

TOWER SCHEDULE

Name of Work: Conducting Detailed Survey for Construction of 110KV radial Line from Existing 110/11KV Tumminakatte S/S to the proposed 110/11KV S/S at Mudenuur for the work of up-gradation of existing 33KV S/S to 2x10MVA, 110/11KV S/S at Mudenuur in Ranebennur Taluk, Havari District

Client : Karnataka Power Transmission Corporation Limited.

Surveyors : M/s Durga Enterprises Hubballi.

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village limits
						L	R	T		
	Bay	-	-		0	-	-	-	Survey Commenced from Existing 110/11KV Tumminakatte S/S	Menasirahala
				34					Fencing	
1	AP-1	MD+0 220KV MC NBT (VTP)	23°48'38"L		34	-	97	97	Existing 110KV DC APT No.38 to be dismantled DD+0, Proposed 110KV MC Towers start	"
				175					Existing 110KV DC Line from Tumminakatte to KNNL & Hallur (A/C=90°), 11KV Line	
2		MD+0 220KV MC NBT (VTP)	0°0'0"		209	78	103	181		"
				175					Existing 110KV DC APT No.37 to be dismantled DA+0	
3		MA+0 220KV MC NBT (VTP)	-		384	72	98	170		"
				171					11KV Line, Tar Road from Mensihah to Tar Road	
4	AP-2	MB+0 220KV MC NBT (VTP)	8°38'24"R		555	73	16	89	Existing 110KV DC APT No.36 to be dismantled DA+0	"
				175					11KV Line	
5		MA+6 220KV MC NBT (VTP)	-		730	159	90	249		"
				175					Halla, Krishi Honda, Existing 110KV DC A T.No.35 to be dismantled DA+6	

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village limits
						L	R	T		
6		MB+3 220KV MC NBT (VTP)	0°0'0"		905	85	78	163		"
				194					11KV/LT Line, Mud Road from Menshihal to Fields	
7	AP-3	MD+3 220KV MC NBT (VTP)	23°12'39"R		1099	116	1083	1199	Existing 110KV DC AP T.No.35 to be dismantled DC+0, Proposed 110KV MC Towers end	"
				31						
8	AP-4	DD+3	3°10'54"L		1130	-1052	115	-937		"
9		DA+3	-	260	1390	145	141	286	11KV Line, Mud Road from Menshihal to Fields	"
10		DA+0	-	260	1650	119	106	225		"
11		DA+3	-	260	1910	154	124	278		"
12		DB+3	0°0'0"	260	2170	136	135	271		"
				260					Mud Road from Fields, to Fields, Canal, 11KV Line	
13		DA+3	-		2430	125	151	276		"
14		DA+0	-	250	2680	99	100	199		"
15	AP-5	DC+3	17°42'18"R	248	2928	148	114	262		"
				260					11KV Line 2No's, Cart Track from Sangapura to Fields, Mud Road from Sangapura to Fields	
16		DA+3	-	245	3188	146	131	277		"
17		DA+0	-	245	3433	114	112	226	Paddy Field	"
18		DA+0	-	245	3678	133	97	230	LT Line	"
				250					Cart Track from Canal to fields, Canal	

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village lim
						L	R	T		
19		DA+3	-	235	3928	153	115	268	11KV Line	"
20	AP-6	DB+3	1°52'10"R		4163	120	125	245	11KV Line, Tar Road from Kudapalli to SH-52, Paddy Field Start	"
21		DA+3	-	280	4438	150	130	280	Paddy Field	Kuppelur
22		DA+3	-	280	4718	150	125	275	Paddy Field, Cart Track from Tar Road to Fields	"
23		DA+3	-		4998	155	122	277	Paddy Field End, 11KV Line	"
24		DB+3	0°0'0"	265	5263	143	124	267	-	"
25		DA+3	-	275	5538	151	132	283	Cart Track from Canal to fields, Canal	"
26		DB+3	0°0'0"	280	5818	148	114	262	-	"
27	AP-7	DD+6	40°56'37"R	202	6097	165	97	262	11KV Line 2N's, SH-52 from Honnali to Ranebennur	"
28	AP-8	DD+6	10°15'32"L	260	6299	105	149	254	Tar Road from SH-52 to Fields, Canal, Maize, 33KV Line, Maize	"
29		DB+3	0°0'0"		6559	111	139	250	Cart Track from SH-52 to Fields, Canal	"
30		DA+3	-	260	6819	121	154	275	Maize	"
31		DA+0	-	260	7079	106	98	204	Maize, Cart Track from Kuppluru to Fields	"
32		DA+6	-	260	7339	162	181	343	Maize	"

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village limits
						L	R	T		
33		DB+0	0°0'0"	260	7599	79	134	213		"
34		DA+0	-	255	7859	126	108	234	Maize	"
35		DA+3	-	253	8114	147	130	277	Maize	"
36	AP-9	DC+3	17°44'46"R	250	8367	123	98	221	Maize, Canal, Cart Track from Tar Road to Fields	"
37		DB+6	0°0'0"	250	8617	152	121	273	Maize, 11KV Line 2No's, 33KV Line, Tar Road from Kuppeluru to Kotihal	"
38		DB+6	0°0'0"	250	8867	129	144	273	Maize, Canal & Cart Track at Right side	"
39		DA+3	-	250	9117	106	130	236	Maize, Tar Road from Lingadahalli to Tar Road	Lingadahalli
40		DB+3	0°0'0"	250	9367	120	147	267	Maize	"
41		DA+0	-	250	9617	103	127	230	Maize	"
42		DA+0	-	247	9867	123	126	249	Maize	"
43	AP-10	DB+0	0°14'59"R	255	10114	121	112	233	Maize	"
44		DA+3	-	255	10369	143	154	297	Maize, Canal, Cart Track from Canal to fields	"
45		DA+0	-	260	10624	101	115	216	Maize	"
46		DB+3	0°0'0"	260	10884	145	152	297	Maize	"
				260					Maize	

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village limits
						L	R	T		
47		DA+0	-	260	11144	108	107	215	Maize	"
48		DB+3	0°0'0"	251	11404	153	139	292	Maize, 11KV Line, Tar Road from Lingadahalli to Kotihal	"
49	AP-11	DB+3	11°58'52"L	270	11655	112	170	282		"
50		DA+0	-	265	11925	100	134	234		"
51		DA+0	-	265	12190	131	111	242		"
52		DA+0	-	260	12455	154	123	277	Paddy Field Start	"
53		DB+0	0°0'0"	270	12715	137	113	250	Paddy Field, 11KV Line	Holeanveri
54		DB+3	0°0'0"	270	12985	157	129	286	Paddy Field End, Tar Road from Lingadahalli to Holeanveri	"
55		DB+3	0°0'0"	275	13255	141	97	238	11KV/LT Line, 11KV Line, Paddy Fields end	"
56		DA+6	-	275	13530	178	147	325	11KV Line	"
57	AP-12	DB+3	10°36'55"R	230	13805	128	110	238	Paddy Field Start, Tar Road from Holeanveri to Musturu	"
58		DB+6	0°0'0"	234	14035	120	134	254	Paddy Field, 11KV Line	"
59	AP-13	DD+6	2°12'44"L	290	14269	100	147	247	Paddy Field, Kumadavathi River, River Bund	"
60		DD+6	0°0'0"		14559	143	155	298		Malakanahalli

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village limits
						L	R	T		
61		DA+3	-	290	14849	135	135	270	Paddy Field, LT Line	"
62		DA+3	-	290	15139	155	139	294	Paddy Field Er d	"
63	AP-14	DD+3	1°36'40"L	290	15429	151	115	266	LT Line, 11KV Line, Mud Road from Tar Road to Fields, Paady Field	"
		DD+0		182						
64	AP-15	(9 Cross Arm)	64°50'56"L		15611	67	-	67		"
				45					11KV Line 6Nos, Fencing	
	Bay		-		15656	-	-	-	Joining to the Proposed 110/11KV Mudenur S/S	"
Existing 110KV Tumminakatte to Rattihalli & Ranebennur Line										
*7	*AP-3	*MD+0 220KV MC NBT (VTP)	16°44'2"L		15656	116	574	690	Existing 110KV DC AP T.No.35 to be dismantled DA+0, Proposed 110KV MC Towers end	Menasinahala
65		DD+3	0°0'0"	50	15706	-524	140	-384		"
				240						
		Existing DA+0	-		15946	100	-	100	Joining to the Existing 110KV DC AP T.No.33 to be retained DA+0, 110KV Line towards Rattihalli & Ranebennur	"
Existing 110KV Tumminakatte to Rattihalli & Ranebennur Line (near Tumminakatte S/S)										
	Bay	-	-		15946	-	-	-	Survey Commenced from Existing 110/11KV Tumminakatte S/S	Menasinahala
				36						

Sl. No.	AP No.	Type of Towers	Angle of deviation	Span in mts	Cumulative chainage in	Weight span			Crossing Details/Remarks	Village Name
						L	R	T		
*1	*AP-1	*MD+0 220KV MC NBT (VTP)	50°35'8"L		15982	-	97	97	110KV Line towards Ratihalli & Ranebenmur	-
Existing 110KV Tumminakatte to KNNL Line										
	Bay	-	-		15982	-	-	-	Survey Commenced from Existing 110/11KV Tumminakatte S/S	Manasiraha
				36						
	AP-1A	Existing DD+0 (9 Cross Arm)	88°0'0"L		16018	-	-	-	Joining to the Existing 110KV DC AP T.No.18 to be retained DD+0. 110KV Line towards KNNL S/S	-

ABSTRACT OF TOWERS

Name of Work: Conducting Detailed Survey for Construction of 110KV radial Line from Existing 110/11KV Tumminakatte S/S to the proposed 110/11KV S/S at Mudenur for the work of up-gradation of existing 33KV S/S to 2x10MVA, 110/11KV S/S at Mudenur in Ranebennur Taluk, Haveri District

Client : Karnataka Power Transmission Corporation Limited.

Surveyors : M/s Durga Enterprises Hubballi.

Sl.No.	Type of towers	Normal	+3M	+6M	+9M	TOTAL
Proposed 110KV DC Towers (Kalpatharu AQUES Line) ✓						
1	DA	30	15	2	-	30
2	DB	18	12	3	-	18
3	DC	2	2	-	-	2
4	DD	7	3	4	-	7
5	DD+0 (9 Cross Arm)	1	-	-	-	1
Total =						58 Nos.
Proposed 220KV MC Narrow based Towers (M/s L&T Design, VTP) ✓						
1	MA	2	-	1	-	2
2	MB	2	1	-	-	2
3	MD	3	1	-	-	3
Total =						7 Nos.
Grand Total =						65 Nos.
Existing 110KV DC Tower to be dismantled (T.No.38 to T.No.34)						
1	DA	2	-	1	-	2
2	DB	1	-	-	-	1
3	DC	1	-	-	-	1
4	DD	1	-	-	-	1
Total =						5 Nos.

- NOTE : 1) Minor deviation if any due to way leave problem that may arise during the execution of the work will be incorporated accordingly.
- 2) Existing 110KV DC line from Tumminakatte to Rattihalli & Ranebennur line Conductor to be released & Restrung = $1.391 \times 6 = 8.364$ Kms
- 3) Existing 110KV DC line from Tumminakatte to Rattihalli & Ranebennur line Earth wire to be released & Restrung = 1.391Kms
- 4) Existing 110KV SC Tumminakatte to KNNL Line conductor to be released & Restrung = $0.036 \times 3 = 0.108$ Kms
- 5) Existing 110KV SC Tumminakatte to KNNL Line Earth wire to be released & Restrung = 0.036Kms
- 6) Proposed Bay to be proposed for Existing 110KV KNNL line & Existing 110KV KNNL Bay is to be used for Mudenur Line

For M/s Durga Enterprises Hubballi.

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Assistant Engineer Ele.,
Major Works Sub-Division,
KPTCL, Haveri.

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SOIL CLASSIFICATION STATEMENT

Name of Work: Conducting Detailed Survey for Construction of 110KV radial Line from Existing 110/11KV Tumminakatte S/S to the proposed 110/11KV S/S at Mudenur for the work of up-gradation of existing 33KV S/S to 2x10MVA, 110/11KV S/S at Mudenur in Ranebennur Taluk, Havari District

Loc. No.	AP Nos	Location Details	Angle of deviation	Cum. Chainage in mts	NDS/ Dry BC	Wet Black Cotton Soil	Partially Sub merged	Fully Sub merged	Hard rock	Soft rock/Lime Stone	WET Soil	SFR Soil	DFR Soil	Provisional Type of Foundation	Remarks
1	AP-1	MD+0 220KV MC NBT (VTP)	23°48'38"L	34	0.60	2.40	-	-	-	-	-	-	-	WBC	-
2		MD+0 220KV MC NBT (VTP)	0°0'0"	209	0.50	2.50	-	-	-	-	-	-	-	WBC	-
3		MA+0 220KV MC NBT (VTP)	-	384	0.50	-	-	-	-	-	-	2.50	-	SFR	-
4	AP-2	MB+0 220KV MC NBT (VTP)	8°38'24"R	555	0.80	-	-	-	-	-	-	2.20	-	SFR	-
5		MA+6 220KV MC NBT (VTP)	-	730	0.35	-	-	-	-	-	-	2.65	-	SFR	-
6		MB+3 220KV MC NBT (VTP)	-	905	0.60	-	-	-	-	-	-	2.40	-	SFR	-
7	AP-3	MD+3 220KV MC NBT (VTP)	23°12'39"R	1099	0.80	2.20	-	-	-	-	-	-	-	WBC	-
8	AP-4	DD+3	3°10'54"L	1130	0.40	-	-	-	-	-	-	2.60	-	SFR	-
9		DA+3	-	1390	0.35	-	-	-	-	-	-	2.65	-	SFR	-
10		DA+0	-	1650	0.60	-	-	-	-	-	-	2.40	-	SFR	-
11		DA+3	-	1910	0.80	-	-	-	-	-	-	2.20	-	SFR	-
12		DB+3	0°0'0"	2170	0.50	-	-	-	-	-	-	2.50	-	SFR	-
13		DA+3	-	2430	0.40	-	-	-	-	-	-	2.60	-	SFR	-
14		DA+0	-	2680	0.35	-	-	-	-	-	-	2.65	-	SFR	-
15	AP-5	DC+3	17°42'18"R	2928	0.40	-	-	-	-	-	-	2.60	-	SFR	-

Loc. No.	AP Nos	Location Details	Angle of deviation	Cum. Chainage in mts	NDS/ Dry BC	Wet Black Cotton Soil	Partially Sub merged	Fully Sub merged	Hard rock	Soft rock/Lime Stone	WET Soil	SFR Soil	DFR Soil	Provisional Type of Foundation	Remarks
50		DA+0	-	11925	0.55	2.45	-	-	-	-	-	-	-	WBC	-
51		DA+0	-	12190	0.80	-	-	-	-	-	-	2.20	-	SFR	-
52		DA+0	-	12455	0.30	-	-	-	-	-	-	2.70	-	SFR	-
53		DB+0	0°0'0"	12715	0.65	-	-	-	-	-	-	2.35	-	SFR	-
54		DB+3	0°0'0"	12985	0.45	-	-	-	-	-	-	2.55	-	SFR	-
55		DB+3	0°0'0"	13255	0.25	-	-	-	-	-	-	2.75	-	SFR	-
56		DA+6	-	13530	0.65	-	-	-	-	-	-	2.35	-	SFR	-
57	AP-12	DB+3	10°36'55"R	13805	0.55	-	-	-	-	-	-	2.45	-	SFR	-
58		DB+6	0°0'0"	14035	0.40	-	-	-	-	-	-	2.60	-	SFR	-
59	AP-13	DD+6	2°12'44"L	14269	0.35	-	-	-	-	-	-	2.65	-	SFR	-
60		DD+6	0°0'0"	14559	0.45	-	-	-	-	-	-	2.55	-	SFR	-
61		DA+3	-	14849	0.60	-	-	-	-	-	-	2.40	-	SFR	-
62		DA+3	-	15139	0.55	-	-	-	-	-	-	2.45	-	SFR	-
63	AP-14	DD+3	1°36'40"L	15429	0.35	-	-	-	-	-	-	2.65	-	SFR	-
64	AP-15	DD+0 (9 Cross Arm)	64°50'56"L	15611	0.40	-	-	-	-	-	-	2.60	-	SFR	-
65		DD+3	-	15706	0.35	-	-	-	-	-	-	2.65	-	SFR	-

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