Additional information in respect of Construction of 132kV Transmission Line from Bairabi to W Phaileng via Mamit.

Sl No	Additional information sought by Integrated Regional Office (IRO) Shillong	Reply furnished by Power and Electricity Deptt, Govt of Mizoram.
1.	Total length of Tr Line with Right of Way : The total line length passes through Forest land is	The total line length passes through Forest land is 4.14kM
2.	Whether any alternative have been explored for the transmission Line, if yes the 3 routes to be shown on the map to be duly signed and authenticated by DFO concerned:	Yes, the proposed route alignment is the most economical and barest minimum impact on deforestation to link 132kV Bairabi Sub-Station and 132kV Sub-Station West Phaileng via 132kV Sub-station Mamit. **Annex-I**
3.	3-diamentional sketch of the transmission line showing diamension of tower along with its foot print.	Enclosed soft copy and hard copy.
4.	Forest Right Act Certificate: NA	NA
5.	Undertaking for compensatory afforestation and tree felling from the user agency	Shall be submitted in due course
6.	GPS – Coordinated for the proposed diversion area: Enslosed.	Enclosed as Annexure-II

(Vanlaltluanga)
Sub-Divisional Officer
Mamit Power Sub-Division

(Thanghara Sailo)
Executive Engineer
Mamit Power Division.

Annexure-I

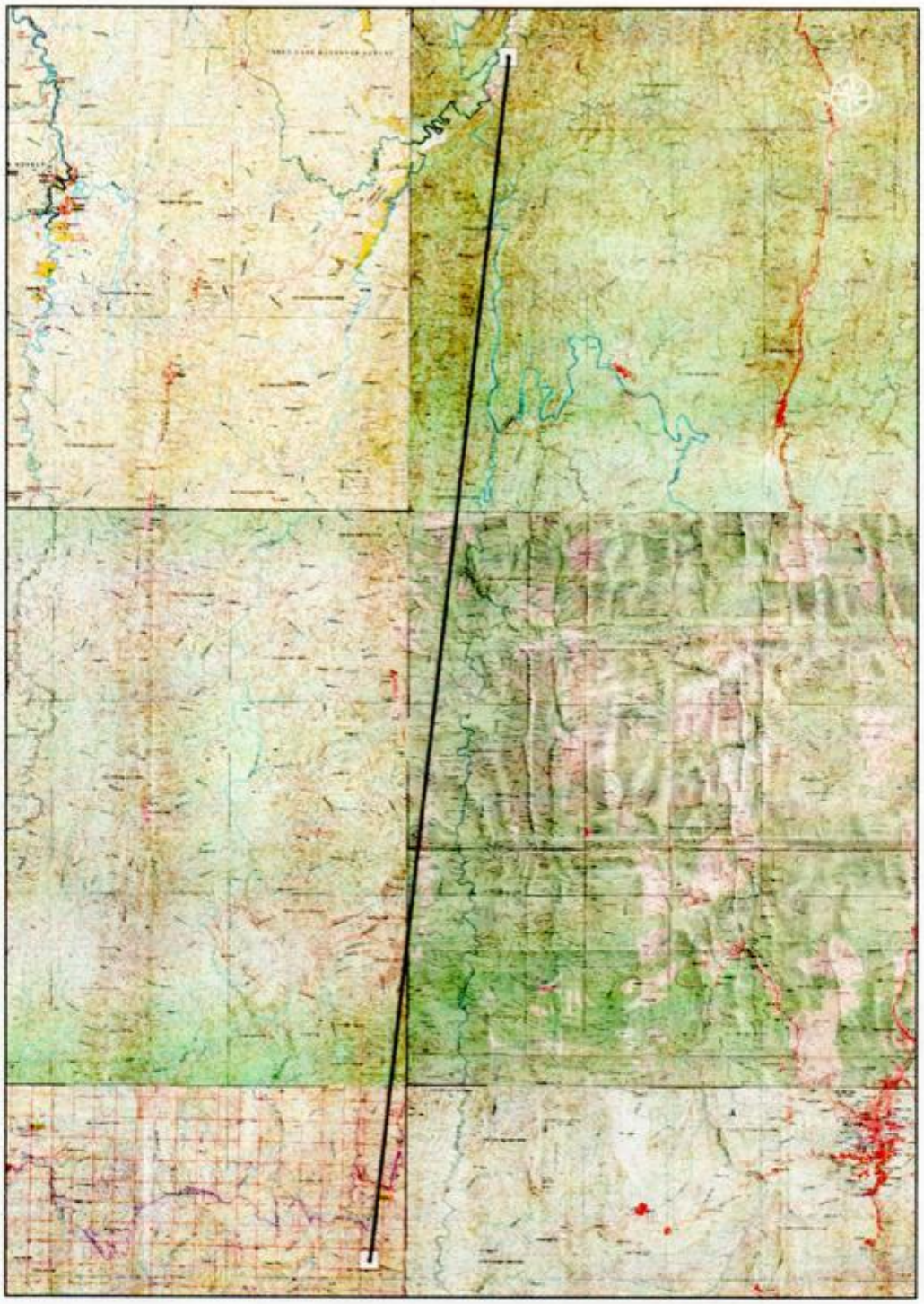
RECONNAISSANCE REPORT FOR THREE ALTERNATIVE ALONG WITH BEE LINE :

In course of our preliminary survey apart from the 'BEE' Line, Alternative – I, Alternative – II, Alternative – III are considered which marked in Black, Magenta Blue & Cyan have been indicated in the attached Topographical maps for final selection before detail survey of the selection route is undertaken. Please note that all those routes indicated in the attached maps are tentative. Comparison details with those above routes with their merits and demerits are indicated below for your kind perusal and approval of the selected route.

(A) 'BEE' Line (marked in black)

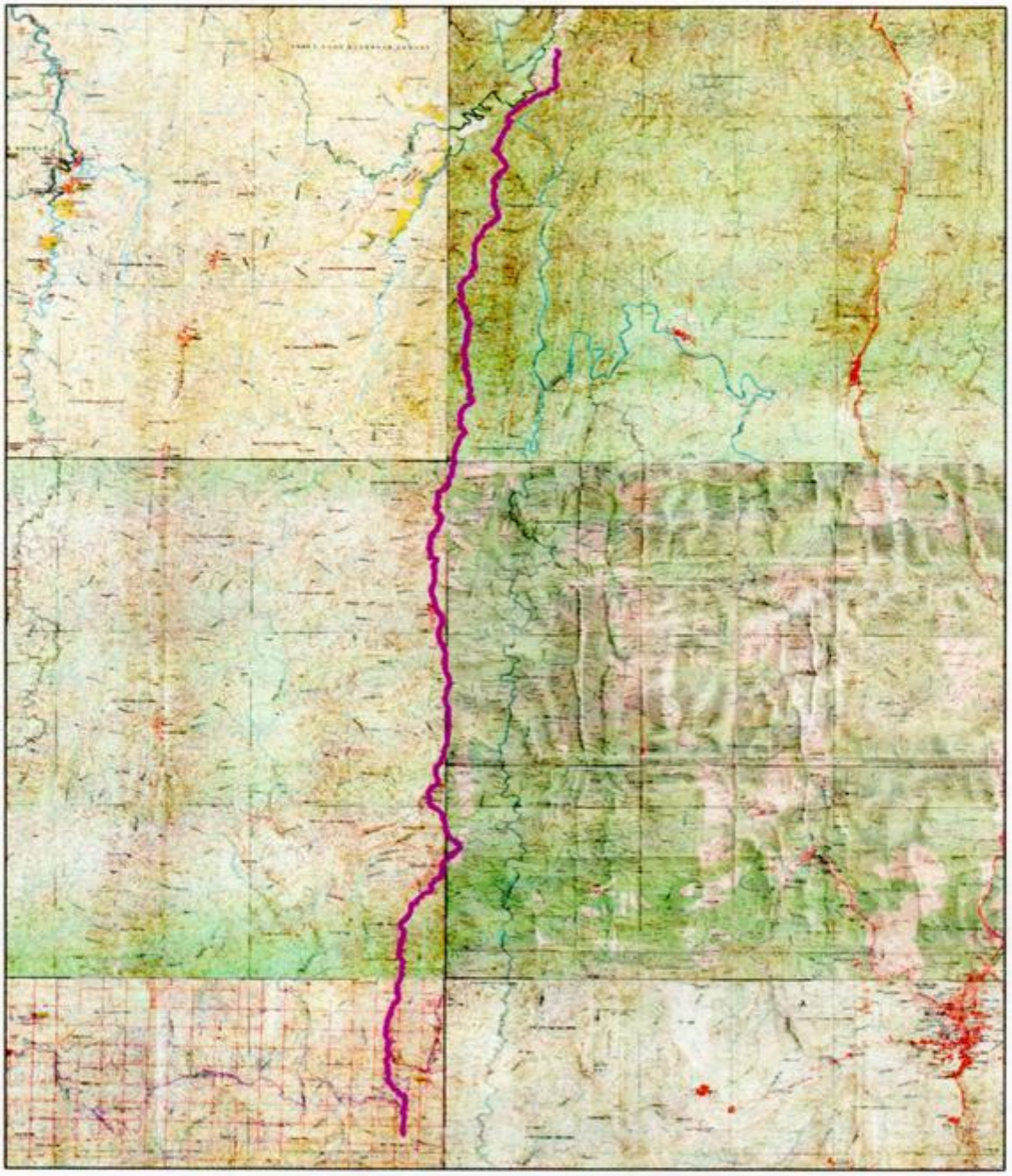
From the enclosed map it may please be observed that the 'BEE' line is the straight line connecting the 132kV Sub-Station Bairabi and 132kV Sub-Station West Phaileng via 132kV Sub-Station Mamit. The length of BEE line is 58.277 kMs . This BEE line is in comparison to the other investigated routes is shorter. However, the aforesaid is not feasible due to the details as given below:-

1. 'BEE' line passes through some permanent structure like – House, Churches, Community Hall etc at Suarhliap, Damdiai and Vawngawnzo Villages.
2. It has cross deep valley and hill top, rough terrain, Clive, where tower spotting are not possible.



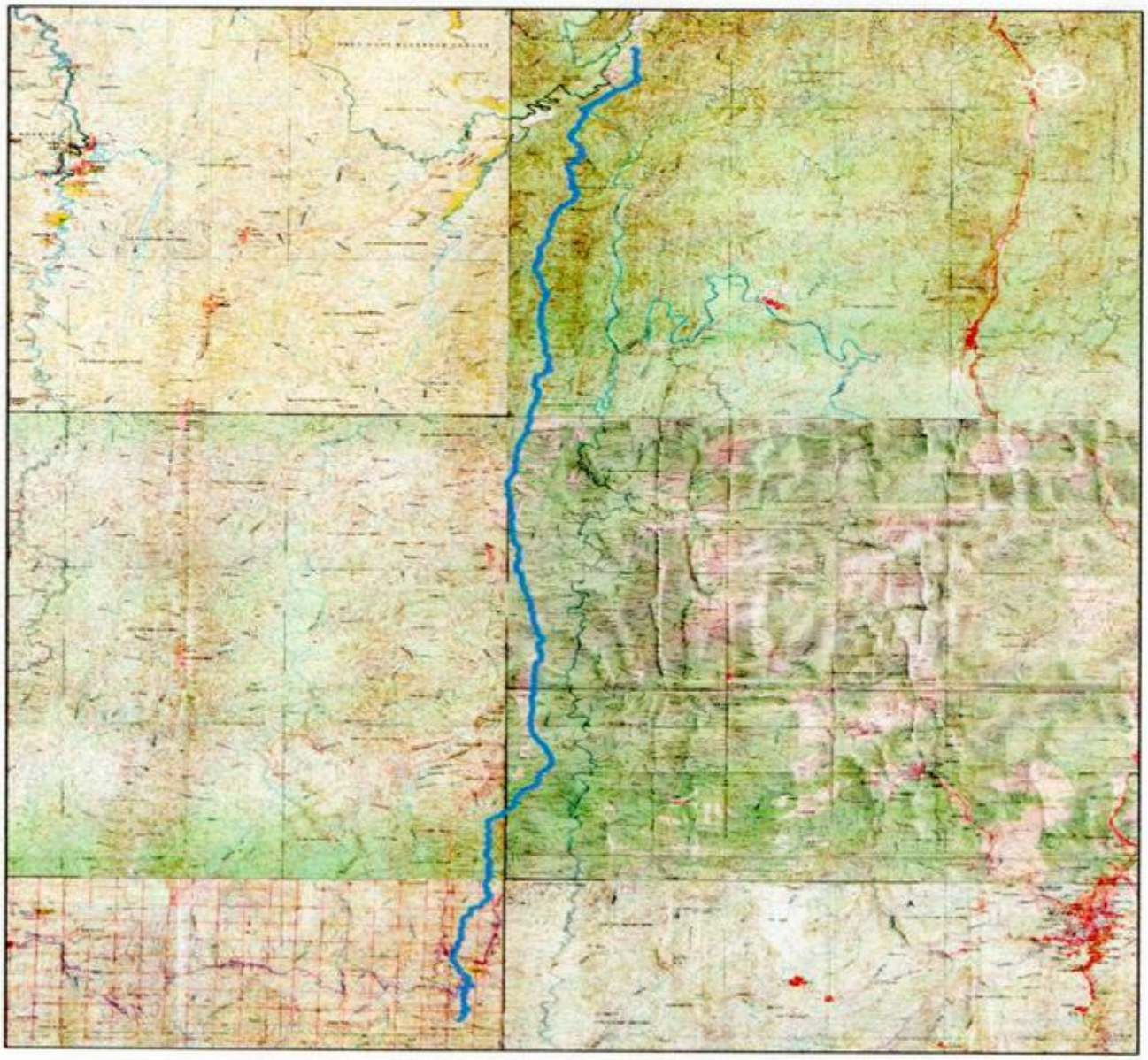
(B) <u>Alternative –I (ALT-I Marked in Magenta – Our proposed route)</u>

The length of this route is 69.10kM (Approx). This alternative route passes through the villages : Suarhliap, Damdiai, Vawngawnzo, Sabual, Mamit. This route is free from any permanent structure. Tower location selected along this route is not far from the main road along Bairabi to Mamit, Mamit to Dampui and other connected road so that the transportation cost will be minimum.



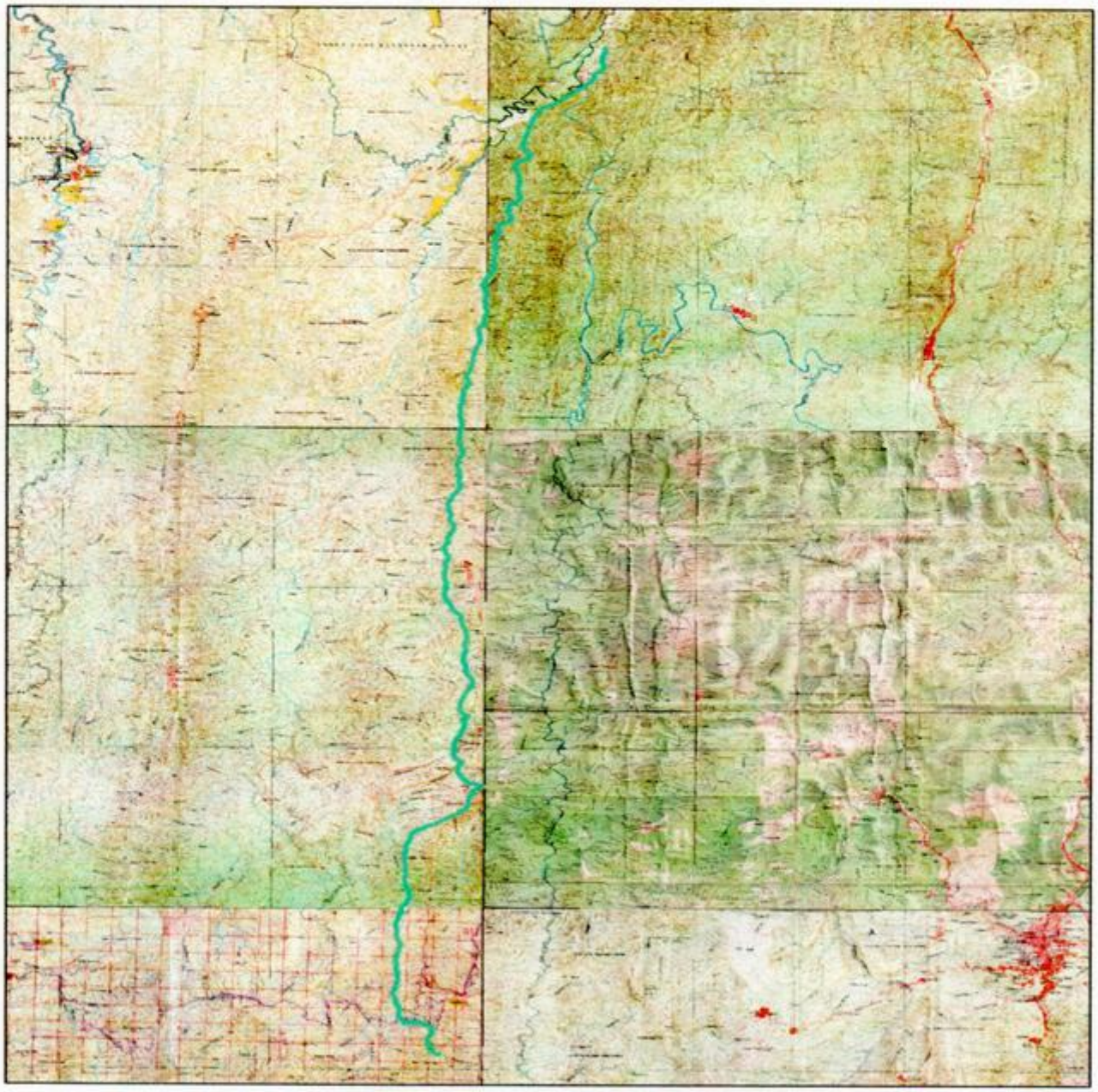
(C) <u>Alternative –II (ALT-II Marked in Blue)</u>

The length of this route is 69.90kM (Approx). This alternative route passes through the villages : Suarhliap, Damdiai, Vawngawnzo, Sabual, Mamit. Despite this route is free from any permanent structure but the route is far away from main road which will affect transportation cost during construction and maintenance cost will be more round the year. Apart from this the line passes through Deep Forest zone at Zongaw Area, where tree felling is much more than Alternative –I also private plantation at Dampui Village which will enhance Right of Way cost also it has to cross existing 33kV line at 2(two) location.



(D) <u>Alternative –III (ALT-III Marked in Cyan)</u>

The length of this route is 70.150kM (Approx). This alternative route passes through the villages : Suarhliap, Damdiai, Vawngawnzo, Sabual, Mamit. Despite this route is free from any permanent structure, the route is far away from road which will increased transportation cost during construction and maintenance cost will be more round the year. Apart from this the line passes through Deep Forest zone at Zongaw Area, where tree felling is much more than Alternative –I also private plantation at Dampui Village, Damdiai, & Vawngawnzo Villages which will enhance Right of Way cost.



From the above 3(three) alternatives we propose Alternative-I. There will be no parallelism with Telephone line, Internet line within the said proposed route. Thus there will be no problem to get P.T.C.C clearance from the competent authority. In this proposed line we observed that the line is passing through the minimum compensation area as well as Forest reserved area. Also best feasibility have been explored so as to get minimum food grade garden like Mango, Betel Nut, and other trees. In view of the required detail and technical aspect narrated above, we would suggest allowing us to carry out detail survey in respect of the Alternative Route-I, as investigated by us at the earliest. Besides we are also having the following merits for this route:

1. Route length is shortest as compared with Alternative-II & Alternative-III.
2. Number of Angle point is minimum as compared with other Alternative-II & Alternative-III.
3. During preliminary survey we also observed that ROW problems will be minimum in the proposed route.
4. As stated above, route is free from permanent structures.
5. Along our proposed route which is along the road side, the cost of transportation (manual & light vehicle etc) for construction is more easier/economical in comparison with the other alternative route. As well as the maintenance of the entire line is easier than the other alternatives.
6. As Jungle and tree are minimum along our proposed route, for this reason tree cutting / trimming are minimum as compared to other alternatives.
   For the above reason maintenance also will be easier/economical as compared to other alternative routes.

Submitted by

(THANGLURA SAILO)
Executive Engineer
Mamit Power Division

Authenticated by

(JENNY SAILO)
Divisional Forest Officer
Mamit Forest Division

COMPARATIVE STATEMENT AT A GLANCE

The comparative feature of alternative for selecting the optimum route are as under

Description	Alternative –I (Optimum/Proposed Route)	Alternative –II	Alternative –III
Route Length in kM	69.10	69.90	70.15
Angle Point	207	209	211
Railway Crossing	Nil	Nil	1
River Crossing (Major)	1	1	1
River Crossing (Minor)	Nil	Nil	Nil
Forest (Village Forest)*	4.14kM	5.25kM	7.05kM
ROW*	Forest – 63.50% Barren Land – 23.50% Cultivated Land – 13%	Forest – 66.50% Barren Land – 19.50% Cultivated Land – 14.00%	Forest – 70.50% Barren Land – 13.50% Cultivated Land – 16.00%
Site Approach	Mechnical & Manual	Manual	Manual
Railway Crossing	Nil	Nil	1
N.H Crossing	1	1	1
S.H Crossing	11	7	4
132kV S/C Crossing	1	1	1
66kV S/C Crossing	Nil	Nil	Nil
33kV S/C Crossing	2	3	2
11kV S/C Crossing	1	2	3
Cable Route	Nil	Nil	Nil
Low Land Area	Nil	Nil	Nil

***This value is tentative and will be finalised after detail survey.**

Submitted by

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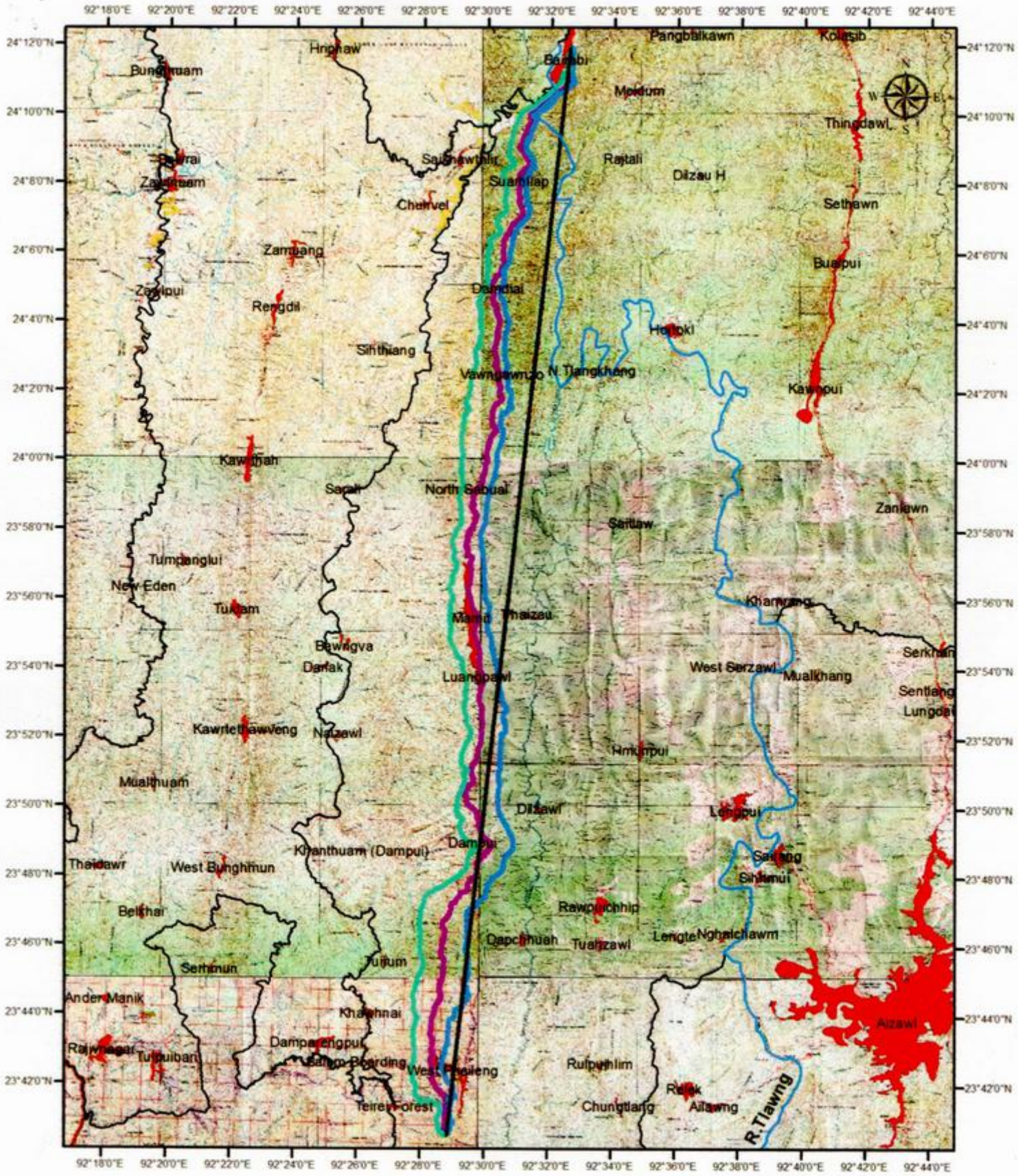
Executive Engineer
Mamit Power Division

Authenticated by

(JENNY SAILO)
Divisional Forest Officer
Mamit Forest Division

TOPO SHEET MAP SHOWING THREE ALTERNATIVE ROUTE ALIGNMENT FOR 132 KV LINE BAIRABI TO W. PHAILENG VIA MAMIT



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Mamit

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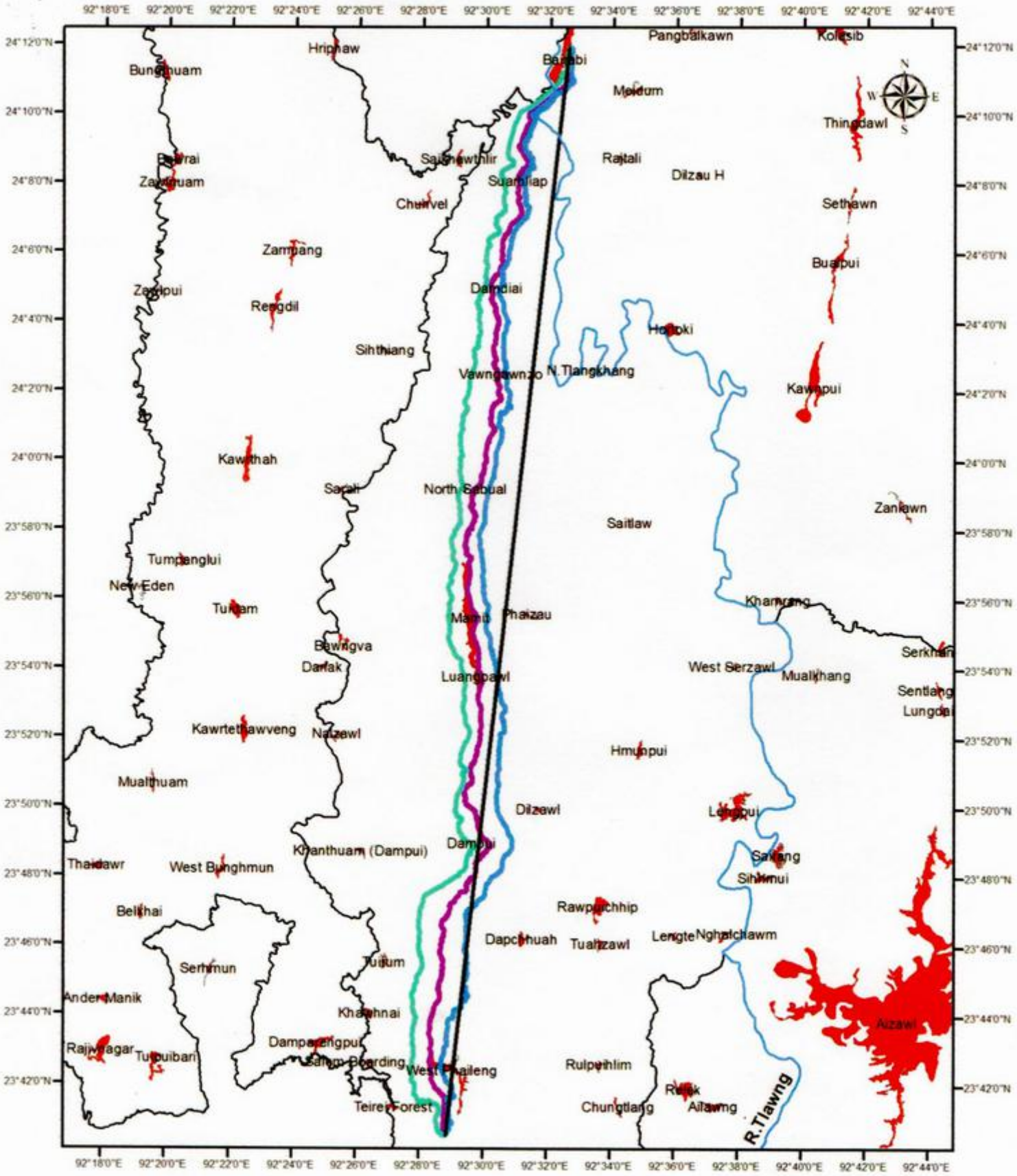
Mamit Forest Division
Mamit : Mizoram

Legend

- Bee Line
- Final Proposed Route (Alternative 1)
- Alternative-2
- Alternative-3
- Rivers
- Settlement

Prepared by:
GIS Cell, EF&CC Deptt.Mizoram

DIGITIZED MAP SHOWING THREE ALTERNATIVE ROUTE ALIGNMENT FOR 132 KV LINE BAIRABI TO W. PHAILENG VIA MAMIT



7.5 3.75 0 7.5 Kilometers

Legend

- Bee_Line
- Final Proposed Route (Alternative 1)
- Alternative-2
- Alternative-3
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