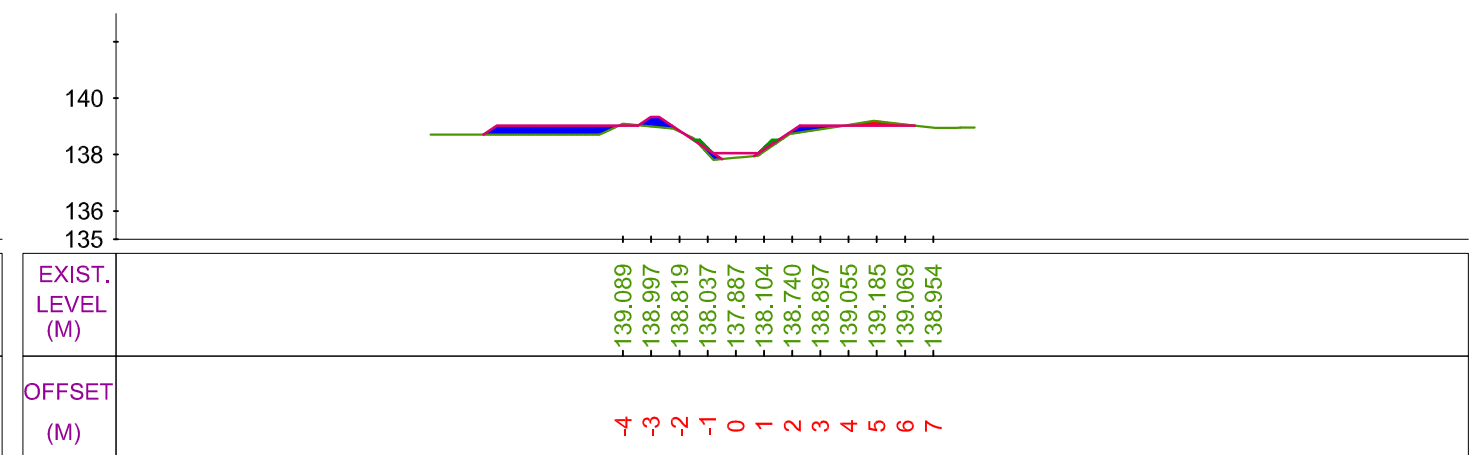
CUTTING AREA (SQ.M) = 0.431  
FILLING AREA (SQ.M) = 2.182  
CH. (KM):- 0+500  
DESIGNED BED LEVEL = 138.125 M



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



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



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

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

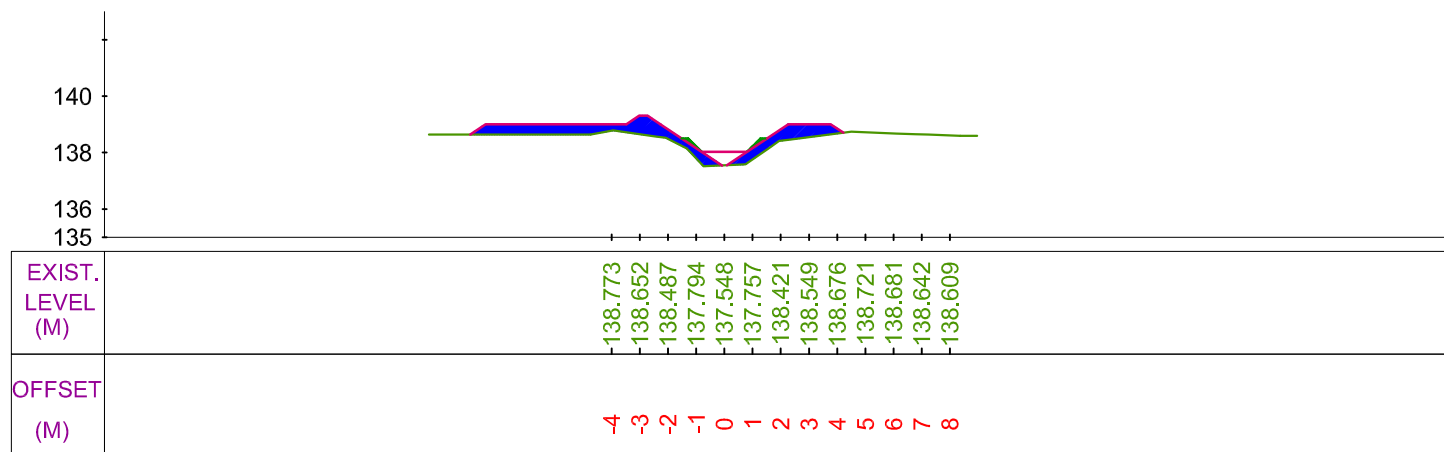
Prepared by :-

WAPCOS LTD.

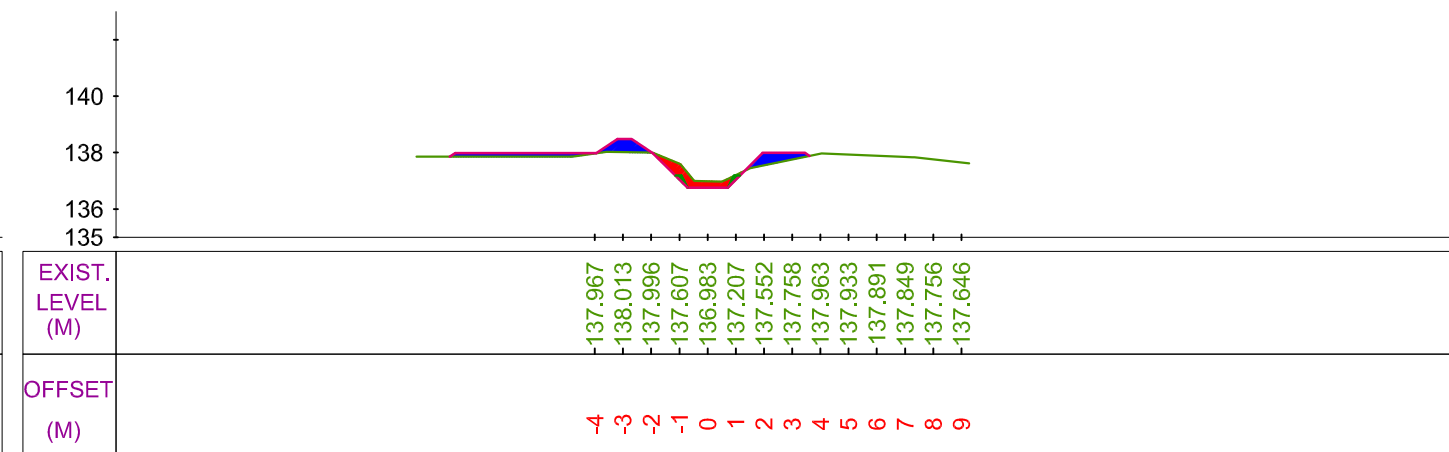


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 2 of 9

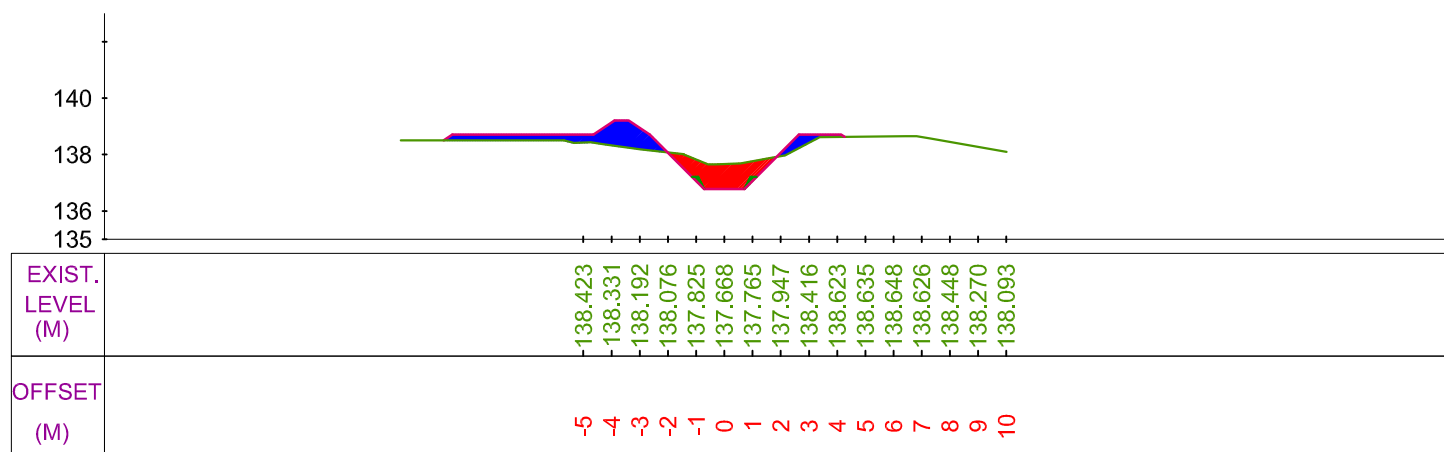
X SECTION OF AMBA MINOR



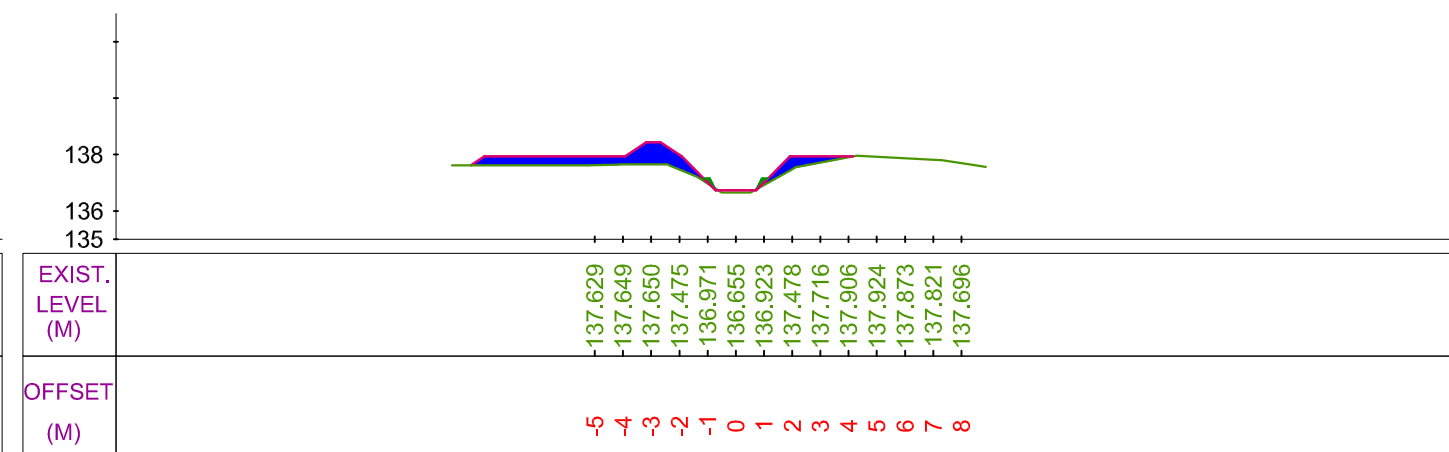
CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 4.632  
CH. (KM):- 0+900  
DESIGNED BED LEVEL = 138.025 M



CUTTING AREA (SQ.M) = 0.812  
FILLING AREA (SQ.M) = 1.780  
CH. (KM):- 1+100  
DESIGNED BED LEVEL = 136.755 M



CUTTING AREA (SQ.M) = 2.380  
FILLING AREA (SQ.M) = 3.275  
CH. (KM):- 1+000  
DESIGNED BED LEVEL = 136.780 M



CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 3.852  
CH. (KM):- 1+200  
DESIGNED BED LEVEL = 136.730 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

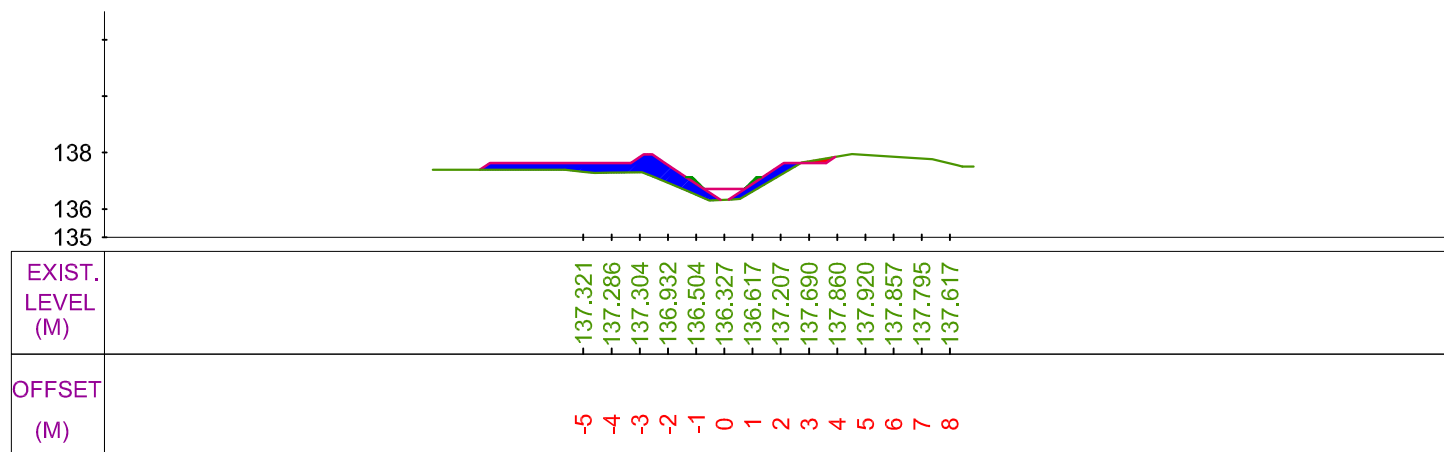
Prepared by :-

WAPCOS LTD.

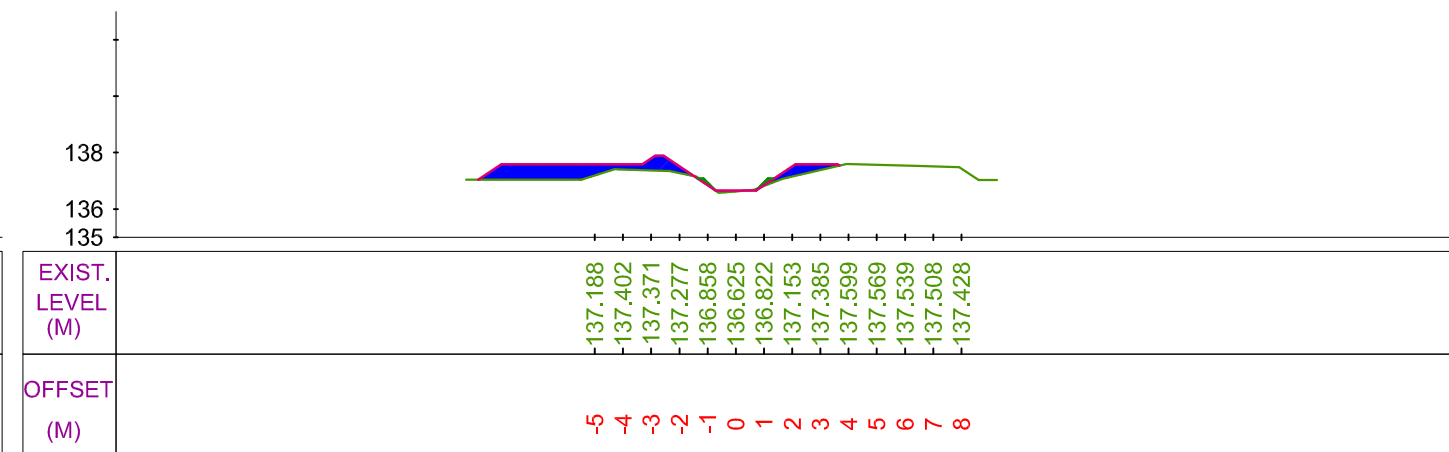


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 3 of 9

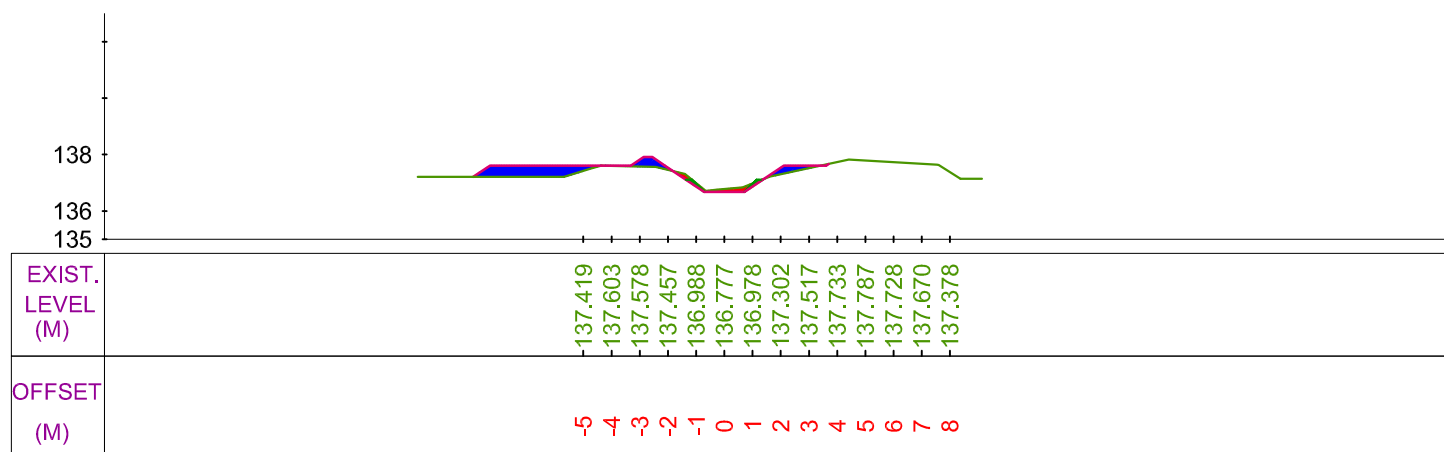
X SECTION OF AMBA MINOR



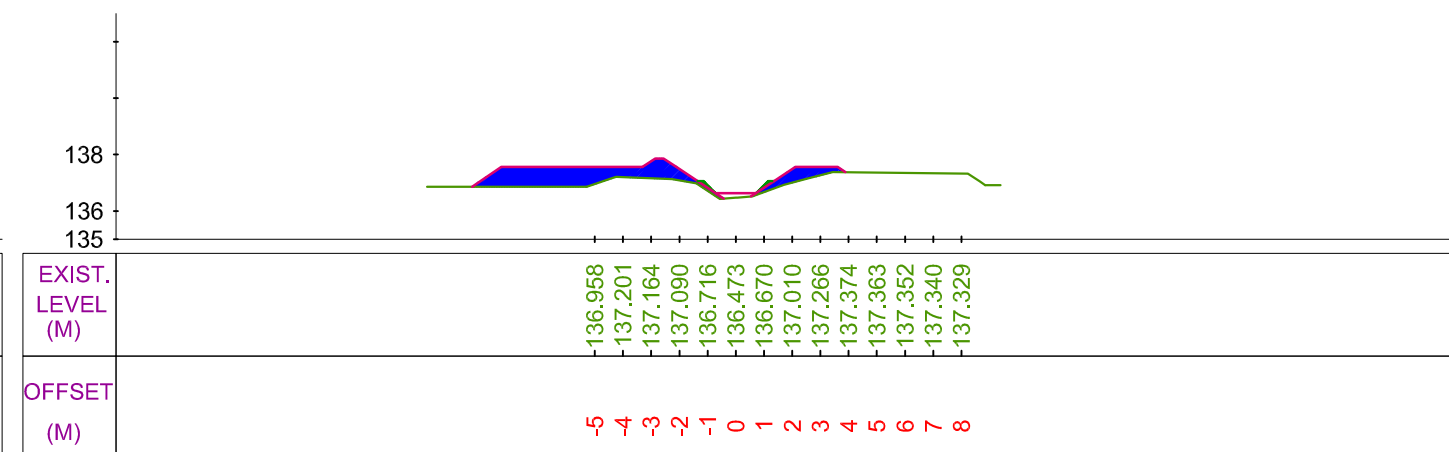
CUTTING AREA (SQ.M) = 0.099  
FILLING AREA (SQ.M) = 3.629  
CH. (KM):- 1+300  
DESIGNED BED LEVEL = 136.705 M



CUTTING AREA (SQ.M) = 0.013  
FILLING AREA (SQ.M) = 3.592  
CH. (KM):- 1+500  
DESIGNED BED LEVEL = 136.655 M



CUTTING AREA (SQ.M) = 0.251  
FILLING AREA (SQ.M) = 2.033  
CH. (KM):- 1+400  
DESIGNED BED LEVEL = 136.680 M



CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 5.274  
CH. (KM):- 1+600  
DESIGNED BED LEVEL = 136.630 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

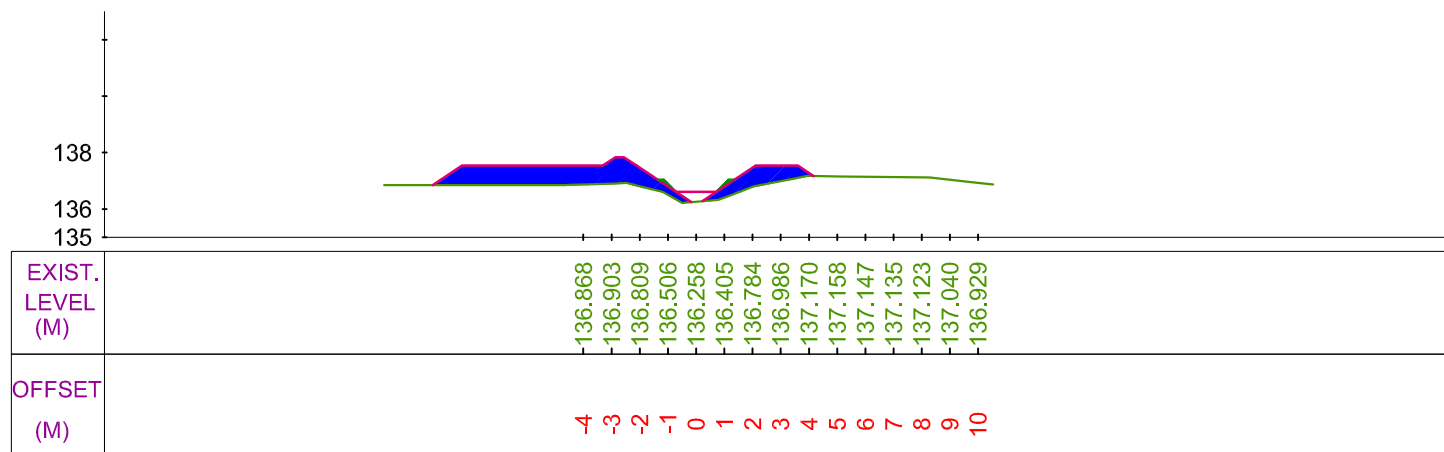
Prepared by :-

WAPCOS LTD.

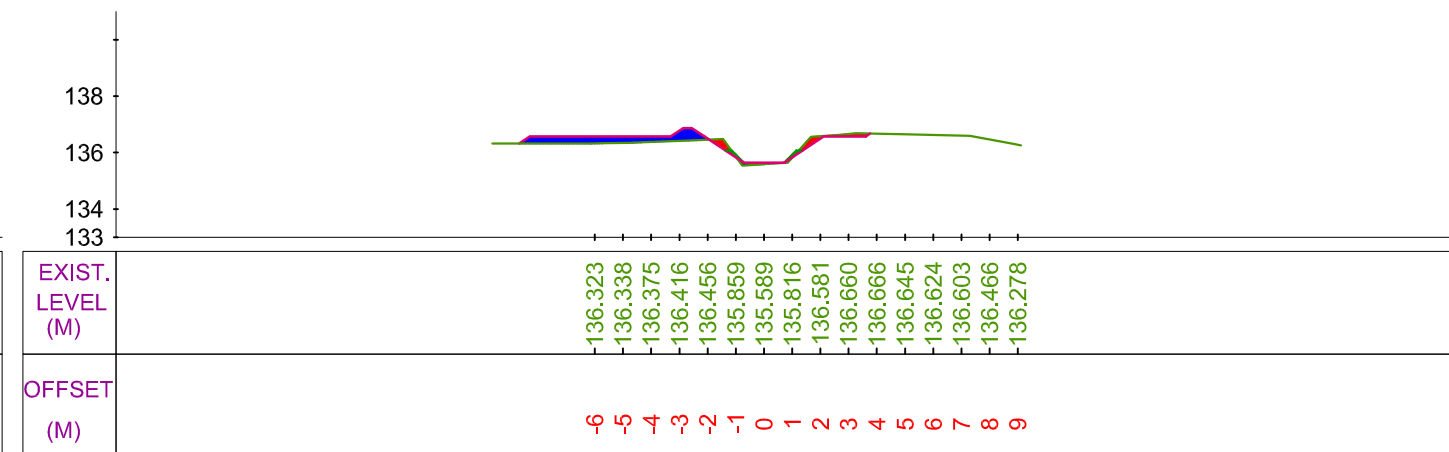


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 4 of 9

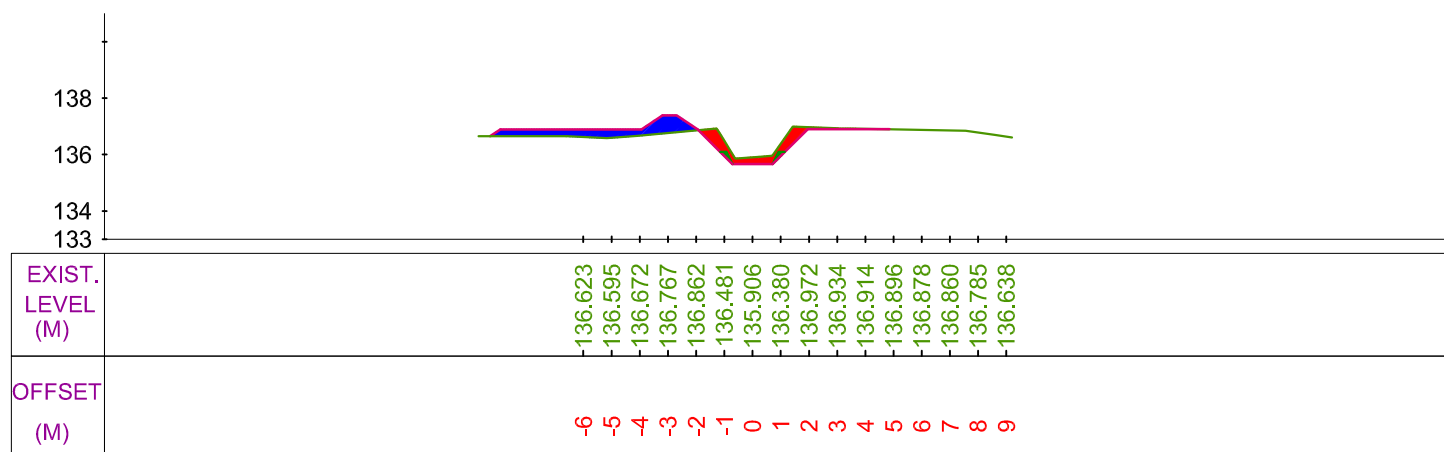
X SECTION OF AMBA MINOR



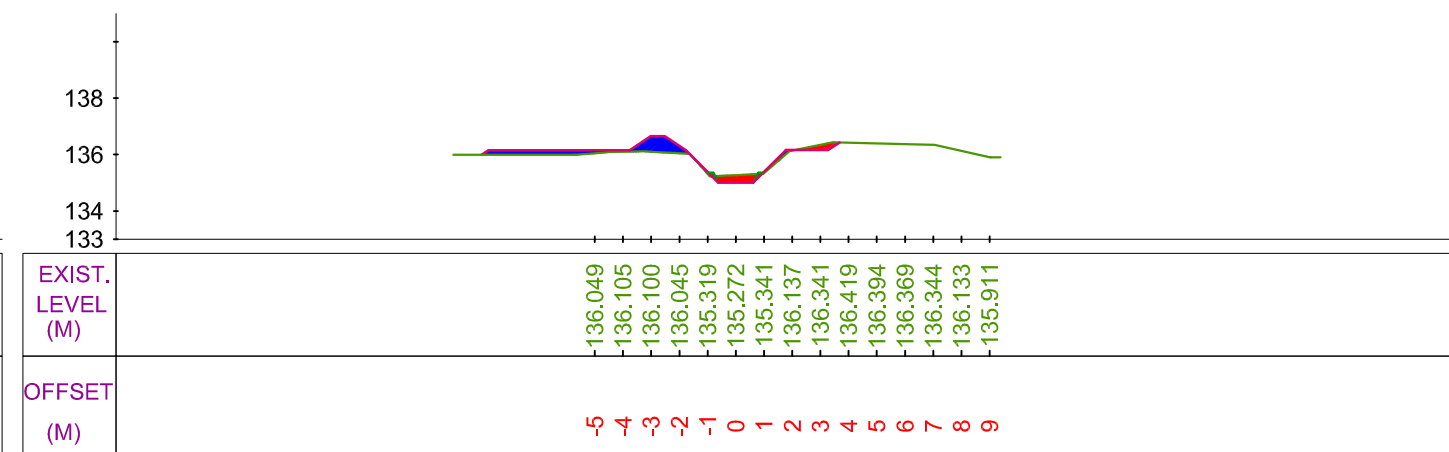
CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 7.195  
CH. (KM):- 1+700  
DESIGNED BED LEVEL = 136.605 M



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



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



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

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

Prepared by :-

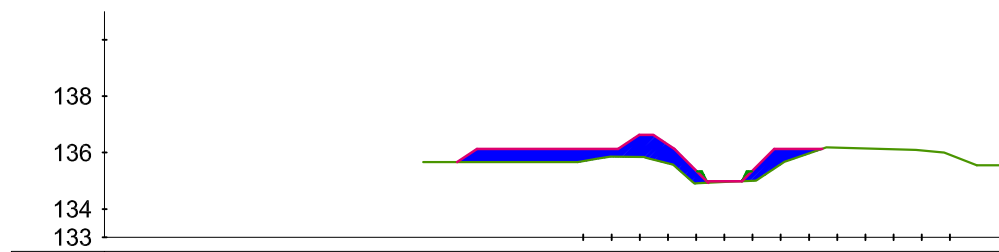
WAPCOS LTD.



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



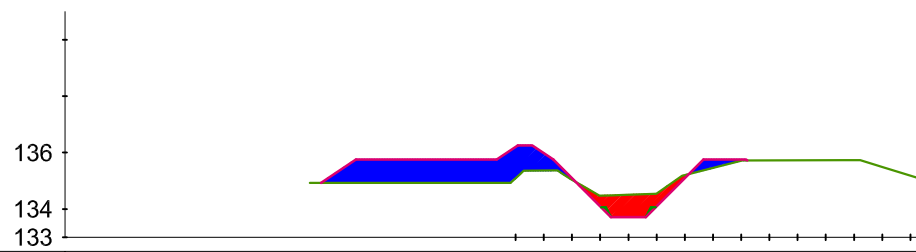
X SECTION OF AMBA MINOR



EXIST. LEVEL (M)	-135.696	-135.856	-135.842	-135.619	-134.908	-134.954	-135.000	-135.589	-135.972	-136.172	-136.143	-136.113	-136.072	-135.921
OFFSET (M)	5	4	3	2	1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 5.223

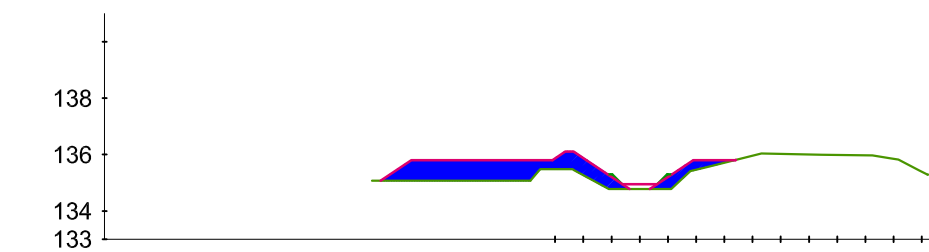
CH. (KM):- 2+100  
DESIGNED BED LEVEL = 134.980 M



EXIST. LEVEL (M)	-135.094	-135.360	-135.035	-134.473	-134.506	-134.541	-135.201	-135.459	-135.716	-135.726	-135.726	-135.726	-135.487	-135.185	
OFFSET (M)	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 1.855  
FILLING AREA (SQ.M) = 6.878

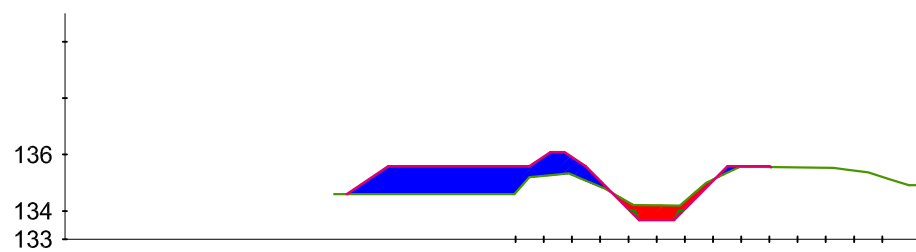
CH. (KM):- 2+300  
DESIGNED BED LEVEL = 133.710 M



EXIST. LEVEL (M)	-135.485	-135.270	-134.782	-134.781	-134.781	-135.468	-135.714	-135.960	-136.026	-136.008	-135.990	-135.972	-135.847	-135.395
OFFSET (M)	3	2	1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 0.000  
FILLING AREA (SQ.M) = 5.846

CH. (KM):- 2+200  
DESIGNED BED LEVEL = 134.955 M



EXIST. LEVEL (M)	-134.653	-135.247	-135.283	-134.862	-134.312	-134.199	-134.343	-135.114	-135.568	-135.554	-135.541	-135.529	-135.434	-135.213
OFFSET (M)	5	4	3	2	1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 1.118  
FILLING AREA (SQ.M) = 7.087

CH. (KM):- 2+400  
DESIGNED BED LEVEL = 133.685 M

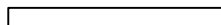
LEGEND



CUT AREA



EXISTING BED LINE



DESIGNED BED LINE



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

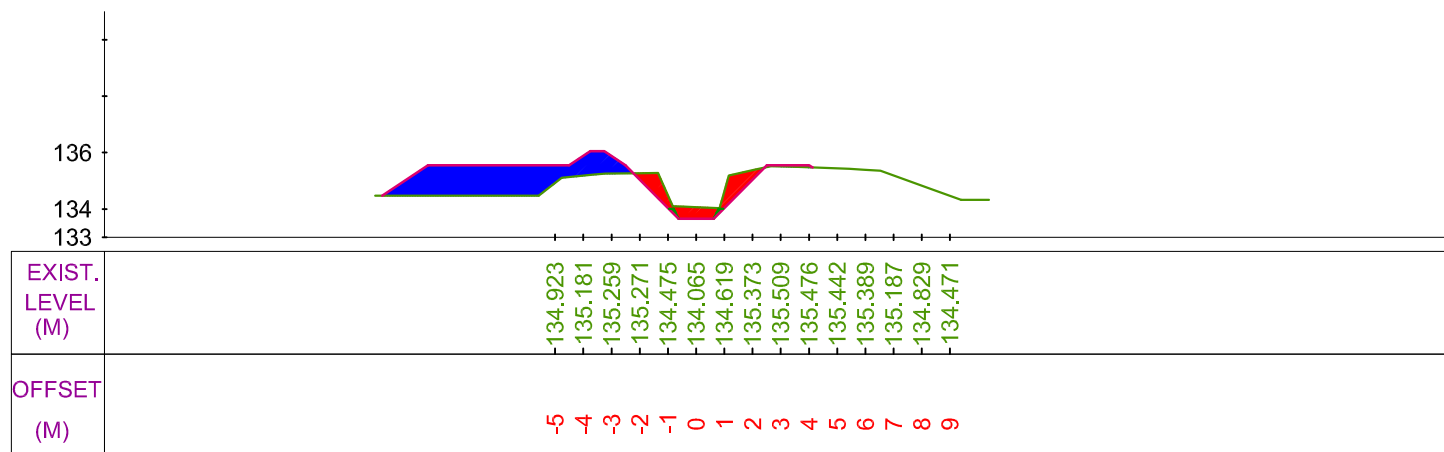
Drawing Title :-

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

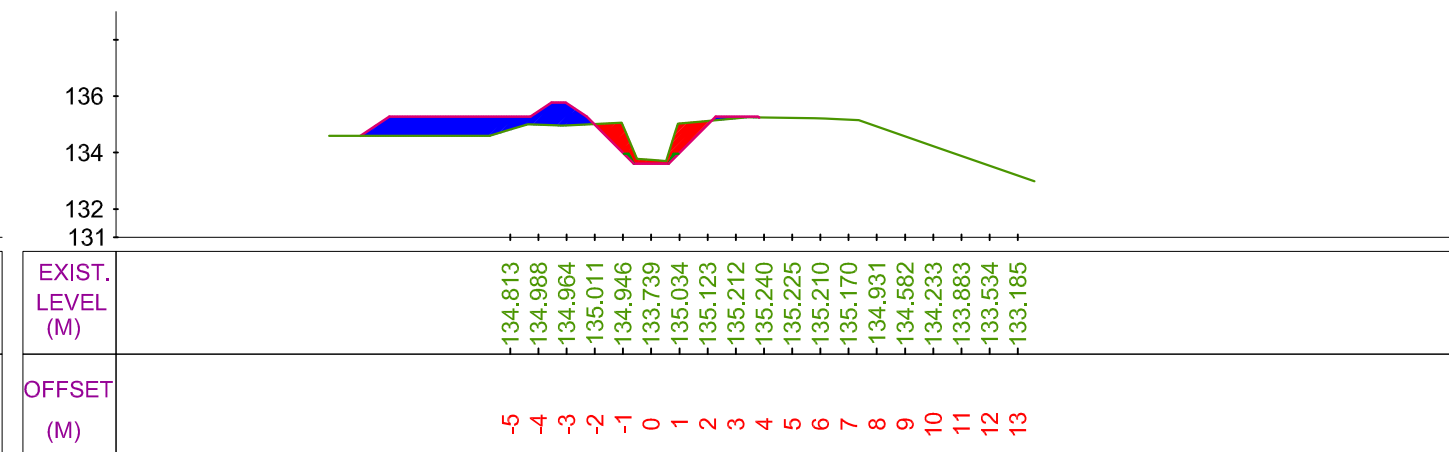
Drawing No. :-

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

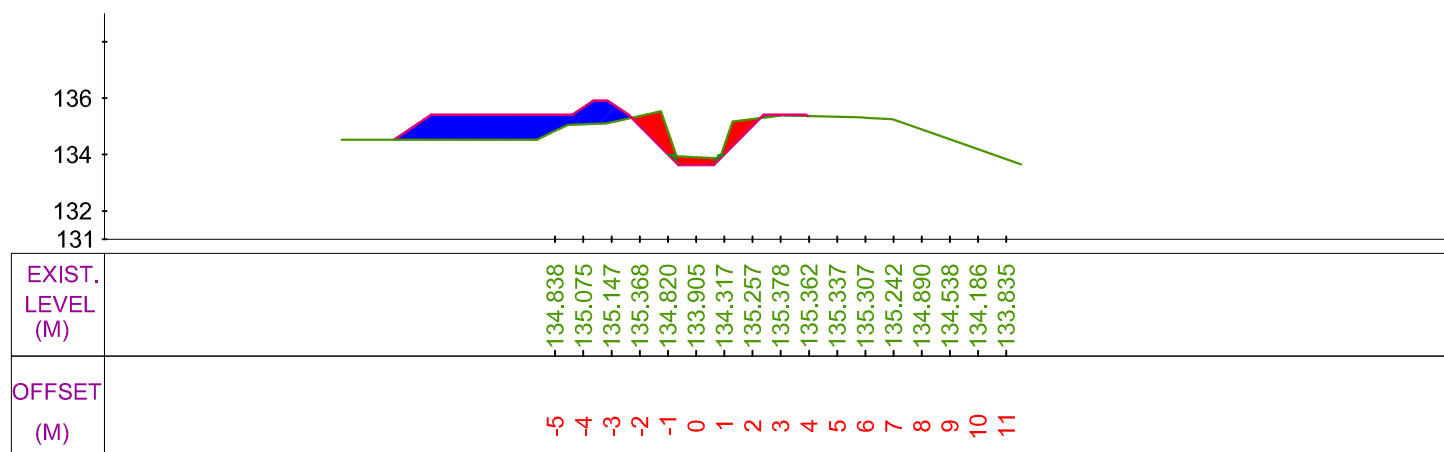
X SECTION OF AMBA MINOR



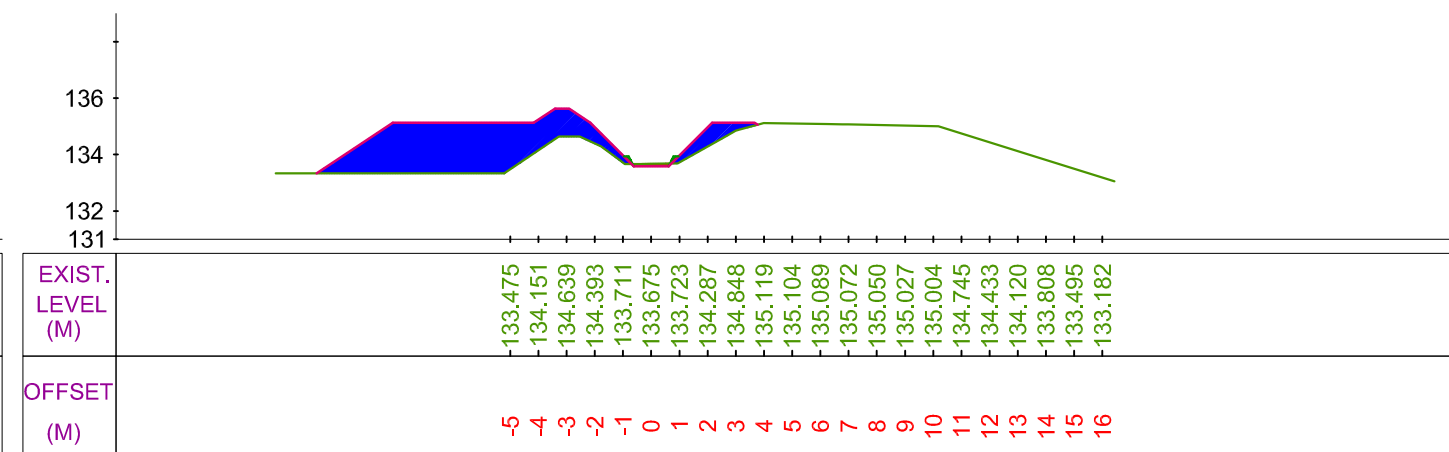
CUTTING AREA (SQ.M) = 2.056 CH. (KM):- 2+500  
FILLING AREA (SQ.M) = 7.251 DESIGNED BED LEVEL = 133.660 M



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



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



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

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

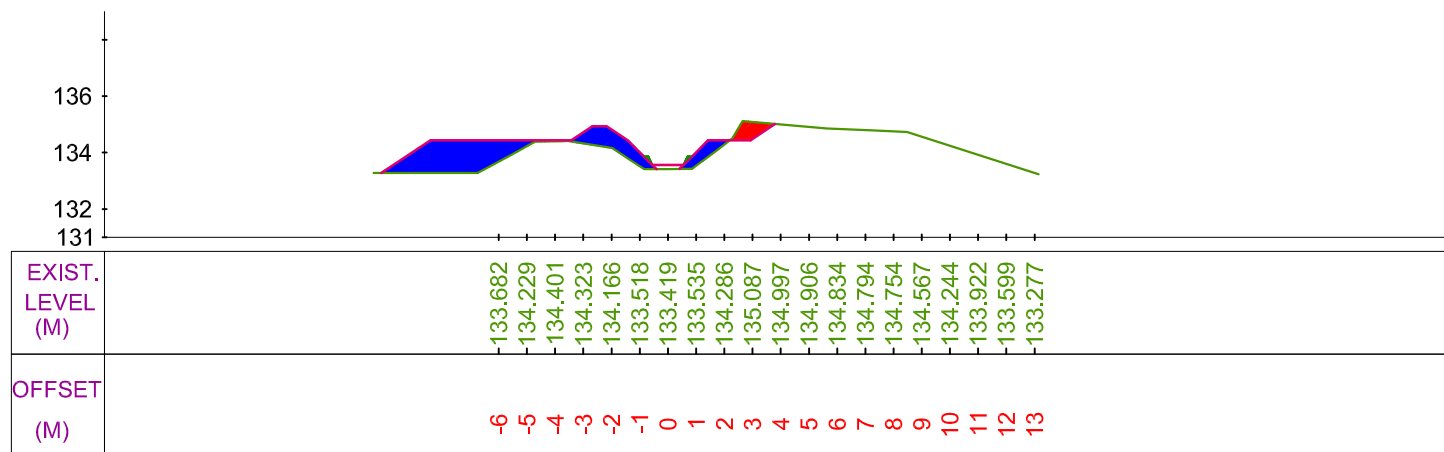
Prepared by :-

WAPCOS LTD.

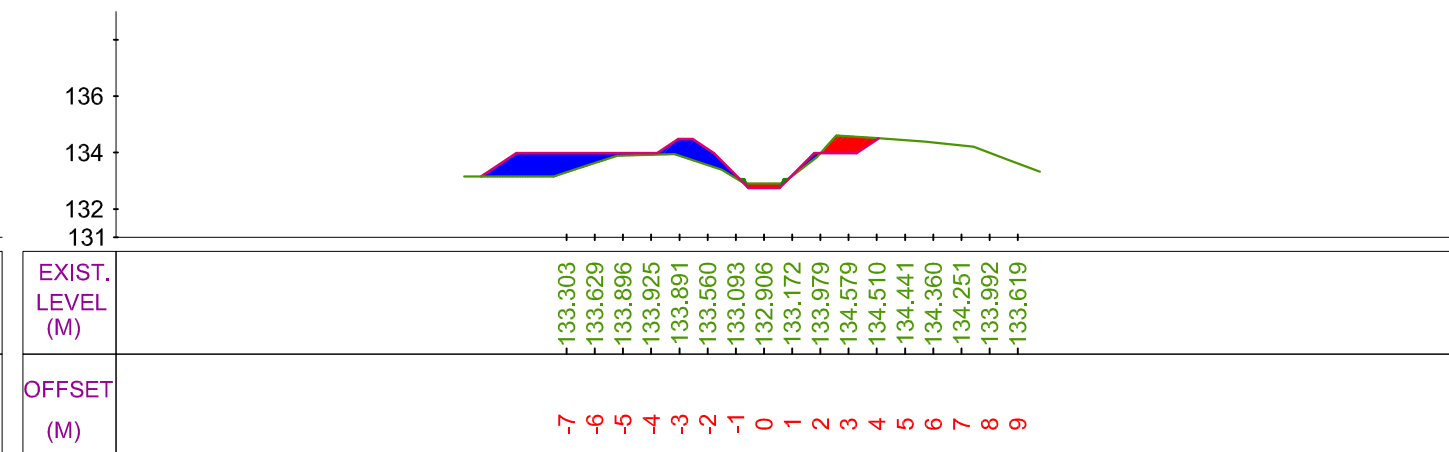


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 7 of 9

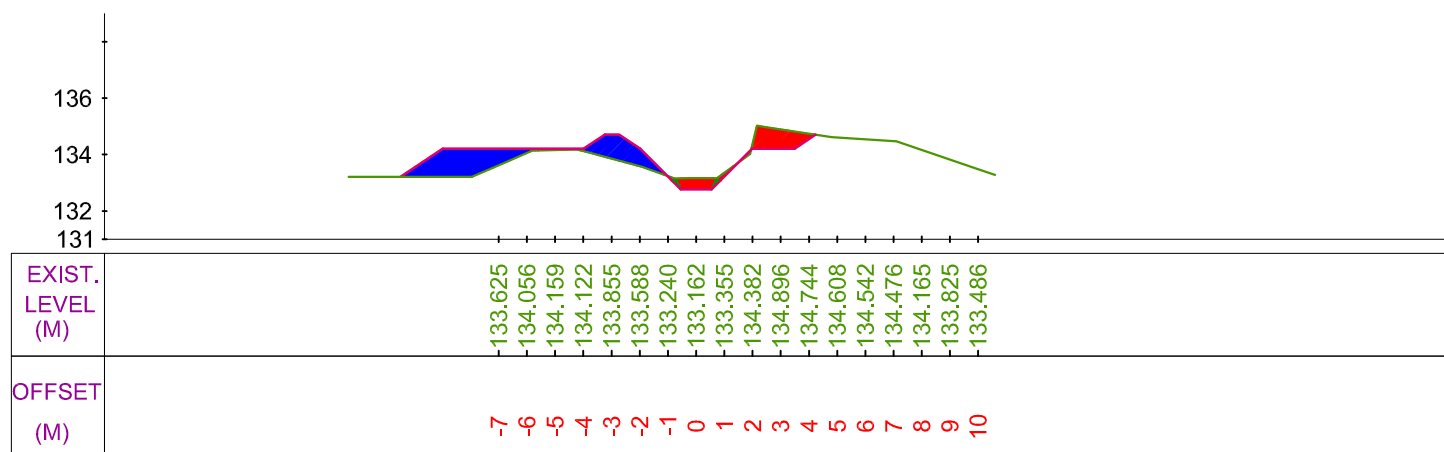
X SECTION OF AMBA MINOR



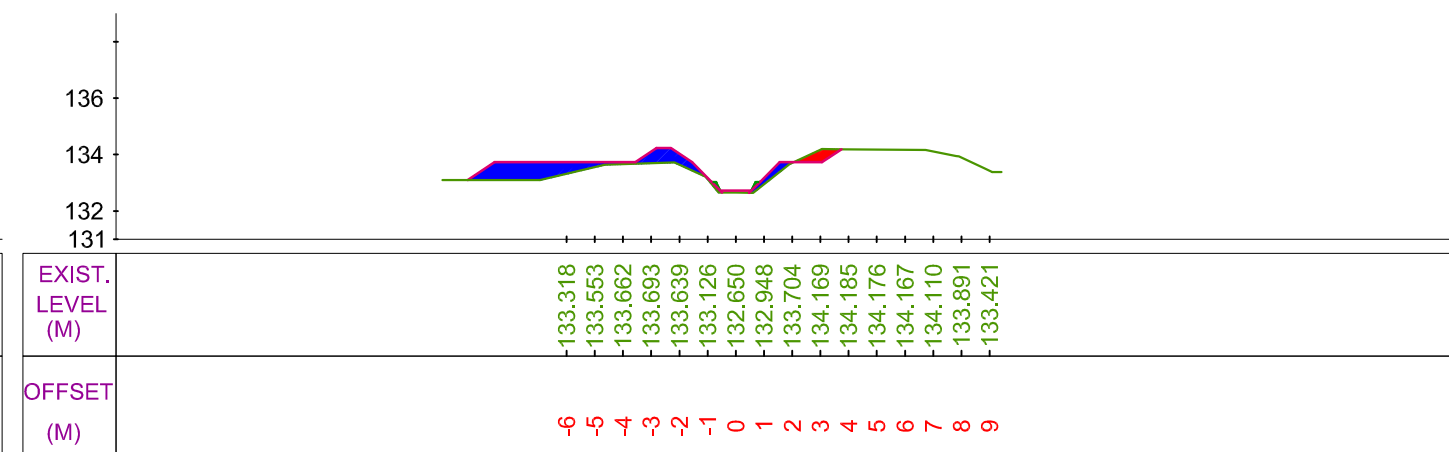
CUTTING AREA (SQ.M) = 0.614 CH. (KM):- 2+900  
FILLING AREA (SQ.M) = 6.352 DESIGNED BED LEVEL = 133.560 M



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



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



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

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

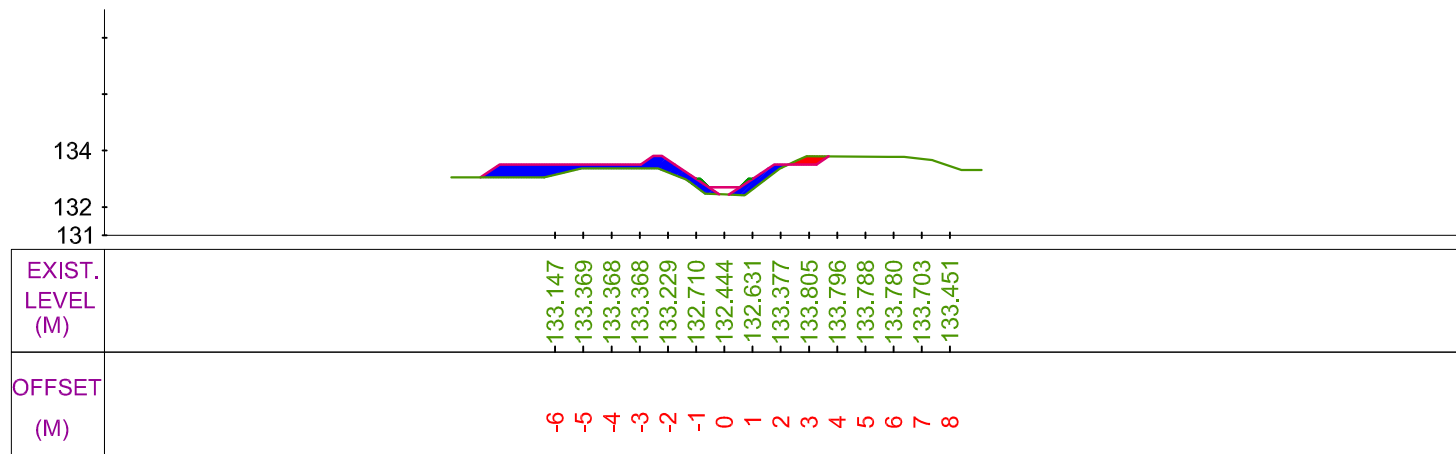
Prepared by :-

WAPCOS LTD.

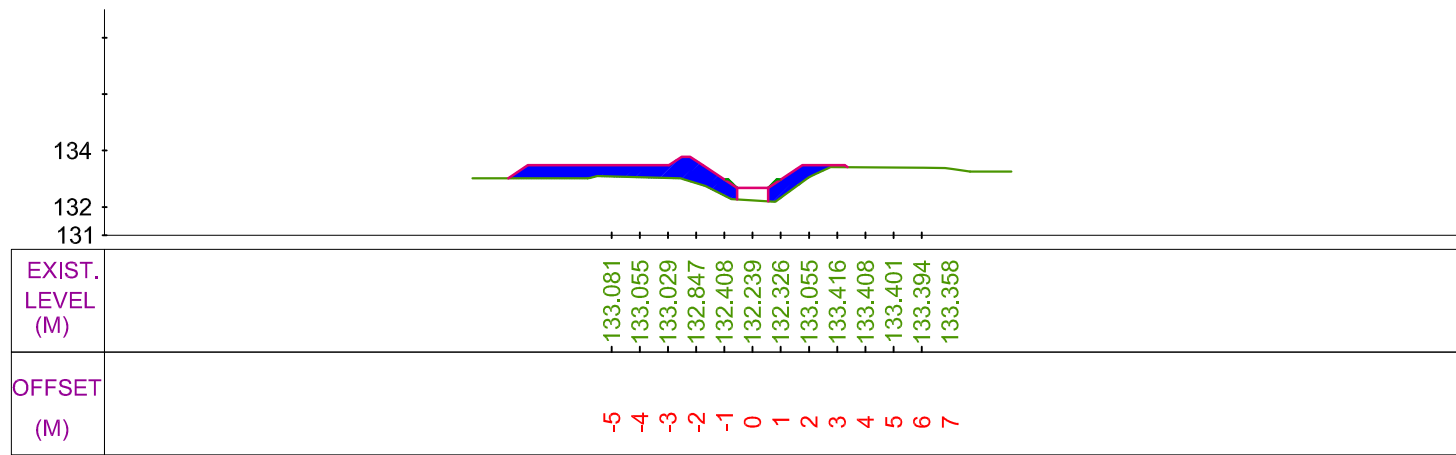


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF AMBA MINOR (OFFTAKE FROM RD - 53+645 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-15/ XSEC- 8 of 9

X SECTION OF AMBA MINOR



CUTTING AREA (SQ.M) = 0.262 CH. (KM):- 3+300  
FILLING AREA (SQ.M) = 2.953 DESIGNED BED LEVEL = 132.698 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 3+400  
FILLING AREA (SQ.M) = 5.047 DESIGNED BED LEVEL = 132.673 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE

Prepared by :-

WAPCOS LTD.



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

# ***DRAWING OF STRUCTURES***





