Abstract

Name of work: Raising Compensatory Afforestation plantation total 47 ha for Diversion of 23.32 ha of Protected Forest Land for Widening of Existing Road Stretch from Khanvel chowk to khedpa border in the U.T. of Dadra and Nagar Haveli,

Survey No. Village : Area=47 Ha

Sr no	Particulars of Items	Amount
01	Nursery Cost	31,58,400/-
02	Formation Cost	30,97,676/-
03	Maintenance of plantation for 10 years & Chainlink Fencing work	3,04,41,383/-
04	Soil and Moisture conservation work	6,21,188/-
	Total ....₹	**3,73,18,647/-**

RFO (NR)

Assistant Conservator of Forest (HQ)
Dadra & Nagar Haveli
Silvassa

Deputy Conservator of Forest (T)
Dadra & Nagar Haveli
Silvassa

LAND SUITABLITY CERTIFICATE

This is to certify that 47 Ha. land bearing Survey No. 32/P of Bonta village of Dadra and Nagar Haveli is identified for Compensatory Afforestation in lieu of Diversion of 23.32 Ha. Protected Forest land for widening & strengthening of existing road from Khanvel Chowk to Khedpa Border in the Union Territory of Dadra and Nagar Haveli is suitable for plantation from management point of view and is free from all sorts of encumbrances and encroachments.

Place : Silvassa.

Date : /07/2021

(PrashantRajagopal, IFS)
Deputy Conservator of Forests, Territorial
Dadra and Nagar Haveli
Silvassa

NORMS FOR RAISING OF NURSERY

(In Terms of Mandays)

For 10,000 Seedlings

Size of Polythene Bags 20cm x 30 cm

for 1 year

Sr. No.	Particular	Quantity	Value in Rs.	M.D.	Rate per Mandays	Amount
1	Labor Charges for cleaning of the site and erection Chainlink fencing	Departmental Chainlink & Poles		30	340.2	10206.00
2	Collection of quality Earth	12.70 Cu. Mtr	2032.00	131.94	340.2	44885.99
3	Collection of Manure	12.70 Cu. Mtr	5080.00			
4	Collection of Sand	12.70 Cu. Mtr	5080.00			
5	Mixing of all above three ingredient after pulverizing			22	340.2	7484.40
6	Filling of the polythene bags			78	340.2	26535.60
7	Preparation of beds with wooden materials shifting and arrangement of polythene bags.			24	340.2	8164.80
8	Collection of seeds and sowing			6	340.2	2041.20
9	Watering for 150 days and weeding works. Feb-June			300	340.2	102060.00
10	Weeding and application of pesticide including rearranging as per requirment for 5 months July-Nov.			200	340.2	68040.00
11	Shifting of 10000 polythene bags and rearranging for 5 Months and transplanting June to Nov.			24	340.2	8164.80
12	Watering weeding and rearranging works from December - June next Season 7 months			400	340.2	136080.00
13	Polythene bag size 20x30 C.m/250 to 200 Guage (150 No/kg) 10.66 Kg for 1600 bags 130 per kg pb			8.3	340.2	2823.66
14	Cost of Fungicide and pesticides and other medicines	lump sum Rs. 500/-		5.41	340.2	1840.48
			Total	**1229.7**		**418326.93**

10000 Seedlings :- 418326.93

1 Seedling : - 42.00

Cost per seedlings = 1600 X ₹:- 42 = 67200/- % 340.20

Cost per 47 Hect = 67200 X 47 = 31,58,400/-

RFO(NR) **ACF(HQ)** **DCF(T)**

Formation Cost for Raising Plantation in 1 hect. for 1600 seedling per Hect.

Rate per Mandays **340.20**

Sr. No.	Particulars	1600 Seedling M.D.	Amount
1	Site Cleaning	16	5443.20
2	Alignment	3.52	1197.50
3	**A)** Pit Digging (45cm x 45cm x 45cm)	59.2	20139.84
4	Transportation plantation (12cm x 25cm x polythene bag)	27.2	9253.44
5	**Weeding**		
	A) 1st Weeding	20	6804.00
	B) 2nd Weeding	16.8	5715.36
	C) 3rd Weeding	16	5443.20
6	Application & Fertilizer	2.4	816.48
7	Watch & Ward	15	5103.00
	Total	**176.12**	**59916.02**
8	Any other operation		
9	Misc. 10% Contigent of (Above all)	17.612	5991.60
	Grand Total	**193.732**	**65907.63**

Formation Cost for 1 Hect Plantation = 65908/-
Formation Cost for 47 Hect = 65908 X 47 = 30,97,676/-

RFO (NR)

ACF(HQ)

DCF(T)

Abstract

Compensatory Afforestration plantation

A) Plantation

Sr No.	Particulars of work	Year of implementation	Plantation			Nursery			Total Amount	Remarks
			MD	Rate per Mandas Considering 10%	Amount	MD	Rate per Mandas Considering 10%	Amoun t		
1	I st year Maintenance	2020-21	178.42	340.20	60698	39.35	340.20	13387	74085	Mandays & Rupees decimal converted to round off
2	II nd year Maintenance	2021-22	95.35	374.22	35682	29.51	374.22	11043	46725	
3	III rd year Maintenance	2022-23	90.156	411.64	37112	19.68	411.64	8101	45213	
4	IV th year Maintenance	2023-24	84.964	452.8	38472	0		0	38472	
5	V th year Maintenance	2024-25	84.964	498.08	42319	0		0	42319	
6	VI th year Maintenance	2025-26	84.964	547.89	46551	0		0	46551	
7	VII th year Maintenance	2026-27	84.964	602.68	51206	0		0	51206	
8	VIII th year	2027-28	49.5	662.95	32816	0		0	32816	
9	IX th year Maintenance	2029-30	49.5	729.25	36098	0		0	36098	
10	X th year Maintenance	2031-32	49.5	802.18	39708	0		0	39708	
	Total Amount …		**852.3**		**420662**	**88.54**		**32531**	**453193**	

B	Chainlink Fencing work Average per 1 Hect 400 Rmt	400		486.24	**194496**	Rate Analysis & Rates of S.O.R of taken from Estimate
		Grand Total			**647689**	

Maintenance Cost for 10 Year for 1 Hect Plantaion 647689

Maintenance Cost for 10 Year for 47 Hect Plantaion 647689 X 47 =

3,04,41,383/-

RFO(NR) **ACF(HQ)** **DCF(T)**

Estimate for Soil and moisture conservation Work

Sr No	MD per ha	Total area in ha	Total MD	Rate per MD	Amount
01	37	47	1739	340.20	5,91,608.00
				5% Contingency	29580.00
				Total Amount ₹....	**6,21,188.00**

RFO (NR)

ACF (HQ)

DCF (T)

Rate Analysis

Sr No	Particulars	MD
01	Number of maximum trenches in 1 ha= 78	-
02	MD per trench is (₹ 143.64/₹ 307.90)	0.47
03	MD per 1 ha (78 x 0.47)	36.66
	Say .	37

Cost per 1 ha = 37 MD

Cost per 17 Hect = 37 x 17 = 629

Range Forest Officer (NR)
Dadra & Nagar Haveli
Silvassa

ABSTRACT SHEET OF ESTIMATE

Name of work: Providing Chainlink Fencing (Cost for 1:00 Km/1000 Rmt) to P.F.Boundary

Sr No	Description of items	Qty	Unit	Rate	Rate with 1% Labour cess	Amount	GSR-2015-16 Valsad Reference
01	Providing EARTHWORK IN EXCATION by mechanical means (Hydraulic Excavator) Manual means over areas (Exceeding 30 cms in depth 1.5 meters in width as well as 10 sq mtr on plan including disposal of excavated earth lead up to 50 meters and lift up to 1.5 mtr disposed earth to be leveled and neatly dressed in All kinds of soil	50.00 Cu .m.	One Cubic Meter	122.00	123.22	6161.00	GSR Sr No 01 Code 04B001A
02	Providing and fixing G.I Chainlink fencing including material & labour with chainlink of size 150 mm x 150mm x 4mm (8G) wire & 1.50m wide with R.C.C. pole (10cm x 10cm) & 2.00m long/height provided at 2.50m CC distance including fixing of 'J' hooks (6 nos) in each pole complete) Excavation for pit & C.C to be paid scparately) 1x1000.00x1.50=1500.00 Sq.m	1500.00 Sq.m	One Sq m	301.60	304.616	456924.00	Rate Analysis
	Certificate : - This is to certify that the rates adopted in the estimates are from GSR for the Year 2015-16 and rate analysis for consolidated items prepared based on the same GSR-2015-16 (Valsad)	Total …….. ₹				463085.00	
		Add 5 % Contingencies …… ₹				**23154.25**	
		Total…….. ₹				**486239.25**	
		Say…………. ₹				**486239.00**	

(Cost for 1 Hect = Average 400 Rmt X 486.24 = 194496/-)

Junior Engineer (FD)

RFO (NR)

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RATE ANALYSIS

As Per GSR Valsad (2015-16)

NAME OF WORK:-

Item No. Providing material and labour for fixing G.I. chainlink fencing (Size:150mm x 150mm x 8 gauge 4mm) 2.00 Meter height with 2 line wire of 4mm dia (top & Bottam) with R.C.C. Poles (100mm x 100mm) & 2.50 Meter height with supporting poles where ever necessary as per side condition using P.C. Wire 3mm dia vertical bars 04 Nos. including making fixing holes of 1mm dia 6 Nos. and pole should be casted of C: C: M-20 mix, provided at 2.50 meter c/c distsnce including fixing of G.I. 'J' hook hot drip (15cm/6"long) 6mm dia with nut and 02 Nos. of G.I. Washers with every " J " Hook. 6 Nos. in each pole etc. complete (Poles,chainlink, 'J' Hooks, G.I. Washers should be of good & approved quality) as directed.

Details of Cost :- For 30.00 x 2.00 = 60.00 Sq.m

Sr.No.	Item	Qty.	Rate	Unit	Amount
1	Supply of G.I. Chainlink (150mm x 150mm x 8 Gauge). 1 x 30.00 x 2.00 = 60.00 Sq.mt. (M. R.)	60.00	125.00	Sq.mt.	7500.00
2	Supply of R.C.C. Poles Having c/s 0.10 x 0.10m & 2.50Meter long of C.C. mix M-20 qty. = 13 x 2.50 x 0.10 x 0.10 = 0.325m (DSR Page No. 257, code No. 16.15.1)	0.325	20469.55	Cu.Mtr.	6652.60
3	Supply of ' J ' Hook (6") with G.I. Washer 13 x 06.00 =78.00 Nos (GSR Page No. 7, Sr.No.246, code No. M226)	78.000	8.80	Each	686.40
4	Carriage of Steel Chainlink (15km)	0.141	806.56	M.T.	113.72
	(a) Chainlink 1x45.00 x2.25kg/sq.m = 135.00 kg. (b) ' J ' Hook = 06.00 kg. Total = 141.00 kg. i.e. 0.141 M.T. Consider lead = 100 km 1st 5.00 km = 220.41km Rem 90 km x 6.17 586.15 Total = 806.56 (GSR Pg.No.39, Sr. No.3.2.7)				
5	Carriage of R.C.C. Poles 13 Nos x 0.10 x 0.10 x 2.00 = 0.26 Cu.m. Weight of PCC = 24 KN/Cu.mt i. e. 2400 Kg./ Cu.mt 0.26 Cu.mt. x 2400Kg/Cu.mt = 624 kg i.e. 0.624 Mt Consider lead = 50 km 1st 5.00 km = 210.41km Rem. 40 km x 4.57 205.65 Total = 416.06 (DSR Pg.No.39, It. No.3.2.6)	0.624	416.06	M.T.	259.62
6	Labour charges for fixing of G.I. Chainlink with R.C.C. Pole including fixing of ' J ' Hook etc. complete at site of work.				
(i)	Black smith 1st class	02 Nos	303.00/No.		606.00
(ii)	Mistry (Welder)	02 Nos	294.40/No		588.80
(iii)	Fitter	01 Nos	294.40/No		249.40
(iv)	Hole driller	01 Nos	294.00/day		294.00
(v)	Labour	04 Nos	286.00/No		1144.00
	(GSR Pg. No. 32, it No. 3, 30 26, 40, 21)			Total	**18094.54**
	Cost for 1.00 sq.mt = Rs.18094.54/60.00 sq.mt.				301.57
			Say Total....Rs....		**301.60/- Sq.mt.**

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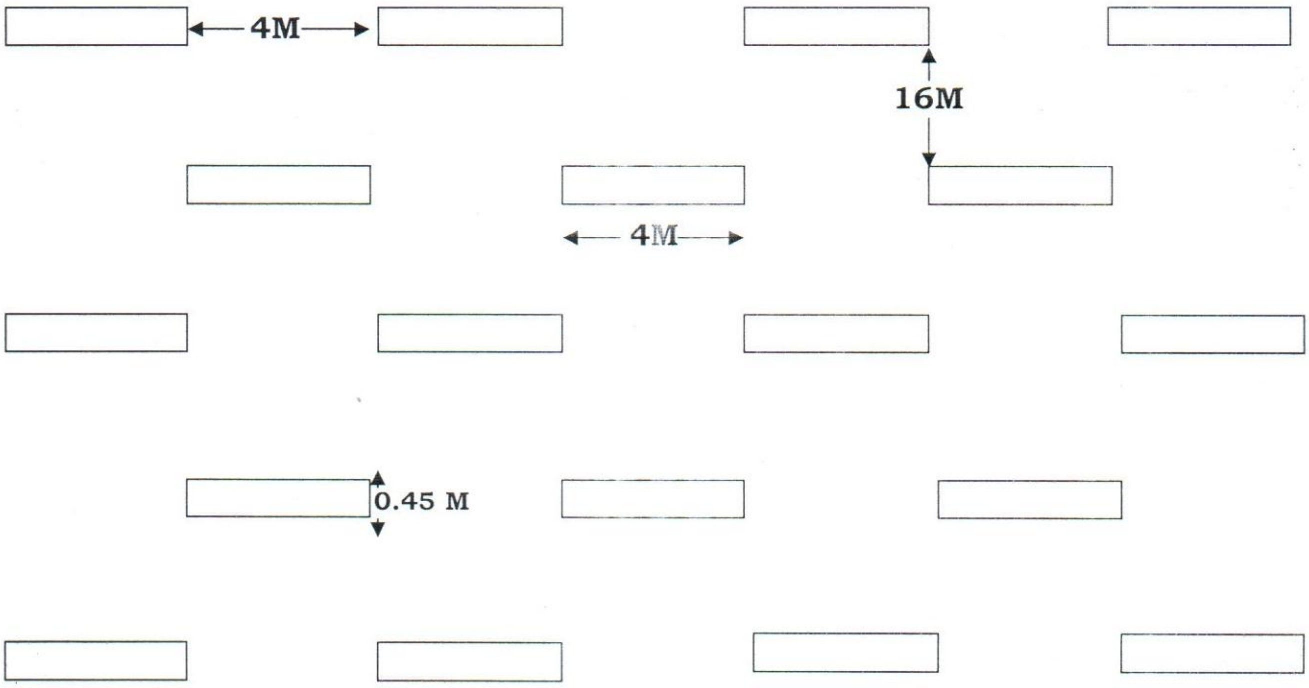
STAGGERED CONTOUR TRENCHING



MEASUREMENT SHEET

- **Length of each trench:** 4 Meter.
- **Dimensions:** 4 Mt. x 0.45 Mt. x 0.30 Mt. (L x B x H)
- **Horizontal distance between two trenches:** 4 Meter.
- **Vertical distance between two rows:** 16 Meter.
- **Number of maximum trenches in one hectare:** 78.

➢ As per the G.S.O.R., Page no.: 5, item no.: 3, Code: 04 B001C.
Rate of earth work in hard murrum is Rs. 266.00 per cubic meter.
For preparation of trench of following specification
4M x 0.45M x 0.30M
Volume = L x B x H
= (4.0 x 0.45 x 0.30) M^3
= 0.54 cubic meter.

Therefore, expenditure per trench = Rs. 266.00 x 0.54
= Rs. 143.64

The rate per MD is Rs. 307.90.

Therefore, MD per trench is Rs.143.64/Rs. 307.90 = 0.47 MD.

RFO (NR)

Species to be planted

Sr.no	Local Name	BotanicalName	Nos of Plants
1	Amla	*Emblica officinalis*	100
2	Aritha	*Sapindus emarginatus*	70
3	Beheda	*Terminalia bellerioa*	100
4	Dandosi	*Dalbergia lanceolaria*	50
5	Goradiyo	*Acacia senegal*	70
6	Jambu	*Syzygium cumini*	100
7	Karanj	*Pongamia pinnata*	50
8	Limada	*Azadirachta indica*	150
9	Kinai	*Albizzia procera*	100
10	Kanti	*Acacia ferruginea*	50
11	Mahudo	*Madhuca indica*	100
12	Papda	*Holoptelea integrifolia*	50
13	Siras	*Albizia odoratissima*	25
14	Shivan	*Gmelina arborea*	50
15	Shisham	*Dalbergia latifolia*	50
16	Sitafal	*Anona squamosa*	150
17	Umbro	*Ficus glomerata*	100
18	Vilayti amli	*Pithecellobium dulcses*	235
			1600

RFO (NR)