

Principal Chief Conservator of Forest (H&F), M.S. Nagpur Latter No. Desk-17/CA/Nodal Cell/CR-40/11/2019-20, Date 04/10/2019

Model Rate Structure for Compensatory Afforestation • Model No. 5 • fencing and Irrigated Plantation

Name Of The Project :- Proposal for Diversion of 0.34 Hectare Forest Land for Rehabilitation and Up-gradation of Nagpur-Katol-Warud National Highway (NH 353J) from existing Km 60+100 (End of Katol bypass) to 101+085 (Warud up to Joint junction) two lane with paved shoulders in the state of Maharashtra.

Model rate structure for plantation of mixed tree species having rainfall less than 800 mm and medium quality, medium drained soil.

• Name of site : Mauza Chakdoh , Surway No. -10 Zudpi Jungle - Total Area 2.06 ha. Proposed area 1.00 Hect.

Range Kondhali Round Chameli Beat Ringnabodi

Spacement- 3m x 3m

Size of Pits- 0.45 x 0.45 x 0.45m

No. of seding- 1111 per ha.

Mauza - Chakdoh

Wage Rate - Rs. 387.23

St. No.	particulars of Works	Man Days	Wages	Material Supply	Total (Rs. Per Ha.)	Man Days	Wages	Material Supply	Total (Rs.)	Sancaction Latter Dv/Model No./Item No.
A. Pre Monsoon Works PPO/PYO										
1	(a) Survey and Demarcation	1.00	387.23	91.00	478.23	1.00	387.23	91.00	478.23	Latter Dt. 07/03/2018 Irrigated & Fencing Model No. 1 Item No. 1a
	(b) Preparation of treatment map (100m X 50m grid)	1.00	387.23	91.00	478.23	1.00	387.23	91.00	478.23	Item No. 1b
	(c) Digging trial pis of size 0.30x0.30x0.60 in corner of Grid	0.40	154.89	0.00	154.89	0.40	154.89	0.00	154.89	Item No. 1c
	(d) Fixing 60cm X 00.5cm x 12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No.etc complete (3 Pillars, Rs.75/-for each pillars)	0.00	0.00	225.00	225.00	0.00	0.00	225.00	225.00	Item No. 1d
	(e) Clearing of bushes and preparation of site (As per requirement)	10.00	3872.30	91.00	3963.30	10.00	3872.30	91.00	3963.30	Item No. 1e
2	Soil and moisture conservation works including collection of rubbles from areas upto 30m etc	31.00	12004.13	0.00	0.00	31.00	12004.13	0.00	12004.13	Item No. 2
3	Providing and fixing chain link fencing, 102 Rmt per ha. (With one gate+two wickets gates for one site) (Rs.1494/- per Rmt of basic rate + 20% for transportation of ave. leadplus 20% for tribal/remote area (by tender process.)(Rs.1494+149+149=1792/- per Rmt (1.60 Rmt hight with G.I. chain link size 50mmx50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item No.1744 for 2017-18)	0.00	0.00	182865.60	182865.60	0.00	0.00	182865.60	182865.60	As per SSR rates 201718 Item No. 1744

4	Alignment of pits at 3m x 3m spacement 1111 pits per ha. (0.25 per 100 pits and M&S @Rs. 2.24 per 50 pits)	2.78	1076.50	49.77	1126.27	2.78	1076.50	49.77	1126.27	latter Dt. 07/03/2018 Model No. 3A Item No. 8
5	Digging of pits of size 0.45 x 0.45 x 0.45m (1111 pits per ha.) 6.60 M.D. per 100 pits. Note :- As per local conditions provision for mechanized digging can be made.	73.33	28395.58	0.00	28395.58	73.33	28395.58	0.00	28395.58	Latter Dt. 07/03/2018 Irrigated & Fencing Plantation Model No. 1 Item No. 5 2500 pits instead of 1111 pits
6	Construction of 5.00 Rmt wide Inspection path 1 M.D. 100 Rmt	1.00	387.23	0.00	387.23	1.00	387.23	0.00	387.23	Item No. 6
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing color band and recording the same in Register & 0.75 M.D.) per 100 Plants	0.75	290.42	25.00	315.42	0.75	290.42	25.00	315.42	
8	Providing and fixing (4 feet x 3 feet information board each per site (Total 2 Sites)	0.00	0.00	5000.00	5000.00	0.00	0.00	10000.00	10000.00	Item No. 8
9	part Nursery cost of raising 3000 seedlings per ha. (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (wages Rs 11.90 and M&S Rs. 3.62 per plant)	46.71	18087.51	4825.48	22912.99	46.71	18087.51	4825.48	22912.99	Item No. 9 20% Casualty replacement in place of 10%
Total		167.97	65043.02	193263.85	246302.74	167.97	65043.02	198263.85	263306.87	
Contingency 3%				5797.92	7389.08			5947.92	7899.21	
Labour welfare 4%				7730.55	9852.11			7930.55	10532.27	
Grand Total		167.97	65043.02	206792.32	263543.94	167.97	65043.02	212142.32	281738.35	

B. First Year Operation

1	Part Nursery cost of raising 1333 seedlings per ha. (Wages Rs. 2.69, M & S Rs. 0.81) Rs= 3.77 per Seeding	14.80	5731.00	1079.73	6810.73	14.80	5731.00	1079.73	6810.73	latter Dt. 07/03/2019 Irrigated & Model No. 1 Item Casualty replacements 20%
2	Refilling of Pits by good quality soil including application of single super phosphate (1.66 MD per 100 Pits) @ 1.75	18.44	7140.52	1944.25	9084.77	18.44	7140.52	1944.25	9084.77	Item No. 2
3	Transportation of 1333 seedlings from Nursery to plantation site including loading & Unloading (0.14 M.D. per 100 Seedlings & M.S. Rs. 1.82 per seedlings)	1.87	724.12	2426.00	3150.12	1.87	724.12	2426.00	3150.12	Item No. 3 10% Extra Plantas to be Transported
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedlings)	11.11	4302.13	0.00	4302.13	11.11	4302.13	0.00	4302.13	Item No. 4

5	3 weeding (1 Rmt circular) and 2 soil working (4.00 M.D. per 100 seedlings) fertilizer application Rs. 0.82 per seedling	44.44	17208.50	911.02	18119.52	44.44	17208.50	911.02	18119.52	Item No.5
6	Watering 1111 seedlings November and December 1 time each, January to March 2 times each per seedlings 5 liter water, purchase of 2500 plastic can of 5 liter / maka @ Rs. 25/- each and 100 liter capacity 25 drums @Rs.400/- each for supplying water and water supply at @Rs. 0.05 per litre and wages for watering 1 M.D. for 150 seedlings	59.25	22943.38	54395.00	77338.38	59.25	22943.38	54395.00	77338.38	Item No.7
7	Casualty replacement (20% 222 seedlings per ha. (2 M.D. per 100 seedlings)	4.44	1719.30	0.00	1719.30	4.44	1719.30	0.00	1719.30	Item No.6 20% instead of 10%
8	Part Nursery cost for Causality replacement in SYO (222 seedlings per ha.) (wages Rs. 11.90 and material supply Rs. 3.62 total Rs. 12.55 per Seedlings)	7.77	3008.78	0.00	3008.78	7.77	3008.78	1607.28	4616.06	Item No.8 20% instead of 10%
9	Water and ward (9 months - 1 watcher per 10 ha.)	27.38	9298.52	0.00	9298.52	27.38	10602.36	0.00	10602.36	Item No.9
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 pants)	1.15	445.31	0.00	445.31	1.15	445.31	0.00	445.31	Item No.10
11	Fere Tracing	2.00	679.22	0.00	679.22	2.00	774.46	0.00	774.46	Item No.12
Total		192.65	73200.78	60756.00	133956.78	192.65	74599.86	62363.28	136963.14	
Contingency 3%				1822.68	4018.70			1870.90	4108.89	
Labour welfare 4%				2430.24	5358.27			2494.53	5478.53	
Grand Total		192.65	73200.78	65008.92	143333.76	192.65	74599.86	66728.71	146550.56	

C. Second Year Operations

1	Part Nursery cos for seedlings for causality replacement (500 seedlings per ha) labour rate @ Rs. 3.77 and M.S. Rs. 1.82 per seedlings	2.46	928.65	404.00	1332.65	2.46	952.59	404.00	1356.59	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model No. 1 Item 1 casualty replannment 20%
2	Transportation of 222 seedlings for causality replacement from nursery to plantation site (including loading & Unloading) wages 0.14 M.D. per 100 Seedlings & M.S. Rs. 1.82 per seedlings)	0.31	387.23	404.04	791.27	0.31	120.04	404.04	524.08	Item No. 2 20% instead 10%

3	Planting for casualty replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1719.30	0.00	1719.30	4.44	1719.30	0.00	1719.30	Item No. 3 20% instead of 10%
4	2 weedings and 1 soil working, with fertilizer application at 2.5 M.D. per 100 seedlings M.S. Rs. 0.82 per seedlings	27.77	10753.38	911.02	11664.40	27.77	10753.38	911.02	11664.40	Item No. 4
5	Watering 1111 seedlings November and December, January and June 1 times each and February to May 2 times each total 12 times 5 litre per seedlings, replacing 10% plastic can / matka @Rs. 25/- each replacing 250 cans, supplying water @Rs. 0.50/- per litre and watering 150 seedlings per M.D.	88.88	-298.35	36105.00	35806.65	88.88	34417.00	36105.00	70522.00	Item No. 5
6	watch and ward 12 months - 1 watcher per 10.00 ha	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Item No. 6
7	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 8
	Total	162.36	28398.56	37824.06	66222.62	162.36	62870.66	37824.06	100694.72	
	Contingency 3%			1134.72	1986.68			1134.72	3020.84	
	Labour welfare 4%			1512.96	2648.90			1512.96	4027.79	
	Grand Total	162.36	28398.56	40471.74	70858.21	162.36	62870.66	40471.74	107743.35	

D. Third Year Operations

1	1 weeding and 1 soil working (1.50 M.D. per 100 seedlings) applying fertilizer @ Rs. 0.82 per plant.	16.67	6455.12	611.02	7066.14	16.67	6455.12	611.02	7066.14	Letter Dt. 07/03/2018 Itigated & fencing Plantation Model No. 1 Item 1
2	watering 556 seedlings in November, December, January and June 1 time each and February to May 2 Times each total 12 times per seedlings 5 litre, water supply @ Rs.0.50/- litre and watering 150 seedlings per M.D.	44.48	17223.99	16680.00	33903.99	44.48	17223.99	16680.00	33903.99	Item No. 2
3	watch and ward 12 months - 1 watcher per 10.00 ha	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Item No. 3
4	Counting of survival percentage Grid wise and species wise and to note the same on register in may and october	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No. 5
5	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 6
	Total	101.65	39361.93	17316.02	56677.95	101.65	39361.93	17316.02	56677.95	
	Contingency 3%			519.48	1700.34			519.48	1700.34	
	Labour welfare 4%			692.64	2267.12			692.64	2267.12	
	Grand Total	101.65	39361.93	18528.14	60645.41	101.65	39361.93	18528.14	60645.41	

E. Fourth Year Operations

1	watch and ward 12 months - 1 watcher per 10.00 ha	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model No1 Item 1
2	Counting of survival percentage Grid wise and species wise and to note the same on register in may and october	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No. 2
3	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 3
	Total	40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
	Contingency 3%			0.75	471.23			0.75	471.23	
	Labour welfare 4%			1.00	628.31			1.00	628.31	
	Grand Total	40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	
1	Watch and ward 12 months 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Letter Dt 07/03/2018 Irrigated & fencing Plantation Model No. 1 Item 1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No. 2
3	Fire Tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 3
	Total	40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
	Contingency 3%			0.75	471.23			0.75	471.23	
	Labour welfare 4%			1.00	628.31			1.00	628.31	
	Grand Total	40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

G. Sixth Year Operations

1	Watch and ward 12 moths 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model No.1 Item No. 1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No. 2
3	Fire Tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 3
	Total	40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
	Contingency 3%			0.75	471.23			0.75	471.23	
	Labour welfare 4%			1.00	628.31			1.00	628.31	
	Grand Total	40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

H. Seventh Year Operations

1	Watch and ward 12 moths 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model No.1 Item no. 1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No 2
3	Fire Tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No. 3
	Total	40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
	Contingency 3%			0.75	471.23			0.75	471.23	
	Labour welfare 4%			1.00	628.31			1.00	628.31	
	Grand Total	40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

Eight Year Operations

1	Watch and ward 12 months 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	letter Dt 07/03/2018 Irrigated & fencing plantation model No.1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No.2
3	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No.3
Total		40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
Contingency 3%				0.75	471.23			0.75	471.23	
Labour welfare 4%				1.00	628.31			1.00	628.31	
Grand Total		40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

J. Ninth Year Operations

1	Watch and ward 12 months 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	letter Dt 07/03/2018 Irrigated & fencing plantation model No.1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No.2
3	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No.3
Total		40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
Contingency 3%				0.75	471.23			0.75	471.23	
Labour welfare 4%				1.00	628.31			1.00	628.31	
Grand Total		40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

1	Watch and ward 12 months 1 watcher per 10.00 ha.	36.50	14133.90	0.00	14133.90	36.50	14133.90	0.00	14133.90	letter Dt 07/03/2018 Irrigated & fencing plantation model No. 1 Item No.1
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	774.46	25.00	799.46	2.00	774.46	25.00	799.46	Item No.2
3	Fire tracing	2.00	774.46	0.00	774.46	2.00	774.46	0.00	774.46	Item No.3
Total		40.50	15682.82	25.00	15707.82	40.50	15682.82	25.00	15707.82	
Contingency 3%				0.75	471.23			0.75	471.23	
Labour welfare 4%				1.00	628.31			1.00	628.31	
Grand Total		40.50	15682.82	26.75	16807.36	40.50	15682.82	26.75	16807.36	

Place : Nagpur

Dated:

(Dr. Bharat Singh Hada)
Deputy Conservator of Forests
Nagpur Division, Nagpur

Model Rate Structure for Compensatory Afforestation • Model No. 5 fencing and Irrigated Plantation

Name Of The Project :- Proposal for Diversion of 0.34 Hectare Forest Land for Rehabilitation and Up-gradation of Nagpur-Katol-Warud National Highway (NH 353J) from existing Km 60+100 (End of Katol bypass) to 101+085 (Warud up to Joint junction) two lane with paved shoulders in the state of Maharashtra.

Abstract for Model No.5

					(Amount In Rupees)		
Sr.No	Year of Opetaiion	Man Days	Wages	Material Supply	Total	Other Expenses	Total
1	Pre Monsoon works	167.97	65043.02	198263.85	263306.87	18431.48	281738.35
2	First Year Operations	192.65	74599.86	62363.28	136963.14	9587.42	146550.56
3	Second Year Operations	162.36	62870.66	37824.06	100694.72	7048.63	107743.35
4	Third Year Operations	101.65	39361.93	17316.02	56677.95	3967.46	60645.41
5	Fourth Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
6	Fifth Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
7	Sixth Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
8	Seventh Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
9	Eight Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
10	Nine Year Opetations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
11	Tenth Year Operations	40.50	15682.82	25.00	15707.82	1099.55	16807.36
	Total	786.63	304606.73	315867.21	667597.39	46731.82	714329.21

Place : Nagpur

(Dr. Bharat Singh Hada)

Deputy Conservator of Forests

Dated: 20/10/2019

Nagpur Division, Nagpur