GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

(H.N.S.S. PHASE-2,PACKAGE NO.11)

HYDRAULIC PARTICULARS HNSS MAIN CANAL(STAGE-II) FROM KM 360.000 TO 380.150

SL. No	Reach No.	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	Bed Width (In	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	DueTo CM & CD Structures	Total	At Start (M)	At End (M)	At Start	At End (M)		
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
28		370.825	370.825	0	**CROSS REGULATOR**											0.000	0.08	0.075	443.628	443.553	446.878	446.803		
29	15	370.825	371.425	600	45.140	13.40	3.25	1.14000	1.00:1	54.110	22.592	2.395	1.790	0.841	45.483	0.043	0.00	0.043	443.553	443.510	446.803	446.760	FULL CUTTING	HDR & F.F
30		371.425	371.475	50	Transition		3.25	1.14000								0.004	0.00	0.004	443.510	443.506	446.760	446.756	-	
31	16	371.475	372.925	1450	45.140	12.20	3.25	1.14000	1.50:1	55.490	23.918	2.320	1.753	0.823	45.665	0.104	0.00	0.104	443.506	443.402	446.756	446.652	PARTIAL CUTTING AND FILLING	AKS/ HDR / F.F
32		372.925	372.975	50	Transition		3.25	1.14000								0.004	0.00	0.004	443.402	443.398	446.652	446.648		
33	17	372.975	374.075	1100	45.140	11.00	3.25	1.14000	2.00:1	56.880	25.534	2.227	1.706	0.801	45.546	0.079	0.00	0.079	443.398	443.319	446.648	446.569	BED FILLING REACH DEPTH OF BED FILLING IS ABOUT 3.0M	STREAM CROSSING U.T PROPOSED
34		374.075	374.125	50	Transition		3.25	1.14000								0.004	0.00	0.004	443.319	443.315	446.569	446.565	-	
35	18	374.125	375.350	1225	45.140	13.40	3.25	1.14000	1.00:1	54.110	22.592	2.395	1.790	0.841	45.483	0.088	0.00	0.088	443.315	443.227	446.565	446.477	FULL CUTTING	HDR & FF
36		375.350	375.400	50	Transition		3.25	1.14000								0.004	0.00	0.004	443.227	443.223	446.477	446.473	-	
37	19	375.400	378.500	3100	45.140	12.20	3.25	1.14000	1.50:1	55.490	23.918	2.320	1.753	0.823	45.665	0.221	0.00	0.221	443.223	442.898	446.473	446.148	PARTIAL CUTTING, FILLING,AKS/HDR/ F&F	AQUEDUCT PROPOSED
38		378.500	378.550	50	Transition		3.25	1.14000								0.004	0.00	0.004	442.898	442.894	446.148	446.144	-	
39	20	378.550	378.850	300	45.140	13.40	3.25	1.14000	1.00:1	54.110	22.592	2.395	1.790	0.841	45.483	0.021	0.00	0.021	442.894	442.873	446.144	446.123	FULL CUTTING	HDR & FF
40		378.850	378.900	50	Transition		3.25	1.14000								0.004	0.00	0.004	442.873	442.869	446.123	446.119		
41	21	378.900	380.150	1250	45.140	12.20	3.25	1.14000	1.50:1	55.490	23.918	2.320	1.753	0.823	45.665	0.089	0.00	0.089	442.869	442.780	446.119	446.030	FULL CUTTING	FSL @ Km 380.150 as per Agreement Condition 345.900

Co-efficiect of Rugosity :0.018

1) THE PROPOSED H.P'S FURNISHED VIDE LR NO.CE(P)/ATP/PHASE-II/PK-11/382CE DT:2-11-2007 AND COPY OF GOVT MEMO AND AMENDMENT FURNISHED VIDE SE/HNSS/MADANPALLI,LR.NO.SE/HNSS/CAMP-1 DT.11-4-2008,ADDRESSED TO ENC/TGP/SKHT WITH A COPY TO CE/CDO ARE VETTED AND APPROVED.

2)SUBJECT TO PROVIDING OF NECESSARY PROTECTION WORKS AS PER SITE CONDATIONS IN EMBAKMENT AND BED FILLING REACH FROM 372.975 TO 374.075 AND FROM KM 367.875 TO 368.150 IN THE ALREADY ALIGNMENT AND HP'S.

3)THE LIST OF STRUCTURES OF THE PACKAGE SHALL BE FINALISED SEPERATLY ON RECIPT OF PROPOSAL AS PER SITE CONDATIONS AND AGREEMENT FROM ENC, TGP, SRIKALAHASTI.

Sd/-(dt.17.11.2007)
Executive Engineer
Canals-II
Division Central
Designs Orginisation
Hyderabad.

APPROVED
Sd/-(dt.16.11.2007)
(I.S.N.RAJU)
Chief Engineer
Central Designs
Orginisation Hyderabad.

GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

(H.N.S.S. PHASE-2,PACKAGE NO.11)

HYDRAULIC PARTICULARS HNSS MAIN CANAL(STAGE-II) FROM KM 360.000 TO 380.677/380.000 EXCLUDING TUNNEL PORTION FROM KM 360.000 TO KM 360.400

SL. No	Reach No.	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (IN Mts)	Required Discharge (Cumecs)	Bed Width (In	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	DueTo CM & CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	360.400	360.990	500	51.680	12.50	3.25	1.7400	0.50:1	45.910	19.767	2.322	1.754	1.133	51.992	0.067	0.00	0.067	444.645	444.578	447.895	447.828	FSL +360.400 AS PER AGREEMENT BASICS PARAMETERS +444.645	HR REACH, DEEP CUT

Co-efficiect of Rugosity :0.018

APPROVED
Sd/-(dt.12.02.2008)
(I.S.N.RAJU)
Chief Engineer
Central Designs Orginisation
Hyderabad.

GOVERNAMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

(H.N.S.S. PHASE-2,PACKAGE NO.11)

HYDRAULIC PARTICULARS HNSS MAIN CANAL(STAGE-II) FROM KM 360.900 TO 370.825

SL. No	Reach No.	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	B.W (In Mtc)	F.S.D (In Mtc)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	Due to CM&CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	360.900	363.000	2100	51.680	12.50	3.25	1 in 7400	0.50:1	45.91	19.767	2.322	1.754	1.133	51.992	0.264	0	0.284	444.578	444.294	447.828	447.544	FSL @ KM 360.400 AS PER	H.R REACH DEEP CUT
2		363.000	363.050	50	Transition		3.25	1 in 9700								0.005	0	0.005	444.294	444.289	447.544	447.539		
3		363.050	363.300	250	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.021	0	0.021	444.289	444.268	447.539	447.518	FULL CUTTING	HDR & F&F
4		363.300	363.350	50	Transition		3.25	1 in 13000								0.004	0	0.004	444.268	444.264	447.518	447.514		
5		363.350	364.375	1025	51.680	14.20	3.25	1 in 14000	1.50:1	61.99	25.918	2.392	1.789	0.84	52.061	0.073	0	0.073	444.264	444.191	447.514	447.441	PARTIAL CUTTING	ALL SOILS H.D.R &F&F
6		364.375	364.425	50	Transition		3.25	1 in 13000								0.004	0	0.004	444.191	444.187	447.441	447.437		
7		364.425	366.050	1625	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.135	0	0.135	444.187	444.052	447.437	447.302	FULL CUTTING	HDR & F&F
8		366.050	366.100	50	Transition		3.25	1 in 13000								0.004	0	0.004	444.052	444.048	447.302	447.298		
9		366.100	366.350	250	51.680	14.20	3.25	1 in 14000	1.50:1	61.99	25.918	2.392	1.789	0.84	52.061	0.068	0	0.068	444.048	443.980	447.298	447.230	PARTIAL CUTTING AND FILLING	AQUEDUCT PROPOSED WITH LOH
10		366.350	366.400	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.98	443.976	447.230	447.226		
11		366.400	366.900	500	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.042	0	0.042	443.976	443.934	447.226	447.184	FULL CUTTING	HDR & F&F
12		366.900	366.950	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.934	443.930	447.184	447.180		
13		366.950	367.200	250	51.680	14.20	3.25	1 in 14000	1.50:1	61.99	25.918	2.392	1.789	0.84	52.061	0.018	0	0.018	443.93	443.912	447.180	447.162	PARTIAL CUTTING AND	ALL SOILS H.D.R &F&F
14		367.200	367.250	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.912	443.908	447.162	447.158		
15		367.250	367.825	575	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.048	0	0.048	443.908	443.860	447.158	447.110	FULL CUTTING	HDR & F&F
16		367.825	367.875	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.86	443.856	447.110	447.106		
17		367.875	368.150	275	51.680	13.00	3.25	1 in 14000	2.00:1	63.38	27.534	2.392	1.743	0.819	51.873	0.02	0	0.020	443.856	443.836	447.106	447.086	BED FILLING REACH DEPTH	STREAM CROSSING
18		368.150	368.200	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.836	443.832	447.086	447.082		
19		368.200	368.575	375	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.031	0	0.031	443.832	443.801	447.082	447.051	FULL CUTTING	HDR & F&F
20		368.575	368.625	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.801	443.797	447.051	447.047		
21		368.625	369.575	950	51.680	14.20	3.25	1 in 14000	1.50:1	61.99	25.918	2.392	1.789	0.84	52.281	0.068	0	0.068	443.797	443.729	447.047	446.979	PARTIAL CUTTING AND FILLING	ALL SOILS H.D.R &F&F
22		369.575	369.625	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.729	443.725	446.979	446.975		
23		369.625	370.000	375	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.031	0	0.031	443.725	443.694	446.975	446.944	FULL CUTTING	HDR & F&F
24		370.000	370.050	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.694	443.690	446.944	446.940		
25		370.050	370.275	225	51.680	14.20	3.25	1 in 14000	1.50:1	61.99	25.918	2.392	1.789	0.84	52.061	0.016	0	0.016	443.690	443.674	446.940	446.924	PARTIAL CUTTING AND	ALL SOILS H.D.R &F&F
26		370.275	370.325	50	Transition		3.25	1 in 13000								0.004	0	0.004	443.674	443.670	446.924	446.920		
27		370.325	370.825	500	51.680	14.20	3.25	1 in 12000	1.00:1	56.71	23.392	2.424	1.805	0.915	51.906	0.042	0	0.042	443.670	443.628	446.920	446.878	PARTIAL CUTTING AND FILLING	ALL SOILS H.D.R &F&F

Co-efficiect of Rugosity :0.018

1) LIST OF STRUCTURE SHALL BE FURNISHED SEPERATELY ON RECEIPT OF DETAILS OF CM & CD WORKS FROM THE CE (P) ANANTAHAPUR

2) HP'S AND ALIGNMENT FORM KM 360.900 TO 370.825 ARE PROPOSED BY THE CE (P)ANANTHAPUR WITH DISCHARGE OF 51.68 CUMECS AS PER AGRREMENT IS VETTED AND APPROVED

Sd/-(dt.17.11.2007)
Executive Engineer
Canals-II Division
Central Designs Orginisation

APPROVED
Sd/-) (dt.16.11.2007
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