

60

GOVERNMENT OF NAGALAND
ENVIRONMENT, FOREST & CLIMATE CHANGE DEPARTMENT

NO. FOR/GEN-31/01/2022/ 270

Dated Kohima the 5th April, 2022

To,

The Inspector General of Forest,
Ministry of Environment, Forest & Climate Change,
Government of India,
Integrated Regional Office,
4th Floor, Housefed Building,
G.S. Road, Rukminigaon,
Guwahati-781022

Sub: **Proposal for diversion of 0.45 ha for 2 laning of Peren-Jalukie section on NH 129A on Engineering, Procurement and Construction Mode in the State of Nagaland.**

Sir,

With reference to your letter F.No.3-NG B 087/2022/GHY/1922-1923 dated 2nd February, 2022 on the subject cited above, I am directed to furnish herewith the information/documents for your kind information and necessary action.

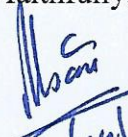
Sl No	Additional Information Required	Action to be taken
1	To clarify whether this proposal is for new construction of road or else, provide a brief note on the existing stretch of the road to be improved/widened whether the forest clearance of such road has been granted earlier or not.	The proposed 2 laning of Peren-Jalukie section of NH-129A is for the purposed Widening of existing road only. This road is the only lifeline of Peren linking Kohima the state capital and Dimapur the commercial hub. This existing road was constructed in private land and was in use for many years before the Forest Department purchased the land on which this NH-129A passes through. As such granting of forest clearance for construction of the existing road earlier does not arise
2	To clarify the legal status of the proposed area as the DFO in his site inspection report has mentioned that the proposed alignment of NH-129A is passing	The Forest department purchased the land on which NH-129A passes through for Forest Range Office and staff colony from private land owner in the year 1988.

	through the "purchased land" of Forest Department under Peren Forest Division for a stretch of about 450 meters along the existing Peren-Jalukie Road.	As the land was purchased by the Forest Department the legal status of the proposed area is now government land.
3	The SoI Map indicating the proposed area is to be resubmitted as the proposed area is falling outside the submitted SoI map.	<ul style="list-style-type: none">• The total project road stretch is falling in 2(two) numbers of SoI Map G46P14 and G46P10 respectively.• However, the proposal for diversion of forest area (0.45 Ha) is falling in SoI G46P10.• Both maps were enclosed earlier in the proposal. The combined topo-sheet merging the total complete alignment is attached herewith as Annexure-I.
	State Government id to clarify the actual CA area proposed as the CA area is proposed in 0.45 ha in Forest Colony in Peren Range, in purchased land whereas the submitted SoI map indicating the proposed CA area is for 0.9 ha and the financial outlay submitted is for 0.9 ha i.e. Rs. 1.575 lacs.	The proposed CA area is mentioned as 0.45 ha, however as per para 2.5 of the F(C) Act, 1980 guidelines, the CA is proposed in area double in the degraded forest land that has come to 0.90ha. Rectified Map attached as Annexure - II
5	The CA scheme and avenue plantation scheme is to be technically approved and duly signed by the competent authority.	Attached as Annexure-III
6	The component wise break up of the proposed road.	Attached as Annexure-IV
7	The current status of FR Act, 2006 certificate of this instant proposal.	Attached as Annexure-V
8	To clarify whether the proposed muck dumping area is a part of the proposed area or not.	The proposed muck dumping area is not the part of the proposed area. It is located at another non forest land at Ch.113.600. Refer Annexure- VII

9	The total length of the proposed road along with existing RoW and proposed RoW.	Attached as Annexure-VI
10	The approved muck dumping plan by the concerned DFO.	Muck dumping as submitted earlier is attached herewith as Annexure-VII
11	The aerial distance of the proposed area from the nearest protected Area/Wildlife Sanctuary/National Park.	The forest area (0.45 Ha) proposed to be diverted is 17.5 Km from the nearest National Park Intanki National Park. The map showing the distance between proposed land to be diverted and Intanki National Park is attached herewith as Annexure-VIII .
12	Undertaking certificate by the user agency for payment of extraction charges of the trees to be removed from the proposed area.	Attached as Annexure-IX

Enclosed: As stated above.

Yours faithfully,



25/04/2022

(Dr. Y. ATSASE THONGTSAR)
Secretary to the Govt. of Nagaland

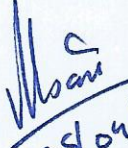
NO. FOR/GEN-31/01/2022/270

Dated Kohima the April, 2022

Copy to:-

1. The PPS to Chief Secretary, Nagaland, Kohima.
2. Secretary, Works & Housing Department, Nagaland, Kohima
3. The Principal Chief Conservator of Forest & HoFF, Nagaland, Kohima.
4. The General Manager, NHIDCL, Nagaland.

o/c



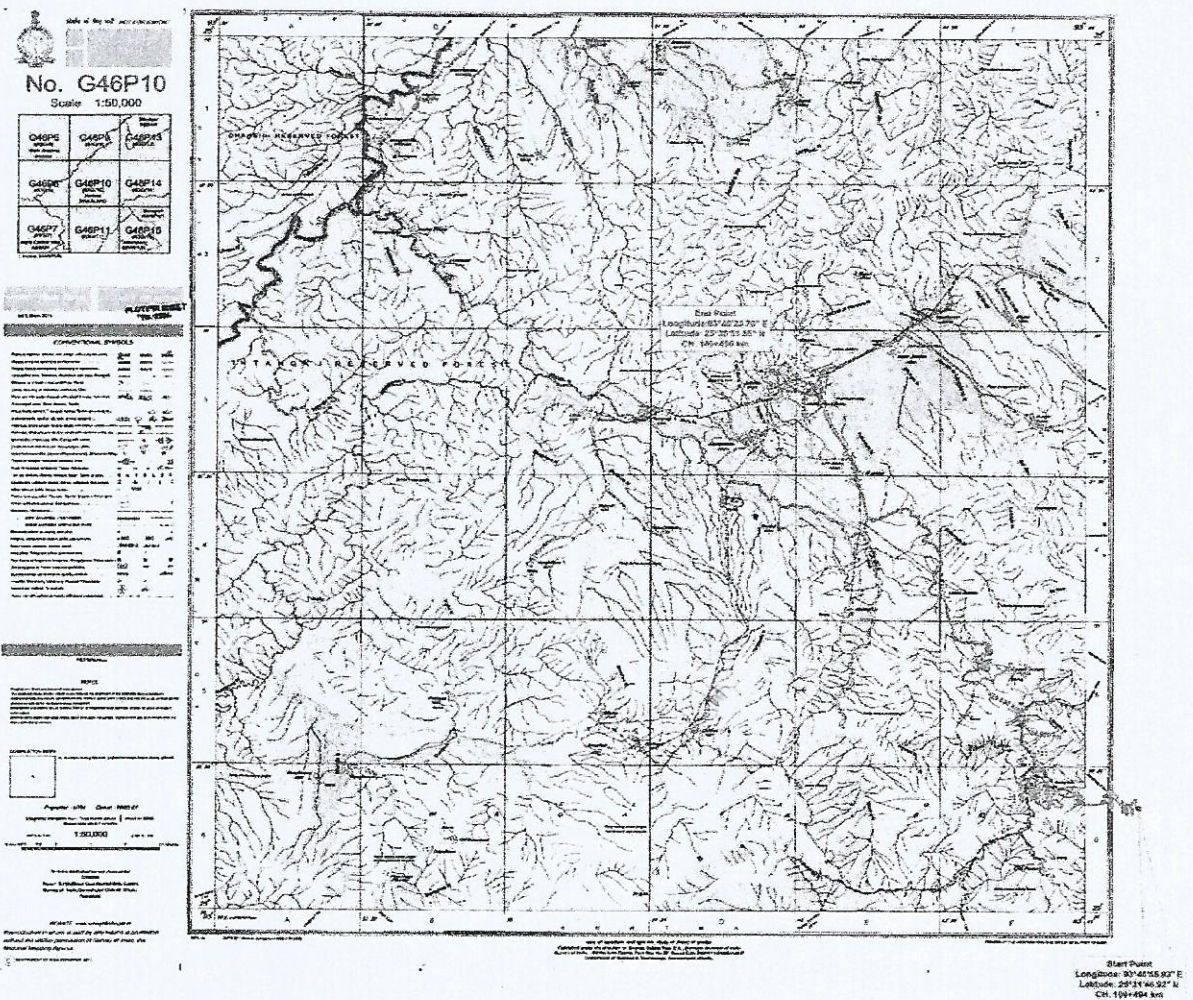
25/04/2022

(Dr. Y. ATSASE THONGTSAR)
Secretary to the Govt. of Nagaland

ANNEXURE - I

TOTAL FOREST LAND IN PEREN DIVISION TO BE DIVERTED OF 0.450 HA. FOR TWO LANING OF PEREN-JALUKIE SECTION OF NH-129A ON ENGINEERING, PROCUREMENT AND CONSTRUCTION MODE IN THE STATE OF NAGALAND (109+494 KM TO 146+450 KM)

TOPICAL SHEET AT 1:50,000 SCALE



No. G46P10
Scale: 1:50,000

Legend

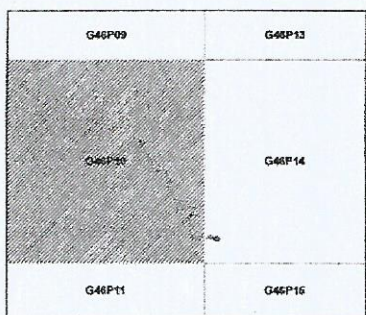
- Start Point
- End Point
- LAND TO BE DIVERTED
- PROPOSED ROW
- EXISTING ROW

Map Details:

Map No. G46P10
Scale: 1:50,000
Projection: UTM
Datum: WGS 84
Zone: 48 N

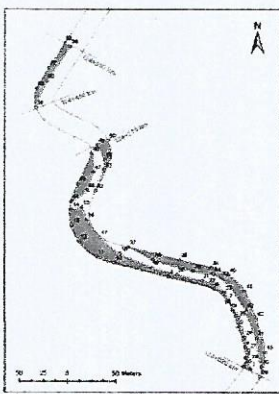
Map Information:

Map No. G46P10
Scale: 1:50,000
Projection: UTM
Datum: WGS 84
Zone: 48 N



Legend

- Start Point
- End Point
- LAND TO BE DIVERTED
- PROPOSED ROW
- EXISTING ROW



DGPS POINTS

ID	Longitude	Latitude	ID	Longitude	Latitude
1	93°45'55.93"	25°31'40.52"	11	93°45'55.93"	25°31'40.52"
2	93°45'55.93"	25°31'40.52"	12	93°45'55.93"	25°31'40.52"
3	93°45'55.93"	25°31'40.52"	13	93°45'55.93"	25°31'40.52"
4	93°45'55.93"	25°31'40.52"	14	93°45'55.93"	25°31'40.52"
5	93°45'55.93"	25°31'40.52"	15	93°45'55.93"	25°31'40.52"
6	93°45'55.93"	25°31'40.52"	16	93°45'55.93"	25°31'40.52"
7	93°45'55.93"	25°31'40.52"	17	93°45'55.93"	25°31'40.52"
8	93°45'55.93"	25°31'40.52"	18	93°45'55.93"	25°31'40.52"
9	93°45'55.93"	25°31'40.52"	19	93°45'55.93"	25°31'40.52"
10	93°45'55.93"	25°31'40.52"	20	93°45'55.93"	25°31'40.52"
21	93°45'55.93"	25°31'40.52"	31	93°45'55.93"	25°31'40.52"
22	93°45'55.93"	25°31'40.52"	41	93°45'55.93"	25°31'40.52"
23	93°45'55.93"	25°31'40.52"	51	93°45'55.93"	25°31'40.52"
24	93°45'55.93"	25°31'40.52"	61	93°45'55.93"	25°31'40.52"
25	93°45'55.93"	25°31'40.52"	71	93°45'55.93"	25°31'40.52"
26	93°45'55.93"	25°31'40.52"	81	93°45'55.93"	25°31'40.52"
27	93°45'55.93"	25°31'40.52"	91	93°45'55.93"	25°31'40.52"
28	93°45'55.93"	25°31'40.52"	101	93°45'55.93"	25°31'40.52"
29	93°45'55.93"	25°31'40.52"	111	93°45'55.93"	25°31'40.52"
30	93°45'55.93"	25°31'40.52"	121	93°45'55.93"	25°31'40.52"

LAND TO BE DIVERTED FOR FOREST (IN HECTARE)

VILLAGE	Area	Forest Class	Area to be Diverted
PEREN TOWN	0.450	RESERVE FOREST	0.450

Map Information:

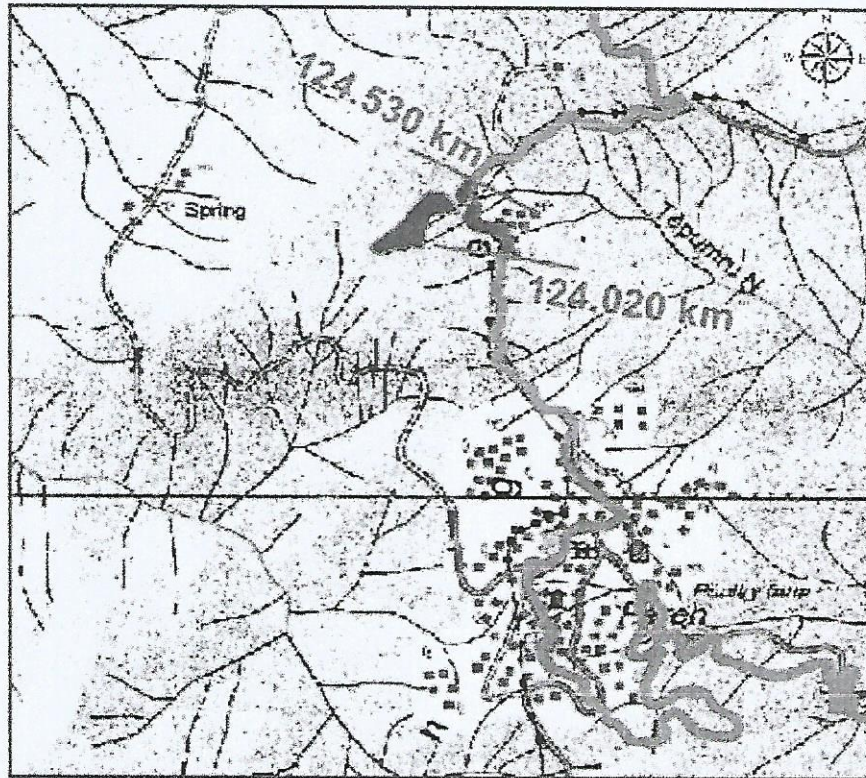
Map No. G46P10
Scale: 1:50,000
Projection: UTM
Datum: WGS 84
Zone: 48 N

ANNEXURE – II

State Govt. is to clarify the actual CA area proposed as the CA area is proposed in 0.45 ha in Forest Colony in Peren Range, in purchased land whereas the submitted Sol map indicating the proposed CA area is for 0.9 ha and the financial outlay submitted is for 0.9 ha i.e Rs. 1.575 lacs.

The proposed CA area is mentioned as 0.45 ha, however as per para 2.5 of the F(C)Act, 1980 guidelines, the CA is proposed in area double in the degraded forest land

MAP SHOWING DEGRADED FOREST AREA IDENTIFIED FOR COMPENSATORY AFFORESTATION



BP No.	Latitude	Longitude
1	25°33'16.75"N	93°43'48.49"E
2	25°33'19.15"N	93°43'48.15"E
3	25°33'20.32"N	93°43'50.42"E
4	25°33'21.21"N	93°43'48.68"E
5	25°33'20.66"N	93°43'47.30"E
6	25°33'17.42"N	93°43'46.31"E
7	25°33'16.06"N	93°43'45.20"E
8	25°33'15.61"N	93°43'45.09"E
9	25°33'15.44"N	93°43'45.68"E

Location	Peren-Peletkie Road
Division	Peren Forest Division
Range	Peren Range
Area	0.90 ha.

LEGEND	
	CA Area
	Road
	Drainage
	Settlement

ahc
 Addl. Principal (Terr) Conservator of Forests
 (Territorial)
 Nagaland : Kohima

M. Obed Zeliang
 (M.Obed Zeliang)
 Divisional Forest Officer
 Peren Division
 Divisional Forest Officer
 Peren Forest Division
 Jalukie : Nagaland

ANNEXURE - III**DETAILED COMPENSATORY AFFORESTATION SCHEME**

1. Model of afforestation : Artificial Regeneration
 2. Species proposed to be planted : Terminalia myriocarpa (Hollock)
 Prunus cerasoides (Cherry)
 3. Implementing Agency : Department of Environment, Forests & Climate
 Change, Nagaland
 4. Time scheduled : Advanced work and creation of plantation and
 maintenance upto 8 years.

**ANALYSIS OF PER HA RATE FOR VARIOUS WORK ITEMS UNDER COMPENSATORY
AFFORESTATION TO BE TAKEN UP UNDER FOREST (CONSERVATION) ACT, 1980***(Rs. 380/- per manday)**(1100 plants per ha.)*

<i>Sl. No.</i>	<i>Item of work</i>	<i>Manday required (in No.)</i>	<i>Labour Component (in Rs.)</i>	<i>Material Component (in Rs.)</i>	<i>Cost/Ha (in Rs.)</i>
1	2	3	4	5	6
1	Advance works including nursery				
	(a) Survey & demarcation including mapping	3	1140		1140
	(b) Area preparation by cutting grasses & shrubs	20	7600		7600
	(c) Fire line cutting, burning and maintenance	6	2280		2280
	(d) Clearance of site for nursery, preparation of nursery bed, filling of poly-bags, manuring, shed erection	20	7600		7600
	(e) Cost of seeds, poly-bags, implements etc	0		1890	1890
	(f) Treatment and sowing of seeds	5	1900		1900
	(g) Weeding & watering	11	4180		4180
	Sub-Total	65	24700	1890	26590
2	Creation of plantation				
	(a) Site preparation, alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting site, planting/sowing, construction of camp shed, inspection path, signboard and other misc, works	25	9500		9500
	(b) Weeding 3 times including gap filling and water & ward	67	25460		25460
	(c) Fire protection measures like fire line cutting, engagement of fire watchers	3	1140		1140
	Sub-Total	95	36100		36100

3

Maintenance of Plantation				
<i>(i) Maintenance after 1st year</i>				
(a) Weeding 3 times + gap filling (10+9+5)	24	9120		9120
(b) Fire protection measures	3	1140		1140
<i>Sub-Total</i>	27	9120		9120
<i>(ii) Maintenance after 2 years</i>				
(a) Weeding 2 times (10+5)	15	5700		5700
(b) Fire protection measures	3	1140		1140
Add 25% for anticipated revision of wage rate				1710
<i>Sub-Total</i>		6840		8550
<i>(iii) Maintenance after 3 years</i>				
(a) Weeding 2 times (8+5)	13	4940		4940
(b) Fire protection measures	3	1140		1140
Add 25% for anticipated revision of wage rate				1520
<i>Sub-Total</i>				7600
<i>(iv) Maintenance after 4 years</i>				
(c) Weeding 2 times (8+5)	13	4940		4940
(d) Fire protection measures	3	1140		1140
Add 50% for anticipated revision of wage rate				3040
<i>Sub-Total</i>				9120
<i>(v) Maintenance after 5 years</i>				
(e) Weeding /tending	12	4560		4560
(f) Fire protection measures	2	760		760
Add 50% for anticipated revision of wage rate				2660
<i>Sub-Total</i>				7980
<i>(vi) Maintenance after 6 years</i>				
(g) Weeding /tending	12	4560		4560
(h) Fire protection measures	2	760		760
Add 75% for anticipated revision of wage rate				3990
<i>Sub-Total</i>				9310

	(vii) Maintenance after 7 years				
	(i) Weeding /tending	10	3800		3800
	(j) Fire protection measures	2	760		760
	Add 75% for anticipated revision of wage rate				3420
	Sub-Total				7980
	(viii) Maintenance after 8 years				
	(k) Weeding /tending	10	3800		3800
	(l) Fire protection measures	2	760		760
	Add 100% for anticipated revision of wage rate				4560
	Sub-Total				9120
	Total of Plantation Cost	289		1890	132610
4	Soil & Moisture Conservation measures including construction of check dams, gully plugging, contour trenching, water harvesting structures etc. whatever necessary within the project area (15% of plantation cost)				19892
5	Fencing (5% of plantation cost)				6631
6	Monitoring & Evaluation (2% of plantation cost)				2652
7	Overheads (10% of plantation cost)				13261
	Grand Total				175046

Resultant cost of CA for widening of NH29A (package-I) – Deem Forest area
 $(0.90 \times 175046) = \text{Rs. } 1,57,541/-$

(Rupees One lakh fifty seven thousand five hundred forty one) only

Prepared by

ph


(M. Obed Zeliang)

Divisional Forest Officer
Peren Forest Division

Jalukie : Nagaland
Divisional Forest Officer
Peren Forest Division
Jalukie : Nagaland

ANNEXURE – III A

**ESTIMATE FOR CARRYING OUT AVENUE PLANTATION ALONG NH-29A ROAD,
PACKAGE-I (DEEMED FOREST AREA)**

- 1. Project Name : 2-laning of Peren-Jalukie section on NH-129A Engineering, Procurement and construction mode in the state of Nagaland.
- 2. Species proposed to be Planted : Prunus cerasoides (Cherry)
- 3. Implementing Agency : Department of Environment, Forests & Climate Change, Nagaland
- 4. Time scheduled : Advanced work, creation of plantation and maintenance upto 3 yrs

(Rs.350 /- per manday)

(1100 plants per ha/1100 plants per 3 km)

(Spacing 3X3 m)

Sl. No.	Item of work	Manday required (in No.)	Labour Component (in Rs.)	Material Component (in Rs.)	Total cost per seedling (in Rs.)
1	2	3	4	5	6
1	Advance works including nursery				
	(a) Survey & demarcation of Nursery site and planting site	12	4560	-	4560
	(b) Preparation of nursery bed, shed erection with netlon	20	7600		7600
	(c) Cost of seed			2700	2700
	(d) Cost of materials like poly bags, netlon and fertilizers etc.			8100	8100
	(e) Pre-treatment of seeds including cost of fungicides, fumigants, soil sterilants etc	17	6460		6460
	(f) Sowing of seeds and weeding, watering	16	6080	-	6080
	(g) Fire protection	5	1900	-	1900
	Sub-Total	70	26600	10800	37400
2	Creation of plantation				
	(a) Alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting sites, planting/sowing, construction of camp sheds, inspection parts, signboards and other misc. works	40	15200	-	15200
	(b) Weeding 4 times including vacancy filling (30+20+20+20)	90	34200	-	34200
	(c) Fire protection measures ward and Watch (5+5)	10	3800	-	3800

	(d) Manurins & Watering				
	(e) Cost of manures/fertilizers			5400	5400
	(f) Fencing /tree guard (Local materials) including subsequent maintenance.	-	-	37800	37800
	Sub-Total	150	57000	43200	100200
	Maintenance of Plantation				
	(i) Maintenance after 1st year				
	(c) Weeding 3 times including vacancy filling, manuring & watering (20+20+20+10)	70	26600		26600
	(d) Fire protection measures & watch and ward (5+5)	10	3800		3800
	(e) Cost of manures/fertilizers	-	-	5400	5400
	(f) Signboard and labeling etc	-	-	5400	5400
	Sub-Total	80	30400	10800	41200
	(ii) Maintenance after 2 years				
	(c) Weeding 2 times vacancy filling, manuring & watering (15+15+10+10)	50	19000	-	19000
	(d) Fire protection measures & watch and ward (5+5)	10	3800	-	3800
	(e) Cost of fertilizers/manures	-	-	5400	5400
	Sub-Total	60	22800	5400	28200
3	(iii) Maintenance after 3 years				
	(a) Weeding 2 times vacancy filling, manuring & watering (15+15+10+10)	50	19000	-	19000
	(b) Fire protection measures & watch and ward (5+5)	10	3800	-	3800
	(c) Cost of fertilizers/manures	-	-	5400	5400
	Sub-Total	60	22800	5400	28200
	(iv) Maintenance after 4 years				
	(a) Weeding 2 times vacancy filling, manuring & watering (15+15+10+10)	50	19000	-	19000
	(b) Fire protection measures & watch and ward (5+5)	10	3800	-	3800
	(c) Cost of fertilizers/manures	-	-	5400	5400
	Sub-Total	60	22800	5400	28200
	(v) Maintenance after 5 years				
	(a) Weeding 2 times vacancy filling, manuring & watering (15+15+10+10)	50	19000	-	19000

	(b) Fire protection measures & watch and ward (5+5)	10	3800	-	3800
	(c) Cost of fertilizers/manures	-	-	5400	5400
	Sub-Total	60	22800	5400	28200
	(vi) Maintenance after 6 years				
	(a) Weeding 2 times vacancy filling, manuring & watering (15+15+10+10)	50	19000	-	19000
	(b) Fire protection measures & watch and ward (5+5)	10	3800	-	3800
	(c) Cost of fertilizers/manures	-	-	5400	5400
	Sub-Total	60	22800	5400	28200
	Grand Total	600	228000	91800	319800

Length of the proposed road for diversion of forest land for Widening of NH-129A (Package-I) -
Deem forest area = 0.51 km (For 3 x 3m spacing, 1100 plants could be planted on 3 kms)

Component wise breakup				
Sl. No.	Component	Forest Land (ha.)	Non-Forest Land (ha.)	Length (in km)
1	Road Ch 124+020 to 530	0.45		0.51

Hence, cost of raising Avenue Plantation along 0.51 km = $\frac{0.51 \times 319800}{3}$ = Rs. 54,366/-

Prepared by

shl
Addl. Principal Chief Conservator of Forests
(Territorial)
Nagaland : Kohima

M. Obed Zeliang
(M. Obed Zeliang)
Divisional Forest Officer
Peren Forest Division,
Jalukie : Nagaland
Divisional Forest Officer
Peren Forest Division
Jalukie : Nagaland

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ANNEXURE - IV

Component wise break up of Proposed Road

Road: Peren-Dimapur(Pkg-IA & IB),Length of Road

:

36.714 Km

DESCRIPTION OF WORKS		TOTAL COST	WEIGHTAGE PERCENTAGE
A.	ROAD WORKS	(IN LAKHS.)	(%)
1	Site Clearance and Dismantling	375.09	1.03
2	Earth work and Subgrade	10688.9	29.43
3	Sub-Base & Base	6114.05	16.83
4	Bituminous Courses	3717.59	10.24
5	Junction Improvement (Major & Minor)	163.16	0.45
6	Traffic signs, Road marking & other road appurtenances	1278.39	3.52
7	Bus bay & Passenger Shelter	143.92	0.4
8	Drainage and Protective Works		
a.	Longitudinal Drains (Trapezoidal Drain)	1470.81	4.05
b.	RCC Covered Drain	830.74	2.29
c.	Composite RE wall	420.65	1.16
d.	Retaining wall	3569.92	9.83
e.	Breast wall	3483.27	9.59
f.	Hydro seeding	605.87	1.67
B.	BRIDGES & CULVERTS		
9	Culvert	3459.35	9.52
C.	COST OF CIVIL WORKS IN LAKHS(AS PER SOR 2016)	36,321.71	

Katra
General Manager (Projects)
MIDCL, PND-Dimapur
Nagaland

(21)

ANNEXURE - V

FORM-II

(For linear projects other than Plantations)

[Rule 6(3) (e) of Forest (Conservation) Rules, 2003 as amended up to date]

**GOVERNMENT OF NAGALAND
OFFICE OF THE DEPUTY COMMISSIONER
PEREN: NAGALAND**


No.PRN/DEV-15(PART-I)/2015/

Dated Peren, the 2nd November 2021

TO WHOMSOEVER IT, MAY CONCERN

In compliance of the Rule 6(3)(e) of the Forest (Conservation) Rules, 2003 [as amended vide the Forest (Conservation) Amendment Rules 2014; Forest (Conservation) Second Amendment Rules 2014; and Forest (Conservation) Amendment Rules, 2016 it is certified that 0.45 hectares of forest land proposed to be diverted in favour of National Highways & Infrastructure Development Corporation Limited (NHIDCL) for "Construction of 2-Laning with Hard Shoulder of Peren-Dimapur Section on NH- 129A from Design Km 109.494 to Km 126.775 (Length -17.281 Km) in the state of Nagaland on EPC Mode (Package-1) under NH(O)-TSP" in the Peren district falls within the jurisdiction of Old Jalukie Village, in Peren Taluk. It is further certified that:

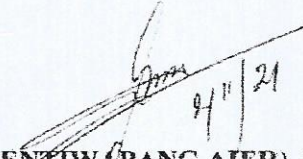
- (a) The complete process for identification and settlement of rights under the FRA has been carried out for the entire 0.45 Ha of forest land proposed for diversion. The Gram Sabha's consent is not required vide Ministry of Environment and Forests (FC Division), Govt. of India letter F.No. 11-9/98-FC(pt) dated 05.02.2013.
- (b) The diversion of forest land for facilities managed by the Government as required under section 3 (2) of the FRA, 2006 have been completed and the Gram Sabha's consent is not required vide Ministry of Environment and Forests (FC Division), Govt. of India letter F.No. 11-9/98-FC(pt) dated 05.02.2013.
- (c) The proposed area does not involve recognized rights of Primitive Tribal Groups and Pre-Agriculture Communities.


(SENTIWAPANG AIER), NCS
Deputy Commissioner
Peren: Nagaland

No.PRN/DEV-15(PART-I)/2015/ 787

Dated Peren, the 2nd November 2021

1. The Commissioner, Nagaland, Kohima for kind information.
2. The Nodal Officer, FCA, Govt. of Nagaland for kind information.
3. The Divisional Forest Officer, Peren for information.
4. The General Manager (Project), NHIDCL, PMU-Dimapur for information and necessary action.
5. Office copy.


(SENTIWAPANG AIER), NCS
Deputy Commissioner
Peren: Nagaland

ANNEXURE - VI

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
109+500	11.7	19.0
109+600	9.7	19.0
109+700	Realignment	19.0
109+800	Realignment	19.0
109+900	Realignment	24.0
110+000	Realignment	24.0
110+100	Realignment	24.0
110+200	Realignment	19.0
110+300	Realignment	19.0
110+400	Realignment	19.0
110+500	Realignment	19.0
110+600	Realignment	19.0
110+700	Realignment	19.0
110+800	Realignment	19.0
110+900	Realignment	19.0
111+000	Realignment	19.0
111+100	Realignment	19.0
111+200	Realignment	19.0
111+300	Realignment	19.0
111+400	8.7	19.0
111+500	Realignment	19.0
111+600	Realignment	19.0
111+700	Realignment	19.0
111+800	Realignment	19.0
111+900	Realignment	19.0
112+000	Realignment	19.0
112+100	Realignment	19.0
112+200	Realignment	24.0
112+300	Realignment	24.0
112+400	Realignment	24.0
112+500	Realignment	20.0
112+600	Realignment	20.0
112+700	Realignment	20.0
112+800	Realignment	20.0
112+900	Realignment	20.0
113+000	Realignment	20.0
113+100	Realignment	24.0
113+200	Realignment	24.0
113+300	Realignment	24.0
113+400	Realignment	24.0
113+500	11.3	24.0
113+600	Realignment	24.0
113+700	Realignment	24.0
113+800	Realignment	24.0
113+900	Realignment	24.0
114+000	Realignment	20.0
114+100	Realignment	20.0

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
114+200	Realignment	20.0
114+300	Realignment	20.0
114+400	Realignment	20.0
114+500	Realignment	20.0
114+600	Realignment	20.0
114+700	Realignment	20.0
114+800	Realignment	20.0
114+900	Realignment	20.0
115+000	Realignment	20.0
115+100	Realignment	20.0
115+200	Realignment	24.0
115+300	Realignment	24.0
115+400	7.4	24.0
115+500	8.1	24.0
115+600	8.0	24.0
115+700	8.9	24.0
115+800	9.3	24.0
115+900	9.6	24.0
116+000	8.9	24.0
116+100	Realignment	24.0
116+200	10.0	24.0
116+300	9.0	24.0
116+400	10.0	24.0
116+500	9.5	24.0
116+600	9.7	24.0
116+700	9.2	24.0
116+800	8.6	24.0
116+900	9.3	24.0
117+000	11.5	24.0
117+100	10.6	24.0
117+200	10.0	24.0
117+300	13.8	24.0
117+400	8.5	24.0
117+500	8.5	24.0
117+600	10.4	24.0
117+700	8.6	24.0
117+800	11.3	24.0
117+900	11.3	24.0
118+000	9.5	24.0
118+100	Realignment	24.0
118+200	Realignment	24.0
118+300	8.8	20.0
118+400	11.0	20.0
118+500	Realignment	20.0
118+600	Realignment	20.0
118+700	Realignment	20.0
118+800	Realignment	20.0

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
118+900	9.4	20.0
119+000	8.3	20.0
119+100	8.8	20.0
119+200	8.5	24.0
119+300	9.2	24.0
119+400	9.4	20.0
119+500	8.4	20.0
119+600	8.6	20.0
119+700	9.4	24.0
119+800	9.5	24.0
119+900	9.2	24.0
120+000	9.1	24.0
120+100	9.9	24.0
120+200	9.9	20.0
120+300	9.3	20.0
120+400	10.5	20.0
120+500	9.4	20.0
120+600	5.8	20.0
120+700	9.5	20.0
120+800	7.0	20.0
120+900	13.4	20.0
121+000	5.2	24.0
121+100	5.5	24.0
121+200	4.7	24.0
121+300	5.1	20.0
121+400	10.7	20.0
121+500	7.0	24.0
121+600	7.0	24.0
121+700	6.8	24.0
121+800	6.8	23.0
121+900	10.6	20.0
122+000	14.4	20.0
122+100	5.1	20.0
122+200	6.5	20.0
122+300	7.2	20.0
122+400	6.7	20.0
122+500	7.6	14.0
122+600	6.7	14.0
122+700	7.0	14.0
122+800	7.0	14.0
122+900	7.4	14.0
123+000	8.6	14.0
123+100	6.9	14.0
123+200	Realignment	14.0
123+300	6.3	20.0
123+400	8.0	20.0
123+500	8.7	20.0

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
123+600	8.9	20.0
123+700	6.6	20.0
123+800	8.4	20.0
123+900	8.0	20.0
124+000	8.6	20.0
124+100	8.2	20.0
124+200	8.9	20.0
124+300	Realignment	20.0
124+400	9.9	20.0
124+500	7.9	20.0
124+600	8.5	20.0
124+700	8.0	20.0
124+800	10.5	20.0
124+900	9.3	20.0
125+000	8.5	20.0
125+100	10.3	24.0
125+200	7.0	24.0
125+300	9.1	20.0
125+400	8.8	20.0
125+500	7.1	20.0
125+600	7.2	20.0
125+700	8.0	20.0
125+800	8.4	20.0
125+900	8.3	20.0
126+000	7.9	24.0
126+100	8.2	24.0
126+200	6.5	20.0
126+300	6.7	24.0
126+400	6.0	24.0
126+500	7.9	24.0
126+600	7.2	20.0
126+700	7.1	20.0
126+800	6.5	20
126+900	8.6	20
127+000	7.2	20
127+100	5.2	20
127+200	2.8	20
127+300	7.1	24
127+400	6.4	24
127+500	7.2	24
127+600	8.3	24
127+700	6.8	20
127+800	6.6	24
127+900	5.6	24
128+000	7.0	24
128+100	5.2	24
128+200	6.7	24

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
128+300	5.3	24
128+400	7.2	24
128+500	6.0	24
128+600	5.8	24
128+700	7.4	24
128+800	14.0	24
128+900	5.8	24
129+000	7.4	24
129+100	8.3	24
129+200	7.4	24
129+300	6.8	24
129+400	7.3	24
129+500	7.7	24
129+600	7.6	24
129+700	7.7	24
129+800	7.8	24
129+900	7.3	20
130+000	8.7	20
130+100	7.4	20
130+200	9.9	20
130+300	7.5	20
130+400	4.0	20
130+500	7.1	20
130+600	Realignment	20
130+700	7.0	20
130+800	8.2	20
130+900	7.6	20
131+000	7.1	20
131+100	6.6	20
131+200	7.6	20
131+300	8.6	20
131+400	6.7	20
131+500	6.2	20
131+600	7.8	20
131+700	7.4	24
131+800	6.4	24
131+900	Realignment	24
132+000	5.7	24
132+100	7.2	24
132+200	Realignment	24
132+300	7.5	24
132+400	6.9	24
132+500	6.3	24
132+600	8.4	24
132+700	7.9	24
132+800	2.8	24
132+900	7.5	24

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
133+000	6.8	24
133+100	6.9	24
133+200	7.0	24
133+300	7.0	24
133+400	7.2	24
133+500	5.3	24
133+600	6.2	24
133+700	7.8	24
133+800	8.3	24
133+900	5.9	24
134+000	5.9	24
134+100	7.8	24
134+200	5.7	24
134+300	8.4	24
134+400	9.4	24
134+500	Realignment	24
134+600	Realignment	24
134+700	Realignment	24
134+800	Realignment	24
134+900	Realignment	24
135+000	5.7	24
135+100	Realignment	24
135+200	9.0	24
135+300	8.0	24
135+400	Realignment	24
135+500	7.8	24
135+600	6.6	24
135+700	6.4	20
135+800	8.2	20
135+900	7.9	20
136+000	4.0	20
136+100	7.2	20
136+200	Realignment	20
136+300	Realignment	20
136+400	5.0	20
136+500	5.3	20
136+600	8.1	20
136+700	5.3	20
136+800	8.1	20
136+900	8.6	20
137+000	6.3	20
137+100	7.8	20
137+200	6.2	20
137+300	6.9	20
137+400	7.2	20
137+500	6.6	20
137+600	5.0	20

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
137+700	Realignment	20
137+800	5.8	20
137+900	Realignment	20
138+000	7.7	20
138+100	3.7	24
138+200	7.5	24
138+300	6.3	24
138+400	6.3	24
138+500	9.0	24
138+600	5.5	24
138+700	7.3	24
138+800	7.9	20
138+900	8.0	20
139+000	5.9	20
139+100	9.6	20
139+200	6.7	20
139+300	8.5	20
139+400	7.9	24
139+500	14.8	24
139+600	Realignment	24
139+700	Realignment	24
139+800	7.3	24
139+900	Realignment	24
140+000	8.4	24
140+100	Realignment	24
140+200	8.6	24
140+300	7.5	24
140+400	8.0	24
140+500	2.0	24
140+600	Realignment	24
140+700	10.0	24
140+800	8.8	24
140+900	8.8	24
141+000	Realignment	24
141+100	7.9	24
141+200	8.1	24
141+300	10.8	24
141+400	2.4	24
141+500	7.9	24
141+600	Realignment	24
141+700	10.8	24
141+800	Realignment	24
141+900	7.3	24
142+000	8.5	20
142+100	7.1	20
142+200	7.8	20
142+300	7.9	20

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
142+400	8.7	20
142+500	8.7	20
142+600	8.4	20
142+700	8.0	20
142+800	7.5	20
142+900	7.3	20
143+000	7.9	20
143+100	8.3	20
143+200	7.6	20
143+300	8.2	20
143+400	8.2	20
143+500	8.4	20
143+600	8.8	20
143+700	9.0	20
143+800	11.0	20
143+900	9.0	20
144+000	8.0	20
144+100	9.7	14
144+200	7.9	14
144+300	7.3	14
144+400	7.9	14
144+500	8.2	14
144+600	7.8	14
144+700	8.5	14
144+800	9.6	14
144+900	9.6	14
145+000	9.2	14
145+100	9.8	14
145+200	8.2	14
145+300	9.5	14
145+400	9.1	20
145+500	9.6	20
145+600	8.7	20
145+700	10.5	20
145+800	9.7	20
145+900	10.2	20
146+000	6.7	20
146+100	8.5	20
146+200	9.5	20
146+208	9.5	20

Existing ROW and Proposed ROW Details		
Design Ch.(m)	EROW Width (m)	PROW Width (m)
142+400	8.7	20
142+500	8.7	20
142+600	8.4	20
142+700	8.0	20
142+800	7.5	20
142+900	7.3	20
143+000	7.9	20
143+100	8.3	20
143+200	7.6	20
143+300	8.2	20
143+400	8.2	20
143+500	8.4	20
143+600	8.8	20
143+700	9.0	20
143+800	11.0	20
143+900	9.0	20
144+000	8.0	20
144+100	9.7	14
144+200	7.9	14
144+300	7.3	14
144+400	7.9	14
144+500	8.2	14
144+600	7.8	14
144+700	8.5	14
144+800	9.6	14
144+900	9.6	14
145+000	9.2	14
145+100	9.8	14
145+200	8.2	14
145+300	9.5	14
145+400	9.1	20
145+500	9.6	20
145+600	8.7	20
145+700	10.5	20
145+800	9.7	20
145+900	10.2	20
146+000	6.7	20
146+100	8.5	20
146+200	9.5	20
146+208	9.5	20

Katra

ANNEXURE - VII

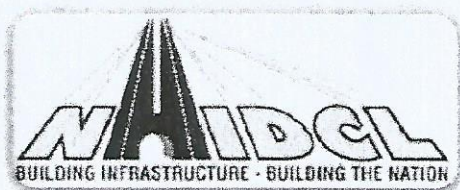
APPROVED
MUCK DUMPING PLAN
BY
DFO

Consultancy Services for Carrying out Feasibility Study, Preparation of Detailed Project Report and providing pre-construction services in respect of 2 laning of Maram-Peren- Dimapur section on NH 129A (Manipur & Nagaland) on Engineering, Procurement and Construction mode in the state of Manipur & Nagaland. (Package No. NHIDCL/DPR/SN-DMP-PC/Manipur/2016)

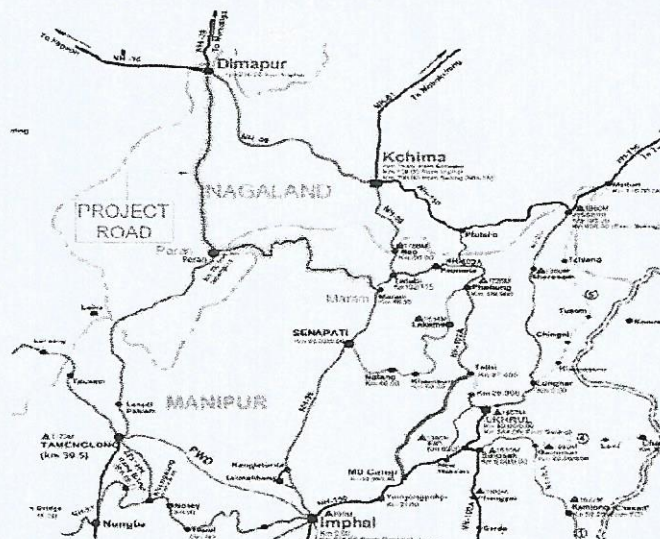
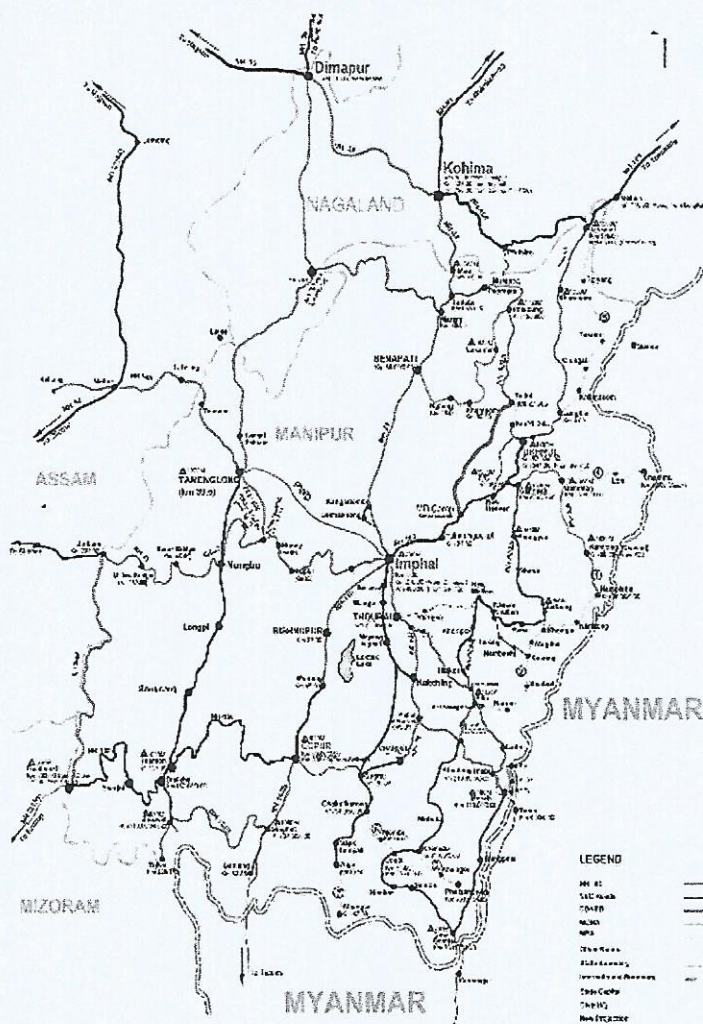
MUCK DISPOSAL REPORT

(Peren-Dimapur Section in the State of Nagaland)

• PKG-I: KM 109+494 TO KM 126+775



National Highways & Infrastructure Development Corporation Ltd.
PTI Building, 3rd Floor, 4, Parliament Street,
New Delhi-110001



CETEST
Engineering Consultants

C. E. Testing Company Pvt. Ltd.
124-A, NSC Bose Road, Kolkata -700092

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MUCK DISPOSAL REPORT

1.1 Introduction

National Highways and Infrastructure Development Corporation (NHIDCL) is a fully owned company of the Ministry of Road Transport & Highways (MoRT&H), Government of India. The company promotes, surveys, establishes, design, build, operate, maintain and upgrade National Highways and Strategic Roads including interconnecting roads in parts of the country which share international boundaries with neighboring countries. The regional connectivity so enhanced would promote cross border trade and commerce and help safeguard India's international borders. This would lead to the formation of a more integrated and economically consolidated South and South East Asia. In addition, there would be overall economic benefits for the local population and help integrate the peripheral areas with the mainstream in a more robust manner.

As a part of the above mentioned endeavor, National Highways & Infrastructure Development Corporation Limited (NHIDCL) has been entrusted with the assignment of Consultancy Services for Carrying out Feasibility Study, Preparation of Detailed Project Report and providing pre-construction services in respect of 2 laning of Peren-Dimapur road Section of NH-129A on Engineering, Procurement and Construction mode in the state of Nagaland.

National Highways & Infrastructure Development Corporation Ltd. is the employer and executing agency for the consultancy services and the standards of output required from the appointed consultants are of international level both in terms of quality and adherence to the agreed time schedule.

National Highways & Infrastructure Development Corporation Limited (NHIDCL), MoRT&H, New Delhi has appointed C.E. Testing Company Pvt. Ltd. (CETEST) as consultant to prepare the Detailed Project Report for the above road stretches vide Letter of Acceptance No. NHIDCL/DPR/SN-DMP-PC/MANIPUR/2016/Vol-II/390 dated 26.10.2017.

1.2 Project Background

The project road starts from existing Ch. 109.767km [Dzuko Bridge (Manipur & Nagaland State border) near Peren town] under Peren district and ends at existing Ch. 190.896km(7th Mile junction with NH-39 in Chumukhdima Town) under Dimapur district.

The project road is located in mountainous & steep terrain. The entire road passes through Peren town, Old Jalukie Sector A, Old Jalukie Sector B, Old Jalukie Sector C, Jalukie B, Jalukie town, Nkwakreu village, New Jalukie, Mhainamsti village, Kiyevi village, Heningkunglwa village, Ngwalwa Village, Chumukedima village, Chumukedima 'A' village, Virazouma village, Tenyiphe-II village and Chumukedima town.

The project road has been divided into five packages. Details are summarized in below table 1.1.



Table 1.1: Package Details

Package No	Existing Chainage (Km)		Existing Length (KM)	Design Chainage (Km)		Design Length (KM)
	From	To		From	To	
PKG-I	109+767	125+203	15.436	109+494	126+775	17.281
PKG-II	125+203	145+393	20.190	126+775	146+208	19.433
PKG-III	145+393	162+890	17.497	146+208	163+592	17.384
PKG-IV	162+890	173+850	10.960	163+592	173+850	10.258
PKG-V	173+850	190+896	17.046	173+850	190+850	17.000
	Total existing length		81.129	Total design length		81.356

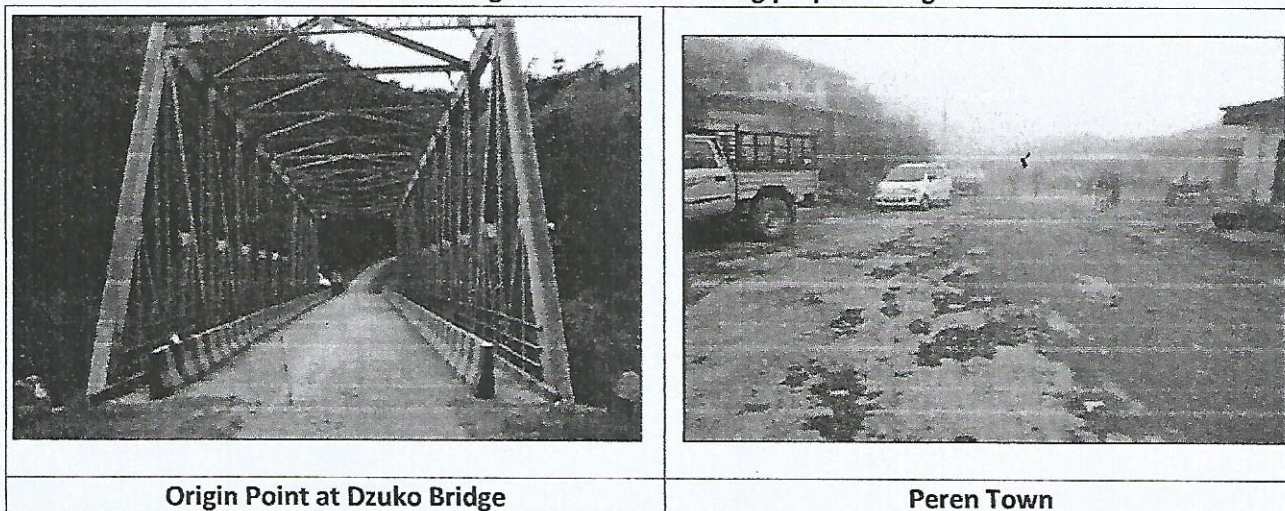
In context of the above mentioned table 1.1, Package-I start from Km 109+494 to Km 126+775 (Length 17.281 Km) on at NH-129A in the district of Peren in the state of Nagaland has been proposed 2-Lane configuration as per specification.

The consultancy services for the same is to include design of best possible alignment follow the existing alignment in addition to Financial Analysis of costs, prioritization of this road depending on project viability and anticipation of hazards during construction, preparation of Land Acquisition Plan, if required and obtaining of all requisite clearances.

Geo Reference Map of the project road stretch is enclosed in Figure 1.1



View of existing Road condition along proposed alignment



1.3 Salient Features of the Project Road (Package-I)

Sl. No	Descriptions	Existing	Proposed															
1	Start Point	Starts from Ext. Ch. 109.767km [Dzuko bridge (Manipur & Nagaland state border) near Peren town]	Starts from Ext. Ch. 109.494km [Dzuko bridge (Manipur & Nagaland state border) near Peren town]															
2	End Point	Ends at Ext. Ch. 125.203km	Ends at Design Ch. 126.775km															
3	Length	: Existing Length = 15.436 Km (As per topographic survey)	Proposed Design Length = 17.281 Km															
4	Terrain	: Mountainous Terrain	Mountainous Terrain															
5	Horizontal Alignment	<p>The horizontal alignment of the existing road has many sub-standard and sharp curves including reverse S-curves. There is also deficiency in transition length as per MoRT&H standards. The details are given below –</p> <table border="1"> <thead> <tr> <th>Types of Curves</th> <th>From (km)</th> <th>To (km)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Sharp Curves/ Blind Curves</td> <td colspan="2">Package-I</td> </tr> <tr> <td>118+190</td> <td>125+203</td> </tr> <tr> <td rowspan="3">Hair-Pin Bends</td> <td colspan="2">Package-I</td> </tr> <tr> <td>109+767</td> <td>117+940</td> </tr> <tr> <td>123+690</td> <td>125+203</td> </tr> </tbody> </table>	Types of Curves	From (km)	To (km)	Sharp Curves/ Blind Curves	Package-I		118+190	125+203	Hair-Pin Bends	Package-I		109+767	117+940	123+690	125+203	Horizontal curves including the sharp/blind curves as well as zigzag ones has been improved to achieve required design speed and super elevation reversal for riding safety and comfort in conformation to MoRT&H standards.
Types of Curves	From (km)	To (km)																
Sharp Curves/ Blind Curves	Package-I																	
	118+190	125+203																
Hair-Pin Bends	Package-I																	
	109+767	117+940																
	123+690	125+203																
6	Design Speed	: Avg. 20-40 kmph	Design Speed: 60 - 40 kmph in general. However as per site constraint design speed is reduced up to 20 kmph.															
7	Cross-Section	<table border="1"> <thead> <tr> <th colspan="2">Chainage (km)</th> <th rowspan="2">Average Carriageway Width (m)</th> </tr> <tr> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td colspan="3">Package-I</td> </tr> <tr> <td>109.494</td> <td>125.203</td> <td>3.5 - 5.0</td> </tr> </tbody> </table>	Chainage (km)		Average Carriageway Width (m)	From	To	Package-I			109.494	125.203	3.5 - 5.0	<p>(1) In Semi Built Up Area at Plain/Mountainous Terrain</p> <p>Carriageway = 7.0 m Hard Shoulder = 2 x 1.5m Footpath cum Covered Drain/Utility Corridor</p>				
Chainage (km)		Average Carriageway Width (m)																
From	To																	
Package-I																		
109.494	125.203	3.5 - 5.0																

Sl. No	Descriptions	Existing	Proposed
		<p>Earthen Shoulder/Gravel Shoulder: 1.0m – 3.5m Total Formation Width: 5.5m – 11.0m</p>	<p>= 2 x 1.0m Space for Utility Corridor = 2 x 1.0m Total Roadway Width = 12.0m</p> <p>(2) In Congested Built up Area at plain terrain Carriageway = 7.5 m Footpath cum Covered Drain = 2 x 1.0 m Space for Utility Corridor = 2 x 1.25 m Total Roadway Width = 9.5 m</p> <p>(3) In Rural/Open Area at Plain Terrain Carriageway = 7.0m Hard Shoulder = 2 x 1.5m Earthen Shoulder = 2 x 1.0m Total Roadway Width = 12.00m</p> <p>(4) In Rural/Open Area at Mountainous Terrain without Retaining Wall on Valley Side Carriageway = 7.0m Hard Shoulder = 2 x 1.5m Earthen Shoulder = 1 x 1.0m Total Road Width = 11.00m</p> <p>(5) In Rural/Open Area at Mountainous Terrain with Retaining Wall on Valley Side Carriageway = 7.0m Hard Shoulder = 2 x 1.5 m Total Road Width = 10.00m</p>
8	CBR Considered	-	10%
9	Traffic (January, 2018)	<p>For Homogenous section – II Base year Traffic (Yr. 2019) Total Vehicle in numbers=373 nos. Total Vehicles in PCU = 322 PCU Total CVPD = 4 nos.</p> <p>For Homogenous section – III Base year Traffic (Yr. 2019) Total Vehicle in numbers=3304 nos. Total Vehicles in PCU = 2938 PCU Total CVPD = 217 nos.</p>	<p>For Homogenous section – II Projected Traffic (Yr. 2042) Total Vehicle in numbers=1966 nos. Total Vehicles in PCU = 1701 PCU Total CVPD = 22 nos.</p> <p>For Homogenous section – III Projected Traffic (Yr. 2042) Total Vehicle in numbers= 17437 nos. Total Vehicles in PCU = 15504 PCU Total CVPD =1146 nos.</p>
10	Traffic Growth Rate	-	7.5 % growth of traffic is considered
11	Pavement Design Life	-	Flexible Pavement - 20 Years
12	Design msa	-	<p>For Homogenous section – II (Ext. Ch. 115+280 km to Ch. 141+690 km) : Calculated MSA = 0.06 MSA</p> <p>For Homogenous section – III (Ext. Ch. 141+690 km to Ch. 178+000 km) : Calculated MSA = 3 MSA</p>



Sl. No	Descriptions	Existing	Proposed																				
			Adopted MSA = 20 MSA as per IRC:SP:73-2015 clause no. 5.4.1																				
13	Flexible Pavement Thickness	Bituminous Surface = 10 – 30 mm Stone Aggregate + Sand = 200 – 720 mm Total Pavement Thickness = 210– 750 mm	For New/Widening & Strengthening portion: BC = 40mm DBM = 70mm WMM = 250mm GSB = 200mm Total = 560mm																				
14	Bridges	<u>Package-I</u> Nil	<u>Package-I</u> Nil																				
15	Culverts	<u>Package : I</u> Total Culvert = 49 nos. • Pipe Culverts = 42 nos. • Slab Culverts = 7 nos.	<u>Package : I</u> Reconstruction with Box culverts=32 nos. New Box culverts =7 nos.																				
16	ROB	Nil	<u>Package-I</u> Nil																				
17	Protection Work	-	<u>Package – I</u> Total length of Retaining Wall=5500 m • Length of 1.5m Retaining Wall=250m • Length of 2.0m Retaining Wall=1200m • Length of 3.0m Retaining Wall=2750m • Length of 4.0m Retaining Wall=1300m Length of Breast Wall = 6850 m Metal Beam Crash Barrier = 2888 m Length of composite RE Wall=250m Hydro seeding=50800Sq m																				
18	Longitudinal Drains	-	<u>Package – I</u> Length of RCC Cover Drain = 4584 m Length of RR Masonry Trapezoidal Drain = 13779.46 m																				
19	Bus Bay with Passenger Shelter	Nil	Total 6 nos. bus bay are proposed at 3 nos. locations. Package wise details are given below: <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Chainage (km)</th> <th>Name of the habitation</th> <th>Side</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Package-I</td> </tr> <tr> <td>1</td> <td>114.15</td> <td>Peren Town</td> <td>Both</td> </tr> <tr> <td>2</td> <td>121.29</td> <td>Old Jalukie Sec A</td> <td>Both</td> </tr> <tr> <td>3</td> <td>124.54</td> <td>Old Jalukie Sec B</td> <td>Both</td> </tr> </tbody> </table>	Sl. No	Chainage (km)	Name of the habitation	Side	Package-I				1	114.15	Peren Town	Both	2	121.29	Old Jalukie Sec A	Both	3	124.54	Old Jalukie Sec B	Both
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1	114.15	Peren Town	Both																				
2	121.29	Old Jalukie Sec A	Both																				
3	124.54	Old Jalukie Sec B	Both																				
20	Truck Lay Bye	Nil	Nil																				
21	ROW	5.0m to 14.0m	Open Area = 18m - 24m Semi Built-up Area = 14m Congested Built-up Area = 12m																				
22	Land Details	<u>Package : I</u> Available land is 27 Ha. (Approx.)	<u>Package : I</u> Land to be acquired 26.77 Ha. (Approx.)																				

Sl. No	Descriptions	Existing	Proposed																																					
23	Forest Stretch	Peren District – Alignment Passes through forest land at Peren Range with roadside plantation.																																						
24	Major Intersection	<p>3Nos. (All junctions are 3-legged)</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Existing Chainage (Km)</th> <th>Name of Junction</th> <th>Leads To</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Package-I</td> </tr> <tr> <td>1</td> <td>119.000</td> <td>Kiepeuzang</td> <td>Tenning</td> </tr> <tr> <td>2</td> <td>119.560</td> <td>Peren town</td> <td>Peren Town</td> </tr> <tr> <td>3</td> <td>124.250</td> <td>Pelekie</td> <td>Kohima</td> </tr> </tbody> </table>	Sl. No.	Existing Chainage (Km)	Name of Junction	Leads To	Package-I				1	119.000	Kiepeuzang	Tenning	2	119.560	Peren town	Peren Town	3	124.250	Pelekie	Kohima	<p>3 Nos. of Major Intersections will be improved at grade.</p> <table border="1"> <thead> <tr> <th rowspan="2">Sl. No.</th> <th colspan="2">Proposal</th> </tr> <tr> <th>Design Chainage (Km)</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">Package - I</td> </tr> <tr> <td>1</td> <td>120.900</td> <td>At Grade 3-Legged</td> </tr> <tr> <td>2</td> <td>121.400</td> <td>At Grade 3-Legged</td> </tr> <tr> <td>3</td> <td>125.870</td> <td>At Grade 3-Legged</td> </tr> </tbody> </table>	Sl. No.	Proposal		Design Chainage (Km)	Type	Package - I			1	120.900	At Grade 3-Legged	2	121.400	At Grade 3-Legged	3	125.870	At Grade 3-Legged
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25	Minor Intersection	<u>Package: I</u> 11 nos.	<u>Package: I</u> 11 nos.																																					
26	Realignment	Nil	<p><u>Package: I</u></p> <p>Total Length = 6.722 km</p> <ul style="list-style-type: none"> Major Realignment due to vertical grade correction = 6.622 km (from Ch. 109 + 494 to Ch. 116+116). Minor Realignment- 1 Location of total length 0.100 km. 																																					
27	Bypass	Nil	Nil																																					
28	Flyover	Nil	Nil																																					
29	Underpasses (VUP/LVUP/PUP)	Nil	Nil																																					
30	Service Road	Nil	Nil																																					
31	Toll Plaza	Nil	Nil																																					
32	Total Civil Cost(Including Escalation based on WPI @ 3.40% for 4 year) (Rs.)	-	<p><u>Package: I</u></p> <p>Rs. 212.26 Cr. (Rs. 12.28 Cr. / Km)</p>																																					

1.4 Quantity of Muck Generated and its consumptive use

During Construction of different components of the project, muck is generated both from soil or slide material and from rock excavation. Total quantity of muck/debris generated due to the project, shall be **11081.00** cum which shall amount to **14405.30** cum considering 30% swell factor. Out of the total muck generated, **2139.00** cum shall be utilized on project road for filling purpose and remaining **12266.30** cum to be dumped with 20% compaction at designated sites. The muck shall be properly roller compacted and dumped on sites to match with the surrounding environment with least change in landscape. Abstract of muck generated and its disposal is presented in **Table 1.1**

Table 1.1: Abstract of Muck Generated and its Disposal

Sl. No.	Quantity of Muck / Debris generated	Quantity of Muck with 30% swell factor	Total Quantity of Muck / Debris including swell factor	Estimated Quantity of Muck/Debris proposed to be utilized in Filling	Balance quantity of muck /debris proposed to be dumped	Effective Muck to be Dumped (With 20% compaction)	Name of the Dumping Site
	(Cum)	(Cum)	(Cum)	(Cum)	(Cum)	(cum)	
1	11081.00	3324.30	14405.30	2139.00	12266.30	9813.04	Muck Disposal Area 1
Total	11081.00	3324.30	14405.30	2139.00	12266.30	9813.04	

1.5 Selection of Muck Disposal Site

The selection of muck disposal sites was carried out considering the quantity of muck, landscape, cost effectiveness, nearness to source of generation, absence of ground and surface water, relief and scope of afforestation works. Subsequently the spoil tips (muck disposal sites) will be developed by taking up plantation through bio technological methods to generate forest type canopy over them. The dumping location shall be well supported at base and at higher elevation by suitable retaining structures like Gabion Wall. Details of Dumping site and amount of muck to be disposed has been summarized in Table 1.2.

Table 1.2: Details of Muck Disposal Site

Sl. No.	Name of Dumping Site	Location of Dumping Site	Dumping Area (sqm)	Average Dumping Height (m)	Volume of Muck to be Dumped (with 20% Compaction) (Cum)
1	Muck Disposal Area 1	NEAR PEREN TOWN (Valley Side)	3,400.00	36.00	9813.04
Total			3,400	36.00	9813.04

The layout Plan of Muck disposal Site is shown in Fig 1.2.

1.6 Description of Muck Disposal Sites

The proposed muck disposal site is located nearest valley side from the existing road. The details are given below.

MUCK ID - 01	LATITUDE(N)	LONGITUDE(E)	Side of Nearest Valley from Existing Road
M1	25°32'05.599"	93°45'25.212"	Right Hand Side (Existing Ch. 112.375km /Proposed Ch. 113.600km)
M2	25°32'07.686"	93°45'25.210"	
M3	25°32'07.703"	93°45'23.430"	
M4	25°32'05.641"	93°45'23.385"	

The Plan area of the site is 3400 Sq. m. = 0.34 Ha.

1.7 Implementation of Engineering Measures at Muck Disposal Site

It has been observed that after disposal of muck, it creates problem as it is susceptible to scattering unless the muck disposal sites are supported with Gabions. All the dumping sites need proper handling to avoid spilling of muck into the river water, present of settlement in valley side while dumping and in the post dumping stages. The muck disposal site has to be developed from the ground level by providing gabion structure. The costing of engineering measures has been worked out based on gabion structure. In the muck disposing site, muck brought in dumpers shall be dumped and manually spread behind the crates and compacted with the roller in such a manner that rock mass is properly stacked behind the crates with minimum of voids.

1.8 Implementation of Biological Measures at Muck Disposal Site

Biological measures, however, require special efforts as the disposed muck will be devoid of nutrients and soil contents to support vegetation. The selection of soil for spreading over such an area would require nutrient profiling of soil for different base elements. Suitable mixtures of nutrients would be done before placing the soil on the top surface of muck disposal area to have administrative growth of forest canopy.

1.8.1 Plantation Technique

In view of the site condition, particularly the soil condition, the planting technique for all the categories of the plants has to be very site specific and suited to the stress conditions as anticipated and discussed above. The planting substrates would need to be considerably improved to support the plants in their initial stages of establishment. The moisture retention capability, availability of nutrients and soil aeration, permeability and porosity would require intervention and assistance.

Plantations are proposed to be raised on the muck dumping sites using grass carpeting in the under storey and trees in the upper story. Tree species would be planted in the area combined with grass showing in patches. Intimate mixture of species would be avoided right at the planning stage and would be strictly followed during planting. Grass carpeting would be mixed by groups in rows.

Grass slip planting and grass seed sowing would be done in strips at 0.1 m x 0.1 m spacing in prepared staggered patches of 1 m x 0.5 m with a depth of 0.3 m. Soil mixture would be used while filling the patches.

Planting trees as compensatory afforestation at the rate of 290 nos. trees per hectare at a spacing of 6m by grubbing and leveling the ground up to a depth of 150mm, digging holes 0.9m dia., 1m deep.



mixing farm yard/sludge manure with soil, planting of sapling 2 m high with 25 cm diameter stem, backfilling the hole and watering.

The stabilization sites from the time of execution of biological measures would be protected with barbed wire fencing on 1.65 m high RCC posts and provided with inspection paths.

The plantations under biological measures would be maintained for a period of one year by watering the plantation during dry season, mortality replacement and repair of fencing and inspection paths within the area. The proposed costs include raising plants, grass carpeting and also for mortality replacement.

1.8.2 Species for Plantation

Afforestation with suitable plant species of high ecological and economic value and adaptable to local conditions will be undertaken in accordance with canopy cover requirement. Selection of plant species, propagation and cultivation will be done in co-ordination with Concerned Forest Department in Nagaland.

1.9 Budget for Muck Disposal Plan

Estimation has been made for engineering measures of muck disposal plan as **Rs. 0.76 Cr.** whereas biological measures as **Rs. 0.06 Cr.** Thus, Total budget for Muck Disposal Plan has been estimated as **Rs. 0.82 Cr.**

The cost break-up of engineering and biological measures are detailed in **Table 1.3** and **Table 1.4** respectively.

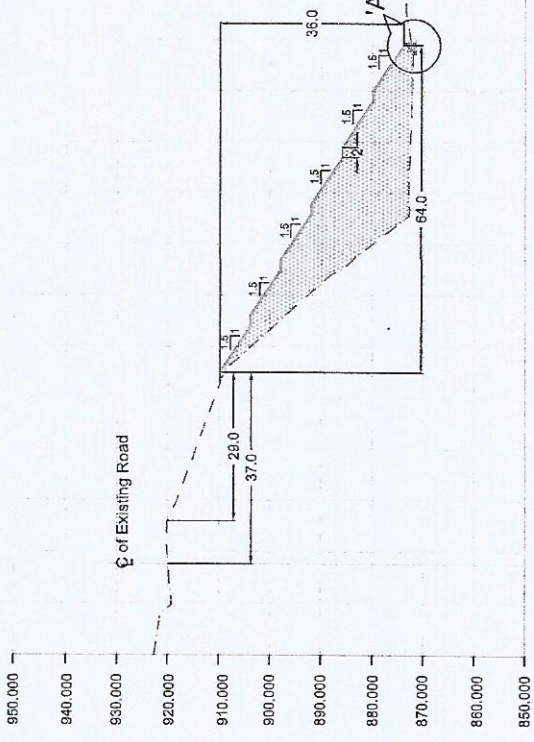
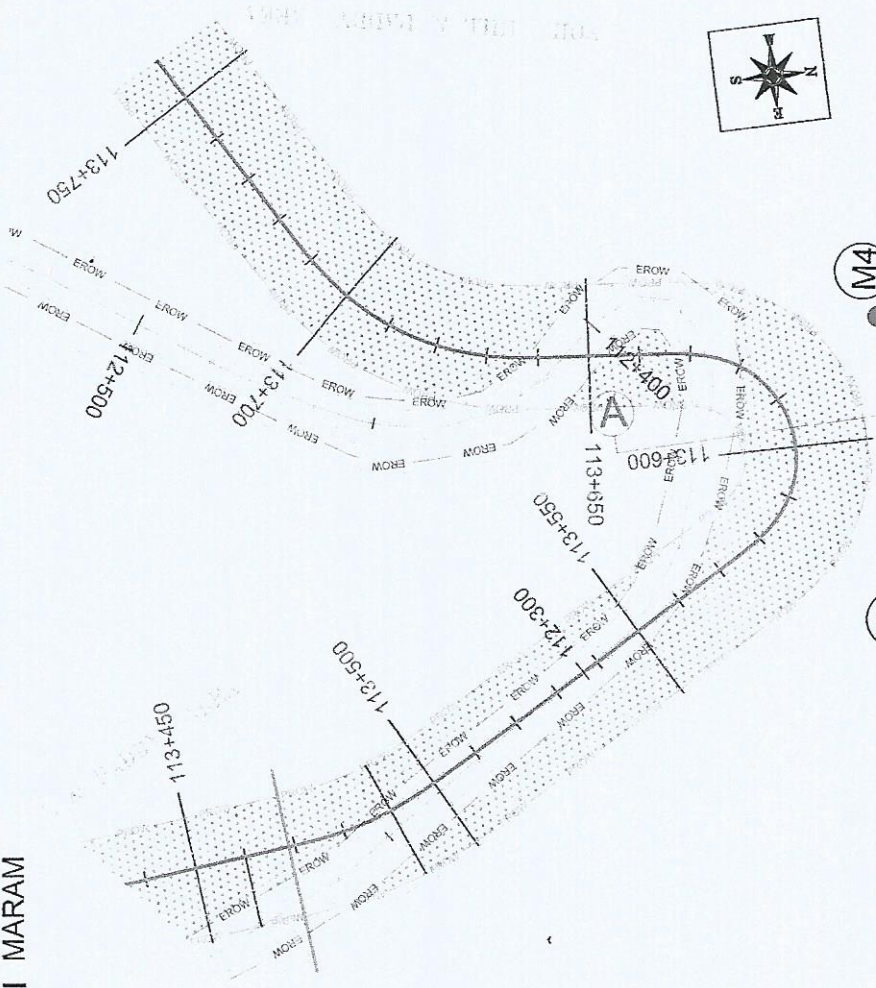
Table 1.3: Cost Estimate for Engineering Measures

Sl. No.	SOR Item No.	Name of the work	Unit	Qty	Rate	Amount (Rs. Lakhs)
Muck Disposal Site						
		Gabion Wall Construction				
1	12.1 B (i)	Earth Work	Cum	129.6	75.00	0.10
	12.8 A (I)	PCC M15	Cum	21.6	10094.95	2.18
	12.7	Stone Masonry	Cum	324	8648.63	28.02
2	3.11	Removal of unserviceable soil from excavation to muck disposal site (for extra lead above 1km upto 12Km)	Cum	9813.00	394.00	38.66
		Total quantity of Muck	Cum	9813		
Sub-Total (1+2) =						68.96
Contingencies @ 10%=						6.90
Total =						75.86

Table 1.4: Cost Estimate for Biological Measures

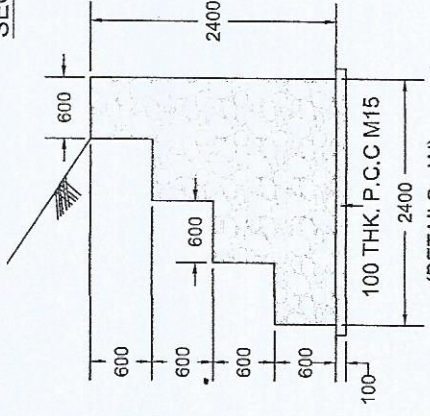
Sl. No.	SOR Item No.	Name of the work	Unit	Qty	Rate	Amount (Rs. Lakhs)
1		Raising of Plantation (Creation Cost)				
	LS	Survey / demarcation / plantation /site clearance	Days	2	450	0.009
	11.21	Compensatory afforestation	Hectare	0.34	126431.00	0.43
2		Fencing Cost				
	8.17	G.I Barbed wire Fencing 1.2 metre high (Providing and fixing 1.2 metres high GI barbed wire fencing with 1.8 m angle iron posts 40 mm x 40 mm x 6 mm placed every 3 metres center to center	Meter	154	616.00	0.95
		ii) Maintenance of barbed wire fencing @5% of erection cost for 2nd and 3rd year				0.05
3	11.5	Turfing lawns with fine grassing	Sqm	3400	126.00	4.28
Sub-Total (1+2+3) =						5.72
Contingencies @ 10%=						0.57
Total Cost for Biological Treatment=						6.29

Total budget for Muck Disposal Plan = 82.15 Lakhs i.e. 0.82 Cr.



MUCK ID-01
 AREA OF MUCK DISPOSAL- 0.34 Ha.
 CAPACITY OF VOLUME - 9813.00 Cum.

SECTION A-A



DETAILS OF GABION WALL
 (DETAILS - 'A')

MUCK DISPOSAL AREA:
 SURROUNDING COORDINATES

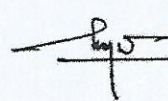
Muck	Longitude (E)	Latitude (N)
M-1	25°32'05.599"	93°45'25.212"
M-2	25°32'07.686"	93°45'25.210"
M-3	25°32'07.703"	93°45'23.430"
M-4	25°32'05.641"	93°45'23.385"

FIG:-1.2

MUCK DISPOSAL PLAN

CONSULTANT : CETEST CE TESTING COM 124-A, N.S.C.I Kolkata Kolkata Kolkata	NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. PIT Building, 3rd Floor, 4, Parliament Street, New Delhi - 110001	CLIENT:	LAYOUT PLAN OF MUCK DISPOSAL SITE	DWG NO. - CET/406/NHIDCL/NH-129A/JP-D/MDP REVISION MKD. - RO SHEET NO. - 01	DRAWN BY DESIGNED BY CHECKED BY S.MANDAL B.DAS S.SADHU
Scale : DATE : SEP, 2021	Divisonal Forest Officer Peren Forest Division Jalukie Nagaland	M1 M2 M3 M4	MUCK DISPOSAL- 0.34 Ha. CAPACITY OF VOLUME - 9813.00 Cum.	FIG:-1.2	45

**ANNEXURE-I: FOREST NO OBJECTION
CERTIFICATE**


* C.E. TESTING CO. PVT. LTD. *
KOLKATA
700 092
* 12/A, N.S.C. BOSE ROAD *
A circular stamp with the text "C.E. TESTING CO. PVT. LTD." around the top edge, "KOLKATA 700 092" in the center, and "12/A, N.S.C. BOSE ROAD" around the bottom edge. A handwritten signature is written over the stamp.

FOREST NO OBJECTION CERTIFICATE

Project Name :- Construction of 2-Laning with Hard Shoulder of Peren-Dimapur Section on NH-129A from Design Km 109.494 to Km 126.775 (Length -17.281 Km) in the state of Nagaland on EPC Mode (Package-1) under NH(O)-TSP

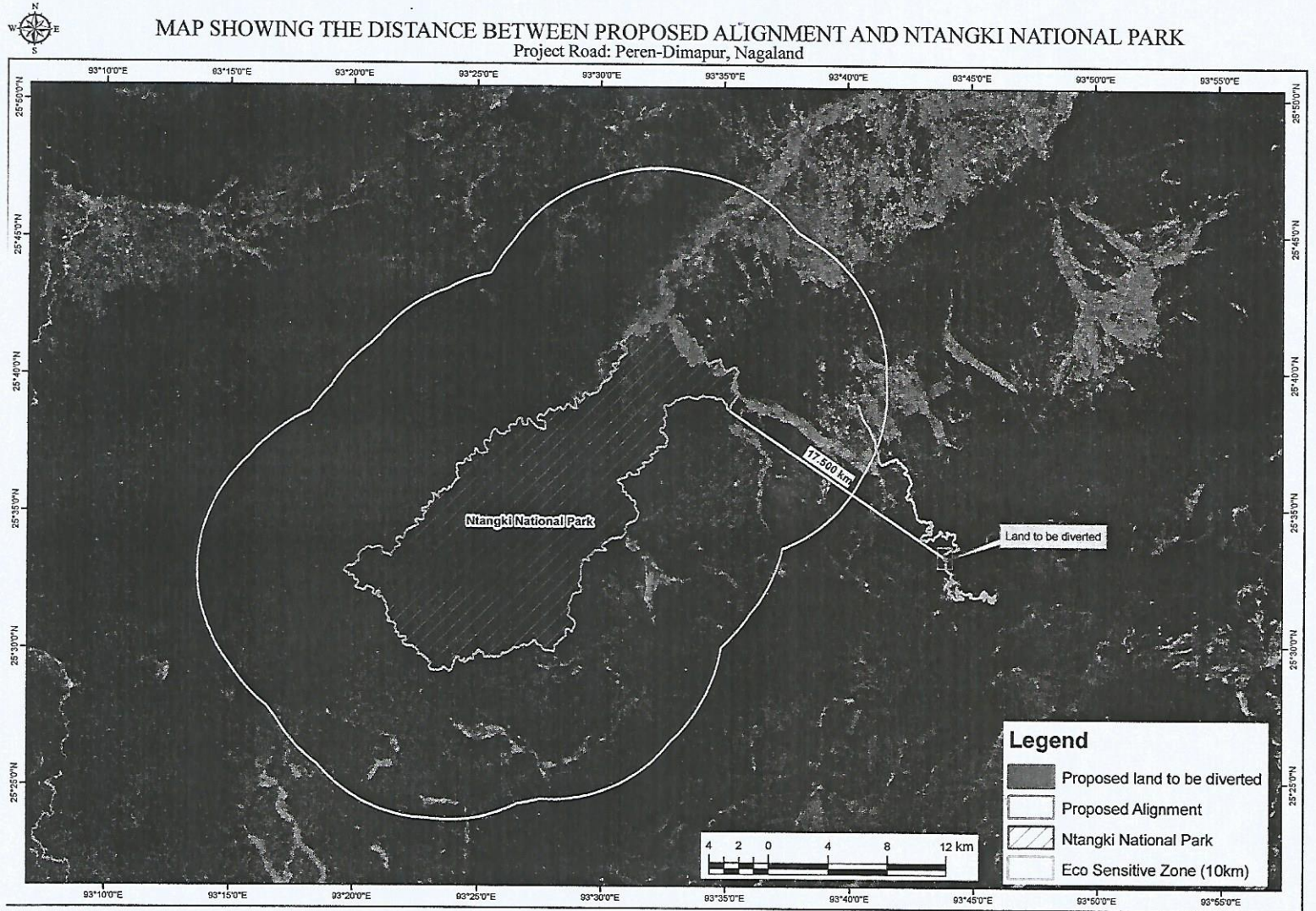
Village Name :- Peren			Date :-	
Chainage	Existing Chainage		Design Chainage	
	From	To	From	To
	112.333 Km	112.403 Km	113.570 Km	113.640 Km

(Note :- NHIDCL will not give any compensation for the Muck Disposal Site to the local land owner. The Site will be given back after dumping the surplus material by the NHIDCL's contractor with necessary land development.)

Name of the DFO	Forest Division	Signature with date and Seal
M. OBED ZELIANG	PEREN FOREST DIVISION	<i>[Signature]</i> 22/10/21 Divisional Forest Officer Peren Forest Division Jalukie : Nagaland
Name of the Land Owner		Signature with date and Seal
MIREULUNG SEPHE		<i>[Signature]</i> 22/10/21 Chairman Peren Village Council Peren

ANNEXURE - VIII

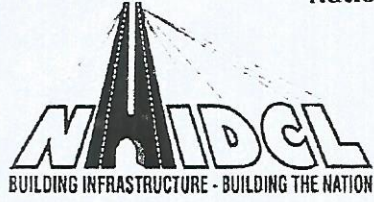
MAP SHOWING THE DISTANCE BETWEEN PROPOSED ALIGNMENT AND NTANGKI NATIONAL PARK
Project Road: Peren-Dimapur, Nagaland



ah
 Addl. Principal Conservator of Forests
 (Territorial)
 Nagaland : Kohima

[Signature]
 Divisional Forest Officer
 Peren Forest Division
 Jalukie : Nagaland

ANNEXURE - IX



National Highways & Infrastructure Development Corporation Limited
(Ministry of Road Transport & Highways, Govt of India)
General Manager (Projects)
PMU - Dimapur
Behind City Tower Building, NST Colony,
Dimapur, Nagaland- 797112
Email: pmu-dimapur@nhidcl.com



BHARATMALA
ROAD TO PROSPERITY

No. NHIDCL/PMU-DMP/DPR/M-P-D/FC/Vol-I/2021-22/2994(A)

Dated: 10.03.2022

UNDERTAKING FOR PAYMENT FOR EXTRACTION CHARGES OF THE TREES TO BE REMOVED FROM THE PROPOSED AREA

This is to certify that the PMU Dimapur, National Highways and Infrastructures Development Corporation Limited (NHIDCL), Government of India, the User Agency, has applied for diversion of forest land for "2 laning of Peren-Jalukie section on NH-129A on Engineering, Procurement and Construction mode in the State of Nagaland". We hereby undertake and submit that the User Agency is ready for the payment for extraction charges of the trees to be removed from the proposed area, if any, as decided by the State Government. In case of revision of rates, the difference amount will also be paid by the PMU Dimapur, National Highways and Infrastructures Development Corporation Limited (NHIDCL), Government of India.

Date: 10.03.2022

Place: Dimapur

(Ajay Batra)
General Manager (Projects)
NHIDCL, PMU-Dimapur
General Manager (Projects)
NHIDCL, PMU Dimapur
Nagaland