

**GOVERNMENT OF TELANGANA STATE
FOREST DEPARTMENT**

From
Smt. J. Vasantha
Divisional Forest Officer,
Wildlife Management,
Nagarjunasagar

To
The Chief Conservator of Forests &
Field Director,
Amrabad Tiger Reserve,
Hqrs Hyderabad, Aranya Bhavan,
Hyderabad, Telangana.

Rc. No. 1087/2014/S3, Dated. 24.09.2016

Sir,

Sub:- TS – FCA – Water Grid – Diversion of Forest land in various forest divisions – in favour of RWS & S Dept., for laying of pipeline and construction of structure under Telangana Drinking Water Supply Project – Preparation of Revised CA Scheme submission of – Reg.

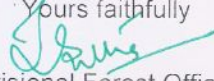
Ref:- 1. PCCF(HoFF), Telangana, Hyderabad Rc.No.03/2015/FCA-1/TS, Dt:13.05.2016.
2. PCCF & HoFF (FAC), Telangana, Hyderabad Rc.No.03/2015/FCA-1/TS, Dt:23.08.2016.

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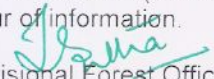
With reference to the subject cited above, I herewith submit the detailed Revised CA scheme for diversion of non-forest land for laying of pipeline and construction of structure under Telangana Drinking Water Supply Project in favour of RWS & S Department for Rs. 2738.62 lakhs of Wildlife Management Division, Nagarjunasagar.

This is submitted for favour of information and necessary action.

Yours faithfully


Divisional Forest Officer,
Wildlife Management,
Nagarjunasagar

Copy submitted to Additional Principal Chief Conservator of Forests (CAMP) & FCA Aranya bhavan, Telangana, Hyderabad for favour of information.


Divisional Forest Officer,
Wildlife Management,
Nagarjunasagar

COMPENSATORY AFFORESTATION SCHEME FOR RAISING OF 187.677 Ha (BHA) PLANTATIONS IN NON-FOREST AREAS IN WILDLIFE MANAGEMENT DI*
(In lieu of diversion of forest land being diverted under Telangana Drinking Water Supply Project of Nalgonda District in flo. RWS & S Department)

Sl. No	Item of work	Unit Cost		2016-17			2017-18			2018-19			2019-20			2020-21			2021-22			2022-23			2023-24		
		Per	Rs in (Lakhs)	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
I	Raising of plantations (BHA)																										
1	Raising of Nursery and maintenance	20000 nos	3.735	0.352	3.735	6.575	0.380	4.108	7.806	0.544	4.519	12.293	0.724	4.971	17.994												
2	Infrastructure to Nursery	1	2.000	1.000	2.000	2.000																					
3	Advance Operations	Ha	0.290	17.840	0.290	5.171	33.944	0.319	10.823	55.860	0.351	19.602	80.000	0.386	30.864												
4	Raising of plantations	Ha	0.295		0.295		17.840	0.324	5.784	33.944	0.357	12.106	55.690	0.382	21.927	80.000	0.432	34.625									
	Sub Total :					13.746			24.413			44.001			70.784			34.625			0.000			0.000			0.000
II	Maintenance of plantations																										
1	1st Year	Ha	0.87	0.00	0.87	0.00	0.00	0.74	0.00	17.84	0.81	14.51	33.94	0.89	30.37	55.89	0.96	55.01	80.00	1.08	86.61	0.00		0.00	0.00		0.00
2	2nd Year	Ha	0.87	0.00	0.87	0.00	0.00	0.74	0.00	0.00	0.81	0.00	17.84	0.89	15.98	33.94	0.96	33.41	55.89	1.08	80.51	80.00	1.19	95.26	0.00		0.00
3	3rd Year	Ha	0.87	0.00	0.87	0.00	0.00	0.74	0.00	0.00	0.81	0.00	0.00	0.89	0.00	17.84	0.96	17.56	33.94	1.08	36.75	55.89	1.19	66.56	80.00	1.31	104.80
4	4th Year	Ha	0.013	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	17.84	0.02	0.37	33.94	0.02	0.77	55.89	0.03	1.40
5	5th Year	Ha	0.013	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	17.84	0.02	0.41	33.94	0.03	0.85
6	6th Year	Ha	0.013	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	17.84	0.03	0.45
7	7th Year	Ha	0.013	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	17.84	0.03	0.45
8	8th Year	Ha	0.013	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	17.84	0.03	0.45
9	Erection of Plantation Boards	Nos	0.10	2.00	0.10	0.20	2.00	0.11	0.22	2.00	0.12	0.24															
10	Purchase of Imported soil	LS	10.00	LS	10.00	10.00																					
11	Seed Broadcast	Ha	0.01	50.00	0.01	0.54	50.00	0.01	0.59	50.00	0.01	0.65	37.67	0.14	5.09												
	Sub Total :					10.74			0.81			16.41			51.42			106.98			184.24			163.01			107.50
III	Infrastructure to Nursery, SMC Works, Fencing, Firelines, Inspection Path, Miscellaneous etc																										
1	Drilling of Bore wells (incl. 180mm dia PVC 08Kgs/cm2 casing pipe, Geological survey charges etc.)	Nos	1.02		1.02		2.00	1.12	2.24	2.00	1.23	2.46	2.00	1.36	2.71												
2	Installation of Solar Pump sets incl. pipe line	Nos	6.50		6.50		2.00	7.15	14.30	2.00	7.87	15.73	2.00	8.65	17.30												
3	Construction of Watcher Sheds	Nos	3.50		3.50			3.86		1.00	4.24	4.24	1.00	4.66	4.66	1.00	5.12	5.12									
4	Engaging Protection to Watcher	No	0.80	6.00	0.80	4.82	6.00	0.88	5.31	6.00	0.97	5.84	6.00	1.07	6.42	6.00	1.18	7.06	6.00	1.29	7.77	6.00	1.42	8.65	6.00	1.57	9.40
5	Construction of Boundary Pillars	Nos	0.09	0.00	0.09		100.00	0.10	9.90	100.00	0.11	10.89	100.00	0.12	11.98												
6	Digging of Perimeter Trench	Km	1.48	5.00	1.48	7.42	5.00	1.63	8.16	7.00	1.80	12.57															
7	Digging of Staggered Contour Trench	Cmt	0.0025	1350.00	0.0025	3.38	1350	0.0028	3.71	1350.00	0.0030	4.08	1350.00	0.0033	4.49	1350.00	0.0037	4.94	1350.00	0.0040	5.44	1362.2	0.0044	6.03			
8	Compound wall (CRS) around CA	Km	50.00	4.00	50.00	200.00	4.00	55.00	220.00	4.50	60.50	272.25															
9	Construction of Check Dams	Nos	5.13	2.00	5.13	10.25	2.00	5.64	11.28	2.00	6.20	12.40	2.00	6.82	13.65	2.00	7.50	16.01	2.00	8.26	16.51	2.00	9.08	18.16	2.00	9.90	19.99
10	Construction of Fire Watch Tower	No	10.00		10.00		1.00	11.00	11.00	1.00	12.10	12.10	1.00	13.31	13.31												
11	Construction of Mini Percolation	No	1.10	2.00	1.10	2.20	2.00	1.21	2.42	2.00	1.33	2.66	1.00	1.46	1.46	1.00	1.61	1.61	1.00	1.77	1.77	1.00	1.95	1.95	1.00	2.14	2.14
12	Construction of SGPs	No	0.25	140.00	0.25	35.00	140.00	0.28	38.50	140.00	0.30	42.35	140.00	0.33	46.59	140.00	0.37	51.24	50.00	0.40	20.13	50.00	0.44	22.14	50.00	0.49	24.36
13	Creation of New Fire lines	Km	0.16	5.00	0.16	0.80	5.00	0.18	0.88	5.00	0.19	0.97	3.00	0.21	0.64												
14	Creation of Inspection path	Km	0.10	5.00	0.10	0.51	5.00	0.11	0.56	5.00	0.12	0.61	3.00	0.14	0.41												
15	Construction of Gate	No	1.06		1.06		2.00	1.16	2.32	2.00	1.28	2.56	2.00	1.41	2.81												
16	Purchase of Tractor with trailer and	No	10.00	1.00	10.00	10.00																					
17	Purchase of Agar Machine with	No	8.00	1.00	8.00	8.00																					
18	Maintn of Vehicles for 13 Yrs	LS	0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50
19	Publicity & Awareness	LS	15.00	LS		5.00	LS		5.00	LS		5.00	LS		5.00	LS		5.00	LS		5.00	LS		5.00	LS		5.00
20	Purchase of GPS	No	0.30	25.00	0.30	7.50	25.00	0.30	7.50																		
	Sub Total :					296.379			343.580			407.214			126.924			85.493			52.118			57.334			56.381
	Admin Cost @ 10% over I & II					2.449			2.523			5.941			12.221			14.050			18.424			19.301			10.750
	Grand Total :					322.314			371.330			472.563			261.352			240.046			264.786			236.650			174.628

* Adv. Operations, Raising of Plantations & Maintenance (1st Yr to 8th Yr) of plantations, and other work components added 10% to unit cost to each year.

VISION NAGARJUNASAGAR

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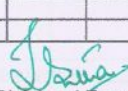
Sl. No	Item of work	Unit Cost		2024-25			2025-26			2026-27			2027-28			2028-29			Total	
		Per	Rs in (Lakhs)	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Rate	Fin	Phy	Fin
1	2	3	4	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
I	Raising of plantations (BHA)																			
1	Raising of Nursery and maintenance	20000 nos	3.735																2.000	44.668
2	Infrastructure to Nursery	1	2.000																1.87.67	2.000
3	Advance Operations	Ha	0.290																187.67	66.459
4	Raising of plantations	Ha	0.295																187.67	74.343
	Sub Total :					0.000			0.000			0.000			0.000			0.000		187.470
II	Maintenance of plantations																			
1	1st Year	Ha	0.67	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	187.67	188.51
2	2nd Year	Ha	0.67	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	187.67	205.16
3	3rd Year	Ha	0.67	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	187.67	225.67
4	4th Year	Ha	0.013	80.00	0.03	2.20	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	187.67	4.74
5	5th Year	Ha	0.013	55.89	0.03	1.54	80.00	0.03	2.42	0.00		0.00	0.00		0.00	0.00		0.00	187.67	5.22
6	6th Year	Ha	0.013	33.94	0.03	0.93	55.89	0.03	1.69	80.00	0.03	2.65	0.00		0.00	0.00		0.00	187.67	5.74
7	7th Year	Ha	0.013	17.84	0.03	0.49	33.94	0.03	1.03	55.89	0.03	1.65	80.00	0.04	2.93	0.00		0.00	187.67	6.31
8	8th Year	Ha	0.013	0.00	0.03	0.00	17.84	0.03	0.54	33.94	0.03	1.13	55.89	0.04	2.05	80.00	0.04	3.22	187.67	6.94
9	Erection of Plantation Boards	No.s	0.10																6.00	0.66
10	Purchase of Imported soil	LS	10.00																1.87.67	10.00
11	Seed Broad casting	Ha	0.01	0.00															187.67	6.88
	Sub Total :					5.17			5.68			5.66			4.98			3.22		683.82
III	Infrastructure to Nursery, SMC Works, Fencing, F																			
1	Drilling of Bore wells (incl. 150mm dia PVC 08Kgs/cm2 casing pipe, Geological survey charges etc.)	No.s	1.02																6.00	7.41
2	Installation of Solar Pump sets incl. pipe line	No.s	6.50																6.00	47.33
3	Construction of Watcher Sheds	No.s	3.50																3.00	14.02
4	Engaging Protection to Watcher	No	0.80	6.00	1.72	10.34	6.00	1.90	11.37	6.00	2.09	12.51	6.00	2.29	13.76	6.00	2.52	15.14	6.00	118.30
5	Construction of Boundary Pillars	Nos	0.09																300.00	32.77
6	Digging of Periperal Trench	Km	1.48																17.00	28.15
7	Digging of Staggered Contour Trench	Cmt	0.0025																9482.20	32.07
8	Compound wall (CRS) around CA	Km	50.00																12.50	692.25
9	Construction of Check Dams	Nos	5.13	2.00	10.99	21.98	2.00	12.09	24.17	2.00	13.30	26.59	2.00	14.63	29.25	2.00	16.09	32.18	26.00	251.41
10	Construction of Fire Watch Tower	No	10.00																3.00	36.41
11	Construction of Mini Percolation	No	1.10	1.00	2.36	2.36	1.00	2.59	2.59	1.00	2.85	2.85	1.00	3.14	3.14	1.00	3.45	3.45	15.00	30.62
12	Construction of SGPs	No	0.25	50.00	0.54	26.79	50.00	0.59	29.47	50.00	0.65	32.42	50.00	0.71	35.66	50.00	0.78	39.23	1100	443.90
13	Creation of New Fire lines	Km	0.16																	3.29
14	Creation of Inspection path	Km	0.10																	2.09
15	Construction of Gate	No	1.05																5.00	7.99
16	Purchase of Tractor with trally and	No	10.00																1.00	10.00
17	Purchase of Agar Machine with	No	8.00																1.00	8.00
18	Maintn of Vehicles for 13 Yrs	LS	0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS		0.50	LS	6.50
19	Publicity & Awareness	LS	15.00																LS	15.00
20	Purchase of GPS	No	0.30																10.00	15.00
	Sub Total :					61.970			98.117			74.878			82.316			90.498		1802.203
	Admin Cost @ 10% over I & II					0.517			0.568			0.566			0.498			0.322		85.129
	Grand Total :					67.652			74.367			81.100			87.792			94.044		2738.623

[Signature]
Divisional Forest Officer (WL)
Nagarjunasagar

Estimate for Raising of Nursery 5"x9" and Conversion to 8" X 12"

Sl.No.	Description of the work	FSR/SSR	Qty		Rate	Per	Amount
1	2	3	4		5	6	7
1	Site preparation for New site - clearing of growth ,weeds grass etc.,	1.03.01	13.52	Beds	44.12	Bed	597
2	Cost and Transport of ingredients for Potting Mixture: (As per CSSR) Red Soil, tank-silt, FYM in 2:1:1 ratio. To this soil mixture, 220 gm of Indophyll M-45, 4.5 kg of single super phosphate (SSP) and 250 gm of phorate granules per 1 cum of potting mixtur						
	12.5 cm X 22.5 cm(5"x9")= 1.12 cum vol. for 1000 bags	01.03.06	23000	No's	348.16	1000 No's	8008
	b) For every extra km beyond 5 km upto 25 km (20 Km)						
	12.5 cm X 22.5 cm(5"x9")= 1.12 cum vol. for 1000 bags	01.03.08	23000	No's	9.07	1000 No's	3129
4	Cost of polythene bags (5"x9") 200 gauge (15% Extra)	As per Lowest tender rate	62.84	Kg's	129	1 Kg	8106
5	Preparation of potting mixture Red Soil and Clayey Soil in 2:1 ratio by powdering various ingredients sieving and mixing then in the prescribed proportion, Opening the bags and filling with potting mixture and gently pressing the same with finger tips and a						
	12.5 cm X 22.5 cm(5"x9") size bags : 1700 bags / bed	01.03.10	23000	No's	830.95	1000 No's	19112
6	Cost of seed		23000	No's	As per actuals		2000
7	Picking out seedlings from primary beds and transplanting in bags	01.03.12	23000	No's	122.74	1000 No's	2823
8	Watering the plants twice a day for 10 m x 1 m size bed 1700 No's/per bed (5"x9") (July,2016 to Oct,2016) (4 Months)	01.03.14	11.76	Beds	238.19	. Bed/ month	11204
9	Weeding only three times during raising year for 10 m x 1 m size bed 1700 No's/per bed (5"x9")	01.03.16	11.76	Beds	43.74	per bed /weeding	1543
10	Shifting and grading and rearranging in beds for 10 m x 1 m size bed 1700 No's/per bed (5"x9") (only once in Sept, 2016)	01.03.19	11.76	Beds	204.28	per bed /shifting	2402
11	Cost of Chemicals, insecticides, pesticides etc.,	01.03.21	20000	No's	As per actuals		500
12	Weeding in the space between beds	01.03.23	11.76	Beds	29.81	Bed	351
Conversion of Root Trainer Plants							
13	Cost and Transport of ingredients for Potting Mixture: Red Soil, tank-silt, FYM in 2:1:1 ratio. To this soil mixture, 220 gm of Indophyll M-45, 4.5 kg of single super phosphate (SSP) and 250 gm of phorate granules per 1 cum of potting mixture will be adde						
	v) 5"x9" to 8"x12" poly bags (3.82-1.12=2.70 cum)	01.03.28	20000	Nos	864.05	1000 Nos	17281

	For Every extra km beyond 5 km upto 25 km						
	v) 5"x9" to 8"x12" polybags (3.82-1.12=2.70 cum)	01.03.33	20000	Nos	21.87	1000 Nos	4057
14	Preparation of potting mixture Red Soil and Clayey Soil in 2:1 ratio by powdering various ingredients sieving and mixing then in the prescribed proportion, Opening the bags and filling with potting mixture and gently pressing the same with finger tips and a						
	V) 5"x9" to 8"x12" polybags (3.82 - 1.12= 2.70 cum)	01.03.38	20000	No's	1478.68	1000 No's	29574
15	Weeding the plants (1100 no. of 6"x12"bags; 800 no. of 8"x12" bags; and 400 no. of 10"x16" bags) from November - March: 2 weedings						
	1st weeding - December	01.03.44	25	Beds	43.74	Bed/Weeding	1094
	2nd weeding - February	01.03.45	25	Beds	43.74	Bed/Weeding	1094
16	Shifting, Grading and rearranging in secondary beds - One Grading in February	01.03.46	25	Beds	204.28	Bed/Weeding	5107
17	Watering the plants manually twice a day (from November - March) with rose spray or finely perforated nozzle attached to a hose pipe						
	a) Manually with rose spray or finely perforated nozzle attached to a hose pipe	01.03.47	25	Beds	238.19	Per bed/ Month	29774
18	Application prophylactic foliar spray of 0.2% of Carbendazim / Dithane M-45 and any organo-phosphate (Monocrotophos / Phosphamidon @ 3-4 ml in 1 lit of water) at regular interval (once in a month from Dec - March) alternatively. Similarly application of m	01.03.49	By Nursery Watcher				
19	Cost of foliar nutrient formulations like multiplex or NPK-19:19:19; fungicides and insecticides (from Dec - March)	01.03.50	As per actuals				500
20	Contingencies/Cost of pipes/nursery board/nursery implements/Electricity bill/Running and maintenance Charges of Oil Engine (Bills to be verified and Certified by the ACF/DFO) etc.,	01.03.51	20000	No's	As per actuals (Subject to maximum of 5% of estimate cost during raising year)		5236
21	Cost of protection during the year from 08/2016 to 03/2016 (8 months)	01.05.04	8	months	7500	month	60000
	Total :-						213491
22	Maintenance of plants for 18 months		20000	each	8		160000
	Rounding off						9
	Grand Total :-						373500

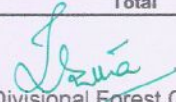

 Divisional Forest Officer (WL)
 Nagarjunasagar

Advance Operations (BHA Model)

2016-17

400 plants / Ha

Sl. No	Item of Work	F.S.R. or SSR item (2016-17)	Quantity		Rate	Per		Amount
1	2	3	4	5	6	7	8	9
1	Survey with GPS (only staff to carry out)	02.19.01	1	Plantation	311.04	1	Plantation	311.00
2	Alignment & Stacking including laying of base line in 3x3 mtrs wspace (1111 No.Per ha of effective area suitable for planting)	02.19.03	400	Nos	74.20	100	No.s	297.00
3	Cost of Preparation of stakes (0.45 m length) including transportation to site	02.19.04	400	Nos	47.30	100	No.s	189.00
4	Digging of 0.60 cm3 pits (Hard soil like gravel and Moram)	02.16.06	400	pits	50.59	1	Pit	20236.00
5	Digging of Staggered Contour trenches (SCTs) on the lower side of the planting point (Manual) - size 1 m length, 0.45 m top-width, 0.30 bottom width and 0.45 m depth; earth work value for trench 0.169 cum / SCT, thus it comes to total 1111/ ha in the effe							
	Hard soils like Gravel and Moram	02.19.16	33.80	cum	218.18	1	Cum	7374.48
	Contingencies	As per actuals						578.00
				2016-17 Total :				28985.48
				Add 10% extra for 2017-18				2899.00
				Adv. Operations (Platn)Total :				31884.48
1	Drilling of bore well		300	Rmt	285.00	1	Rmt	85500.00
i	180 mm dia PVC 06 Kgs/cm2 casing pipe including all taxes etc		20	Rmt	696.12	1	Rmt	13922.00
ii	Geological Survey charges		1	Nos	1000.00	1	each	1000.00
iii	Contingencies, L.S				As per Actuals			750.00
Sub-Total for Drilling of Bore well								101172.00
2	Installation of Solar Pump set incl. pipe lince (As per Quotation)		1	No	650000.00	1	No	650000.00
3	Construction of Watcher Shed		1	No	350000.00	1	No	350000.00
				Total				1,000,000.00

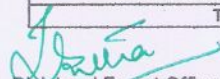

 Divisional Forest Officer (WL)
 Nagarjunasagar

Raising of Plantation (BHA Model)

2017-18

400 plants / Ha

Sl. No	Item of Work	F.S.R. or SSR item (2016-17)	Quantity		Rate	Per		Amount
1	2	3	4	5	6	7	8	9
1	Transport of Bag Plants/ Root trainer plants from nursery site to plantation site including loading and unloading upto 5 Km lead 20 X 30cm (8"X12") bag plants	02.02.03	400	Nos	173.49	100	No.s	694.00
2	Transport of Bag Plants/ Root trainer plants from nursery site to plantation site including loading and unloading beyond 5 Km - extra for every each Km. extra 25 Km 20 X 30cm (8"X12") bag plants	02.02.06	400	Nos	6.75	100	No.s	675.00
3	Internal transportation of bag plants / Root trainers to planting points on head loads 20 X 30cm (8"X12") bag plants	02.02.12	400	Nos	109.20	100	No.s	437.00
4	Planting of bag plants in 0.60 mts cube pits	02.20.04	400	Nos	363.37	100	No.s	1453.00
5	Replacement of Casualties 20% during Raising & 25% in 1st year (In case of Eucalyptus 10% during raising and no casualty replacement for further maintenance)	02.21.03	100	No.s	1.82	1	No.s	182.00
6	Transport of Bag Plants/ Root trainer plants from nursery site to plantation site including loading and unloading upto 5 Km lead 20 X 30cm (8"X12") bag plants	02.02.03	100	Nos	173.49	100	No.s	173.00
7	Transport of Bag Plants/ Root trainer plants from nursery site to plantation site including loading and unloading beyond 5 Km - extra for every each Km. extra 25 Km 20 X 30cm (8"X12") bag plants	02.02.06	100	Nos	6.75	100	No.s	169.00
8	Internal transportation of bag plants / Root trainers to planting points on head loads 20 X 30cm (8"X12") bag plants	02.02.12	100	Nos	109.20	100	No.s	109.00
9	Planting of bag plants in 0.45 mts cube pits	02.20.04	100	Nos	363.37	100	No.s	363.00
10	Cost of Chemicals / fertilizers	02.21.04	As per Actuals					400.00
11	Application of fertilizers	02.21.05	400	Nos	32.62	100	No.s	130.00
12	1st circular weeding (July - August)	02.21.06	400	Nos	103.79	100	No.s	415.00
13	2nd Circular Weeding (Sep, Oct)	02.21.07	400	Nos	103.79	100	Nos	415.00
14	Deep Soil Working (Nov, dec)	02.21.09	400	Nos	545.08	100	Nos	2180.00
15	Creation of sector lines/ Inspection paths/ Fire lines 3m. Wide around the plantation during raising year	02.21.10	100	Rmt	5.08	1	Rmt	508.00
16	Pruning of lower Branch initials	02.21.11	400	Nos	103.19	100	Nos	413.00
17	Brush Wood fencing	02.21.12	500	Rmt	24.12	1	Rmt	12060.00
18	Enumeration of row-wise survival growth twice a year	02.21.13	To be done by the staff					0.00
19	Cost of plantation board with iron anglers and fixing - 1.20 x 0.90 m	As per Actuals	1	Nos	5500.0	1	No.s	5500.00
20	Cost of protection (Per 25 Ha One Watcher) for 9 months 9x7500 = 67500 / 25 Ha	02.21.14	1	ha	2700.0	1	ha	2700.00
21	Contingencies, Journals, implements etc.,	As per Actuals	As per Actuals					500.00
Total :								29,476.00
Added 10% extra for 2017-18								2,948.00
Total :								32,424.00
Added 10% extra for 2018-19								3,242.00
Total :								35,666.00
Added 10% extra for 2019-20								3,567.00
Total :								39,233.00
Added 10% extra for 2020-21								3,923.00
Total :								43,156.00
Added 10% extra for 2021-22								4,316.00
Total :								47,472.00

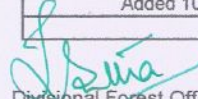

 Divisional Forest Officer (WL)
 Nagarjunasagar

Ist Yr Maintenance (BHA Model)

2018-19

400 plants / Ha

Sl. No	Item of Work	F.S.R. or SSR item (2016-17)	Quantity		Rate	Per		Amount
1	2	3	4	5	6	7	8	9
1	Re-opening of pits and casualty replacement in hill afforestation during raising year and 1st year maintenance	02.22.01	100	Nos	363.37	100	No.s	363.00
2	1st circular weeding (July - August)	02.21.06	400	Nos	103.79	100	No.s	415.00
3	2nd Circular Weeding (Sep, Oct)	02.21.07	400	Nos	103.79	100	Nos	415.00
4	Deep Soil Working (Nov, dec)	02.21.09	400	Nos	545.08	100	Nos	2180.00
5	Pruning of lower Branch initials	02.21.11	400	Nos	103.19	100	Nos	206.38
6	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
7	Cost of protection (Per 25 Ha One Watcher) for 12 months 12x7500 = 90000 / 25 Ha	02.23.05	1	ha	3600.0	1	ha	3600.00
8	Contingencies, Journals, implements etc.,	As per Actuals	As per Actuals					500.00
9	Watering to the plants (27 waterings)	2.17.05	10800	No's	5.49	1	plant	59292.00
Total :								67,225.4
Added 10% extra for 2017-18								6,723.00
Total :								73,948.4
Added 10% extra for 2018-19								7,395.00
Total :								81,343.4
Added 10% extra for 2019-20								8,134.00
Total :								89,477.38
Added 10% extra for 2020-21								8,948.00
Total :								98,425.38
Added 10% extra for 2021-22								9,843.00
Total :								108,268.38
Added 10% extra for 2022-23								10,827.00
Total :								119,095.38
Added 10% extra for 2023-24								11,910.00
Total :								131,005.38
Added 10% extra for 2024-25								13,101.00
Total :								144,106.38

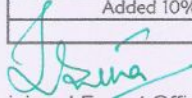

 Divisional Forest Officer (WL)
 Nagarjunasagar

2nd Yr Maintenance (BHA Model)

2018-19

400 plants / Ha

Sl. No	Item of Work	F.S.R. or SSR item (2016-17)	Quantity		Rate	Per		Amount
1	2	3	4	5	6	7	8	9
1	Re-opening of pits and casualty replacement in hill afforestation during raising year and 1st year maintenance	02.22.01	100	Nos	363.37	100	No.s	363.00
2	1st circular weeding (July - August)	02.21.06	400	Nos	103.79	100	No.s	415.00
3	2nd Circular Weeding (Sep, Oct)	02.21.07	400	Nos	103.79	100	Nos	415.00
4	Deep Soil Working (Nov, dec)	02.21.09	400	Nos	545.08	100	Nos	2180.00
5	Pruning of lower Branch initials	02.21.11	400	Nos	103.19	100	Nos	206.38
6	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
7	Cost of protection (Per 25 Ha One Watcher) for 12 months 12x7500 = 90000 / 25 Ha	02.23.05	1	ha	3600.0	1	ha	3600.00
8	Contingencies, Journals, implements etc.,	As per Actuals	As per Actuals					500.00
9	Watering to the plants (27 waterings)	2.17.05	10800	No's	5.49	1	plant	59292.00
Total :								67,225.4
Added 10% extra for 2017-18								6,723.00
Total :								73,948.4
Added 10% extra for 2018-19								7,395.00
Total :								81,343.4
Added 10% extra for 2019-20								8,134.00
Total :								89,477.38
Added 10% extra for 2020-21								8,948.00
Total :								98,425.38
Added 10% extra for 2021-22								9,843.00
Total :								108268.38
Added 10% extra for 2022-23								10,827.00
Total :								119,095.38
Added 10% extra for 2023-24								11,910.00
Total :								131,005.38
Added 10% extra for 2024-25								13,101.00
Total :								144,106.38
Added 10% extra for 2025-26								14,411.00
Total :								158,517.38

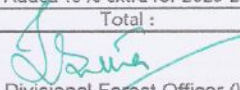

 Divisional Forest Officer (WL)
 Nagarjunasagar

3rd Yr Maintenance (BHA Model)

2018-19

400 plants / Ha

Sl. No	Item of Work	F.S.R. or SSR item (2016-17)	Quantity		Rate	Per		Amount
1	2	3	4	5	6	7	8	9
1	Re-opening of pits and casualty replacement in hill afforestation during raising year and 1st year maintenance	02.22.01	100	Nos	363.37	100	No.s	363.00
2	1st circular weeding (July - August)	02.21.06	400	Nos	103.79	100	No.s	415.00
3	2nd Circular Weeding (Sep, Oct)	02.21.07	400	Nos	103.79	100	Nos	415.00
4	Deep Soil Working (Nov, dec)	02.21.09	400	Nos	545.08	100	Nos	2180.00
5	Pruning of lower Branch initials	02.21.11	400	Nos	103.19	100	Nos	206.38
6	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
7	Cost of protection (Per 25 Ha One Watcher) for 12 months $12 \times 7500 = 90000 / 25$ Ha	02.23.05	1	ha	3600.0	1	ha	3600.00
8	Contingencies, Journals, implements etc.,	As per Actuals	As per Actuals					500.00
9	Watering to the plants (27 waterings)	2.17.05	10800	No's	5.49	1	plant	59292.00
Total :								67,225.4
Added 10% extra for 2017-18								6,723.00
Total :								73,948.4
Added 10% extra for 2018-19								7,395.00
Total :								81,343.4
Added 10% extra for 2019-20								8,134.00
Total :								89,477.38
Added 10% extra for 2020-21								8,948.00
Total :								98,425.38
Added 10% extra for 2021-22								9,843.00
Total :								108268.38
Added 10% extra for 2022-23								10,827.00
Total :								119,095.38
Added 10% extra for 2023-24								11,910.00
Total :								131,005.38
Added 10% extra for 2024-25								13,101.00
Total :								144,106.38
Added 10% extra for 2025-26								14,411.00
Total :								158,517.38


 Divisional Forest Officer (WL)
 Nagarjunasagar

4th Yr Maintenance (BHA Model)

2021-22

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2014-15	Per		Amount
1	2	3	4	5	6	7	8	9
1	Pruning of lower foliage/ branches	02.23.03	400	No.s	103.19	100	Each	413.00
2	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
4	Contingencies, journals, implements etc 5%		1	Ha	As per actuals			500.00

TOTAL 1167.00

Add 10% extra for 2016-17 : 117.00

TOTAL 1284.00

Add 10% extra for 2017-18 : 128.00

TOTAL 1412.00

Add 10% extra for 2018-19 : 141.00

TOTAL 1553.00

Add 10% extra for 2019-20 : 155.00

TOTAL 1708.00

Add 10% extra for 2020-21 : 171.00

TOTAL : 1879.00

Add 10% extra for 2021-22 : 188.00

GRAND TOTAL : 2067.00

Add 10% extra for 2022-23 : 207.00

GRAND TOTAL : 2274.00

Add 10% extra for 2023-24 : 227.00

GRAND TOTAL : 2501.00

Add 10% extra for 2024-25 : 250.00

GRAND TOTAL : 2751.00

Add 10% extra for 2025-26 : 275.00

GRAND TOTAL : 3026.00

Divisional Forest Officer (WL)
Nagarjunasagar

5th Yr Maintenance (BHA Model)

2022-23

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2014-15	Per		Amount
1	2	3	4		5	6		7
1	Pruning of lower foliage/ branches	02.23.03	400	No.s	103.19	100	Each	413.00
2	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
4	Contingencies, journals, implements etc 5%		1	Ha	As per actuals			500.00

TOTAL 1167.00

Add 10% extra for 2016-17 : 117.00

TOTAL 1284.00

Add 10% extra for 2017-18 : 128.00

TOTAL 1412.00

Add 10% extra for 2018-19 : 141.00

TOTAL 1553.00

Add 10% extra for 2019-20 : 155.00

TOTAL 1708.00

Add 10% extra for 2020-21 : 171.00

TOTAL 1879.00

Add 10% extra for 2021-22 : 188.00

TOTAL : 2067.00

Add 10% extra for 2022-23 : 207.00

GRAND TOTAL : 2274.00

Add 10% extra for 2023-24 : 227.00

GRAND TOTAL : 2501.00

Add 10% extra for 2024-25 : 250.00

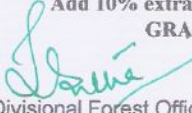
GRAND TOTAL : 2751.00

Add 10% extra for 2025-26 : 275.00

GRAND TOTAL : 3026.00

Add 10% extra for 2026-27 : 303.00

GRAND TOTAL : 3329.00


Divisional Forest Officer (WL)
Nagarjunasagar

6th Yr Maintenance (BHA Model)

2023-24

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2014-15	Per		Amount
1	2	3	4	5	6	7	8	9
1	Pruning of lower foliage/ branches	02.23.03	400	No.s	103.19	100	Each	413.00
2	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
4	Contingencies, journals, implements etc 5%		1	Ha	As per actuals			500.00

TOTAL 1167.00

Add 10% extra for 2016-17 : 117.00

TOTAL 1284.00

Add 10% extra for 2017-18 : 128.00

TOTAL 1412.00

Add 10% extra for 2018-19 : 141.00

TOTAL 1553.00

Add 10% extra for 2019-20 : 155.00

TOTAL 1708.00

Add 10% extra for 2020-21 : 171.00

TOTAL 1879.00

Add 10% extra for 2021-22 : 188.00

TOTAL 2067.00

Add 10% extra for 2022-23 : 207.00

TOTAL 2274.00

Add 10% extra for 2023-24 : 227.00

GRAND TOTAL : 2501.00

Add 10% extra for 2024-25 : 250.00

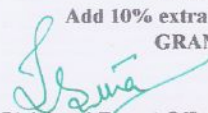
GRAND TOTAL : 2751.00

Add 10% extra for 2025-26 : 275.00

GRAND TOTAL : 3026.00

Add 10% extra for 2026-27 : 303.00

GRAND TOTAL : 3329.00


Divisional Forest Officer (WL)
Nagarjunasagar

7th Yr Maintenance (BHA Model)

2024-25

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2014-15	Per		Amount
1	2	3	4		5	6		7
1	Pruning of lower foliage/ branches	02.23.03	400	No.s	103.19	100	Each	413.00
2	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
4	Contingencies, journals, implements etc 5%		1	Ha	As per actuals			500.00

TOTAL 1167.00

Add 10% extra for 2016-17 : 117.00

TOTAL 1284.00

Add 10% extra for 2017-18 : 128.00

TOTAL 1412.00

Add 10% extra for 2018-19 : 141.00

TOTAL 1553.00

Add 10% extra for 2019-20: 155.00

TOTAL 1708.00

Add 10% extra for 2020-21 : 171.00

TOTAL 1879.00

Add 10% extra for 2021-22 : 188.00

TOTAL : 2067.00

Add 10% extra for 2022-23 : 207.00

TOTAL : 2274.00

Add 10% extra for 2023-24 : 227.00

TOTAL : 2501.00

Add 10% extra for 2024-25 : 250.00

GRAND TOTAL : 2751.00

Add 10% extra for 2025-26 : 275.00

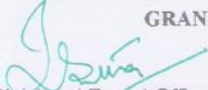
GRAND TOTAL : 3026.00

Add 10% extra for 2026-27 : 303.00

GRAND TOTAL : 3329.00

Add 10% extra for 2027-28 : 333.00

GRAND TOTAL : 3662.00


Divisional Forest Officer (WL)
Nagarjunasagar

8th Yr Maintenance (BHA Model)

2025-26

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2014-15	Per		Amount
1	2	3	4		5	6		7
1	Pruning of lower foliage/ branches	02.23.03	400	No.s	103.19	100	Each	413.00
2	Maintenance of fire lines	02.21.10	50	Rmt	5.08	1	Rmt	254.00
4	Contingencies, journals, implements etc 5%		1	Ha	As per actuals			500.00

TOTAL 1167.00

Add 10% extra for 2016-17 : 117.00

TOTAL 1284.00

Add 10% extra for 2017-18 : 128.00

TOTAL 1412.00

Add 10% extra for 2018-19 : 141.00

TOTAL 1553.00

Add 10% extra for 2019-20 : 155.00

TOTAL 1708.00

Add 10% extra for 2020-21 : 171.00

TOTAL 1879.00

Add 10% extra for 2021-22 : 188.00

TOTAL 2067.00

Add 10% extra for 2022-23 : 207.00

TOTAL 2274.00

Add 10% extra for 2023-24 : 227.00

TOTAL 2501.00

Add 10% extra for 2024-25 : 250.00

TOTAL 2751.00

Add 10% extra for 2025-26 : 275.00

GRAND TOTAL 3026.00

Add 10% extra for 2026-27 : 303.00

GRAND TOTAL 3329.00

Add 10% extra for 2027-28 : 333.00

GRAND TOTAL 3662.00

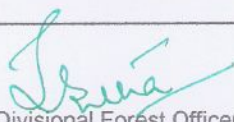
Add 10% extra for 2028-29 : 366.00

GRAND TOTAL 4028.00

 Divisional Forest Officer (WL)
 Nagarjunasagar

Estimate for Digging of Staggered Contour Trenches

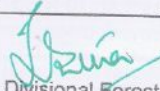
Sl.No	Description of the work	FSR/SSR 2016-17	Qty	Rate	Per	Amount
1	2	3	4	5	6	7
1	Digging of Staggered Contour Trenches of size 6m x 0.5 x 0.3 x 0.45 = 1.012 cum Each (Total 9350 No's x 1.012 cum = 9462.2 Cum)	02.19.16	1	218.18	Cum	218.18
2	Contingencies	As per Actuals				31.82
Total:						250.00


 Divisional Forest Officer,
 Wildlife Management,
 Nagarjunasagar.

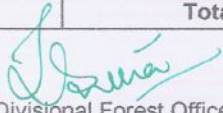
Abstract cum Detailed estimate for construction of check dam

Sl. No	Description of Work	No	L	B	D	Qty	Rate	Per	Amount
1	2	3	4	5	6	7	8	9	10
1	IRR CCDW 1.3 : Earth work Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m up to 0.60 m dia for foundation of canal cross drainage works and other approved structures and placing the excavated struff neatly in sp								
	a) Body wall	1	15.00	1.50	1.50	33.75			
	b) Wing wall U/s	2	2.50	1.20	1.50	9.00			
	c) Side wall D/s	2	3.00	1.20	1.50	10.80			
	d) Toe wall	1	15.00	0.60	0.80	7.20			
	e) Apron	1	12.60	3.00	0.30	11.34			
					cum	72.09	288.50	Cum	20797.965
2	IRR CCDW 2-5 : Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N/Sqm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all material								
	a) Body wall	1	15.00	1.30	1.50	29.25			
	b) Wing wall U/s	2	2.50	1.20	0.30	1.80			
	c) Side wall D/s	2	3.00	1.20	0.30	2.16			
	d) Toe wall	1	15.00	0.60	0.30	2.70			
	e) Apron	1	12.60	3.00	0.30	11.34			
					cum	47.25	4375.00	Cum	206718.75
3	IRR CC DW - 2-10 : Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N/mm2 grade cement concrete using 20 mm down size approved clean, hard, graded aggregates for sub structures/super structure works including c								
	b) Body wall super structure above ground (1.2+0.7)/2	1	15.00	0.95	1.50	21.38			
	Apron	1	12.60	3.00	0.10	3.78			
					cum	25.16	5209.00	Cum	131058.00
4	Filling foundation with R.R Masonary in cm (1:8) first sort including cost and conveyence of all charges etc., complete for finished of item work.								
	b) Wing wall U/s	2	2.50	1.20	1.20	7.20			
	c) Side wall D/s	2	3.00	1.20	1.20	8.64			
	d) Toe wall	1	15.00	0.60	0.50	4.50			
					cum	20.34	2579.00	Cum	52456.86
5	BLD CSTN : CRS Masonary in CM (1:6) Ist sort including cost and conveyence of all materials all labour charges all lead lifts etc., complete finished item of work.								
	b) Wing wall U/s (1+ 0.5/2)	2	2.50	0.75	1.90	7.13			
	c) Side wall D/s(1.9 +1.00/2 =1.45 h)	2	3.00	0.75	1.45	6.53			
	TOTAL :				Cum	13.65	2882.00	Cum	39339.30

6	IRRCCDW-4.10 : Providing 20 mm thick Plastering in CM (1:4) proportion by volume including cost of all materials, machinery, labour scaffolding clearing joints smooth finishing curing etc complete with initial lead upto 50 mts and all lifts								
	a) Wing wall out side U/s	2	2.50	0.00	1.90	9.50			
	b) Wing wall in side U/s	2	2.50	0.00	1.90	9.50			
	c) Side wall out side D/s	2	3.00	0.00	1.45	8.70			
	d) Side wall in side D/s	2	3.00	0.00	1.45	8.70			
					Sqm	36.40	394.00	Sqm	14341.60
8	Unforeseen item of expenditure								1288.00
							TOTAL :		466000.48
							Add 10% extra for 2016-17		46600.0475
							TOTAL :		512600.523


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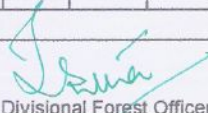
Abstract cum Detailed Estimate for Construction of Mini Percolation Tank					
Sl. No.	Description of Work	Qty	Rate	Per	Amount
1	2	3	4	5	6
1	IRR CAW 1.1 : Excavation in all kinds of soil including boulders above 0.3 m dia for canal seating of embankment, filter drains/ catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials machinery la				
	Stripping	90.00	112.00	Cum	10080.00
2	IRR CAW 2.1 : Providing imprevous hearting embankment with selected soil from approved boprrrow areas in layers of 25 cm before compaction including cost of all materials, machinary,labour, all operations such as excavation, sorting out transportating, s				
	Embankment area	582.60	146.00	Cum	85060
3	IRR-CAW-8-4: Providing and Constructing 45 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete (rubble stones:0.4 cum/spm)	18.00	237.45	Cum	4274
	TOTAL :				99414.00
4	Add L.S				586.00
				Total:-	100000.00
				Add 10% extra for 2016-17	10000
				Total:-	110000.00


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ESTIMATE FOR SEED BROADCASTING

400 plants / Ha

Sl. No	Item of work	F.S.R. Item No	Quantity		Rate as per FSR 2016-17	Per		Amount
1	2	3	4		5	6		7
1	b) Broadcasting of orthodox hard-coated treated seeds (with hot water treatment) of Sandra (Acacia chundra), Narlingi (Albizia amara), Moduga (Butea monosperma), Vepa (Azadirachta indica) and Rela (Cassia fistula) seeds - 2 kg seeds of each of the above species per ha (including cost of seeds) mixed uniformly and broadcasted. The broadcasting of seeds needs to be done in July when the rains is there and the soil is adequately moist. This operation has to be done in presence of Forest Range Officer and the date of broadcast has to be recorded in Plantation Journal. This operation has to be carried out every year for 2 years.	02.21.02	1	Ha	1080	1	Ha	1080.00
TOTAL								1080.00


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