Hydraulic Particulars of Feeder Channel (Paidipalem reservoir - PBC Link)

Sl.No.	Reach From Km	Reach To Km		Discharge to be Designed Cumecs	Bed Width	F.S.D.	Bed Fall 1 in 'n'	Side slope 1:N	Value of C/N	Area of CS (sqm)	Wetted Perimeter M	Value of R 2/3	Velocity M/sec	Designed Discharge Cumecs	Loss of head due to			Canal Bed level		FSL		free board	Top Bund Level		critical velocity in m/sec	critical velocity ratio	Remarks
															Bed fall (m)	Structures (m)	Total loss of head (m)	start	end	start	end		Start	End			
1	2		3		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	0.000		3.125 / 3.300	3.125	10.017	6.50	1.70	9000	1.5	0.018	15.39	12.629	1.141	0.668	10.277	0.347		0.347	245.000	244.653	246.700	246.353	0.75	247.450	247.103	0.698	**0.96**	
2	3.125 /	3.300	16.600	13.300	9.068	6.50	1.64	10000	1.5	0.018	14.69	12.413	1.119	0.622	9.135	1.330	0.060	1.390	244.653	243.323	246.293	244.963	0.60	246.893	245.563	0.685	**0.91**	
				16.425		6.50							Total head loss=			1.68	0.06	1.737		Start FSL-EndFSL=		1.737						
														BL at start:proposed					245.000									

Sd/-
for KBL-MCC-(JV)

Sd/-
Executive Engineer
Modernisation Division
NANDIKOTKUR @ Pulivendula

Sd/-
Superintending Engineer
G.N.S.S.Circle
KADAPA

Sd/-
(18-09-2005)
Chief Engineer (Projects)
TBP , KADAPA

HYDRAULIC PARTICULARS OF FEEDER CHANNEL FROM PAIDIPALEM TO HIMAKUNTLA SUMP From Km 0.000 to Km 16.600

STATEMENT SHOWING THE CROSS MASONARY WORKS

Sl. No.	Description	Name of Cross Masonary Work	Chainage in KM	Existing Road Level/Road Width	Hydraulic Particulars of canal						Loss of Head in Mts	Remarks
					B.L.		F.S.L.		T.B.L.			
					U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts		
Reach I From Km. 0.000 to Km. 3.300												
1	B.T.Road from Mallela to Lavanuru	Proposed SLB	2.378	248.460 / 6.0	244.755	244.755	246.455	246.455	247.205	247.205	-	
Reach II From Km. 3.300 to Km. 16.600												
2	C.T.	Proposed SLB	4.000	247.475 / 2.5	244.583	244.583	246.223	246.223	246.823	246.823	-	
3	C.T.	Proposed SLB Cum SP	4.950	246.155	244.488	244.488	246.128	246.128	246.728	246.728	-	
4	C.T.	Proposed SLB	5.595	243.660 / 2.5	244.424	244.424	246.064	246.064	246.664	246.664	-	
5	C.T.	Proposed SLB	7.725	243.548 / 2.5	244.211	244.211	245.851	245.851	246.451	246.451	-	
6	C.T.	Proposed SLB	7.510	244.319 / 2.5	244.232	244.232	245.872	245.872	246.472	246.472	-	
7	C.T.	Proposed SLB Cum SP	7.710	245.013 / 2.5	244.212	244.212	245.852	245.852	246.452	246.452		

HYDRAULIC PARTICULARS OF FEEDER CHANNEL FROM PAIDIPALEM TO HIMAKUNTLA SUMP From Km 0.000 to Km 16.600

STATEMENT SHOWING THE CROSS DRAINAGE WORKS

Sl.No.	Name of Cross Drainage Work	Chainage in KM	PARTICULARS OF DRAIN				PARTICULARS OF PARENT CANAL					Loss of Head in Mts	Remarks
			Bed Level in m	C.A. in Sq.KMs	M.F.D. Cumecs	O.M.F.L.	Bed Width in m	F.S.D. in m	Bed Level in m	F.S.L. in m	T.B.L. in m		
Reach I:From Km 0.000 to Km. 3.300													
1	Proposed Under Tunnel	1.363	243.195	3.876	37.293	246.650	6.500	1.700	244.868	246.568	247.318	-	
2	Proposed Inlet	2.225	247.505	-	-	-	6.500	1.700	244.772	246.472	247.222	-	
3	Proposed Super Passage	2.385	247.450	0.240	4.629	247.740	6.500	1.700	244.754	246.454	247.204	-	
4	Proposed Super Passage	2.950	245.610	0.520	8.267		6.500	1.700	244.691	246.391	247.141	-	
Reach II:From Km 3.300 to Km. 16.600													
5	Proposed Super Passage	3.875	246.285	0.569	8.884	246.700	6.500	1.640	244.596	246.236	246.836	-	
6	Proposed Super Passage Cum SLB	4.950	246.155	0.550			6.500	1.640	244.488	246.128	246.728		
7	Proposed Under Passage	6.150	241.950	-	-	-	6.500	1.640	244.368	246.008	246.608	-	
8	Proposed Super Passage Cum SLB	7.710	245.013	0.250			6.500	1.640	244.212	245.852	246.452	-	
9	Proposed Super Passage	9.620	245.194	0.149	4.739	246.640	6.500	1.640	244.021	245.661	246.261	-	
10	Proposed Super Passage Cum SLB	9.750	245.349	0.140	4.662	245.850	6.500	1.640	244.008	245.648	246.248	-	
11	Proposed Super Passage	10.773	244.245	0.126	4.156	245.180	6.500	1.640	243.905	245.545	246.145	-	
12	Proposed Super Passage	11.900	244.450	0.310	8.609	245.495	6.500	1.640	243.793	245.433	246.033	-	
13	Proposed Super Passage	12.215	245.576	0.039	1.808	245.845	6.500	1.640	243.762	245.402	246.002	-	
14	Proposed Super Passage Cum SLB	12.475	246.694	0.208	5.949	247.525	6.500	1.640	243.736	245.376	245.976	-	
15	Proposed Under Tunnel	13.885	242.110	2.969	37.449	245.010	6.500	1.640	243.595	245.235	245.835	-	
16	Proposed Under Tunnel	16.025	241.985	0.221	6.195	243.235	6.500	1.640	243.381	245.021	245.621	-	

Note: Dickens formula adopted with 19.39 for CA less than 2.5 sq Km and 16.50 for CA greater than 2.5 sq Km

HYDRAULIC PARTICULARS OF FEEDER CHANNEL FROM PAIDIPALEM TO HIMAKUNTLA SUMP From Km 0.000 to Km 16.600

STATEMENT SHOWING THE DETAILS OF OFF TAKES

Sl.No.	Name of Distributory	Location on Main Canal K.M	Existing Ground Level	Distributory				Parent Canal at O.T. point		Distributory				Des. Dis. In Cumecs	Highest Field Level in Mts	Height of Reclamation in Mts	Remarks			
				Ayacut in Acres	Dis. Required in Cumecs	% of Dis. To Parent Canal	Ht. Of Sill above Bed of Parent Canal in m.	U/S F.S.L. Mts	D/S F.S.L. Mts	Sill Level in Mts	Rear F.S.L. in Mts	Vent Size in Sq.m	F.S.D. in Mts				Hamlet	Revenue Village	Mandal	District
1	2	3	4	4a	4b	4c	4d	5a	5b	6a	6b	6c	6d	7	8	9				10
Reach I																				
1	Offtake	3.250	247.125	5000		0.000		246.358	246.358	245.728	245.728					-				
Reach II											NIL									
			Total	5000	0.000	0.000														

HYDRAULIC PARTICULARS OF FEEDER CHANNEL FROM PAIDIPALEM TO HIMAKUNTLA SUMP From Km 0.000 to Km 16.600

STATEMENT OF REGULATORS

Sl.No.	Structure	Chainage in KM	Hydraulic particulars of Canal										Loss of Head in Mts	Remarks
			Bed Width		F.S.D.		B.L.		F.S.L.		T.B.L.			
			U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts	U/S in Mts	D/S in Mts		
1	Head regulator at KM. 0.000	0.000	Reservoir	6.5	Reservoir	1.7	Reservoir	245.000	Reservoir	246.700	Reservoir	247.450	-	
2	Cross Regulator	3.300	6.5	6.5	1.7	1.64	244.653	244.653	246.353	246.293	247.103	246.893	0.06	

Design of canal sections for Feeder Channel -Paidipalem to Himakuntla

Common parameters:

	value of 'n':	0.018	0.018	
	Q' checked with capacity to the top of lining			
1	**Reach from Km:**	**0.000**	**3.300**	
	Qreq: in Cumecs	10.0170	Cumecs	
	Q' with fliexibility factor:	10.0170	adopted	
	BW:	6.500	6.500	m.
	FSD:	1.700	1.700	m.
	Bed fall: 1 in N	9000	9000	
	side slopes: N:1	1.5	1.5	
	AREA: A in sqm	15.3850	15.3850	sqm.
	Perimeter P in m	12.6294	12.6294	m.
	R:	1.2182	1.2182	m.
	V in m/sec	0.6680	0.6680	m/sec
	Qdes	10.2765	10.2765	cumecs
	whether Q des > Qreq and Q'	OK		
	Channel section adopted:	**6.500**	**1.700**	**M.**
2	**Reach from Km:**	**3.300**	**16.600**	
	Qreq: in Cumecs	9.0680	Cumecs	
	Q' with fliexibility factor:	9.0680	adopted	
	BW:	6.50	6.500	m.
	FSD:	1.64	1.640	m.
	Bed fall: 1 in N	10000	10000	
	side slopes: N:1	1.5	1.5	
	AREA: A in sqm	14.6944	14.6944	sqm.
	Perimeter P in m	12.4131	12.4131	m.
	R:	1.1838	1.1838	m.
	V in m/sec	0.6217	0.6217	m/sec
	Qdes	9.1354	9.1354	cumecs
	whether Q des > Qreq and Q'	OK		
	Channel section adopted:	**6.500**	**1.640**	**M.**