

Feasibility Report

The feasibility of the Road alignment along the Right Bank of River Marsudhar in place of Left Bank is with the justifications detailed as below:-

1. The alignment proposed is the only feasible one because of connecting of the Headquarter Nowpachi with the District Headquarter Kishtwar and rest of the State with a minimum length of 18.00kms involving only one minor Bridge whereas on the Left Bank a Length of 27.48Kms Road gets involved with very hard Rock precipices alongwith two number Bridges of large Span of 230 Mtr and 560mtrs respectively involving thereby a huge cost more than ten times of the sanctioned original Road cost (DPR)
2. The Forest area gets almost 2 times more involved in comparison to the proposed alignment.
3. The habitations enroute to the alignment on Right Bank gets devoid of Road connectivity.
4. The Road alignment on the left Bank in place of the sanctioned one on Right Bank will get involved closer to the Eco-Sensitive zone almost within the Eco-Sensitive zone of Wild life National park KHANP. Whereas the sanctioned proposed alignment is on the Right Bank being far away from the Eco-Sensitive zone and divided by the River Marsudhar which is also a huge barricade for movement of any Wild animals from the Eco-sensitive zone having minimum crossings available on the River Marsudhar.
5. The NPV cost of Forest land involved on the Left Bank is 02 times more involved than the original alignment on the Right Bank.
6. The CA Cost of Forest land involved on the left bank in comparison to the original alignment on the Right Bank is too much higher than the original one.

7. The Road project along the left Bank is not also economically feasible devoiding thereby the habitation enroute on right bank without Road connectivity.

Hence the alignment along the Right Bank is the feasible one only as compared to the left Bank on the facts stated alongwith the comparative statement enclosed.


Executive Engineer
PMGSY Division (PIU)
Marwah

Comparative statement between existing alignment & alternate alignment of Road from Nowpachi Dehrna upto Hanzal

S.No.	Name of Particulars	On-going Road Alignment on right bank	New proposed Alignment on left Bank	Difference		Remarks
				Excess	Savings	
1	Length of Road from Nowpachi Dehrna upto Hanzal	18.00 kms	27.48 kms	9.48 kms excess		The Road is aimed to connect the Sub-Div Headquater of Marwah/ Warwan with District Head Qauter & rest of UT of J&K by all weather Road connectivity being presently connected with a seasonal Road. Thus as per comparative statement on-going alignment on the right bank is the only feasible one
2	Bridges involved	01 No 45mtr span	02No's LSB involving a span of 230mtr & 560mtr respectively	02 No Mega bridges involved with a total Span of 790mtr in comparision to 45mtr span		
3	Forest Involved	7.484Hect	13.07Hectr	5.58Hectrs		
4	Cost of Project	847.00 lacs	9946.00 lacs	9099 lacs		
5	Habitations to be connected	Nowpachi, Changer, Nowgam, Yurdoo Teller, Hynan Hanzal	Hanzal	En-route Habitations Teller, Chanjer, Hynan will got devoid of Road Connectivity		
6	NPV Cost	102.60Lacs	381.96lacs	279.36lacs		
7	CA Cost	22.00lacs	101.00lacs	79.00lacs		
8	Plan for Safe Passage of Animals	202.00lacs	450.00lacs	248lacs together with the alignment falling within the close range of eco-sensitive zone of wildlife Sanctuary KHANP delinated on the left Bank		


 Executive Engineer
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General Abstract of Cost

Name of Project:- Construction of Link Road by way of earthwork & walling for alternate alignment of Nowapachi Dherna upto Hanzal Road

Length of the Road :- 27.48kms

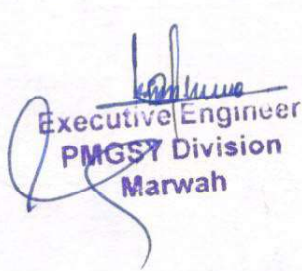
Width of the Road:- 6.00mtr

S.No	Name of Particulars	Unit	Qty	Rate	Amount
A	Earthwork (As per detailed Estimate Enclosed)				2470.37
B	Walling				
i	04mtr Height R/walls	Rmt	1500	18686	280.29
ii	03mtr Height R/walls	Rmt	1000	13212	132.12
iii	2.50 mtr Height R/walls	Rmt	2000	15607	312.14
C	X-Drainages				
i	2mtr span RCC Culvert	Nos	10	925000	92.50
ii	900 mm dia H/pipe Culvert	Nos	10	832399	83.24
iii	side drain	RMT	2000	4425	88.50
D	Bridges				
	Constt of 230mtr LSB at KM 2nd RD(630-860)	RMT	230	750000	1725.00
	Constt of 560mtr LSB at KM 20th RD(370-930)	RMT	560	850000	4760.00
			Total		9944.16

Say Rs:- 99.44Cr


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 Marwah

Detailed Estimate for construction of link Road by way of Erosion for alternate alignment of Nowpothi Deharna to Hanzal Road up to PMGSY.

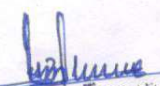
S.No	Particulars of item	Amount
①	Earth work in bulk excavation by Mechanical means (Hydraulic excavator) other areas (Exceeding 30cm in depth, 1.5m in width as well as 10.5m on plan) incl disposal of excavated earth load upto 50m & lift upto 1.5m, as directed by Engineer incharge.	
	(a) All kinds of Soil Qty vide chart enclosed: $132111.35m^3 @ Rs 188.75/m^3$	$Rs 24936017=-$
	(b) Ordinary Rock $152508.02m^3 @ Rs 378.35/m^3$	$Rs 57701409=-$
	(c) Hard Rock (require blasting) $245483.28m^3 @ Rs 669.70/m^3$	$Rs 164400152=-$
		Total Rs 247037578
		Say Rs <u>2470.37 lacs.</u>
		D/ Jha
	 Executive Engineer PMGSY Division Marwah	

**Earthwork Quantity chart for Construction of Motorable Road from Nowapachi
Deherna upto Hanzal via (Alternate Alignment)**

KM	RD	S.A	T.A	M.A	LENGTH	QTY.
1st	0	12.00	—	—	—	3.
	500	28.10	40.10	20.05	500	10025m
2nd	0	22.50	50.60	25.30	500	12650 =
	500	12.00	34.50	17.25	500	8625.00
	630	9.00	21.00	10.50	130	1365.00
RD 630 - 860	860	Bridge g.n	—	4.50	—	—
8'	860	32.20	—	—	—	—
km 3rd	0	26.10	58.30	29.15	140	4081.00
	500	36.00	62.10	31.05	500	15525.00
km 4th	0	31.88	67.88	33.94	500	16970 =
	500	39.60	71.48	35.74	500	17870 =
5th	0	21.00	60.60	30.30	500	15150 =
	500	27.51	48.51	24.25	500	12127.50
6th	0	46.39	74.02	37.01	500	18505.00
	500	27.00	73.39	36.69	500	18347.50
7th	0	29.40	56.40	28.20	500	14100.00
	500	43.89	73.29	36.64	500	18322.50
8th	0	27.00	70.89	35.44	500	17722.50
	500	40.80	67.80	33.90	500	16950.00
9th	0	30.20	71.00	35.50	500	17750 =
	500	27.10	57.30	28.65	500	14325 =
10th	0	18.00	45.10	22.55	500	11275 =
	500	28.10	46.10	23.05	500	11525 =
11th	0	18.95	47.05	23.52	500	11762.50
+	500	24.00	42.95	21.47	500	10737.50
12th	0	30.17	54.17	27.08	500	13542.50
	500	25.40	55.57	27.78	500	13892.50
13th	0	28.00	46.40	23.20	500	11600 =
	500	28.00	49.00	24.50	500	12250 =
14th	0	15.00	43.00	21.50	500	10750 =
	500	17.10	32.10	16.05	500	8025 =
15th	0	18.00	35.10	17.55	500	8775 =
	500	31.50	49.50	24.75	500	12375 =
16th	0	24.70	56.20	28.10	500	14050 =
	500	22.50	47.20	23.60	500	11800 =
17th	0	28.50	51.00	25.50	500	12750 =
	500	18.00	46.50	23.25	500	11625 =
18th	0	27.00	45.00	22.50	500	11250 =
	500	11.10	38.10	19.05	500	9525 =
19th	0	15.00	26.10	13.05	500	6525 =
	500	21.90	36.90	18.45	500	9225 =
20th	0	35.95	57.85	28.92	500	14462.50
	370	14.90	50.85	25.42	370	9407.25

32665 =
M3

464875.75 M³


Executive Engineer
PMGSY Division

km	RD	SA	TA	MA	L	Qty
21st	0	21.90	36.80	18.40	630	11592.00
	600	48.00	69.90	34.95	600	20970.00
						32562 = M ³

fixed classification

km 1st RD 0 to km 2nd RD 630

All kinds of soil :- 60%

Ordinary Rock :- 20%

Hard Rock 20% =

Qty = 32665 m³ = Ash @ 60% = 19599 m³

Ord. Rock @ 20% = 6533 = M³

Hard Rock 20% = 6533 = M³

Km 2nd RD 630 to km 20th RD 370

fixed classification

All kinds of soil :- 20%

Ord. Rock = 30%

Hard Rock = 50% =

Qty = 464875.75 m³

Ash = @ 20% = 92975.15 M³

Ord. Rock 30% = 139462.72 M³

Hard Rock 50% = 232437.88 M³

km 21st

RD 0 - 600

Classification All kinds of soil 60%

Ordinary Rock 20%

Hard Rock 20% =

Qty = 32562 M³ Ash @ 60% = 19537.20 m³

Ord. Rock 20% = 6512.40 m³

Hard Rock 20% = 6512.40 m³

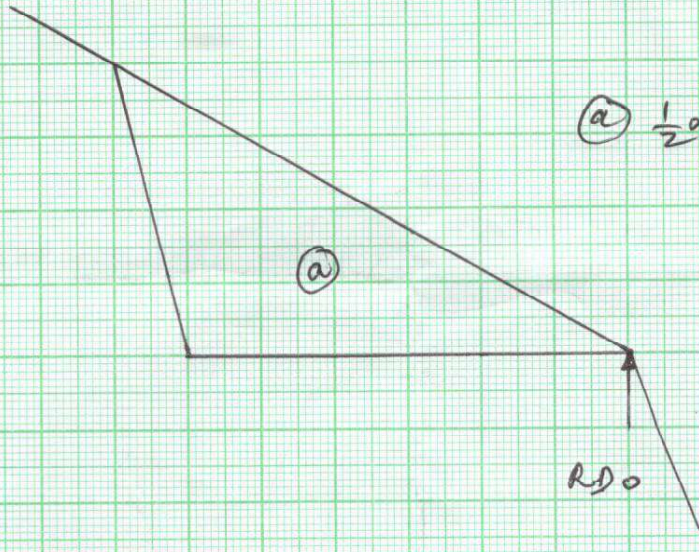
Total Qty Ash = 19599 + 92975.15 + 19537.20 = 132111.35 m³

Ord. Rock = 6533 + 139462.72 + 6512.40 = 152508.02 m³

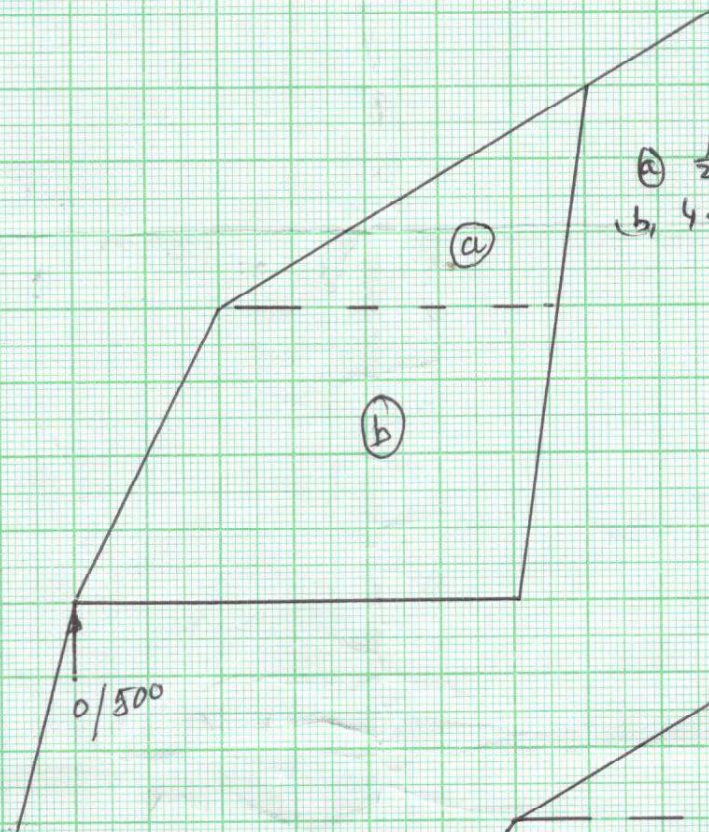
Hard Rock = 6533 + 232437.88 + 6512.40 = 245483.28 m³

Executive Engineer
PMGSY Division
Marwah

(1)

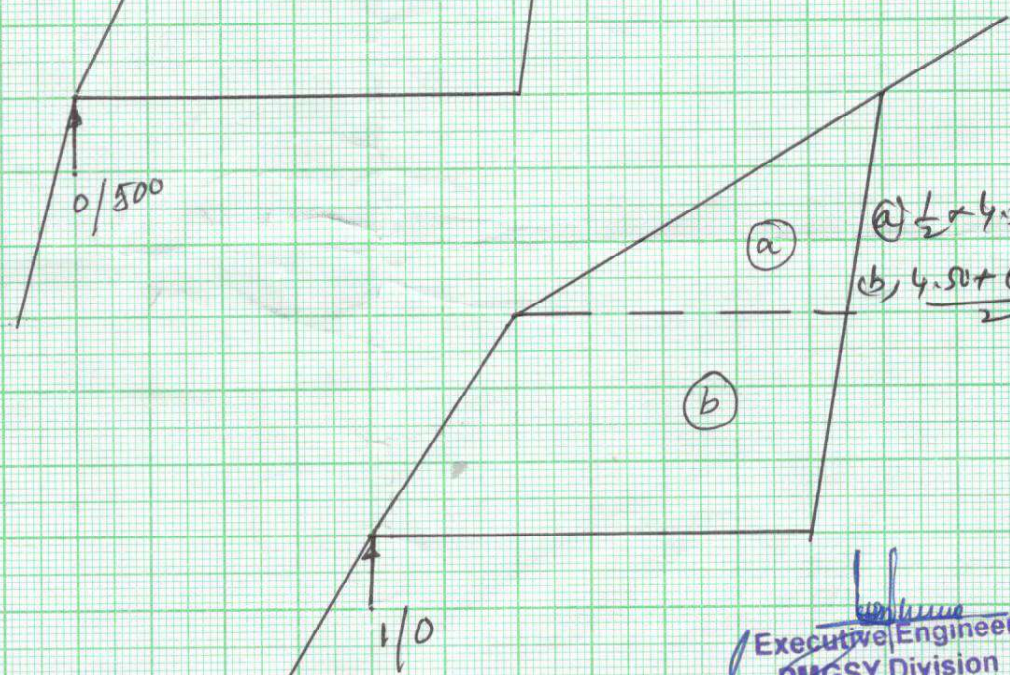


$$(a) \frac{1}{2} \times 6.00 \times 4.00 = 12.00 \text{ m}^2$$



$$(a) \frac{1}{2} \times 4.60 \times 3.00 = 6.90 \text{ m}^2$$

$$(b) \frac{4.60 + 6.00}{2} \times 4.00 = \frac{21.20 \text{ m}^2}{28.10 \text{ m}^2}$$



$$(a) \frac{1}{2} \times 4.50 \times 3.00 = 6.75 \text{ m}^2$$

$$(b) \frac{4.50 + 6.00}{2} \times 3.00 = \frac{15.75 \text{ m}^2}{22.50 \text{ m}^2}$$

Executive Engineer
RMGSY Division
Marwah

(2)

$$(a) \frac{1}{2} \times 6 \text{ m} \times 4 \text{ m} = 12 \text{ m}^2$$

(a)

1/500

$$\frac{1}{2} \times 6 \text{ m} \times 3 \text{ m} = 9 \text{ m}^2$$

(a)

1/630

$$(a) \frac{1}{2} \times 4.30 \times 3 \text{ m} = 6.45 \text{ m}^2$$

(a)

$$(b) \frac{4.30 + 6 \text{ m}}{2} \times 5 \text{ m} = 25.75 \text{ m}^2$$

32.20 m

(b)

$$(a) \frac{1}{2} \times 4.70 \times 2 \text{ m} = 4.70 \text{ m}^2$$

$$(b) \frac{4.70 + 6 \text{ m}}{2} \times 4 \text{ m} = 21.40 \text{ m}^2$$

(a)

(b)

1/860

2/0

(a)

(b)

$$(a) \frac{1}{2} \times 4 \text{ m} \times 3 \text{ m} = 6 \text{ m}^2$$

$$(b) \frac{4 \text{ m} + 6 \text{ m}}{2} \times 6 \text{ m} = 30 \text{ m}^2$$

36 m²

2/500

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(a) $\frac{1}{2} \times 5.60 \times 3.10 = 8.68 \text{ m}^2$
 (b) $\frac{5.60 + 6.0}{2} \times 4.0 = \frac{23.20}{2} = 11.60 \text{ m}^2$
 $\frac{8.68 + 11.60}{2} = 10.14 \text{ m}^2$

(3)

(a) $\frac{1}{2} \times 4.90 \times 3.0 = 7.35 \text{ m}^2$
 (b) $\frac{4.90 + 5.0}{2} \times 3.0 = \frac{32.25}{2} = 16.125 \text{ m}^2$
 $\frac{7.35 + 16.125}{2} = 11.7375 \text{ m}^2$

(b)

(b)

P.2

3/0

3/500

(a)

(a) $\frac{1}{2} \times 6.00 \times 7.00 = 21.00 \text{ m}^2$

(a)

(a) $\frac{1}{2} \times 4.70 \times 2.60 = 6.11 \text{ m}^2$

(b) $\frac{4.70 + 6.0}{2} \times 4.0 = \frac{21.40}{2} = 10.70 \text{ m}^2$
 $\frac{6.11 + 10.70}{2} = 8.405 \text{ m}^2$

(b)

27.50

4/0

4/500

(a)

(a) $\frac{1}{2} \times 5.80 \times 4.10 = 11.89 \text{ m}^2$

(b) $\frac{5.80 + 6.0}{2} \times 5.0 = \frac{34.50}{2} = 17.25 \text{ m}^2$
 $\frac{11.89 + 17.25}{2} = 14.57 \text{ m}^2$

(c) $\frac{1}{2} \times 6.00 \times 9.00 = 27.00 \text{ m}^2$

(b)

(a)

P.2

5/0

5/500

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$$(a) \frac{1}{2} \times 3.60 \times 3.0 = 5.40 \text{ m}^2$$

$$(b) \frac{3.60 + 6.0}{2} \times 5.0 = \frac{24.0}{2} = 12.00$$

$$(a) \frac{1}{2} \times 5.90 \times 3.10 = 9.14 \text{ m}^2$$

$$(b) \frac{5.90 + 8.0}{2} \times 5.0 = \frac{34.75}{2} = 17.375$$

$$43.89 \text{ m}^2$$

P. 2

$$(a) \frac{1}{2} \times 4.50 \times 5.0 = 11.25 \text{ m}^2$$

$$(b) \frac{4.50 + 6.0}{2} \times 3.0 = \frac{15.75}{2} = 7.875$$

$$(a) \frac{1}{2} \times 4.20 \times 2.0 = 4.20 \text{ m}^2$$

$$(b) \frac{4.20 + 8.0}{2} \times 6.0 = \frac{36.6}{2} = 18.3$$

$$40.80 \text{ m}^2$$

P. 2

$$(a) \frac{1}{2} \times 3.80 \times 3.0 = 5.70 \text{ m}^2$$

$$(b) \frac{3.80 + 6.0}{2} \times 5.0 = \frac{24.50}{2} = 12.25$$

$$(a) \frac{1}{2} \times 3.70 \times 2.0 = 3.70 \text{ m}^2$$

$$(b) \frac{3.70 + 8.0}{2} \times 4.0 = \frac{23.4}{2} = 11.7$$

$$27.10 \text{ m}^2$$

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(5)

$$\frac{1}{2} \times 6.00 \times 6.00 = 18.00 \text{ m}^2$$

(a)

9/0

$$\frac{1}{2} \times 7.30 \times 1.00 = 3.65 \text{ m}^2$$

$$\frac{1}{2} \times 7.30 + \frac{8.00}{2} \times 2.00 = \frac{15.30}{18.95 \text{ m}^2}$$

a

(b)

10/0

$$\frac{1}{2} \times 4.60 \times 3.90 = 8.97 \text{ m}^2$$

$$\frac{1}{2} \times 4.60 + \frac{6.00}{2} \times 4.00 = \frac{21.20}{30.17 \text{ m}^2}$$

(a)

(b)

11/0

$$\frac{1}{2} \times 4.60 \times 3.00 = 6.90 \text{ m}^2$$

$$\frac{1}{2} \times 4.60 + \frac{6.00}{2} \times 4.00 = \frac{21.20}{28.10 \text{ m}^2}$$

(a)

(b)

9/500

$$\frac{1}{2} \times 6.00 \times 8.00 = 24.00 \text{ m}^2$$

(a)

10/500

$$\frac{1}{2} \times 3.40 \times 2.50 = 4.25 \text{ m}^2$$

$$\frac{1}{2} \times 3.40 + \frac{6.00}{2} \times 4.50 = \frac{21.15}{25.40 \text{ m}^2}$$

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PMGSY Division
Marwah

$$(a) \frac{1}{2} \times 6 \cdot w \times 7 \cdot w = 21 \cdot w^2$$

$$(a) \frac{1}{2} \times 8 \cdot w \times 7 \cdot w = 28 \cdot w^2$$

$$(a) \frac{1}{2} \times 6 \cdot w \times 5 \cdot w = 15 \cdot w^2$$

$$(a) \frac{1}{2} \times 4 \cdot 80 \times 2 \cdot 40 = 5 \cdot 76$$

$$(b) \frac{4 \cdot 80 + 6 \cdot w}{2} \times 2 \cdot 10 = 11 \cdot 3$$

$$17 \cdot 10$$

$$(a) \frac{1}{2} \times 6 \cdot w \times 6 \cdot w = 18 \cdot w^2$$

$$(a) \frac{1}{2} \times 6 \cdot 50 \times 3 \cdot w = 9 \cdot 75$$

$$(b) \frac{6 \cdot 50 + 8 \cdot w}{2} \times 3 \cdot w = 21 \cdot 75$$

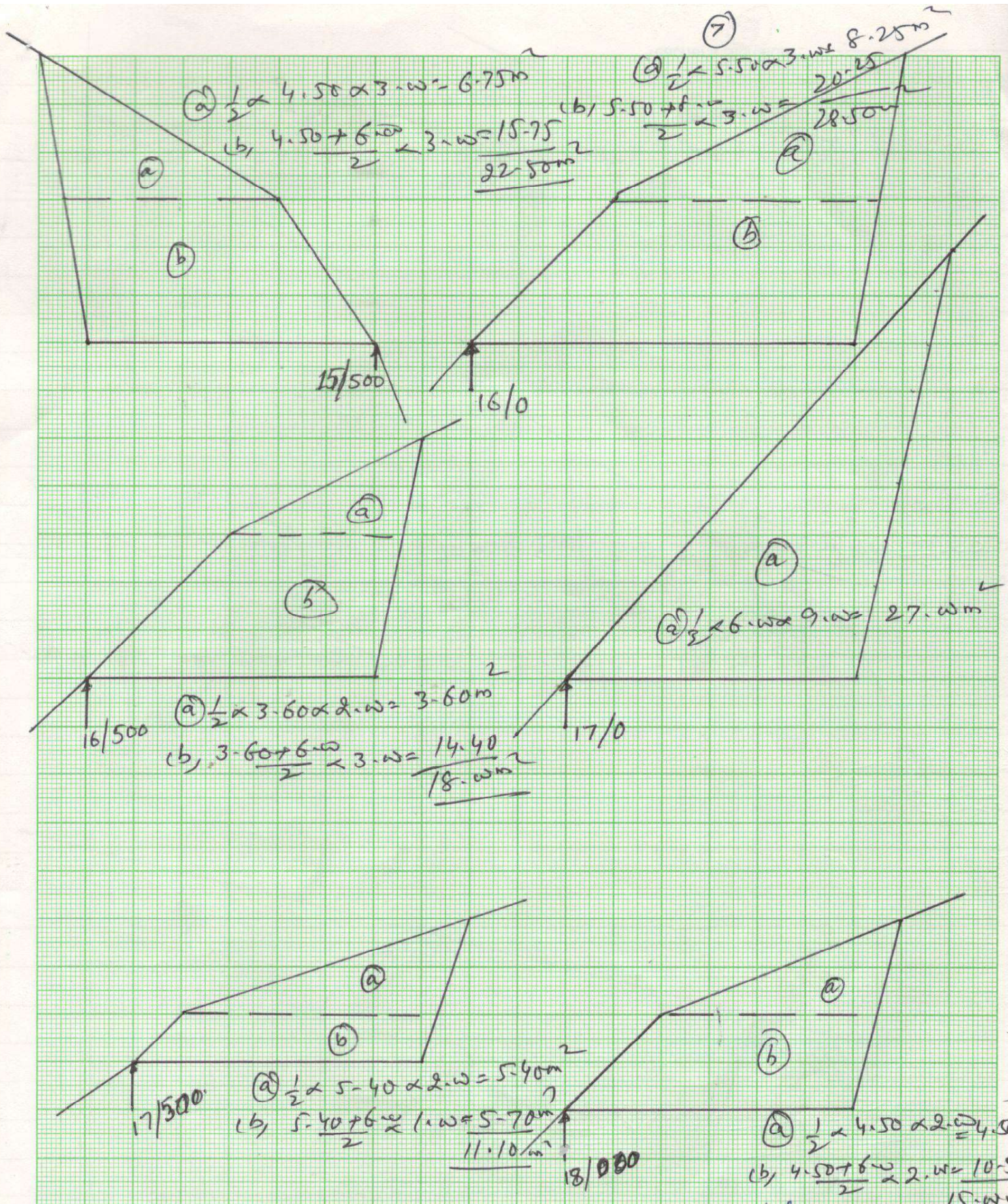
$$31 \cdot 50$$

$$(a) \frac{1}{2} \times 4 \cdot 40 \times 3 \cdot 90 = 8 \cdot 58 \cdot w^2$$

$$(b) \frac{4 \cdot 40 + 6 \cdot w}{2} \times 3 \cdot 10 = 16 \cdot 12 \cdot w^2$$

$$24 \cdot 70 \cdot w$$

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Marwah



Executive Engineer
 PMGSY Division
 Marwah

8

(a) $\frac{1}{2} \times 5.30 \times 4.00 = 10.60m^2$
 (b) $\frac{5.30 + 6.00}{2} \times 2.00 = \frac{11.30}{2} \times 2.00 = 11.30$
21.90m

(a)

(b)

18/500

(a) $\frac{1}{2} \times 5.70 \times 3.00 = 8.55m^2$
 (b) $\frac{5.70 + 8.00}{2} \times 4.00 = \frac{13.70}{2} \times 4.00 = 27.4$
35.95

(a)

(b)

19/000

(a) $\frac{1}{2} \times 5.20 \times 2.50 = 6.50m^2$
 (b) $\frac{5.20 + 6.00}{2} \times 1.50 = \frac{11.20}{2} \times 1.50 = 8.40$
14.90m

(a)

(b)

19/370

(a) $\frac{1}{2} \times 5.30 \times 4.00 = 10.60m^2$
 (b) $\frac{5.30 + 6.00}{2} \times 2.00 = \frac{11.30}{2} \times 2.00 = 11.30$
21.90m

(a)

(b)

20/0

(a)

(b)

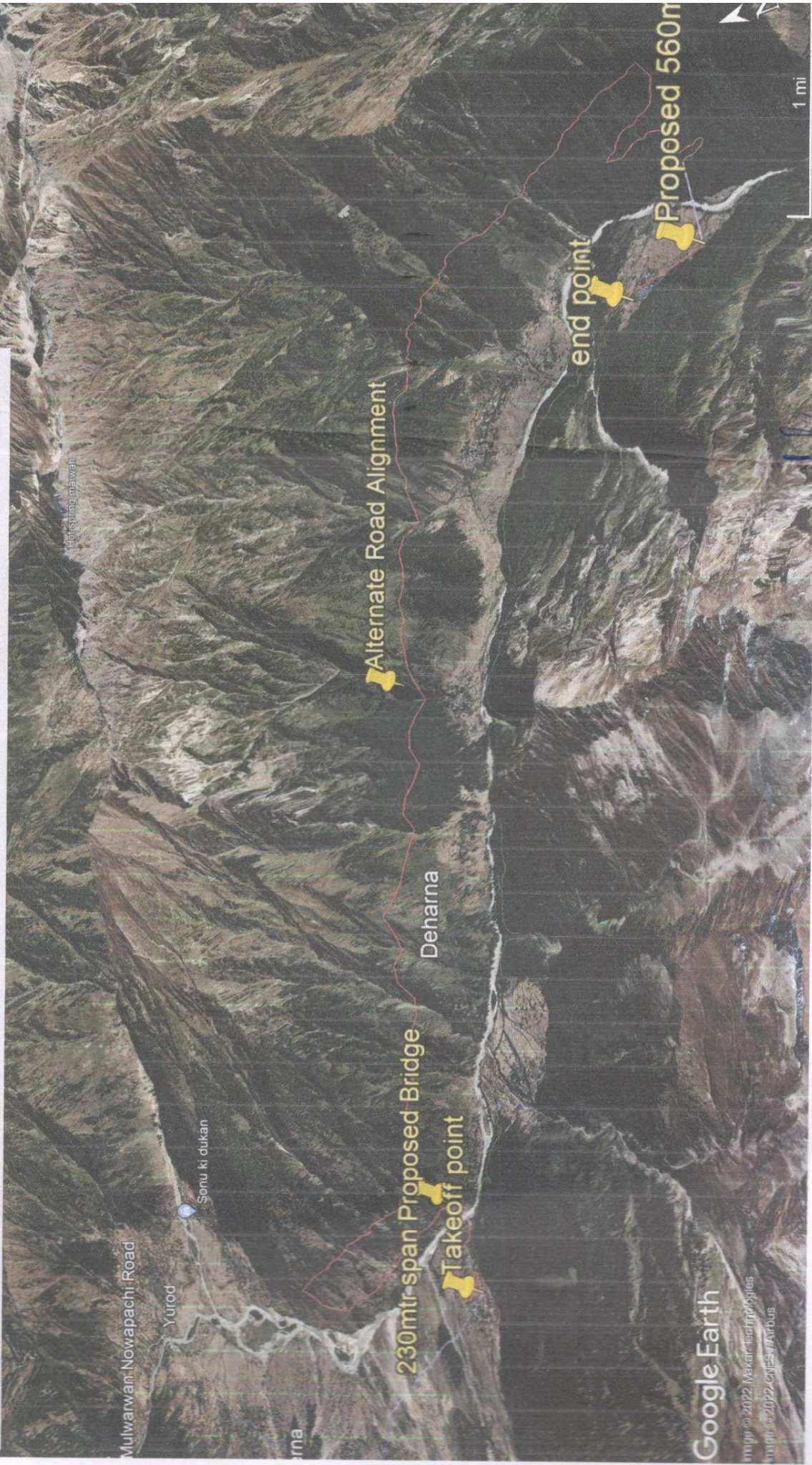
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20/600

(a) $\frac{1}{2} \times 11.00 \times 3.00 = 16.50m^2$
 (b) $\frac{11.00 + 10.00}{2} \times 3.00 = \frac{21.00}{2} \times 3.00 = 31.50m^2$
48.00m

Signature

siteplan showing the alternate alignment for Nowapachi Dherna upto hanzal Road



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siteplan showing the alternate alignment for Nowapachi Dherna upto hanzal Road



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